

**Cost Allocation Proceeding
Workpapers to Accompany
Chapter 3
Testimony of Rose-Marie Payan**

A.22-08-XXX

September 30, 2022

Chapter 3 Workpapers

RMPayan

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EUFORCASTER



I. Introduction

End Use Forecaster is a market-segmentation and modeling framework that forecasts the impacts of competitive strategies and market scenarios on sales, revenues, and market shares.

EUForecaster is used to prepare the demand forecasts for the residential, core commercial and industrial, and noncore commercial and industrial markets.

The object of this chapter is to familiarize you with the overall End Use Forecaster modeling structure and to describe how the system relates to common business issues concerning demand forecasting and market assessment. This chapter also serves to explain how the various modules within End Use Forecaster relate to one another. Subsequent chapters define the contents and features of each individual module.

End Use Forecaster: An Overview

End Use Forecaster, formerly known as Quant.sim, is a market segmentation, competitive assessment, and sales projection application developed to respond to market needs and overcome the limitations of existing demand forecasting and market planning tools. The application, originally developed in 1993, is constructed using SAS software.

We have found that each utility's market structure and competitive environment is unique and that a major shortcoming of other tools has been an inability to accurately capture this diversity. End Use Forecaster's Market Segmentation module provides the ability to update the model to reflect new strategies without writing SAS programming code. Unique market conditions translate into an inherently flexible, dynamic modeling framework that can rapidly adapt to new market conditions.

This flexibility is afforded through a model development approach that separates specific market issues from theoretical modeling constructs:

- ***Logic and theory***, the portion of the system comprised of the programming code and data structures, is stored and managed in one location
- ***Market data***, which are unique for every company and strategy, are stored in a separate location

This structure makes market segmentation and analyses relatively easy tasks compared to adapting spreadsheet models or rewriting "black box" programming code. As an example, consider the "DSM planning" and "competitive assessment" market dimensions in the Table 1 below. The DSM dimensions show a standard end-use forecast model design for the utility industry, while the competitive assessment dimensions illustrate another way to set up End Use Forecaster to analyze new retail competition if retail choice is present in the jurisdiction.

Table 1. Alternative Market Segmentation Designs – Utility Industry Example

Market Dimension	DSM Planning	Competitive Assessment
Dimension 1	Market sector (residential, commercial, industrial, agricultural)	Risk of switching
Dimension 2	Customer type (dwelling, building, industry segments)	Customer value (to energy provider)
Dimension 3	End uses	Products and services
Dimension 4	Fuel types	Provider choices
Dimension 5	Efficiency levels	Product choices

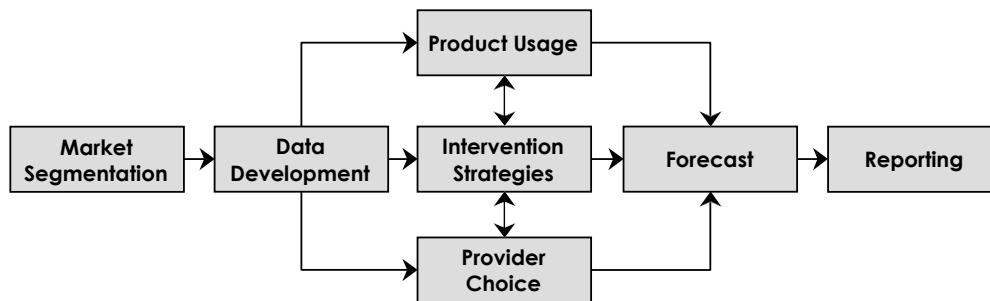
End Use Forecaster has other dimensions that capture factors affecting product demands. Perhaps the most important of these is End Use Forecaster’s “vintaging” capability. Vintaging refers to product or service turnover that is a function of either physical lives or contract period. Accurate assessments of product turnover are crucial to obtaining accurate forecasts for any product where purchases are derived from a fraction of the population in the market at a moment of time. An example of vintaging would be accounting for energy-consuming equipment such as motors, boilers, water heaters, chillers, etc., where demand over a given time interval is the sum of demands from new customers plus those customers replacing existing equipment.

The effective use of the inherent multidimensionality of most business forecasting issues is a key strength of the End Use Forecaster framework. Critical dimensions of business issues (e.g., geography, customers, products, competitors, equipment lives, etc.) are included in every forecast, along with dimensions users can modify to resolve a variety of business issues. For example, forecasters may be interested in the price elasticity of demand, marketing staff may want to study market shares across various scenarios, and corporate finance may need the bottom line revenue forecast. All these (and more) are immediately available in every forecast due to the concentration of rich and flexible dimensionality.

Seven primary modules form the heart of the End Use Forecaster framework: Market Segmentation, Data Development, Product Usage, Provider Choice, Intervention Strategies, Forecasting, and Reporting. .

Figure 1 depicts the relationships between these modules. Each is summarized below and in the remaining chapters of this Reference Guide.

Figure 1. End Use Forecaster Modules and Structure



Interface Design

The user interface to the End Use Forecaster model is constructed using SAS/AF (Applications Facility). SAS/AF software provides dozens of predefined “classes” that enabled the development of End Use Forecaster. These classes include a wide selection of both visual and non-visual aspects. The visual classes, or widgets, define objects that are placed on the screen, including icons, push buttons, text boxes tables, etc. The non-visual classes use screen control language (SCL) that define the objects controlling End Use Forecaster behind the scenes. Figure 2 and Figure 3 show the first two screens users see after starting End Use Forecaster.

Figure 2. Welcome Screen

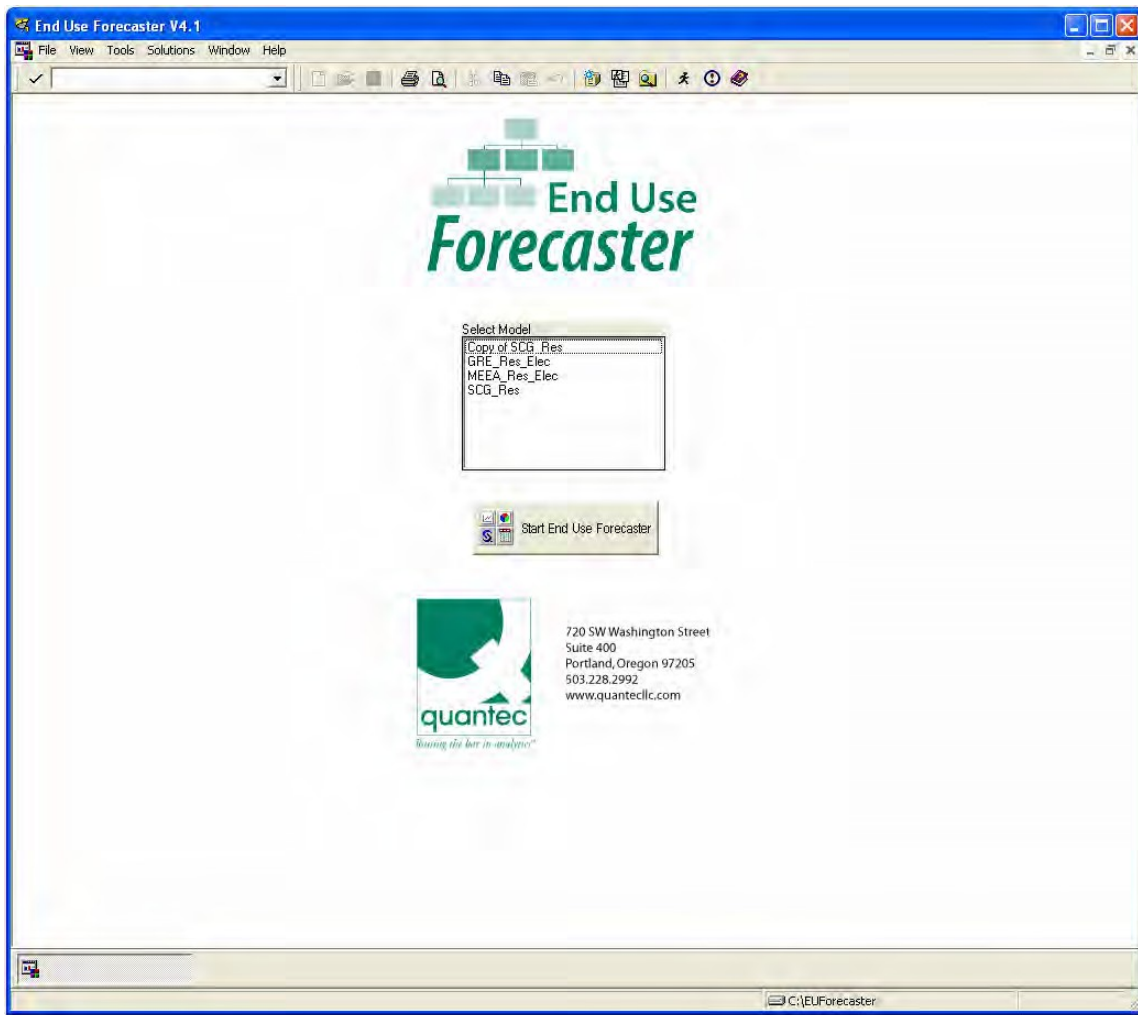
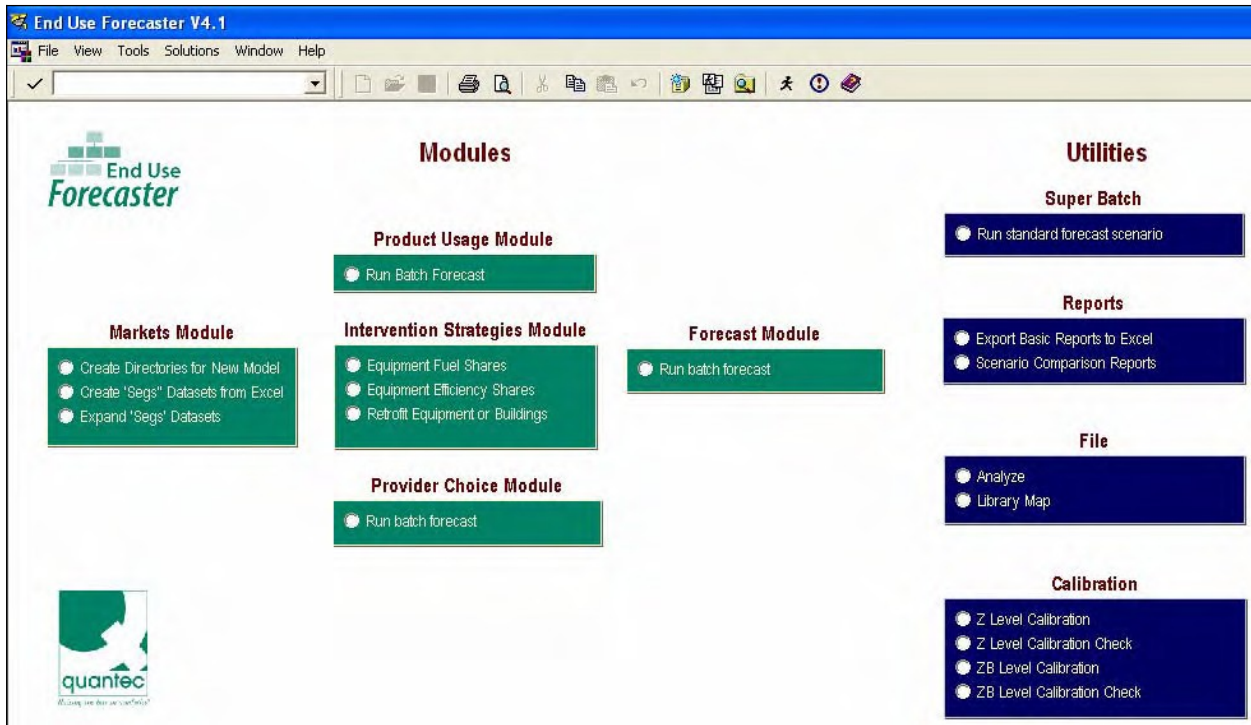


Figure 3. Main Dashboard



The interface is the only part of the End Use Forecaster framework that is compiled. All of the mathematical operations are in open SAS code, and End Use Forecaster’s SAS/AF interface can also be edited and recompiled. This is a true “open architecture” design that allows users to modify and extend the End Use Forecaster framework.

In addition to End Use Forecaster’s customized sets of tools, there is also a wide variety of data management, analysis, and reporting tools that are packaged with the SAS System.

Data Exchange

End Use Forecaster uses SAS/ACCESS software to provide direct and transparent access to various databases such as:

- DB2 Under UNIX and PC Hosts
- ORACLE
- SYBASE
- SQL/DS
- ODBC
- PC File Formats (Excel, Access)
- SYSTEM 2000 software

Since data access functions are separated from End Use Forecaster’s logic, underlying data sources may change, but the model’s capabilities will not be affected.

Market Segments

The primary goal of any market segmentation design in End Use Forecaster is to disaggregate the overall market into meaningful portions of customer types that behave similarly in terms of product demands and the set of choices they face. These disaggregations are arranged hierarchically, with Dimension 1 at the top of the “tree.” Each Dimension 1 class can have one or more Dimension 2 classes, each Dimension 2 class can have one or more Dimension 3 classes, and so on.

Strategic Information Needs

A secondary goal of the market segmentation design is to designate groups of customers and products for which sufficient data are available to be fed into End Use Forecaster’s forecasting framework. It may not be desirable to disaggregate the market into segments for which little or no data are available or where there is little distinction between two or more groups. Every new market segment requires additional disk storage space and more time to assemble the required End Use Forecaster data inputs. The objective should be to *optimize* the number of market segments: create enough market sectors to provide differentiation on answers to important questions but not so many that they become a burden to the overall process.

Data Development and Entry

Successful implementation of the End Use Forecaster model relies on highly integrated sets of information. Data entry is closely related to the market segmentation process, and both are addressed in this Reference Guide. Each set of input data uses different dimensions, so highly structured templates were designed to minimize redundancy and eliminate error at the same time.

End Use Forecaster uses market segmentation information and templates to set up all the required SAS datasets such that they are entirely consistent with the segmentation design.

Data Entry Formats

End Use Forecaster’s datasets can be populated in several ways. The most common methods are:

- Exporting/importing data using SAS/ACCESS for PC file formats
- Programmatic data entry through simple SAS programs

As users gradually increase the number of distinct market segments from dozens to hundreds to thousands, it is anticipated that they will take advantage of SAS/ACCESS links to other company databases. Such links would allow for real-time forecast updates as database information is updated.

End Use Forecaster tracks consumption of resources (such as natural gas, electricity, water, minutes of telephone or Internet use, gasoline, etc.) through the Product Usage module. This module is only used when there are secondary, derived demands from customers' product choices. For example, a utility would be interested in the use of energy from appliances to generate natural gas or electricity forecasts, but other types of manufacturers may not need this information to develop sales forecasts. If certain parts of the model are not needed in a given application, you may assign default values (usually a 0 or 1) that essentially turn off that portion of the model.

Product usage can vary with a variety of factors such as weather, non-weather seasonal factors, customer characteristics, prices, and other product attributes. Several modeling techniques explain and predict product usage, including scalars (exogenous estimates), econometric functions, and other statistical models.

Regardless of the approach taken, the Product Usage module provides a forecast of the predicted consumption by combining (1) a forecast of consumption factors or drivers (i.e., independent or exogenous variables) and (2) a set of coefficients associated with each exogenous variable.

Provider Choice Module: Modeling Customer Service and Purchase Decisions

Types of Choices: The Provider Choice module analyzes customer choice decisions among competitors and product options. For example, a commercial building operator chooses between fuel (provider) types for HVAC systems, and then from various equipment efficiency levels (product options) within the fuel type. Purchase decisions are represented by a nested structure of provider and product option choices.

Modes of Choice Modeling

The Provider Choice module is designed for two types of modeling: (1) the estimation of choice parameters, and (2) the forecast of market shares given these choice parameters. More specifically, the Provider Choice Module:¹

- *Simulates parameter estimates* relating to customer choice in markets where micro-(customer) level information is not available, but aggregate cost and market share figures are known, or
- *Uses parameter estimates* from the application of logistic regression, or other models of customer choice, to micro-level customer data.

¹ The Provider Choice Module can be bypassed in some applications such as DSM potential analysis. In this type of framework, the base line fuel and efficiency shares are held constant and are determined outside the model. The Intervention Strategies Module is then used to view alternate market shares associated with, for example, technical and achievable DSM potential.

If primary market research is used to develop the micro data necessary for parameter estimates, the Provider Choice module essentially transforms a “static” market research report into a dynamic what-if analysis structure. This can significantly extend the usefulness and life of company market research resources.

After model parameters are simulated or input into the Provider Choice Module, it then forecasts the market share associated with each product and service alternative over the planning horizon.

Average versus Marginal Shares

The comparison of average versus marginal shares and associated trends is a key result of incorporating dynamic choice functions in the End Use Forecaster forecasting framework.

For example, the infusion of new energy consumption technologies (such as condensing furnaces) may be reaching 35% of new construction buildings, but if new construction in a given year only represents 2% of the total market, then the total impact on the market is merely 0.7%. As these rates of change accelerate and decelerate through the future, and as simulated what-if scenarios impact these forecasts of consumer choice, markedly different forecasts are possible over the longer term, while at the same time maintaining a realistic short-term profile.

Intervention Strategies Module: Analyzing Marketing Scenarios and DSM Potential

The Intervention Strategies module – a generic term to apply to activities typically associated with demand-side management (DSM) – is intended to capture the impacts of marketing, energy efficiency potential, and other programs designed to influence customer behavior. This module makes available a series of program designs that simulate the “what-if” impacts on the market shares, usage, and the resulting demand forecast. Three general types of program designs are available:

- ***Provider (fuel) substitution scenarios.*** These scenarios modify the forecasted choices or market shares among provider (fuel) sources. Separate sets of assumptions apply to existing buildings and new construction buildings, permitting different types of programs to be designed.
- ***Product option (equipment efficiency) scenarios.*** These scenarios modify efficiency or product option shares. For example, an efficiency program usually favors the highest available efficiency level for each market sector. These impacts affect choices at the point of new construction or replacement of existing end uses, and different assumptions can apply to each market. A technical potential scenario normally assigns a 100% share to the most efficient option. An achievable potential scenario assigns less than a 100% share to the most efficient option, with the level determined by experience with similar program designs or market research.
- ***Usage retrofit program scenarios.*** These programs encourage consumers to change their product usage given the equipment they already have (e.g., improve the efficiency of existing equipment by installing efficiency measures or through better O&M procedures).

Examples include measures to tighten residential and commercial building envelopes, industrial process changes, and pipe and duct insulation.

Intervention strategies are incorporated directly into the relevant Product Usage or Provider Choice forecasts.

Forecast Module: Putting It All Together

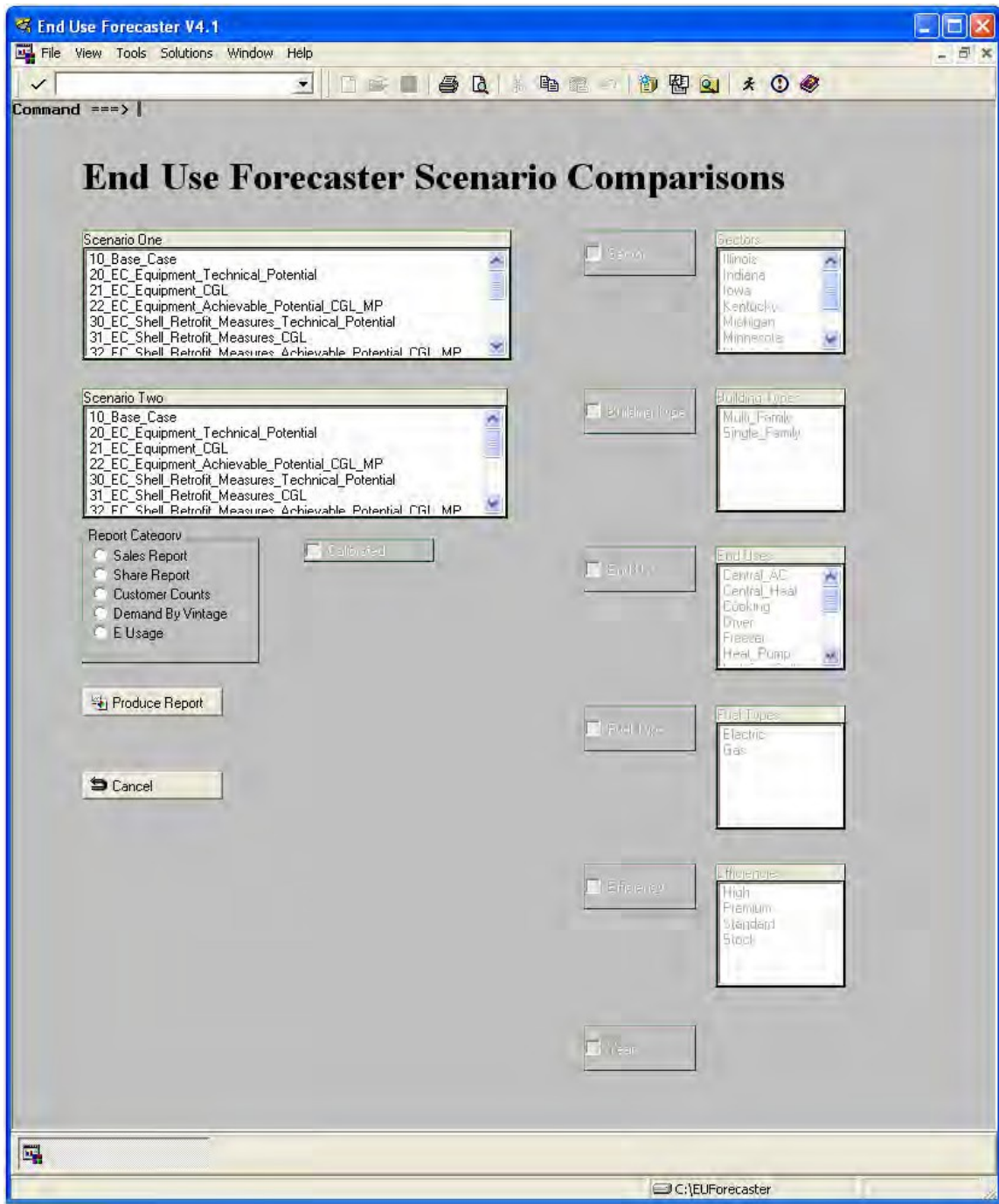
The Forecast Module incorporates all the information compiled from the other modules – Usage, Choice, and Intervention Strategies – related to the overall economic growth of the market segment and equipment lifetime (decay) functions to create the final forecast for a given scenario.

This module produces sales and market share reports that provide quick access to all forecast details. The reports produce forecast outputs in a “flat” matrix format, providing the ability to review the data for reasonability before pronouncing the forecast final.

Reporting: Getting the Projections Out to Decision-Makers

End Use Forecaster also produces reports that can be customized based upon the user’s choice of segmentation combinations to analyze. These reports summarize and/or compare forecasts for two forecast scenarios specified by the user in the Scenario Comparison interface, as shown in Figure 4.

Figure 4. Report Customization



The user specifies the Report Category (sales, market share, customer counts or demand by vintage) and, based on the category selected, the user is given the option of selecting different combinations of segments to summarize and/or compare. Additionally, the user is given the option of summarizing the forecast data across all years within the forecast horizon or generating results on a year-by-year basis.

II. Application Structure

A solid understanding of how End Use Forecaster is organized will help users to understand the logic of the model and greatly improve the efficiency with which they use the application. The latest revisions to End Use Forecaster focused almost exclusively on consolidating libraries and datasets to make the model easier to use; the model's logic, repeatedly validated over its history, was left intact. Underlying the updates was an emphasis on consistency in the naming and organization of datasets and variables so as to maximize the intuitiveness of the model. This Chapter describes the model's organization with the intent of helping the user be a more effective modeler.

Hardware and Software

End Use Forecaster is a Windows application developed in PC-SAS. The code and datasets can easily be migrated to other platforms (UNIX, etc.), should the user desire, but the interfaces will not provide the same functionality on other systems. If a user desires a non-PC hardware/software solution, The Cadmus Group, formerly known as Quantec, will work with the SAS Institute to ensure compatibility and develop a customized solution.

Hardware

The minimum recommended hardware configuration slightly exceeds SAS Institute requirements to ensure that forecast simulations can be performed in a timely manner. The vast majority of PCs purchased since 2000 exceed these recommendations:

- Pentium 866 MHZ CPU
- 512 MB RAM
- SVGA compatible color monitor
- 10 GB hard disk drive of free space
- CD-ROM drive (for installation purposed only)

End Use Forecaster's performance (i.e., speed) increases significantly if the system is equipped with more advanced processors (e.g., Pentium III or better), additional RAM (1 GB RAM or more), and additional disk space (for storage).

Software

End Use Forecaster is designed for the Microsoft Windows operating system (compatible with Windows 95 and 98, Windows NT Workstation 4.0, Windows XP, and Windows 2000 Professional). It is currently configured for SAS version 9.1 and version 8.2. Seven SAS software products are required:

- Base SAS

- Full Screen Product (SAS/FSP)
- Econometrics and Time Series (SAS/ETS)
- Statistics (SAS/STAT)
- High-Resolution Graphics (SAS/GRAPH)
- Interactive Data Analysis (SAS/INSIGHT)
- Direct Database Access (SAS/ACCESS)

An additional module, Applications Facility (SAS/AF), is used in developing End Use Forecaster's graphical user interface. These modules are based on a special SAS code subset called SAS Control Language (SCL). This portion of End Use Forecaster is stored (compiled) within the model and does not require user modification.

If any of the required SAS products are missing from the site license, the software can be added for little additional cost. For organizations that do not yet have SAS, The Cadmus Group (Quantec) will be happy to work with the SAS Institute to ensure that you obtain a solution that will allow End Use Forecaster to run smoothly and cost effectively.

Installation of End Use Forecaster is site-specific because it is dependent on the location of SAS on your PCs. However, there is minimal customization. For each user we only need to modify two files in the End Use Forecaster\Config directory: autoexec.sas and EUForecaster.cfg. These files 'point' End Use Forecaster to your SAS installation and take advantage of the hard drive on your computer with the most disk space. These customized files are developed during installation, consistent with the installation of SAS on individual workstations.

Conventions

The majority of the nomenclature in this documentation comes directly from the SAS application in which End Use Forecaster was developed. The various components of SAS and the conventions used in referring to them throughout the documentation are:

- **SAS libraries**, the logical names that refer to the physical locations where SAS datasets are stored, are referred to using all uppercase letters (CONFIG, MODELCODE, etc.).
- **SAS code**, which contain the routines for End Use Forecaster's modules, are referred to in normal text using the 'camelBack' syntax with the .sas suffix appended, such as choiceBatch.sas.
- **SAS datasets** are referred to using bold-face type using the 'camelBack' syntax, such as **equipmentAge_10**.
- **SAS variables** are referred to in italic type using the 'camelBack' syntax, such as *usageEquationStatus*.

End Use Forecaster's modules run user-specified scenarios. To differentiate among these scenarios, scenario-specific datasets have a numeric suffix, such as **priceForecast_10**. In general

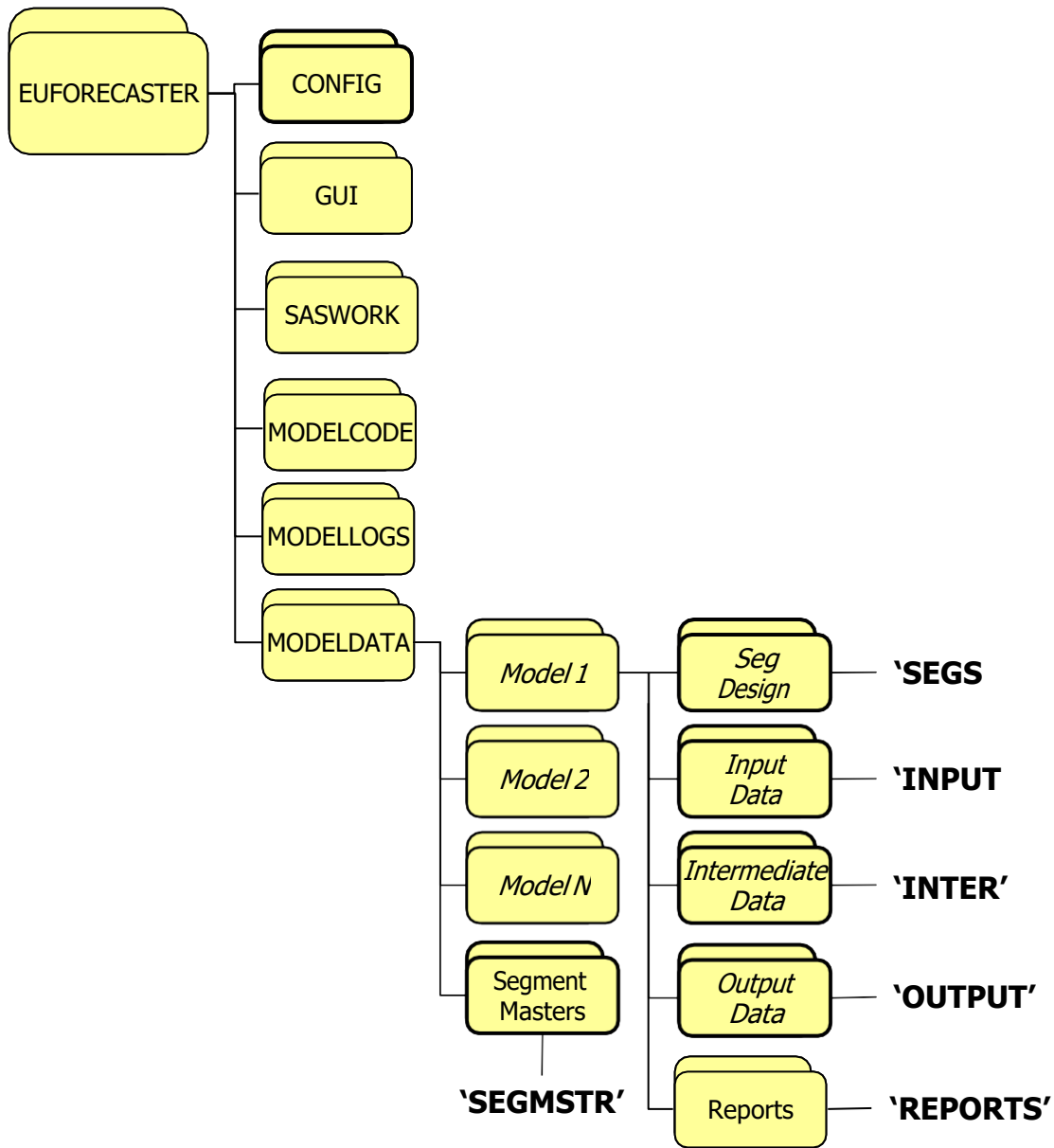
cases, where the documentation does not refer to a specific scenario, datasets are referred to with an “_xx” suffix, such as **saturations_xx**.

Model Organization

The logic and theory underlying End Use Forecaster are separated from the data, which vary by individual segmentation design (model). This differentiation drives the structural organization of the model as well, and these two components are stored in different physical locations. The initial organization takes place in the underlying Windows folder structure, which serves as the basis for the SAS libraries that hold both the datasets and catalogs that dictate the model logic and data structure, as well as those datasets specific to individual segmentation designs.

As shown in Figure 5, the folder hierarchy begins with the folder ‘EUFORECASTER.’ With the exception of the SAS application itself, the entire model – all code, interfaces, and datasets – resides within this folder. Folders with bold outlines represent the physical locations of SAS libraries, the names of which are designated in single quotes. The folders with names in italics – note that they are all within the data folder – represent those libraries that will vary by individual model. The ‘MODELDATA’ folder will contain individual folders for every model created by a user. Each of these individual model folders will also contain the same set of subfolders as those shown within ‘Model 1.’ Because these folders serve as SAS libraries, the group of folders that will serve as ‘Segs,’ ‘Input,’ etc., will depend on which model the operator happens to be working with in a given session. The data for individual models will not be available at the same time.

Figure 5. End Use Forecaster Folder Structure



This organization can have implications for the user. For example, if a user has a data source that applies to more than one model, the 'MODELCODE' library can serve as a good place to store the raw data to avoid keeping copies in each of the model-specific libraries. Detailed descriptions of these folders and their contents are provided in Table 2.

Table 2. End Use Forecaster Folders

Folder	Full Path	SAS Library	Description
EUFORCASTER	EUFORCASTER	N/A	Root application folder.
GUI	EUFORCASTER\GUI	App	Folder containing all the underlying application catalogs and GUIs.
MODELLOGS	EUFORCASTER\MODELLOGS	N/A	Directory where logs of model operations are stored.
MODELCODE	EUFORCASTER\MODELCODE	N/A	Contains all the SAS code underlying the different End Use Forecaster modules.
CONFIG	EUFORCASTER\CONFIG	N/A	Contains SAS configuration files in which site-specific modifications are established.
MODELDATA	EUFORCASTER\MODELDATA	N/A	Contains data for all of the user-created segmentation designs.
"Model_Name"	EUFORCASTER\MODELDATA \ "Model_Name"	N/A	A folder with all data for a model based on a user-defined name.
SegDesign	EUFORCASTER\MODELDATA \ "Model_Name" \ segDesign	SEGS	For each model, contains the SAS datasets that establish the specific segmentation design.
InputData	EUFORCASTER\ MODELDATA\ "Model_Name"\ inputData	INPUT	For each model, contains all of the user-populated datasets that are necessary to run the different modules.
IntermediateData	EUFORCASTER\ MODELDATA \ "Model_Name"\ intermediateData	INTER	For each model, contains all of the intermediate, model-generated outputs from the usage and choice modules that are necessary to run other modules.
OutputData	EUFORCASTER\ MODELDATA \ "Model_Name"\ outputData	OUTPUT	For each model, contains the various final output sets generated by the forecast module.
Reports	EUFORCASTER\ MODELDATA \ "Model_Name"\ Reports	N/A	Contains the reports and excel files created by End Use Forecaster's Reporting Engine.
SegmentMasters	EUFORCASTER\ MODELDATA \ segmentMasters	SEGMSTR	Contains datasets with all of the necessary variables and structure for every model dataset. A SAS program combines these datasets with a specific segmentation design to generate all the datasets (unpopulated) necessary for a given model.

III. Market Segmentation and Data Entry Modules

End Use Forecaster's Market Segmentation module governs two distinct tasks: 1) the development of customized market segmentation designs; and 2) the population of the model with the necessary data. While the first consists of formal, specific steps, the nature of the second depends on a number of factors, including the complexity of the segmentation design, the format of the various data sources, as even as the technical skills of the operator. This chapter provides extensive detail on the first followed by a brief discussion of issues surrounding the second.

Development of Market Segmentation Design

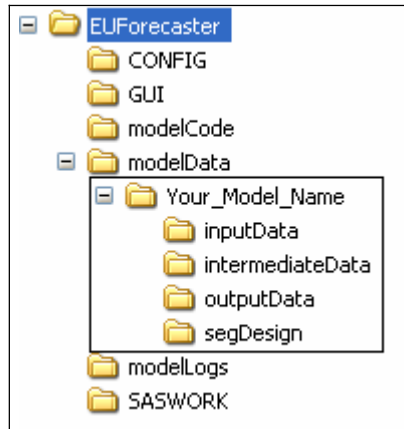
The execution of the first task – creation of a customized market segmentation design – is based on four steps, listed briefly below and then described in greater detail.

- 1) ***Creation of Model Data Folders*** – Creation of a specific directory structure for each model is necessary to perform subsequent steps.
- 2) ***Population of the Excel workbook Seg_Design_Template.xls*** – A step to define the various segments and their relationship with one another.
- 3) ***Creation of the Segs Library Datasets*** – This takes the Excel workbook and populates the “segs” library with the necessary segmentation design data sets.
- 4) ***Expansion of the Segmentation Design*** – This takes the segmentation design data sets in the “segs” library and merges them with the data set templates in the “segmstr” library, expanding them to create all the necessary – but still unpopulated! – data sets to run the basecase (“10”) scenario in End Use Forecaster.

Creation of Model Data Folders

A prerequisite to setting up a new model is the creation of the necessary folders to contain the model-specific segmentation design and data. This means that within the c:\EUForecaster\modelData directory, you must have a folder with your model's name and within that folder you must have four folders called “inputData,” “intermediateData,” “outputData,” and “segDesign,” as shown in the interior boxed portion of Figure 6 below.

Figure 6. Data Folder Structure



There are multiple ways to create these folders. First, the user can manually create them in Windows Explorer. Alternately, one can copy the folder for an existing model and rename the root data folder to the preferred name, in which case subsequent steps will overwrite the existing datasets for the from model that was copied. Finally, the interface has an option in the Markets Module called “Create Directories for New Model.” Selection of this option will prompt the user to enter the name for the new model and End Use Forecaster will create the desired folders.

Population of Seg_Design_Template.xls

The file *Seg_Design_Template.xls*, a read-only file located in the root directory for End Use Forecaster (generally C:\EUForecaster) is the starting point for creating a custom segmentation design. It is here where you define the levels for the five primary dimensions that must exist in every segmentation design. While the experienced user will be very familiar with these dimensions, they deserve detailed discussion here. Starting at the top of the hierarchy, Dimensions 1 through 3 identify unique market segments. Dimensions 4 and 5 refer to the available product/service suppliers competing in the marketplace and product/service options, respectively. Although the actual use of these dimensions can vary, in an energy model the general use is as follows:

- Dimension 1: geographic region or sector
- Dimension 2: customer segment (home type, business type, or SIC)
- Dimension 3: end use
- Dimension 4: fuel type
- Dimension 5: efficiency level

In all designs, the first three dimensions define the basic market segmentation structure.

Dimension 1 always refers to geography, customer size, customer behavior, customer class, and/or any other features that separate groups of customers. Note that all of the aforementioned

factors can be used within Dimension 1 (e.g., north-residential, north-commercial, south-residential, south-commercial, etc.).

Dimension 2 is reserved for factors that affect a particular group of customers in a similar manner, such as an exogenous rate of economic growth, building lives, or contract lives. In an end-use model, for example, this dimension might include various types of residential (single family, duplexes, multifamily, etc.) and commercial (office buildings, restaurants, hospitals, etc.) customers.

Dimension 3 refers to the products and services being marketed to each customer type, such as heating, cooling, or water heating. In a telecom model, this dimension would refer to basic service, Internet service, custom calling features, etc. As with the second dimension, each third dimension level has an associated physical or contract life. In an end-use energy model, each equipment type has a life span.

Dimensions 4 and 5 describe the product/competitive options within the major market categories that are defined by Dimensions 1 – 3. In an end-use model, fuel types are typically represented as Dimension 4 and various efficiency levels are represented by Dimension 5. In a competitive energy market, the fifth dimension could be used to represent various levels of retail services such as power quality or equipment maintenance offered by a provider.

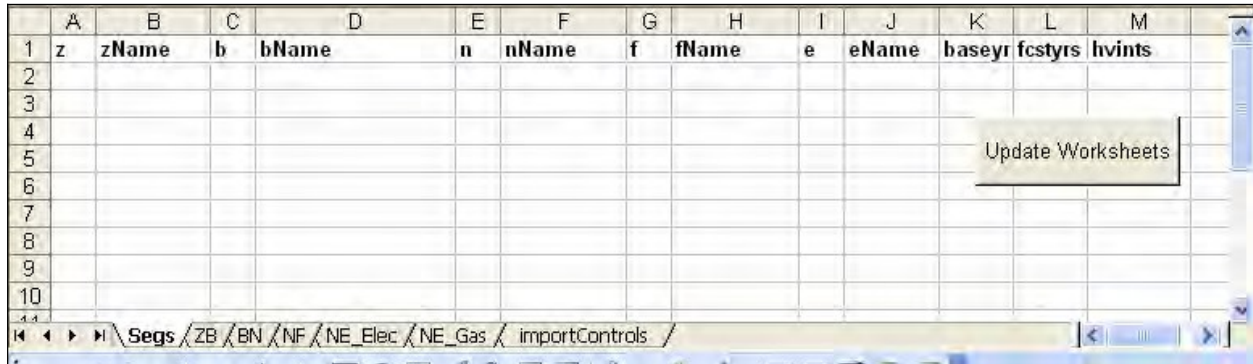
Table 3 summarizes the intended use of each of these dimensions. Note that while the model must include all five dimension, you are not required to use all of them. For example, suppose you want a design with alternative providers at Dimension 4 and do not wish to complicate the model with product/service options. In this case, you would assign only one alternative to Dimension 5, which effectively eliminates this dimension from the analysis. You could assign the same name to the single Dimension 5 alternative as that of the Dimension 4 to signify that in the design, this dimension has essentially been eliminated.

Table 3. End Use Forecaster Dimension Use Summary

Dimension	End Use Forecaster Dimension Name	End Use Forecaster Descriptive Name	End Use Forecaster Function	Special Features	No. Segment Levels in End Use Forecaster
One	z	zName	Factors that separate groups of customers		999
Two	b	bName	Additional factors that separate groups of customers	Building or contract life can be used to allow existing customers to decay over time	999
Three	n	nName	Equipment, products, services potentially purchased by Dimensions 1 – 2	Equipment or contract life can be used to allow existing equipment to decay over time	999
Four	f	fName	Providers of Dimension 3	Provider Choice module forecasts market shares	4
Five	e	eName	Service Options within Dimension 4	Provider Choice module forecasts product option shares	4

Open *Seg_Design_Template.xls*. Excel will prompt you to either enable or disable macros and *you will want to enable the macros*. Of the workbooks seven tabs, the first of interest is called “Segs,” which is used for the definition of the different dimensions (z, b, n, f, and e) as well as the base year and years in the forecast rizon. That sheet should look like the image below, with no values for any of the dimensions:

Figure 7. Empty “Segs” Tab in Seg_Design_Template.xls



On this tab, first establish the base year of the forecast, the number of forecast years, and the number of historical vintages in columns K, L, and M below the headers baseyr, fcstysr, and hvints, respectively. Next, the recommended first step is to fill in the columns for zName, bName, nName, fName, and eName with whatever zones, segments, end uses, fuels, and efficiency levels (or however you want to define the dimensions) that you want to include in the segmentation design. Once you have filled in the desired descriptive names, they then need to have their corresponding model values. ***These format for these is critical.*** For z, b, and n the format is three-character numeric values. That is, they are a numeric values from 1 to 999 with leading zeros for all values below 100. In Excel, it is necessary to type an apostrophe (“ ’ ”) prior to entering the value or else Excel will convert the cell to a numeric value and you will lose the leading zeros. For f and e, these are one-character numeric values. That is, they will have value of 1, 2, 3, or 4, but they must be in a character format. Again, a leading apostrophe will tell Excel to make these character. Figure 8 shows a fully populated “Segs” tab.

A Note on Naming Conventions – It is best to restrict the names of the different levels in each dimension used in the segmentation design to valid SAS variable names. According to SAS documentation, these names “can be up to 32 characters long. The first character must be a letter (A, B, C, . . . , Z) or underscore (_). Other characters can be letters, numbers (0, 1, . . . , 9), or underscores. Blanks cannot appear in SAS names, and special characters (for example, \$, @, #), except underscores, are not allowed.” While it is not an explicit requirement, using these names will greatly facilitate the process of model population because it will allow for the import and manipulation of data using names that need no modification to be applied directly to the model.

Figure 8. Example of Populated “Segs” Tab in Seg_Design_Template.xls

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	z	zName	b	bName	n	nName	f	fName	e	eName	baseyr	fcstyrs	hvints
2	001	Residential	001	Single_Family	001	Space_Heat	1	Natural_Gas	1	Stock	2003	22	3
3			002	MF2_2_TO_4_Un	002	Water_Heat	2	Electric	2	Standard			
4			003	MF3_GE_5_Unite	003	Cooking			3	High			
5			004	MM_Master_Mete	004	Drying			4	Premium			
6			005	SM_Sub_Meter	005	Pool							
7					006	Spa							
8					007	Fireplace							
9					008	Barbecue							
10					009	Other							
11													
12													

Update Worksheets

\\Segs\ZB\BN\NF\NE_Elec\NE_Gas\importControls /

Once you have completed the “Segs” tab, selecting the Update Worksheets button will then populate the tabs “ZB,” “BN,” “NF,” “NE_Elec,” and “NE_Gas” with the desired segments in the correct format for the user to then fill out. For example, Figure 9 shows the “BN” tab as it will appear after activation of the Update Worksheets button.

Figure 9. Example of Unpopulated “BN” Tab in Seg_Design_Template.xls

	A	B	C	D	E	F
1	nName	Single_Family	MF2_2_TO_4_Units	MF3_GE_5_Units	MM_Master_Meter	SM_Sub_Meter
2	Space_Heat					
3	Water_Heat					
4	Cooking					
5	Drying					
6	Pool					
7	Spa					
8	Fireplace					
9	Barbecue					
10	Other					
11						

\\Segs\ZB\BN\NF\NE_Elec\NE_Gas\importControls /

Again, the segmentation is hierarchical. The purpose of the newly-populated tabs (“ZB,” “BN,” “NF,” “NE_Elec,” and “NE_Gas”) is to allow the specification of which dimensions belong together – starting at the top of the hierarchy and moving down – in the segmentation design. For example, with the ZB tab, the purpose might be to define which building belong in each geographic area. The key here is that the design need not be symmetrical. You might have Z represent two geographic areas, one extremely urban that would not have manufactured housing and rural that would need this home type.

The population of these tabs is based on filling the relevant cells with “TRUE” or “FALSE,” with the former indicating where the dimensional relationship should exist in the segmentation design. The relationships defined in these tabs is as follows:

- **ZB** – Define which levels of the second (b) dimension belong in each level of the first (z) dimension.
- **BN** – Define which levels of the third (n) dimension belong in each level of the second (b) dimension.
- **NF** – Define which levels of the fourth (f) dimension belong in each level of the third (n) dimension.
- **NE_Elec** – Define which levels of the fifth (e) dimension belong in each level of the third (n) dimension for the electric fuel type.
- **NE_Gas** – Define which levels of the fifth (e) dimension belong in each level of the third (n) dimension for the gas fuel type.

Figure 10 presents a fully-populated “NE_Elec” tab. Note the pattern of “TRUE” and “FALSE” indicating which of the efficiency levels apply to the different end uses.

Figure 10. Example of Populated “NE_Elec” Tab in Seg_Design_Template.xls

	A	B	C	D	E
1	nName	Stock	Standard	High	Premium
2	Space_Heat	TRUE	FALSE	FALSE	FALSE
3	Water_Heat	TRUE	TRUE	TRUE	TRUE
4	Cooking	TRUE	TRUE	FALSE	FALSE
5	Drying	TRUE	TRUE	FALSE	FALSE
6	Pool	TRUE	FALSE	FALSE	FALSE
7	Spa	TRUE	FALSE	FALSE	FALSE
8	Fireplace	TRUE	FALSE	FALSE	FALSE
9	Barbecue	TRUE	FALSE	FALSE	FALSE
10	Other	TRUE	FALSE	FALSE	FALSE
11					

Note that in filling in all of these sheets, make every effort to keep the data “clean.” That is, there can be no data in adjoining rows or columns that is extraneous to the segmentation design. If there has been any work done in cells, it might be best to delete all the rows to the right of the last relevant column and all the rows below the last relevant row.

Finally, the last tab - importControls – tells SAS in the next step how to bring in the data contained on various tabs in the segmentation design workbook. Other than two cells, this entire workbook will populated itself dynamically based on the other tabs. Those two cells are E5 and

E6 – shown in Figure 11 with the values “Electric” and “Gas,” respectively – and the values the contain must be identical to whatever you have specified on the original “Segs” tab. That is, if you’ve called your fuels “Electricity” and “Natural Gas,” the values in those cells must be identical.

Figure 11. A portion of the importControls Tab in Seg_Design_Template.xls

	A	B	C	D	E	F
1	sheetName	outFile	byVar	tranVar	fuel	startRow
2	ZB	ZB_Combos	z	b		2
3	BN	BN_Combos	n	b		2
4	NF	NF_Combos	n	f		2
5	NE_Elec	NE_Elec_Combos	n	e	Electric	2
6	NE_Gas	NE_Gas_Combos	n	e	Gas	2
7						

Once you are done populating Seg_Design_Template.xls, you will have to save the workbook with a very specific name in the data folder for the model under creation (C:\EUForecaster\modelData\yourModelname). That name must be whatever your model name is with “_Segments” appended at the end. For example, if you’ve created the a model for small commercial customers for a utility’s end-use model, you might call the model “Small_Com.” Accordingly, you’d save the workbook as “Small_Com_Segments.xls.” Again, the file is read-only, so it will prompt you to save it under another name should you try to save it normally.

Creation of the Segs Library Datasets

After completing the Seg_Design_Template.xls and workbook and saving it under another name, the next step is convert this information into the various Segs library datasets. To do this, under the Market Module on the main dashboard, select the “Create ‘Segs’ Datasets from Excel” option. The interface will prompt you to say ‘OK’ or to cancel. If you are confident in your segmentation design, select ‘OK.’ To check that this code has run correctly, you should see the all of the segmentation design datasets in the “Segs” library, as shown in Figure 12, and they should all have a modified date reflecting the time when the code was submitted.

Contents of 'Segs'				
Name	Size	Type	D.	Modified
B_dim	5.0KB (2 Cols X 14 Rows...)	Table		10Jan06:10:19:30
E_dim	5.0KB (2 Cols X 4 Rows) ...	Table		10Jan06:10:19:32
F_dim	5.0KB (2 Cols X 2 Rows) ...	Table		10Jan06:10:19:32
Initparm	5.0KB (2 Cols X 1 Rows) ...	Table		10Jan06:10:19:28
N_dim	5.0KB (2 Cols X 11 Rows...)	Table		10Jan06:10:19:31
Z	5.0KB (3 Cols X 1 Rows) ...	Table		10Jan06:10:19:40
Zb	5.0KB (6 Cols X 14 Rows...)	Table		13Jan06:10:43:41
Zbn	9.0KB (8 Cols X 87 Rows...)	Table		13Jan06:10:43:41
Zbnf	17.0KB (10 Cols X 160 R...)	Table		11Jan06:16:49:08
Zbnfe	33.0KB (11 Cols X 376 R...)	Table		10Jan06:10:19:39
Z_dim	5.0KB (2 Cols X 1 Rows) ...	Table		10Jan06:10:19:29

Expansion on the Segmentation Design

Once the Segs library is populated with the desired segmentation design, the next step is to expand the Segs library datasets to create all of datasets necessary to run the model. Select “Expand ‘Segs’ Datasets” under the Markets Module on the main dashboard and say ‘OK.’ Once this code has run, you should be able to look in the “Input” library and see datasets it has created, as shown in Figure 13.

Contents of 'Input'			
Name	Size	Type	Modified
Accountdecay_10	17.0KB (10 Cols X 115 R...	Table	08Feb06:13:44:38
Calibrationzb_10	9.0KB (7 Cols X 105 Row...	Table	08Feb06:13:44:40
Calibrationz_10	5.0KB (5 Cols X 21 Rows...	Table	08Feb06:13:44:40
Choicebatchcontrol	9.0KB (10 Cols X 1 Rows...	Table	08Feb06:13:44:39
Choicedrivers_10	301.0KB (15 Cols X 2646...	Table	08Feb06:13:44:38
Choiceparameters_10	65.0KB (21 Cols X 282 R...	Table	08Feb06:13:44:38
Customercountsactual_10	9.0KB (9 Cols X 15 Rows...	Table	08Feb06:13:44:39
Customercountsforecast_10	17.0KB (9 Cols X 100 Ro...	Table	08Feb06:13:44:39
Dsmechoice_10	49.0KB (17 Cols X 183 R...	Table	08Feb06:13:44:38
Dsmfchoice_10	33.0KB (14 Cols X 99 Ro...	Table	08Feb06:13:44:38
Dsmretrofit_10	33.0KB (20 Cols X 122 R...	Table	08Feb06:13:44:38
Echoicestatus_10	9.0KB (10 Cols X 61 Row...	Table	08Feb06:13:44:39
Equipmentage_10	17.0KB (9 Cols X 99 Row...	Table	08Feb06:13:44:39
Equipmentdecay_10	25.0KB (14 Cols X 122 R...	Table	08Feb06:13:44:38
Esharesinitial_10	25.0KB (15 Cols X 126 R...	Table	08Feb06:13:44:39
Fchoicestatus_10	9.0KB (8 Cols X 33 Rows...	Table	08Feb06:13:44:39
Forecastbatchcontrol	9.0KB (11 Cols X 1 Rows...	Table	08Feb06:13:44:39
Fsharesinitial_10	9.0KB (12 Cols X 61 Row...	Table	08Feb06:13:44:39
Intro	5.0KB (2 Cols X 1 Rows) ...	Table	08Feb06:13:44:39
Priceforecast_10	105.0KB (10 Cols X 1281...	Table	08Feb06:13:44:38
Saturations_10	641.0KB (9 Cols X 9009 ...	Table	08Feb06:13:44:38
Usagebatchcontrol	5.0KB (4 Cols X 1 Rows) ...	Table	08Feb06:13:44:39
Usedrivers_10	7.9MB (33 Cols X 31752 ...	Table	08Feb06:13:44:39
Usageparameters_10	769.0KB (34 Cols X 2898...	Table	08Feb06:13:44:39

Note that this step will often be used more than once, as it also serves as a means of “refreshing” the model. Throughout the process of populating the model, any number of operator error-based issues can corrupt the structure of these input data sets, which will lead to questionable results during operation of the model. For example, necessary rows might be lost during an incorrect merge or a typo will lead to an incorrect variable name. When this happens, the easiest way to recover is to perform this step, which will re-create all the datasets in the required structure.

Model Population

Once the starting datasets in the Input library have been created, you must enter data into the SAS datasets that were automatically created by building the segment master. Table 4 shows all the datasets that are created in the INPUT library and the module with which they are associated. The table also provides a brief outline of the information to be entered in each dataset with more detailed information provided in subsequent chapters.

Module	Dataset	Contents
Usage	usageBatchControl	See Batch Control Usage below
Usage	usageDrivers_10	Equipment usage equation forecast drivers
Usage	usageParameters_10	Coefficients describing how usage varies by weather, customer characteristics, prices, and other variables
Choice	choiceBatchControl	See Batch Control Usage below
Choice	choiceDrivers_10	Choice forecast drivers, including capital costs for equipment in existing, conversion, and new construction buildings, plus future availability of each equipment type
Choice	choiceParameters_10	Provider Choice function initialization parameters for Dimension 4 and 5 purchase choices
Choice	eChoiceStatus_10	A status variable that tells the Choice Module how to model shares for Dimension 5. Set this variable to "1" to hold the initial market shares constant over the forecast horizon.
Choice	eSharesInitial_10	Average and marginal market shares for existing, conversion, and new customers for Dimension 5
Choice	fChoiceStatus_10	A status variable that tells the Choice Module how to model shares for Dimension 4. Set this variable to "1" to hold the initial market shares constant over the forecast horizon.
Choice	fSharesInitial_10	Average and marginal market shares for existing, conversion, and new customers for Dimension 4
Choice	priceForecast_10	Fuel, product, or service price forecasts in native units (e.g., therms, kWh, gallons, cubic meters)
Forecast	ForecastBatchControl	See Batch Control Usage below
Forecast	accountDecay_10	Decay functional form indicator and parameters for existing, conversion, and new accounts
Forecast	customerCountsActual_10	Number of existing accounts, non-accounts on main, and non-accounts off main
Forecast	customerCountsForecast_10	Forecast of new construction (economic activity driving demand), capture rates, units per account, and number of units (i.e., units are a scale of measurement consistent with results of the usage forecast, such as buildings, square footage, apartments, etc.)
Forecast	equipmentAge_10	Mean age of end uses by historical vintage in the baseline (i.e., 0th) year of the forecast, used to initialize the age dimension in the turnover/vintage module
Forecast	equipmentDecay_10	Decay functional form indicator and parameters for equipment (end-uses) in existing, conversion, and new buildings
Forecast	 saturations_10	Saturation (percentage of accounts that have the equipment) independent of fourth dimension market shares
N/A	calibrationZ_10	Total actual sales in base year for Dimension 1
N/A	calibrationZB_10	Total actual sales in base year for Dimension 2
Intervention Strategies	dsmEChoice_10	Exogenous parameters that change Dimension 5 market shares for existing, conversion, and/or new customers through 'what if' intervention strategies
Intervention Strategies	dsmFChoice_10	Exogenous parameters that change Dimension 4 market shares for existing, conversion, and/or new customers through 'what if' intervention strategies
Intervention Strategies	dsmRetrofit_10	Exogenous parameters that adjust product usage through 'what if' convention strategies

The method for populating these datasets, however, depends on the interaction of several factors. If the operators SAS skills are limited and the overall segmentation design is simple enough that that datasets do not exceed Excel's row limits, the data can be exported, populated manually, and then re-imported. If the data that will go into the model already exist in an electronic format and the operator has SAS skills that cover basic merges and data manipulation, the datasets can be populated via SAS code. Another option is to create data entry templates that conform to the format of the various data sources that will then be imported into SAS, manipulated to take on the correct format for the model, and then used to populate the datasets via SAS code. The final and best solution will often be a combination of multiple methods.

Batch Control Usage

The INPUT library includes three “batch processing” datasets that describe how various datasets (input scenarios, or the “_xx” suffix) are jointly processed within End Use Forecaster forecast output scenarios. These datasets are:

- **usageBatchControl:** selects input scenarios for each set of input files for forecasting equipment purchase choices
- **choiceBatchControl:** “packages” sets of expected market shares as a result of customer service programs with those segments that are unaffected by these activities into one cohesive group
- **forecastBatchControl:** combines chosen product usage equations, usage drivers, and historical vintage adjustment scenarios

End Use Forecaster automatically creates the base case scenario, denoted by “_10,” for each of these datasets. Additional scenarios can be designated in each batch dataset by:

- Adding a new row worksheet in each dataset through SAS/FSP and changing the relevant scenario indicators
- Writing SAS code to create the datasets with the desired scenario inputs
- Managing the batch controls in an Excel workbook and importing them via SAS

Batch processing datasets allow the user to specify all the input datasets for a given scenario. The strength of this approach is that it allows the analyst to mix and match datasets from different scenarios, which avoids having to keep identical datasets for different scenarios. Figure 14 presents a hypothetical **choiceBatchControl** dataset. In the example, the user has set up three different scenarios (10, 20, and 30), which pull mostly the same datasets, with a couple of exceptions. First, Scenario 20 pulls an alternate price forecast, ostensibly one with high gas prices. Second, Scenario 30 utilizes the price forecast produced for Scenario 20 and also pulls in an alternate usage forecast.

Figure 14. Example choiceBatchControl Dataset

scenario	choiceDrivers	priceForecast	choiceParameters	usageAnnual	eSharesInitial	fSharesInitial	eChoiceStatus	fChoiceStatus	scenarioName
10	10	10	10	10	10	10	10	10	Base Case
20	10	20	10	10	10	10	10	10	High Gas Price Forecast
30	10	20	10	30	10	10	10	10	Low Usage

Scenario 20 pulls a different price scenario.

Scenario 30 pulls different usage and price forecasts, but utilizes the same dataset used for Scenario20.

IV. Product Usage Module

End Use Forecaster tracks consumption of resources (natural gas, electricity, etc.) through the Product Usage module. The module provides a forecast of the predicted consumption by combining (1) a monthly forecast of consumption factors or drivers (i.e., independent or exogenous variables), stored in the SAS dataset **usageDrivers_xx**, and (2) a set of coefficients associated with each exogenous variable, stored in **usageParameters_xx**.

The Product Usage module merges the **usageParameters_xx** dataset with the usage forecast drivers (**usageDrivers_xx**) and sums the results over all variables in order to obtain usage forecasts at the unit level (e.g., per customer, per square foot). The results then become inputs into the Provider Choice and Forecast modules.

If the *usageEquationStatus* variable in **usageParameters_xx** equals 1, usage is a linear combination of the coefficients and forecast drivers:

$$(1) \quad usageMonthly_xx_m = \sum_c usageParameters_xx_c * usageDrivers_xx_{cm}$$

where:

- **usageParameters_xx_c** = usage coefficients c, where the default has 21 slots (B0 through B20)
- **usageDrivers_xx_{cm}** is the monthly forecast (m) of each forecast driver (independent variable) associated with coefficient c (X0 through X20)

If *usageEquationStatus* is set equal to 2, then the Product Usage Module assigns a log-log function:

$$(2) \quad usageMonthly_xx_m = exp(\sum_c usageParameters_xx_c * log(usageDrivers_xx_{cm}))$$

The default structure is a linear model with *usageEquationStatus* equal to 1.²

The final step in this module is to aggregate usage to an annual figure (**usageAnnual_xx**). Both monthly and annual forecasts for a given scenario are stored in the INTER library.

The **usageBatchControl** dataset in the INPUT library has the following variables that define the input datasets associated with each output scenario:

- *scenario*: The Product Usage module output scenario
- *usageParameters*: The input scenario associated with the product usage equations (**usageParameters_xx**)

² As discussed further below under Calibration, End Use Forecaster’s automatic sales calibration routine is designed to work with the linear model where *usageEquationStatus* is set equal to 1. Calibration routines for more complex usage equation structures defined by the log-log or other status indicators (3, 4, etc.) can be developed by The Cadmus Group (Quantec) on request.

- *usageDrivers*: The input scenario associated with the product usage drivers (**usageDrivers_xx**)

Figure 15 shows the program flow, including input and output datasets. Table 5 describes the data sets and their key attributes in more detail.

Figure 15. Product Usage Module Program Flow for “usageBatch.sas”

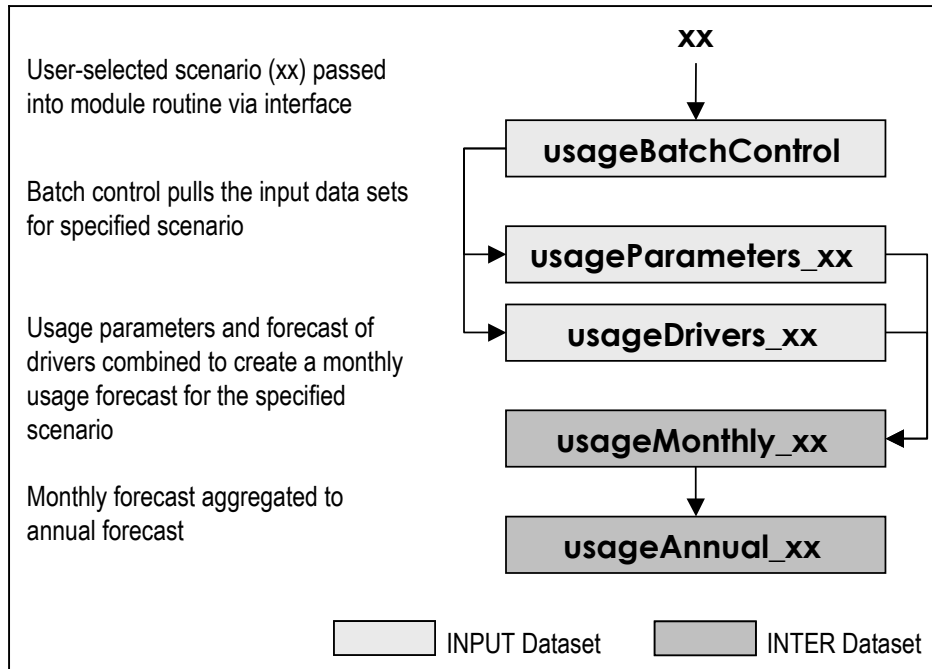


Table 5. Product Usage Module Data Library

Library	Dataset	Description	File/Record Dimensions	Variables/Attributes
INPUT	usageBatchControls	Usage forecast input scenarios	1 record per Output scenario	Usage equation input scenario, forecast driver input scenario, vintage adjustment input scenario, output scenario
INPUT	UsageParameters_xx	Usage forecast equation parameters	Dimensions 1, 2, 3, 4, 5, and vintage	Usage equation parameters B0 through B0 for input scenario Sxx
INPUT	usageDrivers_xx	Usage forecast drivers	Dimensions 1, 2, 3, 4, and 5, year, month	Usage forecast drivers X0 through X0 for input scenario Sxx

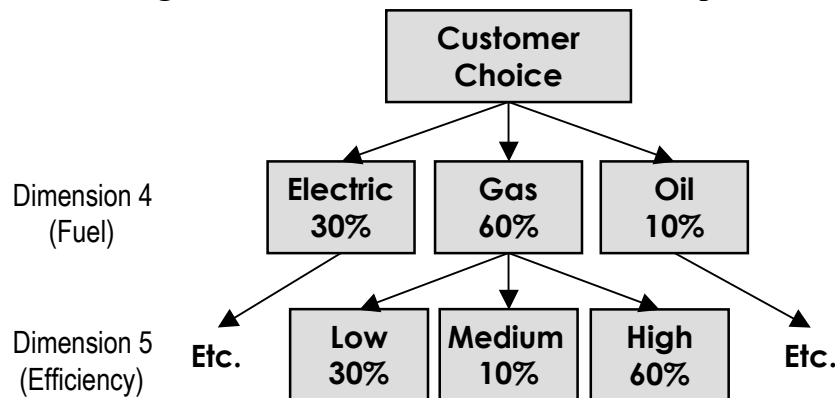
V. Provider Choice Module

The Provider Choice module analyzes customer choice decisions among competitors and product options. For example, customers choose their end-use equipment from various fuel types and efficiency levels. Purchase decisions are represented by a nested structure of provider (fuel) and product (efficiency) option choices.

The nested structure of the Provider Choice module is illustrated in Figure 16 below. This figure represents fourth and fifth dimension choices. The customer in this example faces a choice of gas vs. electricity vs. oil at the fourth dimension, and low vs. medium vs. high efficiency at the fifth dimension. Analysts often think of this problem as “efficiency choice conditional on fuel choice,” hence the downward arrows in the figure. But customer choice theory and the Provider Choice Module actually work in the opposite direction, with the fourth dimension conditional upon fifth dimension choices. In reality, the customer makes a simultaneous choice across these dimensions, and the model structure shown in Figure 16 is just a convenient way of modeling this behavior.

The Provider Choice module first estimates the fifth dimension (efficiency) parameters and forecasts its market shares. The model then calculates the weighted average operating and capital costs for each fourth dimension (fuel) alternative, estimates the choice equation coefficients, and then produces a forecast for the fourth dimension.

Figure 16. Provider Choice Module Example



Note that the structure of the tree need not be symmetric. For example, single fuel energy companies and water utilities may want to focus on multiple efficiency levels for customers using their products. A single efficiency level can be specified for the remaining fuels.

The application of choice coefficients and forecast drivers form a discrete choice-type model that is applied to individual customer data. These models are analogous to regression models for equipment usage. The estimated discrete choice model parameters describe how equipment costs, operating costs, equipment characteristics, and customer characteristics affect equipment

choices. For each choice level there are capital and operating cost parameters (called betas) and alternative-specific intercepts (called alphas).

The alphas and betas are developed through one or more of the available Provider Choice algorithms in End Use Forecaster:

1. Using individual customer level survey and equipment usage data, discrete choice models consistent with the segmentation design are estimated. Note that like usage equation modeling, this estimation is conducted outside of End Use Forecaster, but may be conducted using the same SAS procedures as those used by End Use Forecaster.
2. If individual customer data are not available for discrete choice modeling, End Use Forecaster can use aggregate market data to simulate a simple choice model from equipment capital costs and operating costs.
3. If individual customer data are not available for discrete choice modeling, End Use Forecaster can calculate and use approximate solutions calculated using Mathematica. [Note: this feature is not currently available, but will be added by May 2006]

These alternatives are summarized in Table 6.

Table 6. Provider Choice Equation Status Variable Definitions

Status Variable	Description	Beta Parameters	Alpha (Intercept) Parameters	Potential Applicability to Choice Model
1	Exogenous Market Shares Specified	N/A	N/A	Yes
2	Logit: estimated	Estimated Outside End Use Forecaster	Estimated Outside End Use Forecaster	Yes
3	Logit: estimated	Estimated	Starting values: to be calibrated	Yes
4	Logit: simulated	Starting values: to be estimated & calibrated	Starting values: to be estimated & calibrated	Yes
5	Logit: calculated	Calculated	Calculated	Yes

Model Parameterization

Estimation Mode (Status 2 and 3)

Customer choice parameters can be estimated when sufficient micro-level customer choice data are available to estimate regression coefficients for actual consumer decisions. The Cadmux Group (Quantec) customizes and estimates choice equations for companies who request this approach or uses choice model parameters from previous research conduct by the company.

The choice equation status variables are set equal to 2 or 3 if this approach is used. If status equals 2, all parameters have been estimated outside the model, and no further calibration is necessary. If status equals 3, a logit functional form has been used to estimate operating and

capital cost parameters and the model is being calibrated to base year market shares by adjusting the intercept terms.

Simulation Mode (Status 4)

The simulation of consumer choice is useful when customer-level data are not available. Most users of End Use Forecaster find themselves in this position before they can conduct primary market research. In simulation mode, this module estimates parameters of the choice function based on available data for:

- Operating and capital costs
- Marginal (most recent) equipment market shares
- Customer discount rates
- An estimate of the proportion of customer preferences or “utility” that is related to non-price factors

Provider Choice module coefficients are developed by solving a system of equations within the SAS Model procedure.

Exogenous Mode (Status 1)

If neither micro-level customer choice data nor aggregate data are available, or if poor data quality prevents choice equations from being estimated (simulated), the status variable can be set equal to 1 in order to bypass the Provider Choice Module. In such a cases, market shares are set equal to the values in **fSharesInitial_xx** and **eSharesInitial_xx**.

Forecasting

The Provider Choice model produces forecasts over the planning horizon by applying a forecast of equipment capital costs, equipment energy consumption (from the Product Usage module), and fuel price forecasts to the estimated (simulated) choice parameters.

If modes 2 through 4 are used, these variables will affect market shares over the forecast horizon. If the exogenous mode (status 1) is used, market shares are held constant at their base year values over the forecasting horizon. Exogenous forecasts can also be modified via alternative market share forecast scenarios that are specified in the Intervention Strategies module (see Chapter VI).

Market Availability

End Use Forecaster can adjust forecasted efficiency market shares to reflect changes in regulations by removing the market availability of specified alternatives in the future. In this adjustment procedure, End Use Forecaster shifts any market shares designated for efficiency alternatives to be removed from the market to the remaining alternatives, proportional to their *a priori* market shares. This approach to market availability can also be adapted to situations where

an efficiency level has become obsolescent in the market, such as the market availability of alternatives of superior consumer value at lower cost.

End Use Forecaster includes a variable called *available* that is entered in the **choiceDrivers_xx** dataset. *Available* is equal to 1 when the configuration is available on the market and zero when it is no longer available. When the choice model finds an unavailable configuration, it will reassign that configuration's shares (at the efficiency level) to the remaining configurations.

Provider Choice Module Analysis and Data Flow

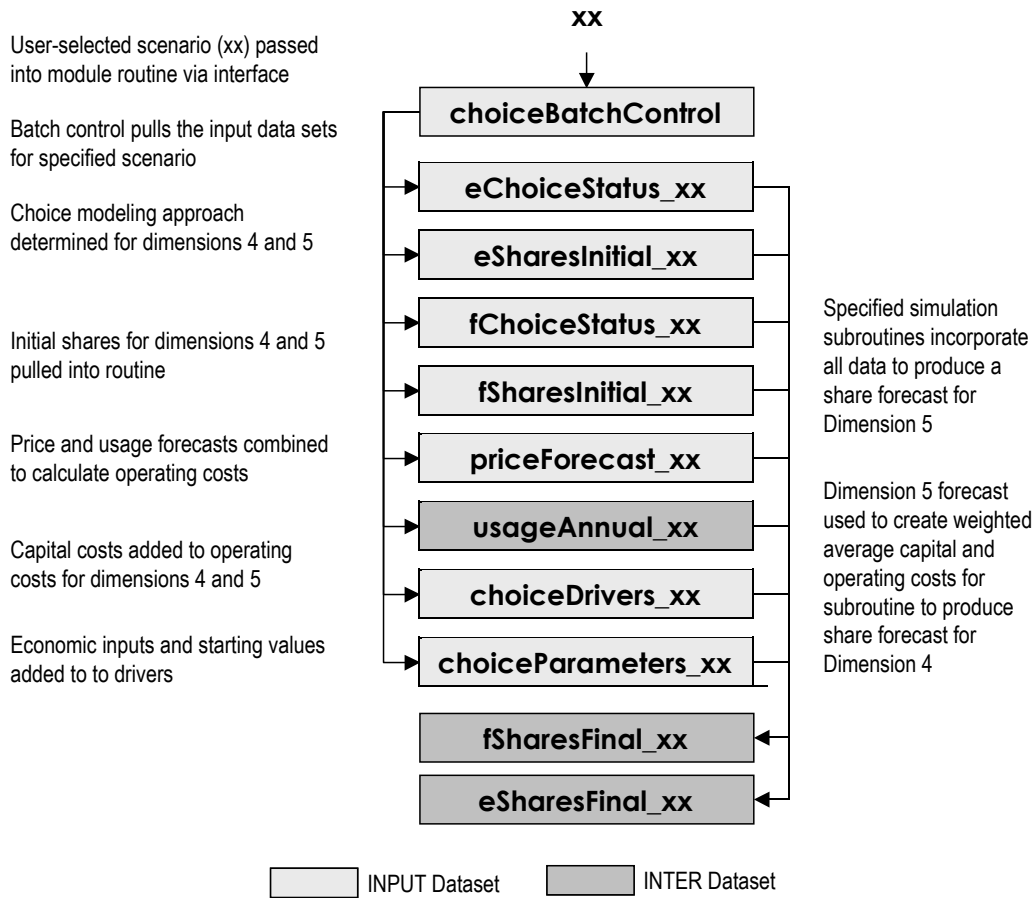
Figure 17 shows the data and analysis flow through the Provider Choice Module.

The dataset **choiceBatchControl** in the input library describes any scenario in terms of the following:

- Equipment capital costs and future availability (**choiceDrivers_xx**)
- Initial simulation (or estimation) parameters (**choiceParameters_xx**)
- Forecasted energy prices (**priceForecast_xx**)
- Product Usage output forecast scenario (**usageAnnual_xx**)
- Initial base-year efficiency (dimension 5) shares (**eSharesInitial_xx**)
- Initial base-year fuel (dimension 4) shares (**fSharesInitial_xx**)
- Indicator for efficiency (dimension 5) choice simulation (**eChoiceStatus_xx**)
- Indicator for fuel (dimension 4) choice simulation (**fChoiceStatus_xx**)

The simulation subroutines in **choiceBatch.sas** calibrate Provider Choice module coefficients to the baseline market shares in **fSharesInitial_xx** and **eSharesInitial_xx**. The program derives a simultaneous solution for all the qualitative choice coefficients using PROC MODEL from SAS/ETS. The first step in this subroutine is to integrate usage module information (consumption per configuration) with forecasted prices per unit of use to generate forecasted operating costs. Along with forecasted capital costs and other variables used in the qualitative choice models, this information serves as the forecast dataset for choice for each market segment. End Use Forecaster's default choice structure considers up to four alternatives at each level of the nest. The Cadmus Group (Quantec) can customize and modify the code if more than four alternatives are needed.

Figure 17. Provider Choice Module Program Flow for “choiceBatch.sas”



Initial Values

The initial value datasets from **choiceParameters_xx** are merged with the other datasets described above. Initial values and other parameters include:

- Equipment life
- Customer discount rate
- Share of customer preferences (“utility”) associated with non-price attributes
- Initial values for alternative-specific constants and model coefficients

In some cases, the subroutine can be sensitive to the initial values, particularly for capital and operating cost coefficients. This problem can generally be mitigated by using initial values that are very small numbers, such as $1E^{-8}$.

Single-Alternative Choices

Choice estimation is not required for one-alternative situations; the choice forecasting routine assigns a 100% market share to these single alternative situations in the choice nest.

Confirming Calibration Results (Status 3 or 4)

A final step in the choice calibration process is to confirm that all equation coefficients have been solved correctly and that the coefficient values are reasonable. The nature of “solving” each choice equation for the appropriate coefficients requires an iterative process, where PROC MODEL begins with user-specified starting values of each coefficient and iterates toward a solution based on the input assumptions.

If the coefficient starting values are inappropriate, the calibration process may not reach a solution or it may reach one that is not in an economically feasible region. For example, starting values of coefficients need to be sufficiently low, such that, when they are multiplied by the independent variables, the result is not “out of the ballpark.”

Additionally, if the relative comparison of operating costs and capital costs are contrary to the user-specified discount rate, the calibration routine may find a solution where one of the coefficients may be positive (i.e., indicating that as costs rise, so do purchases, which is a clearly non-economic decision).

To check calibration results:

Certain files require inspecting as part of the forecasting process. Missing values in these forecasted market shares indicate a calibration problem.

- (n) Look for the problem segment(s) in the EUFORECASTER\MODELLOGS directory. The choiceBatch.log file will let you know whether the model was ever “in the ballpark” by noting at what point in the solution-seeking process the SAS/ETS MODEL procedure failed.
- (o) If there is a problem with the scale of a variable, the model will fail at iteration zero and the “hill climbing” optimization never begins.
- (p) If the model fails during subsequent iterations, a systematic change in the initial parameters in **choiceDrivers_xx** is recommended until convergence is achieved. Using the final parameter values from another, similar, segment can help in the calibration process.

Table 7 summarizes the Provider Choice Module along with a description of the data and libraries.

Table 7. Provider Choice Module Data Libraries and Files

Library	Dataset	Description
INPUT	choiceBatchControl	Choice parameter input scenario, choice forecast driver input scenario, fuel price input scenario, output scenario
INPUT	choiceDrivers_xx	Capital cost equipment replacement, capital cost equipment conversion, capital cost new construction equipment, availability
INPUT	priceForecast_xx	Price forecast
INPUT	choiceParameters_xx	Description, NumAlternatives, Lifetime, Discount Rate, PriceShare, Alpha, A1-A4, B1-B2
INTER	usageAnnual_xx	Usage forecast
INPUT	eSharesInitial_xx	Dimension 5 base year average stock share, base year marginal share existing/replacement, base year marginal share conversion, base year marginal share new construction
INPUT	fSharesInitial_xx	Dimension 4 base year average stock share, base year marginal share existing/replacement, base year marginal share conversion, base year marginal share new construction
INPUT	fChoiceStatus_xx	Indicator for method of estimation/simulation for dimension 4 (fuel).
INPUT	eChoiceStatus_xx	Indicator for method of estimation/simulation for dimension 5 (efficiency)
INTER	fSharesFinal_xx	Shares forecast for dimension 4 (fuel) for existing, conversion, and new customers
INTER	eSharesFinal_xx	Shares forecast for dimension 5 (efficiency) for existing, conversion, and new customers

VI. Intervention Strategies Module

The Intervention Strategies module is intended to capture the impacts of a customer rebate or marketing program. These strategies are modeled as “what-if” scenarios. Depending upon the design of the service or program, these impacts combine specified market acceptance patterns with equipment characteristics to estimate impacts on forecasted choices and per-unit usage.

Substitution Programs

Provider (fuel) substitution strategies encourage consumers to purchase equipment from one provider over other providers. For existing equipment, this change can be done either immediately (early replacement) or at the point of existing equipment retirement (normal replacement). The **dsmFChoice_xx** dataset in the input directory controls how a market intervention will affect shares for a given scenario. The inputs in this dataset, summarized in Table 8, vary by the first, second, and third dimensions and can apply differently to existing, conversion, and new customers.

Table 8. Provider (Fuel) Substitution Program Drivers

Variable	Description	Minimum Value	Maximum Value
<i>yearIntroduced</i>	Year of program introduction activity	1	Last year of forecast horizon
<i>programLife</i>	Duration of program (years)	1	Years in forecast horizon
<i>adoptionPath</i>	Years to Full Adoption	1	7
<i>applicability</i>	Percent of customers to which the program applies	0*	1
<i>marketShare</i>	Percent of market share (%)	0*	1
<i>earlyReplacement</i>	Binary flag for whether early adoption applies to program	0	1
<i>description</i>	Program Description	{text}	{text}

* A zero value implies that the program will have no market impact, so the smallest practical value is 0.01 (1%).

** Early adoption applies to existing buildings only. A value of 1 implies that all applicable consumers (applicability * market share * adoption path %) switch immediately, whether or not the equipment fails. A zero implies that all adoption follows the normal equipment and/or building retirement schedule.

Equipment Efficiency Programs

Product (efficiency) option strategies encourage consumers to purchase a particular option (e.g., equipment with a certain efficiency rating). Either early or normal replacement may apply to existing equipment. Table 9 presents the drivers of purchasing programs and their usage.

Table 9. Product (Efficiency) Program Drivers

Variable	Description	Minimum Value	Maximum Value
<i>yearIntroduced</i>	Year of program introduction activity	1	Last year of forecast horizon
<i>programLife</i>	Duration of program (years)	1	Years in forecast horizon
<i>adoptionPath</i>	Years to Full Adoption	1	7
<i>applicability</i>	Percent of customers to which the program applies	0*	1
<i>eLevel</i>	Efficiency level to which program applies	1	4
<i>marketShare</i>	Percent of market share (%)	0*	1
<i>earlyReplacement</i>	Binary flag for whether early adoption applies to program	0	1
<i>description</i>	Program Description	{text}	{text}

* A zero value implies that the program will have no market impact, so the smallest practical value is 0.01 (1%).

** This represents the maximum efficiency level affected by the program for each end use, and is a supplementary type of applicability factor. The variable EL should be specified to be less than or equal to the maximum number of efficiency levels available for that market sector.

*** This represents the maximum vintage level affected by the program for each end use, and is a supplementary type of applicability factor. The variable V should be specified to be less than or equal to the maximum number of vintages for that market sector. Usually it is set equal to zero to denote an existing building or equipment retrofit strategy.

Equipment Retrofit and Operating & Maintenance (O&M) Service Programs

Usage retrofit strategies encourage consumers to change their product usage given the equipment they already have (e.g., improve the efficiency of existing equipment by installing measures such as weatherization or water heater retrofit kits). Table 10 presents the drivers of these programs.

Table 10. Equipment Efficiency Retrofit and O&M Program Drivers

Variable Name	Description	Minimum Value	Maximum Value
<i>yearIntroduced</i>	Year of program introduction activity	1	Last year of forecast horizon
<i>programLife</i>	Duration of program (years)	1	Years in forecast horizon
<i>adoptionPath</i>	Years to full adoption	1	7
<i>applicability</i>	Percent of customers to which the program applies	0*	1
<i>eLevel</i>	Lowest efficiency level to which program applies	1	4
<i>marketShare</i>	Percent of market share (%)	0*	1
<i>eImprovement</i>	Efficiency improvement (%)	0*	1
<i>MeasureLife</i>	Measure life (years)	1	Years in forecast horizon
<i>vintageApplicability</i>	Applicable vintages***	Lowest vintage	Years (vintages) in forecast horizon
<i>description</i>	Program Description	{text}	{text}

* A zero value implies that the program will have no market impact, so the smallest practical value is 0.01 (1%).

** This represents the maximum efficiency level affected by the program for each end use, and is a supplementary type of applicability factor. The variable EL should be specified to be less than or equal to the maximum number of efficiency levels available for that market sector.

*** This represents the maximum vintage level affected by the program for each end use, and is a supplementary type of applicability factor. The variable V should be specified to be less than or equal to the maximum number of vintages for that market sector. Usually it is set equal to zero to denote an existing building or equipment retrofit strategy.

Intervention Strategies Module Operations

You can create many types of Intervention Strategies programs for all market sectors sequentially and automatically, rather than creating each one manually. This batch processing is done via the following datasets, where the scenario indicator “yy” denotes a scenario that differs from “xx.”

- **dsmFChoice_yy** – Dimension 4 (fuel) choice substitution for existing, conversion, and/or new customers, based on user specifications
- **dsmEChoice_yy** – Dimension 5 (efficiency) choice substitution for existing, conversion, and/or new customers, based on user specifications
- **dsmRetrofit_yy** – Equipment retrofit or O&M programs

Each of these files contains a row for each Dimension 1 – 3 combination and data inputs associated with Table 24 (**dsmFChoice_xx**), Table 23 (**dsmEChoice_xx**), or Table 25 (**dsmRetrofit_xx**).

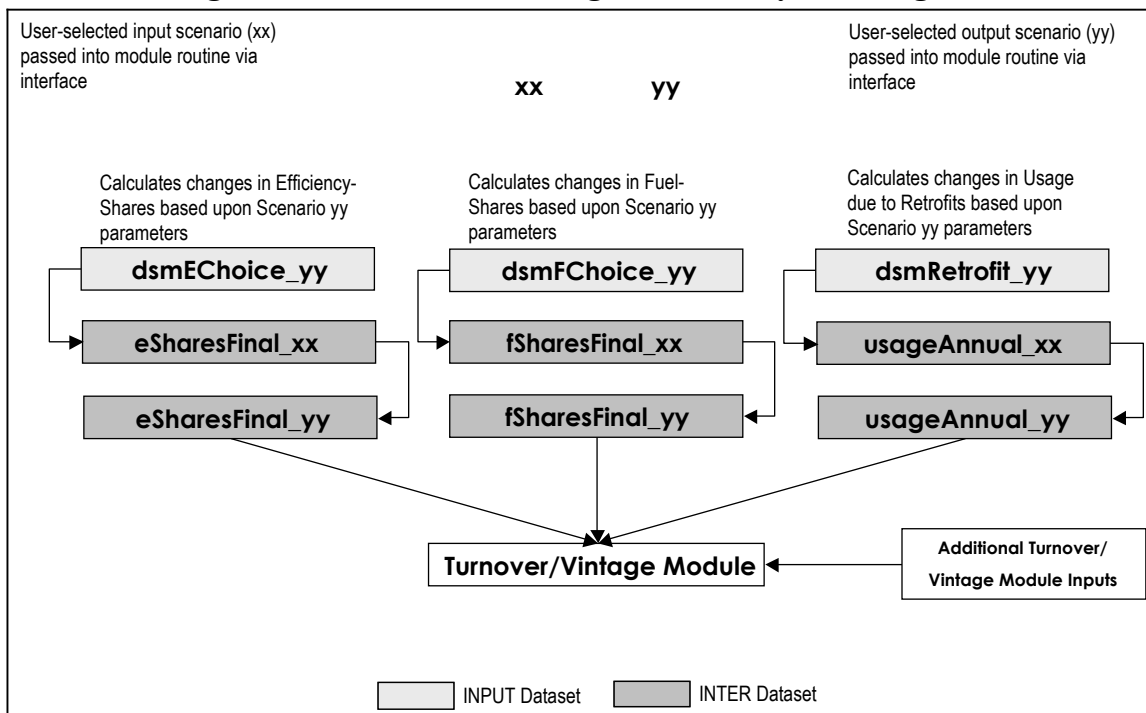
The Market Segmentation module creates base case files (“_10” files) where there is no intervention for each of these program categories. These files serve as templates that allow the user to create different scenarios of interest. To create strategies, you must copy these files to another scenario number and then make changes consistent with the desired intervention strategy over the forecast horizon. It is recommended that these designs be completed by individuals with marketing or demand-side management experience. Alternatively, The Cadmus Group (Quantec) can assist with the development of the first set of intervention strategies.

Figure 18 illustrates how the Intervention Strategies module modifies the Product Usage and/or Provider Choice output files and how these outputs are then used to develop an alternative forecast. Table 11 summarizes the data files used by this module.

Table 11. Intervention Strategies Module Data Library and Files

Directory	File Name	Description	File/Record Dimensions	Variables/Attributes
INPUT	dsmEChoice_xx	Existing/New Dimension 5 (efficiency) program parameters	Dimensions 1-4	Year introduced, program life, applicability, market share, adoption path, early adoption
INPUT	dsmFChoice_xx	Existing/New Dimension 4 (fuel choice) program parameters	Dimensions 1-4	Year introduced, program life, applicability, market share, adoption path, early adoption
INPUT	dsmRetrofit_xx	Product Usage retrofit parameters	Dimensions 1-4	Year introduced, program life, applicability, market share, adoption path, measure life, efficiency improvement, efficiency levels affected, vintages affected

Figure 18. Intervention Strategies Module System Diagram



VII. Forecast Module

The Forecast module serves several analytical and system functions, including forecasts of new construction and conversion accounts, decay or turnover of buildings and equipment, integration of Product Usage, Provider Choice and Intervention Strategies module results, and “internal” forecast reports.

The analytical portion of this module uses information on equipment saturation, average and marginal market shares, building and equipment decay, building account stocks and decay, customer conversions, and new construction to determine changes in the usage mix over time. The final forecast is equal to the number of units [indexed by year, building vintage, equipment age, fuel (provider), and efficiency (product)] multiplied by the consumption per the indexed equipment configuration.

Forecast Inputs

There are several sets of inputs in each Turnover/Vintage module forecast, which are described in Table 12 below. Alternative forecast scenarios using new estimates (scenarios) for new construction, account conversion, usage, choice, account decay, building decay, and any combinations of these can be conducted using the Turnover/Vintage module.

Table 12. Turnover/Vintage Forecast Inputs

Input Type	Dataset
Account Decay Parameters	accountDecay_xx
Equipment Decay Parameters	equipmentDecay_xx
Existing Equipment Age	equipmentAge_xx
Dimension 3 (End Use) Saturation	saturations_xx
Historical Accounts	customerCountsActual_xx
Account Forecast	customerCountsForecast_xx
Product Usage Forecast	usageAnnual_xx
Dimension 4 (Fuel) Shares Forecast	fSharesFinal_xx
Dimension 5 (Efficiency) Shares Forecast	eSharesFinal_xx

Historical and New Construction Building Stocks

Historical accounts are segmented into the number of total accounts in the base year and their distribution among the historical vintages as determined by the user in the segmentation design. Accounts are defined in terms of both buildings and building units (i.e., accounts, apartments, square feet, etc.). Building units are the level of measurement at which the Product Usage module estimates are rendered.

The total building stock in any forecast year is not the simple difference between the total building stock in the current year and the previous year because some buildings will have been

destroyed, completely gutted, or removed from the system in the course of a year. The number of existing buildings replaced each year is dependent on the stock of vintages and the overall decay rate.

Forecasting Equipment Stocks

Dimension 3 (i.e., end use) equipment stocks are forecasted through similar methods as buildings. Initial base year equipment stock levels are estimated utilizing equipment saturation estimates for existing and new construction building vintages in the **saturation_{xx}** dataset. Market shares of new equipment over the forecast horizon are generated in the Provider Choice or Intervention Strategies module and passed to the Turnover/Vintage module via the series of market share forecasts in the **eSharesInitial_{xx}** and **fSharesInitial_{xx}** datasets. You may provide the average age of equipment in existing buildings in the base year in order to initialize the equipment age dimension (**equipmentAge_{xx}**). Generally, this average age is specified as the mean technical lifetime of the equipment.

The forecast simulation then estimates equipment stocks for Dimensions 3-5 (i.e., end use, fuel, and efficiency level) for each Dimension 1-2 combination. The new equipment stock installed each year is dependent on the growth and decay of building stocks, the natural replacement cycle of the equipment, the saturation rates of the end use in new construction, and the market shares of technology types.

End Use Forecaster contains a vintage hierarchy where Dimension 2 (buildings) dominates Dimension 3 (end uses). For example, an older dwelling may have a relatively new furnace and water heater, but these end uses effectively “disappear” if the building is demolished or undergoes a major renovation.

Building and Equipment Decay Functions

The user may specify decay rates of existing stocks of buildings and equipment, as well as new stock constructed or installed in subsequent years. Decay functions and parameters can differ for the existing and new stocks. Some analysts specify different decay functions for existing and new building stocks as the existing base year building stock is an amalgam of unknown vintages and new building stock is tracked as discreet homogenous annual blocks.

There are two datasets with decay rate data for each market segmentation design (**accountDecay_{xx}** and **equipmentDecay_{xx}**). In each of these decay data files, there are two sets of information to be entered: decay functions and decay parameters.

A numeric indicator ranging from 1 to 3 indicates the selected function. Available functions include exponential (1), logistic (2), and Weibull (3). Exponential functions have one parameter, logistic functions have four, and Weibull functions have two.³ The logistic and exponential functions tend to be the most popular and are described in more detail below. The

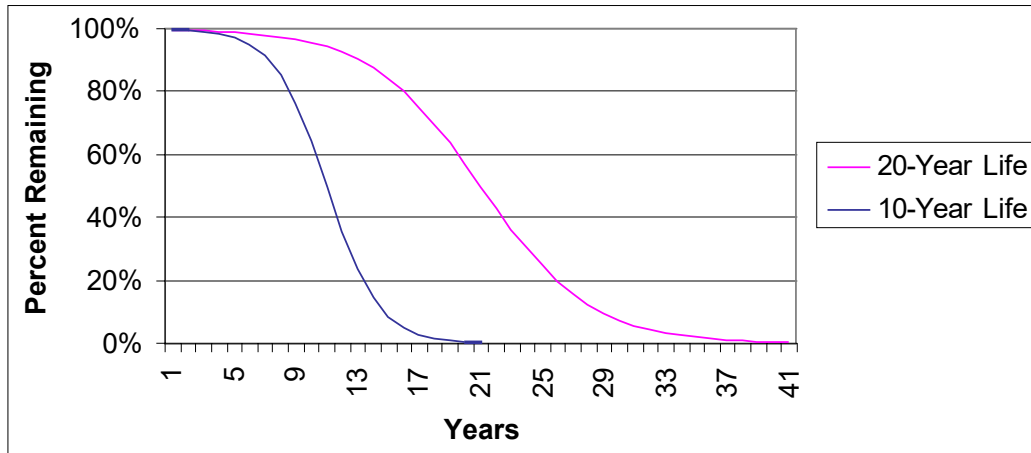
³ These are discrete analogs to the continuous time distributions.

equipmentAge_xx dataset describes the average age of existing equipment in existing facilities. It tells the model where to start the equipment decay function.

Logistic Decay Function

End Use Forecaster uses the logistic function as the recommended decay mechanism for equipment decay construction, as shown in Figure 19. The logistic function is an S-shaped curve that results in a small decay rate for the first years, then increases over time before tapering off.

Figure 19. End Use Forecaster End Use Decay Functions



You may specify the periods and percentages of stock remaining for any two years in the appropriate SAS dataset. For example, to specify that 99% of the building stock remains 20 years after construction and that, 100 years after construction, only 50% of the buildings remain:

- In the SAS dataset, set the functional form indicator to 2
- Set the first parameter to the percent remaining after year X (0.99)
- Set the second parameter to year X (20)
- Set the third parameter to the percent remaining after year Y (0.50)
- Set the fourth parameter to year Y (100)

Exponential Decay Function

An exponential decay function can be used to represent a constant percentage decline for customers, buildings, or equipment. For example, a decay rate of 0.05 would cause 5% of the remaining stock to be removed each year. Since the base becomes progressively smaller, so does the absolute level of decay. If you choose an exponential decay rate:

- Set the functional form indicator equal to 1
- Set the first parameter equal to the specified decay rate
- Set the remaining three parameters equal to zero

Zero Decay

In some cases, decay rates may not be relevant information. This can occur in non end-use End Use Forecaster representations or in certain markets such as “miscellaneous consumption.” In these instances, choose the exponential function and set all parameters to zero.

Early Replacement

In some instances, you may specify the “early replacement” of existing equipment within an Intervention Strategies scenario. In these situations, the variable *earadop*, contained in **eChoiceFinal_xx** dataset, will effectively override the equipment decay functions if it is set equal to 1. The default value for *earadop* is zero (no early adoption).

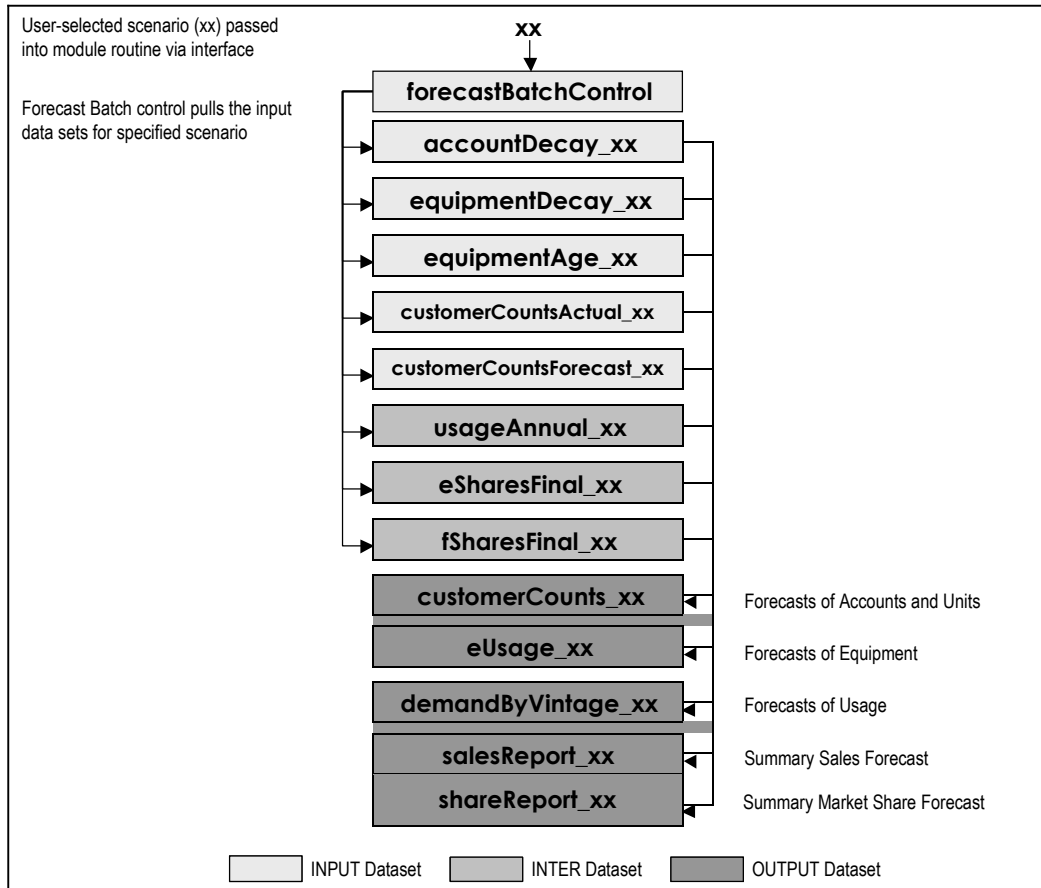
Forecast Operations

The heart of this module is a SAS program called `forecastBatch.sas`, which completes the following tasks:

1. Merges all input data across Dimensions 1-3, including:
 - ❑ Existing accounts, plus a distribution of accounts across historical building vintages
 - ❑ New construction forecast, plus capture rates for new and conversion buildings
 - ❑ Dimension 3 saturation, equal to the number of Dimension 2 customers with Dimension 3 divided by total Dimension 2 customers
 - ❑ Decay rates for buildings (indexed by year and building vintage) and equipment (indexed by Dimension 4 and equipment age)
 - ❑ Product usage forecast (potentially modified by an intervention strategies scenario)
 - ❑ Provider choice forecast (potentially modified by an intervention strategies scenario)
2. Solves for output arrays that contain information on number of market segments units per year, indexed by the specified dimensions (e.g., building vintage, equipment age, fuel, and efficiency)
3. Stores the results in datasets of varying dimensions
4. Multiplies the number of units by the respective consumption estimate per unit, again indexed by the appropriate dimension.
5. Summarizes these results in standard report formats

Figure 20 illustrates how the operation of the Turnover module. Table 13 summarizes the programs developed for the Turnover/Vintage module, and Table 13 summarizes the data files used in this module.

Library	Dataset Name	Description	Record Dimensions	Attributes/Variables
INPUT	ForecastBatchControl	Forecast module input control	One record per output scenario	Account history, distribution and new construction scenarios; decay scenarios; usage scenario, saturation scenarios, and equipment mean age scenario.
INPUT	accountDecay_xx	Decay parameters for Dimension 2	Dimensions 1 and 2, forecast vintages	Decay Function, Decay Parameters 1-4
INPUT	equipmentDecay_xx	New construction Dimension 3 (end use) decay	Dimensions 1, 2, 3 and 4	Decay Function, Decay Parameters 1-4
INPUT	 saturations_xx	Existing Dimension 3 (end use) saturation	Dimensions 1, 2, and 3 Year, historical vintages	Saturation
INPUT	customerCountsActual_xx	Base year accounts and non-accounts (potential customers)	Dimensions 1 and 2	Accounts, non accounts
INPUT	equipmentAge_xx	Dimension 3 (end use) mean age in base year	Dimensions 1, 2, and 3, historical vintage	Dimension 3 (end use) mean age in base year
INPUT	customerCountsForecast_xx	New construction / economic driver forecast	Dimensions 1 and 2, Year	Forecasted new construction, capture rate, conversion rate, units per account,
INTER	usageAnnual_xx	Product Usage module output	Dimensions 1, 2, 3, 4 and 5, year, vintage	Annual usage
INTER	eSharesFinal_xx	Provider Choice module output – existing Dimension 5 market share forecast	Dimensions 1, 2, 3, 4 and 5, year	Market share for replacement, early replacement indicator
INTER	fSharesFinal_xx	Provider Choice module output – existing Dimension 4 market share forecast	Dimensions 1, 2, 3 and 4, year	Market share for replacement, early replacement indicator
OUTPUT	customerCounts_xx	Forecast of accounts and units (square footage)	Dimensions 1 and 2, year, vintage	(E/C/N) Accounts, (E/C/N) units, units per account, remaining nonconversion potential
OUTPUT	eUsage_xx	Forecast of equipment (end-uses)	Dimensions 1, 2, 3, 4 and 5, year, vintage	Total number of Dimension 3 (end uses)
OUTPUT	demandByVintage_xx	Forecast of usage (e.g., kWh, therms)	Dimensions 1, 2, 3, 4 and 5, year, vintage	(E/C/N) Accounts, (E/C/N) units, units per account, remaining nonconversion potential; Total number of Dimension 3 (end uses); Break out of dimension 3 by replacement, conversion, and new construction.
OUTPUT	salesReport_xx	Summary Sales Forecast	Dimensions 1, 2, 3 and 4, year	Total usage and equipment sales by Dimension 5
OUTPUT	shareReport_xx	Summary Market Share Forecast	Dimensions 1, 2, 3 and 4, year	Market shares for Dimensions 4 and 5, by existing, conversion, and new construction



VIII. End Use Forecaster Utilities

The main End Use Forecaster analysis modules – Product Usage, Provider Choice, Intervention Strategies, and Forecast – are typically run separately during the calibration and testing phase of any market segmentation and forecasting process. Once this process is complete, however, you can run these modules jointly and generate all relevant analyses with a single click of the mouse (after data are prepared, of course).

This chapter describes the various utilities available in End Use Forecaster: Super Batch, Calibration, Analysis of Data Files, and Reporting.

Super Batch Processing

Some forecasting scenarios lend themselves to super batch processing. When the Product Usage, Provider Choice, and Forecast modules all have the same scenario indicator value, the that scenario can be run across all modules by selecting it in the Super Batch frame.

Calibration

End Use Forecaster can be calibrated to base year energy usage data for the “primary” fuel of interest in the model ($f=1$). Calibration may proceed at the Z-Level, or at the Z-B-Level. Base year sales data must be available in the `\INPUT\calibrationZ_xx` or `\INPUT\calibrationZB_xx` datasets. To calibrate the model apply the following procedure:

- Select the level at which the forecasts will be calibrated (the Z-Level vs. the Z-B-Level) from the Calibration Utility
- Select the scenario to be calibrated and the percent of usage to be assigned to the miscellaneous usage category.

The calibration routine works as follows:

1. Residual energy is attributed to the miscellaneous end use. This value should be greater than or equal to zero but generally does not exceed 10% of forecasted energy sales. In fact, the upper limit available through the model interface is 10%. Errors larger than this generally indicate a more fundamental data problem where an investigation of data inputs is required rather than this automated calibration process
2. When non-calibrated total usage is on the high side (miscellaneous would then be negative), the next step is to reduce the per-unit energy usage (i.e., customer or square foot) for each market segment, end use, and efficiency combination. Note that the *relative* energy usage across efficiency levels is unchanged. Conversely, when non-calibrated total usage is on the low side, simply let miscellaneous equal zero (the default value). All other end uses will be adjusted proportionately. Again, we recommend avoiding this procedure if the adjustment is larger than 10%.

The relative size of the calibration adjustment which is ultimately applied to the \INPUT\usageParameters_xx dataset can be found in \INTER\initialCalibrationRatio.⁴ The variable (*Zfratio* (*ZBfratio*)) shows the percent error results, and how much End Use Forecaster had to change parameters through the calibration routine to match base year sales.

If additional calibration is needed beyond the base year to, for example, match an external econometric forecast over the duration of the forecast horizon, a post-processing adjustment using either SAS or Excel can be applied.⁵

After running the calibration routine, it is necessary to run the Usage, Choice, and Forecast modules (or Super Batch) and produce a new forecast. One can then click on the appropriate “Calibration: Calibration Check” routine to make sure the calibration worked as intended.

Analysis of Data Files

All SAS datasets in across End Use Forecaster libraries can be accessed directly from End Use Forecaster for further analysis in real time by following these steps:

- Click on “File: Analyze” to access SAS/INSIGHT
 - Select the library and dataset of interest and perform desired analysis
- OR
- SAS/FSP software tools can also be used to browse the SAS datasets via the pull-down menu item “File: Library Map”

Reporting

Five default SAS output dataset reports are created in the OUTPUT directory by the Forecast module:

- A summary sales report (**salesReport_xx**)
- A summary market share report (**shareReport_xx**)
- Detailed account stock forecast (**customerCounts_xx**)
- Detailed market segment/end use equipment sales forecast (**eUsage_xx**)
- Detailed sales projections (**demandByVintage_xx**)

These reports can be browsed directly as described above, or exported to Excel. To accomplish the latter simply click on “Reports: Export Basic Reports to Excel” and select the Forecast module scenario to export.

⁴ Notice that there is no scenario indicator on the **initialCalibrationRatio** dataset. This is because only one scenario per Model should be calibrated; all other scenarios within that model can then be developed from the calibrated **usageParameters_xx** or successor datasets.

⁵ Please contact The Cadmus Group (Quantec) for more information or to obtain a customized calibration routine

End Use Forecaster also produces reports that can be customized based upon the user's choice of segmentation combinations to analyze. These reports summarize and/or compare forecasts for two forecast scenarios specified by clicking on "Reports: Scenario Comparison Reports." The user specifies the Report Category (sales, market share, customer counts or demand by vintage) and, based on the category selection, is given the option of selecting different combinations of segments to summarize and/or compare.

Appendix: Variable Glossary

This glossary provides definitions for each End Use Forecaster SAS variable, and is organized by the model's libraries and datasets as defined in Chapter III.

Table 14. INPUT\accountDecay_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
vintage	Building vintage
accountDecayIndicator	Account decay indicator
accountDecayParm1	Account decay parameter 1
accountDecayParm2	Account decay parameter 2
accountDecayParm3	Account decay parameter 3
accountDecayParm4	Account decay parameter 4

Table 15. INPUT\calibrationZ

Variable Name	Description
z	The indicator for Dimension 1
year	Year of forecast (0 to rorecast horizon)
actualSales	Actual sales in base year

Table 16. INPUT\calibrationZB

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
year	Year
actualSales	Actual sales in base year

Table 17. INPUT\choiceBatchControl

Variable Name	Description
scenarioName	Descriptive name of the scenario
scenario	Output scenario number
choiceDrivers	Scenario to select for the choiceDrivers_xx dataset
priceForecast	Scenario to select for the priceForecast_xx dataset
choiceParameters	Scenario to select for the choiceParameters_xx dataset
usageAnnual	Scenario to select for the usageAnnual_xx dataset
eSharesInitial	Scenario to select for the eSharesInitial_xx dataset
fSharesInitial	Scenario to select for the fSharesInitial_xx dataset
eChoiceStatus	Scenario to select for the eChoiceStatus_xx dataset
fChoiceStatus	Scenario to select for the fChoiceStatus_xx dataset

Table 18. INPUT\choiceDrivers_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
e	The indicator for Dimension 5
year	Year
available	Binary switch to indicate availability of the alternative in any given year of the forecast
capitalCostExisting	Capital cost for equipment in existing (replacement) construction
capitalCostConversion	Capital cost for equipment for conversion customers
capitalCostNew	Capital costs for equipment for new construction

Table 19. INPUT\choiceParameters_xx

Variable Name	Description
Z	The indicator for Dimension 1
B	The indicator for Dimension 2
N	The indicator for Dimension 3
f	The indicator for Dimension 4
eIndicator	Binary switch for choice modeling to indicate the dimension modeled (0 = Dimension 4 and 1 = Dimension 5)
conType	Type of construction or customer (new, existing, or conversion)
lifetime	Equipment or measure lifetime (years)
alpha	Constant
description	Description of Choice
discountRate	Implicit discount rate
priceShare	Price share of customer utility function
a1	Intercept for alternative 1
a2	Intercept for alternative 2
a3	Intercept for alternative 3
a4	Intercept for alternative 4
b1	Operating cost coefficient
b2	Capital cost coefficient

Table 20. INPUT\customerAccountsActual_xx

Variable Name	Description
Z	The indicator for Dimension 1
B	The indicator for Dimension 2
vintage	Building vintage
unitsPerAccount	Units per Dimension 1-2 and vintage combination (square footage, number of apartments, etc.). This should be set to 1 if the unit is the customer
accounts	Number of accounts.
onMainAccounts	Number of accounts on main.
offMainAccounts	Number of accounts off main.

Table 21. INPUT\customerAccountsForecast_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
year	Year
unitsPerAccount	Units per Dimension 1-2 and vintage combination (square footage, number of apartments, etc.). This should be set to 1 if the unit is the customer
newConstructionAccounts	New Construction accounts.
newConstructionCaptureRate	The "capture" rate of NEWCONST = the share of new buildings that are customers
conversionCaptureRate	The share (%) of existing non-customers converting or becoming a customer each year

Table 22. INPUT\dimens

Variable Name	Description
DIM	Dimension
DIMNAME	Dimension Name
DIMNUM	Starting Levels

Table 23. INPUT\dsmEChoice_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
conType	Type of construction or customer (new, existing, or conversion)
yearIntroduced	Year of Program Introduction
programLife	Duration of Program (Years)
adoptionPath	Years to Full Adoption
applicability	Percent of Customers Applicable
eLevel	e Level to Which Program Applies
marketShare	Market Share Percent
earlyReplacement	Early Replacement (binary)
description	Program Description

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
conType	Type of construction or customer (new, existing, or conversion)
yearIntroduced	Year of Program Introduction
programLife	Duration of Program (Years)
adoptionPath	Years to Full Adoption
applicability	Percent of Customers Applicable
marketShare	Market Share Percent
earlyReplacement	Early Replacement (binary)
description	Program Description

Table 25. INPUT\dsmRetrofit_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
yearIntroduced	Year of Program Introduction
programLife	Duration of Program (Years)
measureLife	The average life of Dimension 3 equipment
eImprovement	The efficiency improvement (%) as reflected by the reduction in equipment energy usage.
adoptionPath	Years to Full Adoption
vintageApplicability	Vintages to Which Programs Apply
applicability	Percent of Customers Applicable
marketShare	Market Share Percent
earlyReplacement	Early Replacement (binary)
eLevel	Lowest e Level to Which Program Applies
description	Program Description

Table 26. INPUT\eChoiceStatus_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
eChoiceStatus	This is a "status" variable for Dimension 5. It tells the Provider Choice module which of several possible equation/modeling processing should be followed.
eAlternatives	The number of choice alternatives for Dimension 5, which ranges from 1-4

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
e	The indicator for Dimension 5
baseAvgEShare	The average market share in the historical stock at Dimension 5
baseMargEShareExisting	The marginal (i.e., most recent) market share associated with the replacement of the product or service option by existing customers
baseMargEShareConversion	The marginal market share associated with conversion customers
baseMargEShareNew	The marginal market share associated with the new construction customers
peakDayLoadFactor	The peak demand or peak day load factor associated with annual usage for each Dimension 1-5 combination.

Table 28. INPUT\equipmentAge_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
equipmentMaxAge	The maximum age of existing equipment for each Dimension 1-3 combination regardless of the historical vintage
equipmentMeanAge	The average age of existing equipment for each Dimension 1-3 combination and each historical vintage
vintage	Building vintage

Table 29. INPUT\equipmentDecay_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
conType	Type of construction or customer (new, existing, or conversion)
equipmentDecayIndicator	Equipment decay indicator
equipmentDecayParm1	Equipment decay parameter 1
equipmentDecayParm2	Equipment decay parameter 2
equipmentDecayParm3	Equipment decay parameter 3
equipmentDecayParm4	Equipment decay parameter 4

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
fChoiceStatus	This is a "status" variable for Dimension 4. It tells the Provider Choice module which of several possible equation/modeling processing should be followed.
fAlternatives	The number of choice alternatives for Dimension 4, which ranges from 1-4

Table 31. INPUT\forecastBatchControl

Variable Name	Description
scenarioName	Descriptive name of the output scenario
scenario	Output scenario number
accountDecay	Scenario to select for the accountDecay_xx dataset
equipmentDecay	Scenario to select for the equipmentDecay_xx dataset
equipmentAge	Scenario to select for the equipmentAge_xx dataset
saturations	Scenario to select for the saturations_xx dataset
customerCountsActual	Scenario to select for the customerCountsActual_xx dataset
customerCountsForecast	Scenario to select for the customerCountsForecast_xx dataset
usageAnnual	Scenario to select for the usageAnnual_xx dataset
eSharesFinal	Scenario to select for the eSharesFinal_xx dataset
fSharesFinal	Scenario to select for the fSharesFinal_xx dataset

Table 32. INPUT\fsharesInitial_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
baseAvgFShare	The average market share in the historical stock at Dimension 4.
baseMargFShareExisting	The marginal (i.e., most recent) market share associated with the replacement of the product or service by existing customers
baseMargFShareConversion	The marginal market share associated with the conversion customers
baseMargFShareNew	The marginal market share associated with the new construction customers

Table 33. INPUT\initParm

Variable Name	Description
BASEYR	Base Year
FCSTYRS	Forecast Years

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
year	Year
price	Price (Native Units)

Table 35. INPUT\saturations_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
year	Year
vintage	Building vintage
saturation	Presence of End Use (Percent)

Table 36. INPUT\scenarioDescriptions

Variable Name	Description
scenario	Output scenario number
scenarioName	Descriptive name of the scenario

Table 37.INPUT\usageBatchControl

Variable Name	Description
scenarioName	Descriptive name of the scenario
scenario	Output scenario number
usageParameters	Scenario to select for the usageParameters_xx dataset
usageDrivers	Scenario to select for the usageDrivers_xx dataset

Table 38. INPUT\usageDrivers_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
e	The indicator for Dimension 5
year	Year
month	Month
X0 - X20	Product Usage module forecast drivers

Variable Name	Description
Z	The indicator for Dimension 1
B	The indicator for Dimension 2
N	The indicator for Dimension 3
F	The indicator for Dimension 4
E	The indicator for Dimension 5
Vintage	Building vintage
B0 - B20	Product Usage module coefficients
usageEquationStatus	This is a "status" variable for the Product Usage module.

Table 40. INTER\esharesFinal_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
e	The indicator for Dimension 5
year	Year
eshare	Share for Dimension 5
earadop	A 0/1 binary variable where a value of 1 indicates that the marginal market shares apply to all existing customers, not just those who need to replace retired equipment. The default value is 0; a one will be used if specified in the Intervention Strategies CSFUELE\Sxx dataset.
conType	Type of construction or customer (new, existing, or conversion)

Table 41. INTER\fSharesFinal_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
year	Year
fshare	Fuel Share
earadop	A 0/1 binary variable where a value of 1 indicates that the marginal market shares apply to all existing customers, not just those who need to replace retired equipment. The default value is 0; a one will be used if specified in the Intervention Strategies CSFUELE\Sxx dataset.
conType	Type of construction or customer (new, existing, or conversion)

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
year	Year
vintage	Building vintage
f	The indicator for Dimension 4
e	The indicator for Dimension 5
use	Annual usage from the usage module for each Dimension 1-5 combination by year and vintage

Table 43. INTER\usageMonthly_xx

Variable Name	Description
vintage	Building vintage
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
e	The indicator for Dimension 5
year	Year
month	Month
use	Monthly usage from the usage module for each Dimension 1-5 combination by year and vintage

Table 44. OUTPUT\customerCounts_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
year	Year
unitsPerAccount	Units per Dimension 1-2 and vintage combination (square footage, number of apartments, etc.). This should be set to 1 if the unit is the customer
vintage	Building vintage
remain	All customers and non-customers remaining for each vintage
totalAccounts	The sum of existing, conversion, and new construction customers
cAccounts	Conversion customers
nAccounts	New construction customers
totalUnits	totalAccounts * units per account
cUnits	cAccounts * units per account
nUnits	nAccounts * units per account

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
vintage	Building vintage
year	Year
n	The indicator for Dimension 3
f	The indicator for Dimension 4
e	The indicator for Dimension 5
fuelSpecificUnits	The energy usage associated with a single unit at the full dimension 1 through 5 (zbnfe) level.
unitsPerAccount	Units per Dimension 1-2 and vintage combination (square footage, number of apartments, etc.). This should be set to 1 if the unit is the customer
use	Annual usage from the usage module for each Dimension 1-5 combination by year and vintage
peakDayLoadFactor	The peak demand or peak day load factor associated with annual usage for each Dimension 1-5 combination.
ereplcs	The total number of new Dimension 3 equipment sales from existing customers (who are replacing retired equipment) by year and vintage for each Dimension 1-5 combination
ceus	The total number of new Dimension 3 equipment sales from conversion customers by year and vintage for each Dimension 1-5 combination
neus	The total number of new Dimension 3 equipment sales from new construction customers by year and vintage for each Dimension 1-5 combination
totalUsage	Annual usage from the usage module for each Dimension 1-5 combination by year and vintage
cUsage	The total number of new Dimension 3 equipment sales from conversion customers by year and vintage for each Dimension 1-5 combination
nUsage	The total number of new Dimension 3 equipment sales from new construction customers by year and vintage for each Dimension 1-5 combination
usagePerUnit	Total usage per unit (e.g., square foot, customer, apartment, etc.) for each Dimension 1-5 combination by year and vintage = USE * EEUS
cuseunit	Total conversion usage per unit (e.g., square foot, customer, apartment, etc.) for each Dimension 1-5 combination by year and vintage = USE * CEUS
nuseunit	Total new construction usage per unit (e.g., square foot, customer, apartment, etc.) for each Dimension 1-5 combination by year and vintage = USE * NEUS

Table 46. OUTPUT\Usage_xx

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
vintage	Building vintage
year	Year
n	The indicator for Dimension 3
f	The indicator for Dimension 4
e	The indicator for Dimension 5
fuelSpecificUnits	The energy usage associated with a single unit at the full dimension 1 through 5 (zbnfe) level.

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
year	Year
totalAccounts	The sum of existing, conversion, and new construction customers
totalUnits	totalAccounts * units per account
fuelSpecificUnits	The energy usage associated with a single unit at the full dimension 1 through 5 (zbnfe) level.
totalUsage	Annual usage from the usage module for each Dimension 1-5 combination by year and vintage
peakUsage	Annual peak usage from the usage module for each Dimension 1-5 combination by year and vintage
effeeus1 - effeeus4	This is the average number of fuel specific end-uses (FEUS) across the possible Dimension 5 (efficiency) levels, and is identical to AVGEU(1-4) in VNTFMKSH\Sxx
effuec1 - effuec4	The annual usage for each Dimension 5 level associated with each Dimension 1-4 combination. These estimates come directly from USE is USEANN\Sxx
effuse1 - effuse4	The total usage for each Dimension 1-5 combination by year and vintage. These estimates come directly from EUSE in VNTFDEMD\Sxx
unitsPerAccount	Units per Dimension 1-2 and vintage combination (square footage, number of apartments, etc.). This should be set to 1 if the unit is the customer
uec	Sales per End Use Unit
fuelSpecificUnitsPerAccount	Fuel-Specific End-Use Units per Account
totalUsagePerAccount	Sales per Account

Variable Name	Description
z	The indicator for Dimension 1
b	The indicator for Dimension 2
n	The indicator for Dimension 3
f	The indicator for Dimension 4
year	Year
totalAccounts	The sum of existing, conversion, and new construction customers
totalUnits	totalAccounts * units per account
fuelSpecificUnits	The energy usage associated with a single unit at the full dimension 1 through 5 (zbnfe) level.
effeeus1 - effeeus4	This is the average number of fuel specific end-uses (FEUS) across the possible Dimension 5 (efficiency) levels, and is identical to AVGEU(1-4) in VNTFMKSH\Sxx
averageShareEff1 - averageShareEff4	The average stock share of Dimension 5 for each Dimension 1-4 combination
fshareExisting	The fourth dimension (fuel) market share for existing (replacement equipment) customers
fshareNew	The fourth dimension (fuel) market share for new construction customers
fshareConversion	The fourth dimension (fuel) market share for conversion customers
marginalShareExisting1 - marginalShareExisting4	The marginal (existing equipment) share of Dimension 5 for each Dimension 1-4 combination
marginalShareNew1 - marginalShareNew4	The marginal (new equipment) share of Dimension 5 for each Dimension 1-4 combination
marginalShareConversion1 - marginalShareConversion4	The marginal (conversion equipment) share of Dimension 5 for each Dimension 1-4 combination

The End Use Forecaster's data requirements are extensive and diverse; in practically every case, the set of sources necessary to fulfill them are equally varied. For the five Gas Company models, the data sources fell into four categories.

- (n) Company-specific primary research – Studies conducted by or for the Gas Company help to characterize the market for different segments.
- (o) Company databases – The Gas Company's MAS, for example, and other internal data sources have indispensable historical data on the customer counts and consumption patterns.
- (p) Secondary data sources – Recent state projects by CALMAC, for example, have information on baseline end-use consumption and equipment costs.
- (q) Assumptions – Professional judgment or assumptions based on previous model inputs are necessary to fill in those areas where other data sources are insufficient.

For nearly every input, more than one source was considered during the process of populating the model. The principal criterion for selection of the final source was the "reasonableness" of the results. In cases where alternative source produced similar results, preference was given to more recent and company-specific data. In some cases, multiple sources were used where one complemented another. The specific sources for each individual input are documented in Excel workbooks used during data development or in the SAS code used to populate the model. The final values used in the model are available in the SAS data sets for the various modules.

Residential Model

The residential model had the most consistent and robust set of sources. An analysis of raw data from the Gas Company's most recent RASS provided customized inputs for many of the customer characteristics. Data from CALMAC were available for unit energy consumption and equipment costs for the primary end uses. Gas Company data on customer counts, consumption, and meter forecasts were easily produced in a format consistent with the chosen segmentation design.

Data Set	Variable	Source	Notes
Input.UsageParameters_10	B0 (UEC)	CALMAC California Statewide Residential Sector Energy Efficiency Potential Study, Volume II: Appendices	Stock or standard efficiency UECs taken from "Base Tech UEC" inputs. UECs for higher efficiencies based on "Energy Savings" inputs.
	B1 (Price Elasticity)	SoCal Gas econometric model outputs	
Input.UsageDrivers_10	X0 (UEC)	Default values.	Forecast drivers
	X1 (Price)	SoCal Gas price forecasts	Marginal price forecast applied in usage module.
Input.UsageParameters_10	ADJUST	SoCal Gas historical customer data	Adjustment to UECs by vintage based on SoCal Gas historical use per customer.

Choice Module - Residential

Data Set	Variable	Source	Notes
Input.ChoiceParameters_10	Lifetime	SoCal Gas RASS	
	DiscountRate	Default	
	PriceShare	Default	
	A1, A2, A3, B1, B2	Default Starting Values	Some initial parameters changed during operation of choice module to allow calibration.
Input.ChoiceDrivers_10	CapitalCostExisting, CapitalCostNew, CapitalCostConversion	CALMAC California Statewide Residential Sector Energy Efficiency Potential Study, Volume II: Appendices	Where costs were not available from CALMAC, values from previous SoCal Gas residential model were adapted to accommodate additional efficiency level in current version
	Available	Assumptions	Stock efficiency level assumed unavailable after base year.
Input.FSharesInitial_10	BaseAvgFShare, BaseMargFShareExisting, BaseMargFShareConversion, BaseMargFShareNew	SoCal Gas RASS	
Input.ESharesInitial_10	BaseAvgEShare, BaseMargEShareExisting, BaseMargEShareConversion, BaseMargEShareNew	Assumptions, previous residential model, and CALMAC <i>California Statewide Residential Sector Energy Efficiency Potential Study, Volume II: Appendices</i>	

Data Set	Variable	Source	Notes
Input.CustomerCountsActual_10	ACCTSY0	SoCal Gas historical customer data	
Input.CustomerCountsForecast_10	NEWCONST	SoCal Gas residential meter forecasts	
	UPA	Default	Units Per Account: set to one for single- and multi-family dwellings. Master- and sub-metered adjusted to account for customer counts per meter.
Input.AccountDecay_10	AccountDecayIndicator, AccountDecayParm1-4	SoCal Gas	No decay applied to new construction.
Input.EquipmentDecay_10	EquipmentDecayIndicator, EquipmentDecayParm1-4	Assumptions	Exponential decay function applied based on measure life assumptions. Logistic decay function applied based on measure life assumptions.
Input.EquipmentAge_10	EquipmentMeanAge, EquipmentMaxAge	SoCal Gas RASS	
Input.Saturations_10	SAT	SoCal Gas RASS	

Commercial Core and Non-Core Models

The Core and Non-Core Commercial models share the same sources for data. For most of the inputs, these sources provide identical values for both models. That is the sources for data do not show any distinction in the end use intensity (EUI) values, end-use saturations, and fuel and efficiency shares for the two models. The fundamental difference in the models is the Gas Company’s customer counts for the different building types. Less significantly, price forecasts, which have an influence on both usage and choice modules, are also different for the two models.

End Use Forecaster's Library and Data Set	End Use Forecaster Variable(s)	Source	Notes
Input.UsageParameters_10	B0 (EUI)	SDG&E 2000 Commercial EUI Study, CALMAC <i>California Statewide Commercial Sector Natural Gas Energy Efficiency Potential Study, Volume II: Appendices</i>	Stock efficiency EUIs taken from SDG&E study. EUIs for higher efficiencies based on "Energy Savings" inputs from CALMAC.
	B1 (Price Elasticity)	SoCal Gas econometric model outputs	
Input.UsageDrivers_10	X0 (EUI)	Default values	Forecast drivers
	X1 (Price)	SoCal Gas price forecasts	Marginal price forecast applied in usage module.

Choice Module – Commercial Core and Noncore

Data Set	Variable	Source	Notes
Input.ChoiceParameters_10	Lifetime	So Cal Gas MAS, Assumptions	
	DiscountRate	Default Assumptions – 25%	The 25% customer discount rate stems from the implicit discount rate literature.
	PriceShare	Default Assumptions – 50%	The 50% price share assumption on previous Cadmus Group (formerly Quantec) research on how customers trade off price vs. non price attributes
	A1, A2, A3, B1, B2	Default Starting Values	Some initial parameters changed during operation of choice module to allow calibration.
Input.ChoiceDrivers_10	CapitalCostExisting, CapitalCostConversion, CapitalCostNew	So Cal Gas Average Price Forecast, Assumptions	Operating costs based on equipment usage data and SoCal Gas price forecast, with capital costs calculated based on assumed ratios of operating to capital costs.
	Available	Assumptions	Stock efficiency level assumed unavailable after base year.
Input.FSharesInitial_10	BaseAvgFShare, BaseMargFShareExisting, BaseMargFShareConversion, BaseMargFShareNew	SDG&E 2000 Commercial EUI Study, 1996 SoCal Gas Commercial & Industrial Energy Equipment Market Share Study	
Input.ESharesInitial_10	BaseAvgEShare, BaseMargEShareExisting, BaseMargEShareConversion, BaseMargEShareNew	Assumptions	10% high efficiency share(s) based on professional judgment and DSM free ridership literature.

BaseMargEShareNew

Data Set	Variable	Source	Notes
Input.CustomerCountsActual_10	ACCTSY0	SoCal Gas historical customer data	Base year accounts data.
Input.CustomerCountsForecast_10	NEWCONST	SoCal Gas historical customer data, SoCal Gas employment forecasts, and SoCal Gas employment elasticity from econometric model	New Construction.
	UPA	MAS	Units Per Account.
Input.AccountDecay_10	AccountDecayIndicator, AccountDecayParm1-4	Assumptions	No decay applied to existing accounts. No decay applied to new construction.
Input.EquipmentDecay_10	EquipmentDecayIndicator, EquipmentDecayParm1-4	Assumptions	Exponential decay function applied based on measure life assumptions. Logistic decay function applied based on measure life assumptions
Input.EquipmentAge_10	EquipmentMaxAge, EquipmentMeanAge	SoCal Gas MAS	
Input.Saturations_10	SAT	SDG&E 2000 Commercial EUI Study	

Industrial Core and Non-Core Models

The Core and Non-Core Industrial models also share the same data sources. Unlike the sources for the commercial models, the data from the Gas Company’s MAS – one of the primary inputs into to calculation of the UECs – are different for core and non-core sectors. Consequently, the final UEC for a given building’s end use can vary significantly between the models. As with the commercial models, the Gas Company’s historical customer counts also drive differences in the forecasts.

Data Set	Variable	Source	Notes
Input.UsageParameters_10	B0 (EUI)	SoCal Gas MAS, SoCal Gas Commercial & Industrial Energy Equipment Market Share Study	UECs based on a top-down calculation based on historical use per customer, end-use saturations, and fuel shares.
	B1 (Price Elasticity)	SoCal Gas econometric model outputs	
Input.UsageDrivers_10	X0 (EUI)	Default values.	Forecast drivers
	X1 (Price)	SoCal Gas price forecasts	Marginal price forecast applied in usage module.

Choice Module – Industrial Core and Noncore

Data Set	Variable	Source	Notes
Input.ChoiceParameters_10	Lifetime	So Cal Gas MAS, Assumptions	
	DiscountRate	Default	
	PriceShare	Default	
	A1, A2, A3, B1, B2	Default Starting Values	Some initial parameters changed during operation of choice module to allow calibration.
Input.ChoiceDrivers_10	CapitalCostExisting, CapitalCostNew, CapitalCostConversion	So Cal Gas Average Price Forecast, Assumptions	Operating costs based on equipment usage data and SoCal Gas price forecast, with capital costs calculated based on assumed ratios of operating to capital costs.
	Available	Assumptions	Stock efficiency level assumed unavailable after base year.
Input.FSharesInitial_10	BaseAvgFShare, BaseMargFShareExisting, BaseMargFShareConversion, BaseMargFShareNew	SoCal Gas Commercial & Industrial Energy Equipment Market Share Study	
Input.ESharesInitial_10	BaseAvgEShare, BaseMargEShareExisting, BaseMargEShareConversion, BaseMargEShareNew	Assumptions.	

Data Set	Variable	Source	Notes
Input.CustomerCountsActual_10	ACCTSY0	SoCal Gas historical customer data	
Input.CustomerCountsForecast_10	NEWCONST	SoCal Gas historical customer data, SoCal Gas employment forecasts, and SoCal Gas employment elasticity from econometric model	
	UPA	MAS	Units Per Account
Input.AccountDecay_10	AccountDecayIndicator, AccountDecayParm1-4	Assumptions	No decay applied to existing accounts.
Input.EquipmentDecay_10	EquipmentDecayIndicator, EquipmentDecayParm1-4	Assumptions	Exponential decay function applied based on measure life assumptions. Logistic decay function applied based on measure life assumptions.
Input.EquipmentAge_10	EquipmentMaxAge, EquipmentMeanAge	SoCal Gas MAS	
Input.Saturations_10	SAT	SoCalGas RASS	

RESIDENTIAL FORECAST
SoCalGas



Southern California Gas Residential End-Use Model

I. Residential End-Use Model Description

Introduction:

SoCalGas used the End Use Forecaster model to generate annual gas demand forecasts for the residential market. The software's market segmentation and end-use modeling framework analyzes the impacts of competitive strategies (gas vs. electricity) and market scenarios on gas demand and market shares. The model separates the residential market into five building types (B-level).

These groups are identified by the premise code classification found in the company billing files. The five residential groups are:

- Single-Family (SF);
- Multi-Family <= 4 units (MF2);
- Multi-Family > 4 units (MF3);
- Master Metered (MM); and
- Sub-Metered (SM).

The residential model identifies eight end-uses (N-level) that are the primary drivers of natural gas demand:

- Space heating;
- Water heating;
- Cooking;
- Drying;
- Pool heating;
- Spa heating;
- Fireplace; and
- Barbeque.

The model assumes two fuel choices (F-level) for end-uses:

- Natural gas; and
- Electricity.

The model assumes up to four efficiency levels (E-level) for the various end-uses. In general, the efficiency levels are:

- Stock;
- Standard;
- High efficiency; and
- Premium efficiency.

A set of post-model adjustments were applied to the model's annual demand forecast. The first adjustment calibrates to the recorded 2021 weather-adjusted demand. Next, the annual forecast was parceled out to a series of monthly forecasts by a process which involves two steps. These two steps consist of (1) using the fitted equation for customer demand to generate a forecast of use per customer that varies with the number of calendar days and heating degree days in a given month and (2) calculating a series of weights based on the customer's predicted monthly usage share in total annual consumption. The shares obtained from the latter step were then applied to annual totals to derive the stream of monthly forecasts which are conditional on the particular weather design specification for the entire year. An adjustment to the forecast offsets the throughput by the energy efficiency savings. The forecast was also reduced by AAFS Scenario 2. The AAFS was obtained from the CEC's "California Energy Demand Forecast", IEPR Volume IV, pp 33-49 and Appendix A.

The final adjustment to the forecast was for climate change. To account for anticipated weather that is less cold, the average year weather design was reduced by 6 fewer heating degree days each year over the forecast period.

Tables 1-4 illustrate the residential monthly forecast under each of the weather scenarios. Table 5 shows the fuel substitution forecast used to prepare the out of model adjustment and the final forecast.

Data Sources:

The information used to perform the modeling and to generate the forecast includes historical 2021 consumption and customer counts; meter counts, growth, and decay; use per customer by vintage and unit energy consumption (UEC) values; fuel costs and price elasticity; equipment capital costs and availability; building and equipment lives and decay. The historical 2021 data is in Figure 6.

Meter Counts, Growth and Decay:

Regression equations were developed for each of the 5 building types. The meter count forecast is a company-specific forecast based on actual meter counts within the SoCalGas service territory. Data on meter decay rates were obtained from the Energy Information Administration (EIA). See Figure 7 for the meter forecast used as an input to the End-Use Model.

Use Per Customer by Vintage and UEC:

Use per customer and Unit Energy Consumption (UEC) data were based on company marketing data and the California Measurement Advisory Council. See Figure 8 for the appliance UEC's.

Fuel Costs and Price Elasticity:

Average and marginal gas prices (\$/therm) were calculated from forecasts of the residential rate components. Residential rates have two consumption tiers. We used the simple average of the second tiers' projected monthly prices for each forecast year as the marginal rate. The marginal rate was used for each housing segment type.

For a given housing segment type, the average gas commodity rate was calculated using a pair of weights for the two consumption tiers applied to the simple average of each tier's monthly rate. The average commodity rate in each forecast year was developed using the same consumption tier weights, but with the forecasts of rates for each residential rate tier. The average gas price each year was then calculated by including the non-volumetric customer charges with the year's average gas commodity price. Figure 9 illustrates the gas price forecasts.

Electric Price Data:

Both average prices (cents/kWh) and marginal prices (cents/kWh) were developed as electricity price inputs. Forecasts for the SCE residential customer class were developed based on the California Energy Commission's December 2021 updated forecast rates for California energy demand (forecast for the SCE planning area, under "Mid-Case" demand for electricity) for the SCE service area through our forecast time horizon.

To impute average electricity prices to each residential housing type, we simply calculated the ratio of the housing type's average gas price to the overall residential gas price for each housing type, then multiplied by the overall average electricity price.

The marginal prices for each residential housing type were calculated by multiplying each year's respective average price by a ratio. These ratios were 1.513 for the SF, MF2 and MF3 housing types, 1.34 for the MM housing type and 1.125 for the SM housing type. These various ratios were estimated from analyses of SCE Schedule D rate schedule for housing types SF, MF2 and MF3; SCE Schedule DM for housing type MM; and SCE Schedule D as applied to sub-metered buildings for housing type SM. Copies of these rate schedules were obtained from the SCE web-site. The electric average and marginal prices are included in table 10.

Building and Equipment Lives and Decay:

Building decay rates are based on the building shell lifetimes, where the lifetime is defined as the length of time it takes for either a demolition or a major renovation to occur. For single-family residential buildings, an exponential rate of decay of 0.3% per year was assumed. See Figure 11 for the building decay rates.

Data on equipment lives and decay rates are based on EIA, RASS, Energy Star, and SoCalGas company data. See Figure 12 for the average lifetimes of gas appliances.

Saturations, Fuel and Efficiency Shares:

Saturation values, fuel shares, and efficiency shares were extracted from SoCalGas company data files and the most recent the RASS survey. Please see Figures 13, 14 and 15 for saturations, fuel, and efficiency shares.

AAFS:

Notation from the CEC supporting the construction of the fuel substitution scenarios is included at the end of the section. For more detailed explanation, please refer to the IEPR Volume IV, pp. 33-49 and Appendix A of the *California Energy Demand Forecast*.

**Table 6: SOUTHERN CALIFORNIA GAS COMPANY
 HISTORICAL DATA AT AVERAGE YEAR WEATHER (1,248 HDD'S)**

Segment	2021 Therm Sales	2021 Meter Count				Average Annual Consumption		Average Annual Consumption New Customers	Price Elasticity
		2021 Meter Count pre-78 customers	2021 Meter Count post-78 till "new" customers	2021 Meter Count New Customers	Average Annual Consumption pre-78 customers	Average Annual Consumption post-78 till "new" customers			
Single_Family	1,659,124,262	3,812,505	2,392,473	1,399,758	20,274	434	439	309	-0.1053
MF2_2_TO_4_Units	163,940,003	563,130	402,740	157,381	3,009	294	285	226	-0.1117
MF3_GE_5_Units	321,605,817	1,232,380	696,133	530,307	5,940	267	255	163	-0.0715
MM_Master_Meter	127,948,916	36,425	31,920	4,359	146	3,003	7,059	9,017	-0.0688
SM_Sub_Meter	37,920,003	1,512	1,407	104	1	24,778	29,398	1	-0.1053

Cost Allocation Proceeding

Residential Forecasts: Average, Cold, Hot and Base Scenarios

SOUTHERN CALIFORNIA GAS COMPANY
TABLE 1: AVERAGE YEAR WEATHER DESIGN FORECAST (UNITS = MDTH)
RESIDENTIAL

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2021	32113.96	27965.00	24412.98	20195.60	14594.23	11247.22	10799.89	10775.83	10653.61	13286.67	21282.56	33726.35	231,053.90
2022	31904.22	27783.78	24264.40	20086.48	14526.12	11205.31	10762.51	10738.65	10615.76	13229.65	21161.54	33500.09	229,778.49
2023	31565.58	27490.25	24017.44	19895.49	14398.49	11117.16	10680.64	10657.07	10534.05	13118.26	20954.45	33138.65	227,567.52
2024	31089.79	27077.25	23665.86	19617.50	14207.62	10979.91	10551.53	10528.35	10405.77	12949.13	20655.88	32633.39	224,361.96
2025	30516.19	26579.03	23239.57	19277.25	13971.40	10807.38	10388.44	10365.73	10244.01	12738.57	20291.90	32025.60	220,445.07
2026	29976.77	26110.53	22838.92	18957.77	13749.85	10645.81	10235.78	10213.52	10092.57	12541.19	19949.99	31453.90	216,766.61
2027	29401.03	25610.36	22410.32	18614.73	13510.95	10470.53	10069.88	10048.08	9928.10	12327.86	19583.46	30844.24	212,819.56

SOUTHERN CALIFORNIA GAS COMPANY
TABLE 2: COLD YEAR WEATHER DESIGN FORECAST (UNITS = MDTH)
RESIDENTIAL

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2021	36019.65	31311.31	26962.26	21771.33	15317.14	11395.47	10831.22	10802.57	10722.38	13752.05	23176.18	38059.98	250,121.54
2022	35742.43	31072.28	26769.63	21634.98	15236.54	11351.00	10793.30	10764.93	10683.34	13686.99	23022.44	37758.84	248,516.71
2023	35337.47	30721.93	26479.39	21417.24	15096.63	11260.33	10710.90	10682.90	10600.47	13567.70	22783.21	37323.83	245,982.00
2024	34796.52	30253.10	26085.28	21112.95	14893.70	11120.61	10581.26	10553.74	10471.04	13390.81	22453.04	36746.25	242,458.30
2025	34158.88	29700.01	25617.19	20746.87	14645.63	10945.64	10417.66	10390.68	10308.15	13172.61	22058.01	36067.41	238,228.76
2026	33556.53	29177.59	25175.46	20402.00	14412.44	10781.68	10264.50	10238.03	10155.61	12967.74	21685.59	35425.88	234,243.05
2027	32918.94	28624.43	24706.50	20034.01	14162.09	10604.06	10098.10	10072.17	9990.05	12747.04	21289.07	34747.60	229,994.07

**SOUTHERN CALIFORNIA GAS COMPANY
 TABLE 3: HOT YEAR WEATHER DESIGN FORECAST (UNITS = MDTH)
 RESIDENTIAL**

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2021	28208.27	24618.69	21863.70	18619.88	13871.32	11098.97	10768.56	10749.08	10584.83	12821.28	19388.94	29392.73	211,986.26
2022	28066.01	24495.28	21759.16	18537.97	13815.70	11059.62	10731.72	10712.37	10548.17	12772.30	19300.63	29241.34	211,040.28
2023	27793.68	24258.56	21555.48	18373.74	13700.34	10973.99	10650.38	10631.24	10467.63	12668.82	19125.70	28953.48	209,153.04
2024	27383.05	23901.39	21246.44	18122.04	13521.53	10839.21	10521.79	10502.97	10340.50	12507.46	18858.72	28520.52	206,265.63
2025	26873.50	23458.05	20861.95	17807.63	13297.17	10669.11	10359.22	10340.79	10179.86	12304.52	18525.79	27983.79	202,661.38
2026	26397.01	23043.47	20502.38	17513.54	13087.27	10509.93	10207.07	10189.00	10029.54	12114.64	18214.40	27481.92	199,290.16
2027	25883.12	22596.28	20114.15	17195.45	12859.82	10337.00	10041.66	10023.99	9866.15	11908.68	17877.85	26940.88	195,645.05

**SOUTHERN CALIFORNIA GAS COMPANY
 TABLE 4: BASE YEAR WEATHER DESIGN FORECAST (UNITS = MDTH)
 RESIDENTIAL**

YEAR	MDTH1	MDTH2	MDTH3	MDTH4	MDTH5	MDTH6	MDTH7	MDTH8	MDTH9	MDTH10	MDTH11	MDTH12	TOTAL
2021	10730.04	10037.78	10730.04	10383.91	10730.04	10383.91	10730.04	10730.04	10383.91	10730.04	10383.91	10730.04	126,683.66
2022	10858.27	10157.74	10858.27	10508.00	10858.27	10508.00	10858.27	10858.27	10508.00	10858.27	10508.00	10858.27	128,197.65
2023	10901.74	10198.40	10901.74	10550.07	10901.74	10550.07	10901.74	10901.74	10550.07	10901.74	10550.07	10901.74	128,710.85
2024	10855.56	10155.20	10855.56	10505.38	10855.56	10505.38	10855.56	10855.56	10505.38	10855.56	10505.38	10855.56	128,165.65
2025	10743.85	10050.69	10743.85	10397.27	10743.85	10397.27	10743.85	10743.85	10397.27	10743.85	10397.27	10743.85	126,846.70
2026	10647.16	9960.24	10647.16	10303.70	10647.16	10303.70	10647.16	10647.16	10303.70	10647.16	10303.70	10647.16	125,705.13
2027	10522.66	9843.78	10522.66	10183.22	10522.66	10183.22	10522.66	10522.66	10183.22	10522.66	10183.22	10522.66	124,235.25

SOUTHERN CALIFORNIA GAS COMPANY
TABLE 5: FUEL SUBSTITUTION FORECAST (UNITS
RESIDENTIAL

SOURCE	YEAR	AAFS (Mdth)
Residential	2021	0.00
Residential	2022	218.26
Residential	2023	826.23
Residential	2024	2287.67
Residential	2025	4078.26
Residential	2026	6068.86
Residential	2027	8230.60

Table 6: 2022 California Gas Report (recorded data through 2021)

SoCalGas <i>Connected</i> Meter Forecast							
YEAR	Residential Single-Family	Residential Multi-Family	Residential Master Meter	Commercial	Industrial	NGV	Total
2019	3,797,955	1,900,271	40,257	248,943	25,189	336	6,012,951
2020	3,820,836	1,912,460	39,301	249,302	24,938	339	6,047,176
2021	3,844,078	1,924,441	39,312	249,422	24,764	346	6,082,363
2022	3,868,804	1,939,204	38,997	249,777	24,517	349	6,121,648
2023	3,893,945	1,957,761	38,685	250,074	24,271	353	6,165,089
2024	3,918,212	1,975,997	38,376	250,204	24,029	357	6,207,175
2025	3,941,953	1,993,658	38,069	250,333	23,788	361	6,248,162
2026	3,965,467	2,011,020	37,764	250,484	23,550	365	6,288,650
2027	3,988,538	2,028,381	37,462	250,614	23,315	369	6,328,679

SoCalGas <i>Active</i> Meter Forecast							
YEAR	Residential Single-Family	Residential Multi-Family	Residential Master Meter	Commercial	Industrial	NGV	Total
2019	3,742,106	1,824,603	39,591	189,380	16,068	336	5,812,084
2020	3,769,495	1,832,425	38,644	189,399	15,811	339	5,846,113
2021	3,790,736	1,839,450	38,610	188,690	15,674	346	5,873,506
2022	3,814,617	1,857,865	38,301	189,577	15,518	349	5,916,227
2023	3,839,406	1,875,644	37,994	189,804	15,362	353	5,958,563
2024	3,863,332	1,893,115	37,690	189,902	15,209	357	5,999,605
2025	3,886,741	1,910,035	37,389	190,000	15,057	361	6,039,583
2026	3,909,926	1,926,669	37,090	190,114	14,906	365	6,079,070
2027	3,932,674	1,943,301	36,793	190,213	14,757	369	6,118,107

SOUTHERN CALIFORNIA GAS COMPANY
TABLE 7: INCREMENTAL METER GROWTH
RESIDENTIAL MARKET, BY SEGMENT

Year	SF Meters	MF2 Meters	MF3 Meters	MM Meters	SM Meters
2022	23,881	18,415	5,795	3,972	0
2023	24,789	17,779	5,595	3,834	0
2024	23,926	17,471	5,498	3,768	0
2025	23,409	16,920	5,325	3,649	0
2026	23,185	16,634	5,235	3,587	0
2027	22,748	16,632	5,234	3,587	0

SOUTHERN CALIFORNIA GAS COMPANY
 TABLE 8/9: UNIT ENERGY CONSUMPTION BY SEGMENT AND END
 USE

		2019 Residential Appliance Saturation Survey								
		Conditional Demand Study 2021								
SoCalGas		Single Family Unit Energy Consumption (UEC)	Single Family Saturation (%)	Single Family Intensity	Single Family Use Proportion		Multi Family Unit Energy Consumption	Multi Family Saturation	Multi Family Intensity	Multi Family Use Proportion
	Space Heat	227	98.62%	224	51.75%		107	89.98%	96	46.67%
	Water Heat	141	95.98%	135	31.28%		94	81.33%	76	37.05%
	Cooking	30	82.37%	25	5.71%		28	77.80%	22	10.56%
	Clothes Drying	33	69.36%	23	5.29%		29	35.19%	10	4.95%
	Pool Heat	151	8.37%	13	2.92%		N/A			
	Spa Heat	102	9.68%	10	2.28%		47	1.19%	1	0.27%
	Gas Fireplace	11	7.33%	1	0.19%		7	4.58%	0	0.16%
	Gas Barbecue	16	15.56%	2	0.58%		14	5.17%	1	0.35%
	Total Household SF			433 Therms/Year	100%				206 Therms/Year	100%

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Residential Forecasts: Fuel Prices

SOUTHERN CALIFORNIA GAS COMPANY
TABLE 10: AVERAGE AND MARGINAL GAS PRICES
 UNITS = \$/THERM

Year	R SF Average Price	R SF Marginal Price	R MF2 Average Price	R MF2 Marginal Price	R MF3 Average Price	R MF3 Marginal Price	R MM Average Price	R MM Marginal Price	R SM Average Price	R SM Marginal Price
2021	1.2359	1.2138	1.2417	1.2138	1.2412	1.2138	1.2453	1.2138	1.2432	1.2138
2022	1.3469	1.2388	1.3756	1.2388	1.3728	1.2388	1.3931	1.2388	1.3829	1.2388
2023	1.3125	1.2411	1.3314	1.2411	1.3296	1.2411	1.3430	1.2411	1.3362	1.2411
2024	1.3253	1.2550	1.3440	1.2550	1.3422	1.2550	1.3554	1.2550	1.3488	1.2550
2025	1.3292	1.2808	1.3420	1.2808	1.3408	1.2808	1.3499	1.2808	1.3453	1.2808
2026	1.3613	1.3126	1.3742	1.3126	1.3730	1.3126	1.3821	1.3126	1.3775	1.3126
2027	1.3941	1.3454	1.4071	1.3454	1.4058	1.3454	1.4150	1.3454	1.4103	1.3454

SOUTHERN CALIFORNIA GAS COMPANY
TABLE 10: AVERAGE AND MARGINAL ELECTRIC PRICES (CENTS/KWH)

Year	R SF Average Price	R SF Marginal Price	R MF2 Average Price	R MF2 Marginal Price	R MF3 Average Price	R MF3 Marginal	R MM Average Price	R MM Marginal Price	R SM Average Price	R SM Marginal Price
2021	22.33	33.79	22.43	33.95	22.42	33.93	22.50	23.26	22.46	25.28
2022	23.48	35.53	23.98	36.28	23.93	36.21	24.28	25.11	24.10	27.13
2023	24.15	36.55	24.50	37.08	24.47	37.03	24.71	25.56	24.59	27.67
2024	24.62	37.26	24.97	37.79	24.94	37.73	25.18	26.04	25.06	28.20
2025	25.77	38.99	26.02	39.37	25.99	39.33	26.17	27.06	26.08	29.35
2026	26.75	40.48	27.01	40.87	26.98	40.83	27.16	28.09	27.07	30.47
2027	27.28	41.28	27.53	41.66	27.51	41.62	27.69	28.63	27.60	31.06

Other SAS Input Files

SoCalGas Residential Market

Cost Allocation Proceeding

SoCalGas: Residential Equipment Age Inputs for EUForecaster

zName	bName	nName	vintage	equipmentMaxAge	equipmentMeanAge	z	b	n
Residential	Single_Family	Space_Heat	-2	17	17	001	001	001
Residential	Single_Family	Space_Heat	-1	17	10	001	001	001
Residential	Single_Family	Space_Heat	0	17	3	001	001	001
Residential	Single_Family	Water_Heat	-2	7	7	001	001	002
Residential	Single_Family	Water_Heat	-1	7	7	001	001	002
Residential	Single_Family	Water_Heat	0	7	3	001	001	002
Residential	Single_Family	Cooking	-2	12	12	001	001	003
Residential	Single_Family	Cooking	-1	12	10	001	001	003
Residential	Single_Family	Cooking	0	12	2	001	001	003
Residential	Single_Family	Drying	-2	8	8	001	001	004
Residential	Single_Family	Drying	-1	8	8	001	001	004
Residential	Single_Family	Drying	0	8	6	001	001	004
Residential	Single_Family	Pool	-2	13	13	001	001	005
Residential	Single_Family	Pool	-1	13	9	001	001	005
Residential	Single_Family	Pool	0	13	3	001	001	005
Residential	Single_Family	Spa	-2	11	11	001	001	006
Residential	Single_Family	Spa	-1	11	8	001	001	006
Residential	Single_Family	Spa	0	11	3	001	001	006
Residential	Single_Family	Fireplace	-2	15	15	001	001	007
Residential	Single_Family	Fireplace	-1	15	15	001	001	007
Residential	Single_Family	Fireplace	0	15	15	001	001	007
Residential	Single_Family	Barbecue	-2	7	7	001	001	008
Residential	Single_Family	Barbecue	-1	7	7	001	001	008
Residential	Single_Family	Barbecue	0	7	5	001	001	008
Residential	Single_Family	Other	-2	15	15	001	001	009
Residential	Single_Family	Other	-1	15	15	001	001	009
Residential	Single_Family	Other	0	15	15	001	001	009
Residential	MF2_2_TO_4_Units	Space_Heat	-2	15	15	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	-1	15	12	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	0	15	4	001	002	001
Residential	MF2_2_TO_4_Units	Water_Heat	-2	8	7	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	-1	8	8	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	0	8	2	001	002	002
Residential	MF2_2_TO_4_Units	Cooking	-2	10	10	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	-1	10	9	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	0	10	2	001	002	003
Residential	MF2_2_TO_4_Units	Drying	-2	9	7	001	002	004
Residential	MF2_2_TO_4_Units	Drying	-1	9	9	001	002	004
Residential	MF2_2_TO_4_Units	Drying	0	9	3	001	002	004
Residential	MF2_2_TO_4_Units	Barbecue	-2	6	5	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	-1	6	6	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	0	6	3	001	002	008

Residential	MF2_2_TO_4_Units	Other	-2	15	15	001 002 009
Residential	MF2_2_TO_4_Units	Other	-1	15	15	001 002 009
Residential	MF2_2_TO_4_Units	Other	0	15	15	001 002 009
Residential	MF3_GE_5_Units	Space_Heat	-2	15	15	001 003 001
Residential	MF3_GE_5_Units	Space_Heat	-1	15	11	001 003 001
Residential	MF3_GE_5_Units	Space_Heat	0	15	4	001 003 001
Residential	MF3_GE_5_Units	Water_Heat	-2	8	6	001 003 002
Residential	MF3_GE_5_Units	Water_Heat	-1	8	8	001 003 002
Residential	MF3_GE_5_Units	Water_Heat	0	8	4	001 003 002
Residential	MF3_GE_5_Units	Cooking	-2	11	10	001 003 003
Residential	MF3_GE_5_Units	Cooking	-1	11	11	001 003 003
Residential	MF3_GE_5_Units	Cooking	0	11	4	001 003 003
Residential	MF3_GE_5_Units	Drying	-2	8	6	001 003 004
Residential	MF3_GE_5_Units	Drying	-1	8	8	001 003 004
Residential	MF3_GE_5_Units	Drying	0	8	3	001 003 004
Residential	MF3_GE_5_Units	Barbecue	-2	5	5	001 003 008
Residential	MF3_GE_5_Units	Barbecue	-1	5	5	001 003 008
Residential	MF3_GE_5_Units	Barbecue	0	5	5	001 003 008
Residential	MF3_GE_5_Units	Other	-2	15	15	001 003 009
Residential	MF3_GE_5_Units	Other	-1	15	15	001 003 009
Residential	MF3_GE_5_Units	Other	0	15	15	001 003 009
Residential	MM_Master_Meter	Space_Heat	-2	16	16	001 004 001
Residential	MM_Master_Meter	Space_Heat	-1	16	11	001 004 001
Residential	MM_Master_Meter	Space_Heat	0	16	4	001 004 001
Residential	MM_Master_Meter	Water_Heat	-2	8	6	001 004 002
Residential	MM_Master_Meter	Water_Heat	-1	8	8	001 004 002
Residential	MM_Master_Meter	Water_Heat	0	8	4	001 004 002
Residential	MM_Master_Meter	Cooking	-2	14	14	001 004 003
Residential	MM_Master_Meter	Cooking	-1	14	11	001 004 003
Residential	MM_Master_Meter	Cooking	0	14	3	001 004 003
Residential	MM_Master_Meter	Drying	-2	8	8	001 004 004
Residential	MM_Master_Meter	Drying	-1	8	8	001 004 004
Residential	MM_Master_Meter	Drying	0	8	4	001 004 004
Residential	MM_Master_Meter	Barbecue	-2	9	5	001 004 008
Residential	MM_Master_Meter	Barbecue	-1	9	9	001 004 008
Residential	MM_Master_Meter	Barbecue	0	9	2	001 004 008
Residential	MM_Master_Meter	Other	-2	15	15	001 004 009
Residential	MM_Master_Meter	Other	-1	15	15	001 004 009
Residential	MM_Master_Meter	Other	0	15	15	001 004 009
Residential	SM_Sub_Meter	Space_Heat	-2	16	16	001 005 001
Residential	SM_Sub_Meter	Space_Heat	-1	16	11	001 005 001
Residential	SM_Sub_Meter	Space_Heat	0	16	4	001 005 001
Residential	SM_Sub_Meter	Water_Heat	-2	8	6	001 005 002
Residential	SM_Sub_Meter	Water_Heat	-1	8	8	001 005 002
Residential	SM_Sub_Meter	Water_Heat	0	8	4	001 005 002
Residential	SM_Sub_Meter	Cooking	-2	14	14	001 005 003
Residential	SM_Sub_Meter	Cooking	-1	14	11	001 005 003

Residential	SM_Sub_Meter	Cooking	0	14	3	001 005 003
Residential	SM_Sub_Meter	Drying	-2	8	8	001 005 004
Residential	SM_Sub_Meter	Drying	-1	8	8	001 005 004
Residential	SM_Sub_Meter	Drying	0	8	4	001 005 004
Residential	SM_Sub_Meter	Barbecue	-2	9	5	001 005 008
Residential	SM_Sub_Meter	Barbecue	-1	9	9	001 005 008
Residential	SM_Sub_Meter	Barbecue	0	9	2	001 005 008
Residential	SM_Sub_Meter	Other	-2	15	15	001 005 009
Residential	SM_Sub_Meter	Other	-1	15	15	001 005 009
Residential	SM_Sub_Meter	Other	0	15	15	001 005 009

Cost Allocation Proceeding SoCalGas: Residential Market Equipment Decay

zName	bName	nName	fName	conType	ator	equipment DecayIndic	equipment DecayParm	equipmentDecayParm2	equipmentDecayParm3
Residential	Single_Family	Space_Heat	Natural_Gas	Existing	1	0.0333333		0	0
Residential	Single_Family	Space_Heat	Natural_Gas	New	2	0.995		1	0.5
Residential	Single_Family	Space_Heat	Electric	Existing	1	0.0333333		0	0
Residential	Single_Family	Space_Heat	Electric	New	2	0.995		1	0.5
Residential	Single_Family	Water_Heat	Natural_Gas	Existing	1	0.0666667		0	0
Residential	Single_Family	Water_Heat	Natural_Gas	New	2	0.995		1	0.5
Residential	Single_Family	Water_Heat	Electric	Existing	1	0.0666667		0	0
Residential	Single_Family	Water_Heat	Electric	New	2	0.995		1	0.5
Residential	Single_Family	Cooking	Natural_Gas	Existing	1	0.05		0	0
Residential	Single_Family	Cooking	Natural_Gas	New	2	0.995		1	0.5
Residential	Single_Family	Cooking	Electric	Existing	1	0.05		0	0
Residential	Single_Family	Cooking	Electric	New	2	0.995		1	0.5
Residential	Single_Family	Drying	Natural_Gas	Existing	1	0.0666667		0	0
Residential	Single_Family	Drying	Natural_Gas	New	2	0.995		1	0.5
Residential	Single_Family	Drying	Electric	Existing	1	0.0666667		0	0
Residential	Single_Family	Drying	Electric	New	2	0.995		1	0.5
Residential	Single_Family	Pool	Natural_Gas	Existing	1	0.04		0	0
Residential	Single_Family	Pool	Natural_Gas	New	2	0.995		1	0.5
Residential	Single_Family	Pool	Electric	Existing	1	0.04		0	0
Residential	Single_Family	Pool	Electric	New	2	0.995		1	0.5
Residential	Single_Family	Spa	Natural_Gas	Existing	1	0.05		0	0
Residential	Single_Family	Spa	Natural_Gas	New	2	0.995		1	0.5
Residential	Single_Family	Spa	Electric	Existing	1	0.05		0	0
Residential	Single_Family	Spa	Electric	New	2	0.995		1	0.5
Residential	Single_Family	Fireplace	Natural_Gas	Existing	1	0.0333333		0	0

Residential Single_Family	Fireplace	Natural_Gas	New	2	0.995	1	0.5
Residential Single_Family	Fireplace	Electric	Existing	1	0.0333333	0	0
Residential Single_Family	Fireplace	Electric	New	2	0.995	1	0.5
Residential Single_Family	Barbecue	Natural_Gas	Existing	1	0.0666667	0	0
Residential Single_Family	Barbecue	Natural_Gas	New	2	0.995	1	0.5
Residential Single_Family	Barbecue	Electric	Existing	1	0.0666667	0	0
Residential Single_Family	Barbecue	Electric	New	2	0.995	1	0.5
Residential Single_Family	Other	Natural_Gas	Existing	1	0.0666667	0	0
Residential Single_Family	Other	Natural_Gas	New	2	0.995	1	0.5
Residential MF2_2_TO_4_Units	Space_Heat	Natural_Gas	Existing	1	0.0333333	0	0
Residential MF2_2_TO_4_Units	Space_Heat	Natural_Gas	New	2	0.995	1	0.5
Residential MF2_2_TO_4_Units	Space_Heat	Electric	Existing	1	0.0333333	0	0
Residential MF2_2_TO_4_Units	Space_Heat	Electric	New	2	0.995	1	0.5
Residential MF2_2_TO_4_Units	Water_Heat	Natural_Gas	Existing	1	0.0666667	0	0
Residential MF2_2_TO_4_Units	Water_Heat	Natural_Gas	New	2	0.995	1	0.5
Residential MF2_2_TO_4_Units	Water_Heat	Electric	Existing	1	0.0666667	0	0
Residential MF2_2_TO_4_Units	Water_Heat	Electric	New	2	0.995	1	0.5
Residential MF2_2_TO_4_Units	Cooking	Natural_Gas	Existing	1	0.05	0	0
Residential MF2_2_TO_4_Units	Cooking	Natural_Gas	New	2	0.995	1	0.5
Residential MF2_2_TO_4_Units	Cooking	Electric	Existing	1	0.05	0	0
Residential MF2_2_TO_4_Units	Cooking	Electric	New	2	0.995	1	0.5
Residential MF2_2_TO_4_Units	Drying	Natural_Gas	Existing	1	0.0666667	0	0
Residential MF2_2_TO_4_Units	Drying	Natural_Gas	New	2	0.995	1	0.5
Residential MF2_2_TO_4_Units	Drying	Electric	Existing	1	0.0666667	0	0
Residential MF2_2_TO_4_Units	Drying	Electric	New	2	0.995	1	0.5
Residential MF2_2_TO_4_Units	Barbecue	Natural_Gas	Existing	1	0.0666667	0	0
Residential MF2_2_TO_4_Units	Barbecue	Natural_Gas	New	2	0.995	1	0.5
Residential MF2_2_TO_4_Units	Barbecue	Electric	Existing	1	0.0666667	0	0
Residential MF2_2_TO_4_Units	Barbecue	Electric	New	2	0.995	1	0.5
Residential MF2_2_TO_4_Units	Other	Natural_Gas	Existing	1	0.0666667	0	0
Residential MF2_2_TO_4_Units	Other	Natural_Gas	New	2	0.995	1	0.5
Residential MF3_GE_5_Units	Space_Heat	Natural_Gas	Existing	1	0.0333333	0	0
Residential MF3_GE_5_Units	Space_Heat	Natural_Gas	New	2	0.995	1	0.5
Residential MF3_GE_5_Units	Space_Heat	Electric	Existing	1	0.0333333	0	0

Residential MF3_GE_5_Units	Space_Heat	Electric	New	2	0.995	1	0.5
Residential MF3_GE_5_Units	Water_Heat	Natural_Gas	Existing	1	0.0666667	0	0
Residential MF3_GE_5_Units	Water_Heat	Natural_Gas	New	2	0.995	1	0.5
Residential MF3_GE_5_Units	Water_Heat	Electric	Existing	1	0.0666667	0	0
Residential MF3_GE_5_Units	Water_Heat	Electric	New	2	0.995	1	0.5
Residential MF3_GE_5_Units	Cooking	Natural_Gas	Existing	1	0.05	0	0
Residential MF3_GE_5_Units	Cooking	Natural_Gas	New	2	0.995	1	0.5
Residential MF3_GE_5_Units	Cooking	Electric	Existing	1	0.05	0	0
Residential MF3_GE_5_Units	Cooking	Electric	New	2	0.995	1	0.5
Residential MF3_GE_5_Units	Drying	Natural_Gas	Existing	1	0.0666667	0	0
Residential MF3_GE_5_Units	Drying	Natural_Gas	New	2	0.995	1	0.5
Residential MF3_GE_5_Units	Drying	Electric	Existing	1	0.0666667	0	0
Residential MF3_GE_5_Units	Drying	Electric	New	2	0.995	1	0.5
Residential MF3_GE_5_Units	Barbecue	Natural_Gas	Existing	1	0.0666667	0	0
Residential MF3_GE_5_Units	Barbecue	Natural_Gas	New	2	0.995	1	0.5
Residential MF3_GE_5_Units	Barbecue	Electric	Existing	1	0.0666667	0	0
Residential MF3_GE_5_Units	Barbecue	Electric	New	2	0.995	1	0.5
Residential MF3_GE_5_Units	Other	Natural_Gas	Existing	1	0.0666667	0	0
Residential MF3_GE_5_Units	Other	Natural_Gas	New	2	0.995	1	0.5
Residential MM_Master_Meter	Space_Heat	Natural_Gas	Existing	1	0.0333333	0	0
Residential MM_Master_Meter	Space_Heat	Natural_Gas	New	2	0.995	1	0.5
Residential MM_Master_Meter	Space_Heat	Electric	Existing	1	0.0333333	0	0
Residential MM_Master_Meter	Space_Heat	Electric	New	2	0.995	1	0.5
Residential MM_Master_Meter	Water_Heat	Natural_Gas	Existing	1	0.0666667	0	0
Residential MM_Master_Meter	Water_Heat	Natural_Gas	New	2	0.995	1	0.5
Residential MM_Master_Meter	Water_Heat	Electric	Existing	1	0.0666667	0	0
Residential MM_Master_Meter	Water_Heat	Electric	New	2	0.995	1	0.5
Residential MM_Master_Meter	Cooking	Natural_Gas	Existing	1	0.05	0	0
Residential MM_Master_Meter	Cooking	Natural_Gas	New	2	0.995	1	0.5
Residential MM_Master_Meter	Cooking	Electric	Existing	1	0.05	0	0
Residential MM_Master_Meter	Cooking	Electric	New	2	0.995	1	0.5
Residential MM_Master_Meter	Drying	Natural_Gas	Existing	1	0.0666667	0	0
Residential MM_Master_Meter	Drying	Natural_Gas	New	2	0.995	1	0.5
Residential MM_Master_Meter	Drying	Electric	Existing	1	0.0666667	0	0

Residential MM_Master_Meter	Drying	Electric	New	2	0.995	1	0.5
Residential MM_Master_Meter	Barbecue	Natural_Gas	Existing	1	0.0666667	0	0
Residential MM_Master_Meter	Barbecue	Natural_Gas	New	2	0.995	1	0.5
Residential MM_Master_Meter	Barbecue	Electric	Existing	1	0.0666667	0	0
Residential MM_Master_Meter	Barbecue	Electric	New	2	0.995	1	0.5
Residential MM_Master_Meter	Other	Natural_Gas	Existing	1	0.0666667	0	0
Residential MM_Master_Meter	Other	Natural_Gas	New	2	0.995	1	0.5
Residential SM_Sub_Meter	Space_Heat	Natural_Gas	Existing	1	0.0333333	0	0
Residential SM_Sub_Meter	Space_Heat	Natural_Gas	New	2	0.995	1	0.5
Residential SM_Sub_Meter	Space_Heat	Electric	Existing	1	0.0333333	0	0
Residential SM_Sub_Meter	Space_Heat	Electric	New	2	0.995	1	0.5
Residential SM_Sub_Meter	Water_Heat	Natural_Gas	Existing	1	0.0666667	0	0
Residential SM_Sub_Meter	Water_Heat	Natural_Gas	New	2	0.995	1	0.5
Residential SM_Sub_Meter	Water_Heat	Electric	Existing	1	0.0666667	0	0
Residential SM_Sub_Meter	Water_Heat	Electric	New	2	0.995	1	0.5
Residential SM_Sub_Meter	Cooking	Natural_Gas	Existing	1	0.05	0	0
Residential SM_Sub_Meter	Cooking	Natural_Gas	New	2	0.995	1	0.5
Residential SM_Sub_Meter	Cooking	Electric	Existing	1	0.05	0	0
Residential SM_Sub_Meter	Cooking	Electric	New	2	0.995	1	0.5
Residential SM_Sub_Meter	Drying	Natural_Gas	Existing	1	0.0666667	0	0
Residential SM_Sub_Meter	Drying	Natural_Gas	New	2	0.995	1	0.5
Residential SM_Sub_Meter	Drying	Electric	Existing	1	0.0666667	0	0
Residential SM_Sub_Meter	Drying	Electric	New	2	0.995	1	0.5
Residential SM_Sub_Meter	Barbecue	Natural_Gas	Existing	1	0.0666667	0	0
Residential SM_Sub_Meter	Barbecue	Natural_Gas	New	2	0.995	1	0.5
Residential SM_Sub_Meter	Barbecue	Electric	Existing	1	0.0666667	0	0
Residential SM_Sub_Meter	Barbecue	Electric	New	2	0.995	1	0.5
Residential SM_Sub_Meter	Other	Natural_Gas	Existing	1	0.0666667	0	0
Residential SM_Sub_Meter	Other	Natural_Gas	New	2	0.995	1	0.5

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Cost Allocation Proceeding

SoCalGas Residential Market: Saturations by year and vintage

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Space_Heat	0	-2	1	001	001	001
Residential	Single_Family	Space_Heat	0	-1	1	001	001	001
Residential	Single_Family	Space_Heat	0	0	1	001	001	001
Residential	Single_Family	Space_Heat	1	-2	1	001	001	001
Residential	Single_Family	Space_Heat	1	-1	1	001	001	001
Residential	Single_Family	Space_Heat	1	0	1	001	001	001
Residential	Single_Family	Space_Heat	1	1	1	001	001	001
Residential	Single_Family	Space_Heat	2	-2	1	001	001	001
Residential	Single_Family	Space_Heat	2	-1	1	001	001	001
Residential	Single_Family	Space_Heat	2	0	1	001	001	001
Residential	Single_Family	Space_Heat	2	1	1	001	001	001
Residential	Single_Family	Space_Heat	2	2	1	001	001	001
Residential	Single_Family	Space_Heat	3	-2	1	001	001	001
Residential	Single_Family	Space_Heat	3	-1	1	001	001	001
Residential	Single_Family	Space_Heat	3	0	1	001	001	001
Residential	Single_Family	Space_Heat	3	1	1	001	001	001
Residential	Single_Family	Space_Heat	3	2	1	001	001	001
Residential	Single_Family	Space_Heat	3	3	1	001	001	001
Residential	Single_Family	Space_Heat	4	-2	1	001	001	001
Residential	Single_Family	Space_Heat	4	-1	1	001	001	001
Residential	Single_Family	Space_Heat	4	0	1	001	001	001
Residential	Single_Family	Space_Heat	4	1	1	001	001	001
Residential	Single_Family	Space_Heat	4	2	1	001	001	001
Residential	Single_Family	Space_Heat	4	3	1	001	001	001
Residential	Single_Family	Space_Heat	4	4	1	001	001	001
Residential	Single_Family	Space_Heat	5	-2	1	001	001	001
Residential	Single_Family	Space_Heat	5	-1	1	001	001	001
Residential	Single_Family	Space_Heat	5	0	1	001	001	001
Residential	Single_Family	Space_Heat	5	1	1	001	001	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Space_Heat	5	2	1	001	001	001
Residential	Single_Family	Space_Heat	5	3	1	001	001	001
Residential	Single_Family	Space_Heat	5	4	1	001	001	001
Residential	Single_Family	Space_Heat	5	5	1	001	001	001
Residential	Single_Family	Space_Heat	6	-2	1	001	001	001
Residential	Single_Family	Space_Heat	6	-1	1	001	001	001
Residential	Single_Family	Space_Heat	6	0	1	001	001	001
Residential	Single_Family	Space_Heat	6	1	1	001	001	001
Residential	Single_Family	Space_Heat	6	2	1	001	001	001
Residential	Single_Family	Space_Heat	6	3	1	001	001	001
Residential	Single_Family	Space_Heat	6	4	1	001	001	001
Residential	Single_Family	Space_Heat	6	5	1	001	001	001
Residential	Single_Family	Space_Heat	6	6	1	001	001	001
Residential	Single_Family	Space_Heat	7	-2	1	001	001	001
Residential	Single_Family	Space_Heat	7	-1	1	001	001	001
Residential	Single_Family	Space_Heat	7	0	1	001	001	001
Residential	Single_Family	Space_Heat	7	1	1	001	001	001
Residential	Single_Family	Space_Heat	7	2	1	001	001	001
Residential	Single_Family	Space_Heat	7	3	1	001	001	001
Residential	Single_Family	Space_Heat	7	4	1	001	001	001
Residential	Single_Family	Space_Heat	7	5	1	001	001	001
Residential	Single_Family	Space_Heat	7	6	1	001	001	001
Residential	Single_Family	Space_Heat	7	7	1	001	001	001
Residential	Single_Family	Space_Heat	8	-2	1	001	001	001
Residential	Single_Family	Space_Heat	8	-1	1	001	001	001
Residential	Single_Family	Space_Heat	8	0	1	001	001	001
Residential	Single_Family	Space_Heat	8	1	1	001	001	001
Residential	Single_Family	Space_Heat	8	2	1	001	001	001
Residential	Single_Family	Space_Heat	8	3	1	001	001	001
Residential	Single_Family	Space_Heat	8	4	1	001	001	001
Residential	Single_Family	Space_Heat	8	5	1	001	001	001
Residential	Single_Family	Space_Heat	8	6	1	001	001	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Space_Heat	8	7	1	001	001	001
Residential	Single_Family	Space_Heat	8	8	1	001	001	001
Residential	Single_Family	Space_Heat	9	-2	1	001	001	001
Residential	Single_Family	Space_Heat	9	-1	1	001	001	001
Residential	Single_Family	Space_Heat	9	0	1	001	001	001
Residential	Single_Family	Space_Heat	9	1	1	001	001	001
Residential	Single_Family	Space_Heat	9	2	1	001	001	001
Residential	Single_Family	Space_Heat	9	3	1	001	001	001
Residential	Single_Family	Space_Heat	9	4	1	001	001	001
Residential	Single_Family	Space_Heat	9	5	1	001	001	001
Residential	Single_Family	Space_Heat	9	6	1	001	001	001
Residential	Single_Family	Space_Heat	9	7	1	001	001	001
Residential	Single_Family	Space_Heat	9	8	1	001	001	001
Residential	Single_Family	Space_Heat	9	9	1	001	001	001
Residential	Single_Family	Space_Heat	10	-2	1	001	001	001
Residential	Single_Family	Space_Heat	10	-1	1	001	001	001
Residential	Single_Family	Space_Heat	10	0	1	001	001	001
Residential	Single_Family	Space_Heat	10	1	1	001	001	001
Residential	Single_Family	Space_Heat	10	2	1	001	001	001
Residential	Single_Family	Space_Heat	10	3	1	001	001	001
Residential	Single_Family	Space_Heat	10	4	1	001	001	001
Residential	Single_Family	Space_Heat	10	5	1	001	001	001
Residential	Single_Family	Space_Heat	10	6	1	001	001	001
Residential	Single_Family	Space_Heat	10	7	1	001	001	001
Residential	Single_Family	Space_Heat	10	8	1	001	001	001
Residential	Single_Family	Space_Heat	10	9	1	001	001	001
Residential	Single_Family	Space_Heat	10	10	1	001	001	001
Residential	Single_Family	Space_Heat	11	-2	1	001	001	001
Residential	Single_Family	Space_Heat	11	-1	1	001	001	001
Residential	Single_Family	Space_Heat	11	0	1	001	001	001
Residential	Single_Family	Space_Heat	11	1	1	001	001	001
Residential	Single_Family	Space_Heat	11	2	1	001	001	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Space_Heat	11	3	1	001	001	001
Residential	Single_Family	Space_Heat	11	4	1	001	001	001
Residential	Single_Family	Space_Heat	11	5	1	001	001	001
Residential	Single_Family	Space_Heat	11	6	1	001	001	001
Residential	Single_Family	Space_Heat	11	7	1	001	001	001
Residential	Single_Family	Space_Heat	11	8	1	001	001	001
Residential	Single_Family	Space_Heat	11	9	1	001	001	001
Residential	Single_Family	Space_Heat	11	10	1	001	001	001
Residential	Single_Family	Space_Heat	11	11	1	001	001	001
Residential	Single_Family	Space_Heat	12	-2	1	001	001	001
Residential	Single_Family	Space_Heat	12	-1	1	001	001	001
Residential	Single_Family	Space_Heat	12	0	1	001	001	001
Residential	Single_Family	Space_Heat	12	1	1	001	001	001
Residential	Single_Family	Space_Heat	12	2	1	001	001	001
Residential	Single_Family	Space_Heat	12	3	1	001	001	001
Residential	Single_Family	Space_Heat	12	4	1	001	001	001
Residential	Single_Family	Space_Heat	12	5	1	001	001	001
Residential	Single_Family	Space_Heat	12	6	1	001	001	001
Residential	Single_Family	Space_Heat	12	7	1	001	001	001
Residential	Single_Family	Space_Heat	12	8	1	001	001	001
Residential	Single_Family	Space_Heat	12	9	1	001	001	001
Residential	Single_Family	Space_Heat	12	10	1	001	001	001
Residential	Single_Family	Space_Heat	12	11	1	001	001	001
Residential	Single_Family	Space_Heat	12	12	1	001	001	001
Residential	Single_Family	Space_Heat	13	-2	1	001	001	001
Residential	Single_Family	Space_Heat	13	-1	1	001	001	001
Residential	Single_Family	Space_Heat	13	0	1	001	001	001
Residential	Single_Family	Space_Heat	13	1	1	001	001	001
Residential	Single_Family	Space_Heat	13	2	1	001	001	001
Residential	Single_Family	Space_Heat	13	3	1	001	001	001
Residential	Single_Family	Space_Heat	13	4	1	001	001	001
Residential	Single_Family	Space_Heat	13	5	1	001	001	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Space_Heat	13	6	1	001	001	001
Residential	Single_Family	Space_Heat	13	7	1	001	001	001
Residential	Single_Family	Space_Heat	13	8	1	001	001	001
Residential	Single_Family	Space_Heat	13	9	1	001	001	001
Residential	Single_Family	Space_Heat	13	10	1	001	001	001
Residential	Single_Family	Space_Heat	13	11	1	001	001	001
Residential	Single_Family	Space_Heat	13	12	1	001	001	001
Residential	Single_Family	Space_Heat	13	13	1	001	001	001
Residential	Single_Family	Space_Heat	14	-2	1	001	001	001
Residential	Single_Family	Space_Heat	14	-1	1	001	001	001
Residential	Single_Family	Space_Heat	14	0	1	001	001	001
Residential	Single_Family	Space_Heat	14	1	1	001	001	001
Residential	Single_Family	Space_Heat	14	2	1	001	001	001
Residential	Single_Family	Space_Heat	14	3	1	001	001	001
Residential	Single_Family	Space_Heat	14	4	1	001	001	001
Residential	Single_Family	Space_Heat	14	5	1	001	001	001
Residential	Single_Family	Space_Heat	14	6	1	001	001	001
Residential	Single_Family	Space_Heat	14	7	1	001	001	001
Residential	Single_Family	Space_Heat	14	8	1	001	001	001
Residential	Single_Family	Space_Heat	14	9	1	001	001	001
Residential	Single_Family	Space_Heat	14	10	1	001	001	001
Residential	Single_Family	Space_Heat	14	11	1	001	001	001
Residential	Single_Family	Space_Heat	14	12	1	001	001	001
Residential	Single_Family	Space_Heat	14	13	1	001	001	001
Residential	Single_Family	Space_Heat	14	14	1	001	001	001
Residential	Single_Family	Space_Heat	15	-2	1	001	001	001
Residential	Single_Family	Space_Heat	15	-1	1	001	001	001
Residential	Single_Family	Space_Heat	15	0	1	001	001	001
Residential	Single_Family	Space_Heat	15	1	1	001	001	001
Residential	Single_Family	Space_Heat	15	2	1	001	001	001
Residential	Single_Family	Space_Heat	15	3	1	001	001	001
Residential	Single_Family	Space_Heat	15	4	1	001	001	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Space_Heat	15	5		1	001	001 001
Residential	Single_Family	Space_Heat	15	6		1	001	001 001
Residential	Single_Family	Space_Heat	15	7		1	001	001 001
Residential	Single_Family	Space_Heat	15	8		1	001	001 001
Residential	Single_Family	Space_Heat	15	9		1	001	001 001
Residential	Single_Family	Space_Heat	15	10		1	001	001 001
Residential	Single_Family	Space_Heat	15	11		1	001	001 001
Residential	Single_Family	Space_Heat	15	12		1	001	001 001
Residential	Single_Family	Space_Heat	15	13		1	001	001 001
Residential	Single_Family	Space_Heat	15	14		1	001	001 001
Residential	Single_Family	Space_Heat	15	15		1	001	001 001
Residential	Single_Family	Water_Heat	0	-2		1	001	001 002
Residential	Single_Family	Water_Heat	0	-1		1	001	001 002
Residential	Single_Family	Water_Heat	0	0		1	001	001 002
Residential	Single_Family	Water_Heat	1	-2		1	001	001 002
Residential	Single_Family	Water_Heat	1	-1		1	001	001 002
Residential	Single_Family	Water_Heat	1	0		1	001	001 002
Residential	Single_Family	Water_Heat	1	1		1	001	001 002
Residential	Single_Family	Water_Heat	2	-2		1	001	001 002
Residential	Single_Family	Water_Heat	2	-1		1	001	001 002
Residential	Single_Family	Water_Heat	2	0		1	001	001 002
Residential	Single_Family	Water_Heat	2	1		1	001	001 002
Residential	Single_Family	Water_Heat	2	2		1	001	001 002
Residential	Single_Family	Water_Heat	3	-2		1	001	001 002
Residential	Single_Family	Water_Heat	3	-1		1	001	001 002
Residential	Single_Family	Water_Heat	3	0		1	001	001 002
Residential	Single_Family	Water_Heat	3	1		1	001	001 002
Residential	Single_Family	Water_Heat	3	2		1	001	001 002
Residential	Single_Family	Water_Heat	3	3		1	001	001 002
Residential	Single_Family	Water_Heat	4	-2		1	001	001 002
Residential	Single_Family	Water_Heat	4	-1		1	001	001 002
Residential	Single_Family	Water_Heat	4	0		1	001	001 002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Water_Heat	4	1	1	001	001	002
Residential	Single_Family	Water_Heat	4	2	1	001	001	002
Residential	Single_Family	Water_Heat	4	3	1	001	001	002
Residential	Single_Family	Water_Heat	4	4	1	001	001	002
Residential	Single_Family	Water_Heat	5	-2	1	001	001	002
Residential	Single_Family	Water_Heat	5	-1	1	001	001	002
Residential	Single_Family	Water_Heat	5	0	1	001	001	002
Residential	Single_Family	Water_Heat	5	1	1	001	001	002
Residential	Single_Family	Water_Heat	5	2	1	001	001	002
Residential	Single_Family	Water_Heat	5	3	1	001	001	002
Residential	Single_Family	Water_Heat	5	4	1	001	001	002
Residential	Single_Family	Water_Heat	5	5	1	001	001	002
Residential	Single_Family	Water_Heat	6	-2	1	001	001	002
Residential	Single_Family	Water_Heat	6	-1	1	001	001	002
Residential	Single_Family	Water_Heat	6	0	1	001	001	002
Residential	Single_Family	Water_Heat	6	1	1	001	001	002
Residential	Single_Family	Water_Heat	6	2	1	001	001	002
Residential	Single_Family	Water_Heat	6	3	1	001	001	002
Residential	Single_Family	Water_Heat	6	4	1	001	001	002
Residential	Single_Family	Water_Heat	6	5	1	001	001	002
Residential	Single_Family	Water_Heat	6	6	1	001	001	002
Residential	Single_Family	Water_Heat	7	-2	1	001	001	002
Residential	Single_Family	Water_Heat	7	-1	1	001	001	002
Residential	Single_Family	Water_Heat	7	0	1	001	001	002
Residential	Single_Family	Water_Heat	7	1	1	001	001	002
Residential	Single_Family	Water_Heat	7	2	1	001	001	002
Residential	Single_Family	Water_Heat	7	3	1	001	001	002
Residential	Single_Family	Water_Heat	7	4	1	001	001	002
Residential	Single_Family	Water_Heat	7	5	1	001	001	002
Residential	Single_Family	Water_Heat	7	6	1	001	001	002
Residential	Single_Family	Water_Heat	7	7	1	001	001	002
Residential	Single_Family	Water_Heat	8	-2	1	001	001	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Water_Heat	8	-1	1	001	001	002
Residential	Single_Family	Water_Heat	8	0	1	001	001	002
Residential	Single_Family	Water_Heat	8	1	1	001	001	002
Residential	Single_Family	Water_Heat	8	2	1	001	001	002
Residential	Single_Family	Water_Heat	8	3	1	001	001	002
Residential	Single_Family	Water_Heat	8	4	1	001	001	002
Residential	Single_Family	Water_Heat	8	5	1	001	001	002
Residential	Single_Family	Water_Heat	8	6	1	001	001	002
Residential	Single_Family	Water_Heat	8	7	1	001	001	002
Residential	Single_Family	Water_Heat	8	8	1	001	001	002
Residential	Single_Family	Water_Heat	9	-2	1	001	001	002
Residential	Single_Family	Water_Heat	9	-1	1	001	001	002
Residential	Single_Family	Water_Heat	9	0	1	001	001	002
Residential	Single_Family	Water_Heat	9	1	1	001	001	002
Residential	Single_Family	Water_Heat	9	2	1	001	001	002
Residential	Single_Family	Water_Heat	9	3	1	001	001	002
Residential	Single_Family	Water_Heat	9	4	1	001	001	002
Residential	Single_Family	Water_Heat	9	5	1	001	001	002
Residential	Single_Family	Water_Heat	9	6	1	001	001	002
Residential	Single_Family	Water_Heat	9	7	1	001	001	002
Residential	Single_Family	Water_Heat	9	8	1	001	001	002
Residential	Single_Family	Water_Heat	9	9	1	001	001	002
Residential	Single_Family	Water_Heat	10	-2	1	001	001	002
Residential	Single_Family	Water_Heat	10	-1	1	001	001	002
Residential	Single_Family	Water_Heat	10	0	1	001	001	002
Residential	Single_Family	Water_Heat	10	1	1	001	001	002
Residential	Single_Family	Water_Heat	10	2	1	001	001	002
Residential	Single_Family	Water_Heat	10	3	1	001	001	002
Residential	Single_Family	Water_Heat	10	4	1	001	001	002
Residential	Single_Family	Water_Heat	10	5	1	001	001	002
Residential	Single_Family	Water_Heat	10	6	1	001	001	002
Residential	Single_Family	Water_Heat	10	7	1	001	001	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Water_Heat	10	8	1	001	001	002
Residential	Single_Family	Water_Heat	10	9	1	001	001	002
Residential	Single_Family	Water_Heat	10	10	1	001	001	002
Residential	Single_Family	Water_Heat	11	-2	1	001	001	002
Residential	Single_Family	Water_Heat	11	-1	1	001	001	002
Residential	Single_Family	Water_Heat	11	0	1	001	001	002
Residential	Single_Family	Water_Heat	11	1	1	001	001	002
Residential	Single_Family	Water_Heat	11	2	1	001	001	002
Residential	Single_Family	Water_Heat	11	3	1	001	001	002
Residential	Single_Family	Water_Heat	11	4	1	001	001	002
Residential	Single_Family	Water_Heat	11	5	1	001	001	002
Residential	Single_Family	Water_Heat	11	6	1	001	001	002
Residential	Single_Family	Water_Heat	11	7	1	001	001	002
Residential	Single_Family	Water_Heat	11	8	1	001	001	002
Residential	Single_Family	Water_Heat	11	9	1	001	001	002
Residential	Single_Family	Water_Heat	11	10	1	001	001	002
Residential	Single_Family	Water_Heat	11	11	1	001	001	002
Residential	Single_Family	Water_Heat	12	-2	1	001	001	002
Residential	Single_Family	Water_Heat	12	-1	1	001	001	002
Residential	Single_Family	Water_Heat	12	0	1	001	001	002
Residential	Single_Family	Water_Heat	12	1	1	001	001	002
Residential	Single_Family	Water_Heat	12	2	1	001	001	002
Residential	Single_Family	Water_Heat	12	3	1	001	001	002
Residential	Single_Family	Water_Heat	12	4	1	001	001	002
Residential	Single_Family	Water_Heat	12	5	1	001	001	002
Residential	Single_Family	Water_Heat	12	6	1	001	001	002
Residential	Single_Family	Water_Heat	12	7	1	001	001	002
Residential	Single_Family	Water_Heat	12	8	1	001	001	002
Residential	Single_Family	Water_Heat	12	9	1	001	001	002
Residential	Single_Family	Water_Heat	12	10	1	001	001	002
Residential	Single_Family	Water_Heat	12	11	1	001	001	002
Residential	Single_Family	Water_Heat	12	12	1	001	001	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Water_Heat	13	-2		1	001	001 002
Residential	Single_Family	Water_Heat	13	-1		1	001	001 002
Residential	Single_Family	Water_Heat	13	0		1	001	001 002
Residential	Single_Family	Water_Heat	13	1		1	001	001 002
Residential	Single_Family	Water_Heat	13	2		1	001	001 002
Residential	Single_Family	Water_Heat	13	3		1	001	001 002
Residential	Single_Family	Water_Heat	13	4		1	001	001 002
Residential	Single_Family	Water_Heat	13	5		1	001	001 002
Residential	Single_Family	Water_Heat	13	6		1	001	001 002
Residential	Single_Family	Water_Heat	13	7		1	001	001 002
Residential	Single_Family	Water_Heat	13	8		1	001	001 002
Residential	Single_Family	Water_Heat	13	9		1	001	001 002
Residential	Single_Family	Water_Heat	13	10		1	001	001 002
Residential	Single_Family	Water_Heat	13	11		1	001	001 002
Residential	Single_Family	Water_Heat	13	12		1	001	001 002
Residential	Single_Family	Water_Heat	13	13		1	001	001 002
Residential	Single_Family	Water_Heat	14	-2		1	001	001 002
Residential	Single_Family	Water_Heat	14	-1		1	001	001 002
Residential	Single_Family	Water_Heat	14	0		1	001	001 002
Residential	Single_Family	Water_Heat	14	1		1	001	001 002
Residential	Single_Family	Water_Heat	14	2		1	001	001 002
Residential	Single_Family	Water_Heat	14	3		1	001	001 002
Residential	Single_Family	Water_Heat	14	4		1	001	001 002
Residential	Single_Family	Water_Heat	14	5		1	001	001 002
Residential	Single_Family	Water_Heat	14	6		1	001	001 002
Residential	Single_Family	Water_Heat	14	7		1	001	001 002
Residential	Single_Family	Water_Heat	14	8		1	001	001 002
Residential	Single_Family	Water_Heat	14	9		1	001	001 002
Residential	Single_Family	Water_Heat	14	10		1	001	001 002
Residential	Single_Family	Water_Heat	14	11		1	001	001 002
Residential	Single_Family	Water_Heat	14	12		1	001	001 002
Residential	Single_Family	Water_Heat	14	13		1	001	001 002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Water_Heat	14	14		1	001	001 002
Residential	Single_Family	Water_Heat	15	-2		1	001	001 002
Residential	Single_Family	Water_Heat	15	-1		1	001	001 002
Residential	Single_Family	Water_Heat	15	0		1	001	001 002
Residential	Single_Family	Water_Heat	15	1		1	001	001 002
Residential	Single_Family	Water_Heat	15	2		1	001	001 002
Residential	Single_Family	Water_Heat	15	3		1	001	001 002
Residential	Single_Family	Water_Heat	15	4		1	001	001 002
Residential	Single_Family	Water_Heat	15	5		1	001	001 002
Residential	Single_Family	Water_Heat	15	6		1	001	001 002
Residential	Single_Family	Water_Heat	15	7		1	001	001 002
Residential	Single_Family	Water_Heat	15	8		1	001	001 002
Residential	Single_Family	Water_Heat	15	9		1	001	001 002
Residential	Single_Family	Water_Heat	15	10		1	001	001 002
Residential	Single_Family	Water_Heat	15	11		1	001	001 002
Residential	Single_Family	Water_Heat	15	12		1	001	001 002
Residential	Single_Family	Water_Heat	15	13		1	001	001 002
Residential	Single_Family	Water_Heat	15	14		1	001	001 002
Residential	Single_Family	Water_Heat	15	15		1	001	001 002
Residential	Single_Family	Cooking	0	-2		1	001	001 003
Residential	Single_Family	Cooking	0	-1		1	001	001 003
Residential	Single_Family	Cooking	0	0		1	001	001 003
Residential	Single_Family	Cooking	1	-2		1	001	001 003
Residential	Single_Family	Cooking	1	-1		1	001	001 003
Residential	Single_Family	Cooking	1	0		1	001	001 003
Residential	Single_Family	Cooking	1	1		1	001	001 003
Residential	Single_Family	Cooking	2	-2		1	001	001 003
Residential	Single_Family	Cooking	2	-1		1	001	001 003
Residential	Single_Family	Cooking	2	0		1	001	001 003
Residential	Single_Family	Cooking	2	1		1	001	001 003
Residential	Single_Family	Cooking	2	2		1	001	001 003
Residential	Single_Family	Cooking	3	-2		1	001	001 003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Cooking	3	-1	1	001	001	003
Residential	Single_Family	Cooking	3	0	1	001	001	003
Residential	Single_Family	Cooking	3	1	1	001	001	003
Residential	Single_Family	Cooking	3	2	1	001	001	003
Residential	Single_Family	Cooking	3	3	1	001	001	003
Residential	Single_Family	Cooking	4	-2	1	001	001	003
Residential	Single_Family	Cooking	4	-1	1	001	001	003
Residential	Single_Family	Cooking	4	0	1	001	001	003
Residential	Single_Family	Cooking	4	1	1	001	001	003
Residential	Single_Family	Cooking	4	2	1	001	001	003
Residential	Single_Family	Cooking	4	3	1	001	001	003
Residential	Single_Family	Cooking	4	4	1	001	001	003
Residential	Single_Family	Cooking	5	-2	1	001	001	003
Residential	Single_Family	Cooking	5	-1	1	001	001	003
Residential	Single_Family	Cooking	5	0	1	001	001	003
Residential	Single_Family	Cooking	5	1	1	001	001	003
Residential	Single_Family	Cooking	5	2	1	001	001	003
Residential	Single_Family	Cooking	5	3	1	001	001	003
Residential	Single_Family	Cooking	5	4	1	001	001	003
Residential	Single_Family	Cooking	5	5	1	001	001	003
Residential	Single_Family	Cooking	6	-2	1	001	001	003
Residential	Single_Family	Cooking	6	-1	1	001	001	003
Residential	Single_Family	Cooking	6	0	1	001	001	003
Residential	Single_Family	Cooking	6	1	1	001	001	003
Residential	Single_Family	Cooking	6	2	1	001	001	003
Residential	Single_Family	Cooking	6	3	1	001	001	003
Residential	Single_Family	Cooking	6	4	1	001	001	003
Residential	Single_Family	Cooking	6	5	1	001	001	003
Residential	Single_Family	Cooking	6	6	1	001	001	003
Residential	Single_Family	Cooking	7	-2	1	001	001	003
Residential	Single_Family	Cooking	7	-1	1	001	001	003
Residential	Single_Family	Cooking	7	0	1	001	001	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Cooking	7	1	1	001	001	003
Residential	Single_Family	Cooking	7	2	1	001	001	003
Residential	Single_Family	Cooking	7	3	1	001	001	003
Residential	Single_Family	Cooking	7	4	1	001	001	003
Residential	Single_Family	Cooking	7	5	1	001	001	003
Residential	Single_Family	Cooking	7	6	1	001	001	003
Residential	Single_Family	Cooking	7	7	1	001	001	003
Residential	Single_Family	Cooking	8	-2	1	001	001	003
Residential	Single_Family	Cooking	8	-1	1	001	001	003
Residential	Single_Family	Cooking	8	0	1	001	001	003
Residential	Single_Family	Cooking	8	1	1	001	001	003
Residential	Single_Family	Cooking	8	2	1	001	001	003
Residential	Single_Family	Cooking	8	3	1	001	001	003
Residential	Single_Family	Cooking	8	4	1	001	001	003
Residential	Single_Family	Cooking	8	5	1	001	001	003
Residential	Single_Family	Cooking	8	6	1	001	001	003
Residential	Single_Family	Cooking	8	7	1	001	001	003
Residential	Single_Family	Cooking	8	8	1	001	001	003
Residential	Single_Family	Cooking	9	-2	1	001	001	003
Residential	Single_Family	Cooking	9	-1	1	001	001	003
Residential	Single_Family	Cooking	9	0	1	001	001	003
Residential	Single_Family	Cooking	9	1	1	001	001	003
Residential	Single_Family	Cooking	9	2	1	001	001	003
Residential	Single_Family	Cooking	9	3	1	001	001	003
Residential	Single_Family	Cooking	9	4	1	001	001	003
Residential	Single_Family	Cooking	9	5	1	001	001	003
Residential	Single_Family	Cooking	9	6	1	001	001	003
Residential	Single_Family	Cooking	9	7	1	001	001	003
Residential	Single_Family	Cooking	9	8	1	001	001	003
Residential	Single_Family	Cooking	9	9	1	001	001	003
Residential	Single_Family	Cooking	10	-2	1	001	001	003
Residential	Single_Family	Cooking	10	-1	1	001	001	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Cooking	10	0		1	001	001 003
Residential	Single_Family	Cooking	10	1		1	001	001 003
Residential	Single_Family	Cooking	10	2		1	001	001 003
Residential	Single_Family	Cooking	10	3		1	001	001 003
Residential	Single_Family	Cooking	10	4		1	001	001 003
Residential	Single_Family	Cooking	10	5		1	001	001 003
Residential	Single_Family	Cooking	10	6		1	001	001 003
Residential	Single_Family	Cooking	10	7		1	001	001 003
Residential	Single_Family	Cooking	10	8		1	001	001 003
Residential	Single_Family	Cooking	10	9		1	001	001 003
Residential	Single_Family	Cooking	10	10		1	001	001 003
Residential	Single_Family	Cooking	11	-2		1	001	001 003
Residential	Single_Family	Cooking	11	-1		1	001	001 003
Residential	Single_Family	Cooking	11	0		1	001	001 003
Residential	Single_Family	Cooking	11	1		1	001	001 003
Residential	Single_Family	Cooking	11	2		1	001	001 003
Residential	Single_Family	Cooking	11	3		1	001	001 003
Residential	Single_Family	Cooking	11	4		1	001	001 003
Residential	Single_Family	Cooking	11	5		1	001	001 003
Residential	Single_Family	Cooking	11	6		1	001	001 003
Residential	Single_Family	Cooking	11	7		1	001	001 003
Residential	Single_Family	Cooking	11	8		1	001	001 003
Residential	Single_Family	Cooking	11	9		1	001	001 003
Residential	Single_Family	Cooking	11	10		1	001	001 003
Residential	Single_Family	Cooking	11	11		1	001	001 003
Residential	Single_Family	Cooking	12	-2		1	001	001 003
Residential	Single_Family	Cooking	12	-1		1	001	001 003
Residential	Single_Family	Cooking	12	0		1	001	001 003
Residential	Single_Family	Cooking	12	1		1	001	001 003
Residential	Single_Family	Cooking	12	2		1	001	001 003
Residential	Single_Family	Cooking	12	3		1	001	001 003
Residential	Single_Family	Cooking	12	4		1	001	001 003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Cooking	12	5	1	001	001	003
Residential	Single_Family	Cooking	12	6	1	001	001	003
Residential	Single_Family	Cooking	12	7	1	001	001	003
Residential	Single_Family	Cooking	12	8	1	001	001	003
Residential	Single_Family	Cooking	12	9	1	001	001	003
Residential	Single_Family	Cooking	12	10	1	001	001	003
Residential	Single_Family	Cooking	12	11	1	001	001	003
Residential	Single_Family	Cooking	12	12	1	001	001	003
Residential	Single_Family	Cooking	13	-2	1	001	001	003
Residential	Single_Family	Cooking	13	-1	1	001	001	003
Residential	Single_Family	Cooking	13	0	1	001	001	003
Residential	Single_Family	Cooking	13	1	1	001	001	003
Residential	Single_Family	Cooking	13	2	1	001	001	003
Residential	Single_Family	Cooking	13	3	1	001	001	003
Residential	Single_Family	Cooking	13	4	1	001	001	003
Residential	Single_Family	Cooking	13	5	1	001	001	003
Residential	Single_Family	Cooking	13	6	1	001	001	003
Residential	Single_Family	Cooking	13	7	1	001	001	003
Residential	Single_Family	Cooking	13	8	1	001	001	003
Residential	Single_Family	Cooking	13	9	1	001	001	003
Residential	Single_Family	Cooking	13	10	1	001	001	003
Residential	Single_Family	Cooking	13	11	1	001	001	003
Residential	Single_Family	Cooking	13	12	1	001	001	003
Residential	Single_Family	Cooking	13	13	1	001	001	003
Residential	Single_Family	Cooking	14	-2	1	001	001	003
Residential	Single_Family	Cooking	14	-1	1	001	001	003
Residential	Single_Family	Cooking	14	0	1	001	001	003
Residential	Single_Family	Cooking	14	1	1	001	001	003
Residential	Single_Family	Cooking	14	2	1	001	001	003
Residential	Single_Family	Cooking	14	3	1	001	001	003
Residential	Single_Family	Cooking	14	4	1	001	001	003
Residential	Single_Family	Cooking	14	5	1	001	001	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Cooking	14	6		1	001	001 003
Residential	Single_Family	Cooking	14	7		1	001	001 003
Residential	Single_Family	Cooking	14	8		1	001	001 003
Residential	Single_Family	Cooking	14	9		1	001	001 003
Residential	Single_Family	Cooking	14	10		1	001	001 003
Residential	Single_Family	Cooking	14	11		1	001	001 003
Residential	Single_Family	Cooking	14	12		1	001	001 003
Residential	Single_Family	Cooking	14	13		1	001	001 003
Residential	Single_Family	Cooking	14	14		1	001	001 003
Residential	Single_Family	Cooking	15	-2		1	001	001 003
Residential	Single_Family	Cooking	15	-1		1	001	001 003
Residential	Single_Family	Cooking	15	0		1	001	001 003
Residential	Single_Family	Cooking	15	1		1	001	001 003
Residential	Single_Family	Cooking	15	2		1	001	001 003
Residential	Single_Family	Cooking	15	3		1	001	001 003
Residential	Single_Family	Cooking	15	4		1	001	001 003
Residential	Single_Family	Cooking	15	5		1	001	001 003
Residential	Single_Family	Cooking	15	6		1	001	001 003
Residential	Single_Family	Cooking	15	7		1	001	001 003
Residential	Single_Family	Cooking	15	8		1	001	001 003
Residential	Single_Family	Cooking	15	9		1	001	001 003
Residential	Single_Family	Cooking	15	10		1	001	001 003
Residential	Single_Family	Cooking	15	11		1	001	001 003
Residential	Single_Family	Cooking	15	12		1	001	001 003
Residential	Single_Family	Cooking	15	13		1	001	001 003
Residential	Single_Family	Cooking	15	14		1	001	001 003
Residential	Single_Family	Cooking	15	15		1	001	001 003
Residential	Single_Family	Drying	0	-2	0.86025	001	001	004
Residential	Single_Family	Drying	0	-1	0.87141	001	001	004
Residential	Single_Family	Drying	0	0	0.87141	001	001	004
Residential	Single_Family	Drying	1	-2	0.86025	001	001	004
Residential	Single_Family	Drying	1	-1	0.87141	001	001	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Drying	1	0	0.87141	001	001	004
Residential	Single_Family	Drying	1	1	0.87141	001	001	004
Residential	Single_Family	Drying	2	-2	0.86025	001	001	004
Residential	Single_Family	Drying	2	-1	0.87141	001	001	004
Residential	Single_Family	Drying	2	0	0.87141	001	001	004
Residential	Single_Family	Drying	2	1	0.87141	001	001	004
Residential	Single_Family	Drying	2	2	0.87141	001	001	004
Residential	Single_Family	Drying	3	-2	0.86025	001	001	004
Residential	Single_Family	Drying	3	-1	0.87141	001	001	004
Residential	Single_Family	Drying	3	0	0.87141	001	001	004
Residential	Single_Family	Drying	3	1	0.87141	001	001	004
Residential	Single_Family	Drying	3	2	0.87141	001	001	004
Residential	Single_Family	Drying	3	3	0.87141	001	001	004
Residential	Single_Family	Drying	4	-2	0.86025	001	001	004
Residential	Single_Family	Drying	4	-1	0.87141	001	001	004
Residential	Single_Family	Drying	4	0	0.87141	001	001	004
Residential	Single_Family	Drying	4	1	0.87141	001	001	004
Residential	Single_Family	Drying	4	2	0.87141	001	001	004
Residential	Single_Family	Drying	4	3	0.87141	001	001	004
Residential	Single_Family	Drying	4	4	0.87141	001	001	004
Residential	Single_Family	Drying	5	-2	0.86025	001	001	004
Residential	Single_Family	Drying	5	-1	0.87141	001	001	004
Residential	Single_Family	Drying	5	0	0.87141	001	001	004
Residential	Single_Family	Drying	5	1	0.87141	001	001	004
Residential	Single_Family	Drying	5	2	0.87141	001	001	004
Residential	Single_Family	Drying	5	3	0.87141	001	001	004
Residential	Single_Family	Drying	5	4	0.87141	001	001	004
Residential	Single_Family	Drying	5	5	0.87141	001	001	004
Residential	Single_Family	Drying	6	-2	0.86025	001	001	004
Residential	Single_Family	Drying	6	-1	0.87141	001	001	004
Residential	Single_Family	Drying	6	0	0.87141	001	001	004
Residential	Single_Family	Drying	6	1	0.87141	001	001	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Drying	6	2	0.87141	001	001	004
Residential	Single_Family	Drying	6	3	0.87141	001	001	004
Residential	Single_Family	Drying	6	4	0.87141	001	001	004
Residential	Single_Family	Drying	6	5	0.87141	001	001	004
Residential	Single_Family	Drying	6	6	0.87141	001	001	004
Residential	Single_Family	Drying	7	-2	0.86025	001	001	004
Residential	Single_Family	Drying	7	-1	0.87141	001	001	004
Residential	Single_Family	Drying	7	0	0.87141	001	001	004
Residential	Single_Family	Drying	7	1	0.87141	001	001	004
Residential	Single_Family	Drying	7	2	0.87141	001	001	004
Residential	Single_Family	Drying	7	3	0.87141	001	001	004
Residential	Single_Family	Drying	7	4	0.87141	001	001	004
Residential	Single_Family	Drying	7	5	0.87141	001	001	004
Residential	Single_Family	Drying	7	6	0.87141	001	001	004
Residential	Single_Family	Drying	7	7	0.87141	001	001	004
Residential	Single_Family	Drying	8	-2	0.86025	001	001	004
Residential	Single_Family	Drying	8	-1	0.87141	001	001	004
Residential	Single_Family	Drying	8	0	0.87141	001	001	004
Residential	Single_Family	Drying	8	1	0.87141	001	001	004
Residential	Single_Family	Drying	8	2	0.87141	001	001	004
Residential	Single_Family	Drying	8	3	0.87141	001	001	004
Residential	Single_Family	Drying	8	4	0.87141	001	001	004
Residential	Single_Family	Drying	8	5	0.87141	001	001	004
Residential	Single_Family	Drying	8	6	0.87141	001	001	004
Residential	Single_Family	Drying	8	7	0.87141	001	001	004
Residential	Single_Family	Drying	8	8	0.87141	001	001	004
Residential	Single_Family	Drying	9	-2	0.86025	001	001	004
Residential	Single_Family	Drying	9	-1	0.87141	001	001	004
Residential	Single_Family	Drying	9	0	0.87141	001	001	004
Residential	Single_Family	Drying	9	1	0.87141	001	001	004
Residential	Single_Family	Drying	9	2	0.87141	001	001	004
Residential	Single_Family	Drying	9	3	0.87141	001	001	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Drying	9	4	0.87141	001	001	004
Residential	Single_Family	Drying	9	5	0.87141	001	001	004
Residential	Single_Family	Drying	9	6	0.87141	001	001	004
Residential	Single_Family	Drying	9	7	0.87141	001	001	004
Residential	Single_Family	Drying	9	8	0.87141	001	001	004
Residential	Single_Family	Drying	9	9	0.87141	001	001	004
Residential	Single_Family	Drying	10	-2	0.86025	001	001	004
Residential	Single_Family	Drying	10	-1	0.87141	001	001	004
Residential	Single_Family	Drying	10	0	0.87141	001	001	004
Residential	Single_Family	Drying	10	1	0.87141	001	001	004
Residential	Single_Family	Drying	10	2	0.87141	001	001	004
Residential	Single_Family	Drying	10	3	0.87141	001	001	004
Residential	Single_Family	Drying	10	4	0.87141	001	001	004
Residential	Single_Family	Drying	10	5	0.87141	001	001	004
Residential	Single_Family	Drying	10	6	0.87141	001	001	004
Residential	Single_Family	Drying	10	7	0.87141	001	001	004
Residential	Single_Family	Drying	10	8	0.87141	001	001	004
Residential	Single_Family	Drying	10	9	0.87141	001	001	004
Residential	Single_Family	Drying	10	10	0.87141	001	001	004
Residential	Single_Family	Drying	11	-2	0.86025	001	001	004
Residential	Single_Family	Drying	11	-1	0.87141	001	001	004
Residential	Single_Family	Drying	11	0	0.87141	001	001	004
Residential	Single_Family	Drying	11	1	0.87141	001	001	004
Residential	Single_Family	Drying	11	2	0.87141	001	001	004
Residential	Single_Family	Drying	11	3	0.87141	001	001	004
Residential	Single_Family	Drying	11	4	0.87141	001	001	004
Residential	Single_Family	Drying	11	5	0.87141	001	001	004
Residential	Single_Family	Drying	11	6	0.87141	001	001	004
Residential	Single_Family	Drying	11	7	0.87141	001	001	004
Residential	Single_Family	Drying	11	8	0.87141	001	001	004
Residential	Single_Family	Drying	11	9	0.87141	001	001	004
Residential	Single_Family	Drying	11	10	0.87141	001	001	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Drying	11	11	0.87141	001	001	004
Residential	Single_Family	Drying	12	-2	0.86025	001	001	004
Residential	Single_Family	Drying	12	-1	0.87141	001	001	004
Residential	Single_Family	Drying	12	0	0.87141	001	001	004
Residential	Single_Family	Drying	12	1	0.87141	001	001	004
Residential	Single_Family	Drying	12	2	0.87141	001	001	004
Residential	Single_Family	Drying	12	3	0.87141	001	001	004
Residential	Single_Family	Drying	12	4	0.87141	001	001	004
Residential	Single_Family	Drying	12	5	0.87141	001	001	004
Residential	Single_Family	Drying	12	6	0.87141	001	001	004
Residential	Single_Family	Drying	12	7	0.87141	001	001	004
Residential	Single_Family	Drying	12	8	0.87141	001	001	004
Residential	Single_Family	Drying	12	9	0.87141	001	001	004
Residential	Single_Family	Drying	12	10	0.87141	001	001	004
Residential	Single_Family	Drying	12	11	0.87141	001	001	004
Residential	Single_Family	Drying	12	12	0.87141	001	001	004
Residential	Single_Family	Drying	13	-2	0.86025	001	001	004
Residential	Single_Family	Drying	13	-1	0.87141	001	001	004
Residential	Single_Family	Drying	13	0	0.87141	001	001	004
Residential	Single_Family	Drying	13	1	0.87141	001	001	004
Residential	Single_Family	Drying	13	2	0.87141	001	001	004
Residential	Single_Family	Drying	13	3	0.87141	001	001	004
Residential	Single_Family	Drying	13	4	0.87141	001	001	004
Residential	Single_Family	Drying	13	5	0.87141	001	001	004
Residential	Single_Family	Drying	13	6	0.87141	001	001	004
Residential	Single_Family	Drying	13	7	0.87141	001	001	004
Residential	Single_Family	Drying	13	8	0.87141	001	001	004
Residential	Single_Family	Drying	13	9	0.87141	001	001	004
Residential	Single_Family	Drying	13	10	0.87141	001	001	004
Residential	Single_Family	Drying	13	11	0.87141	001	001	004
Residential	Single_Family	Drying	13	12	0.87141	001	001	004
Residential	Single_Family	Drying	13	13	0.87141	001	001	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Drying	14	-2	0.86025	001	001	004
Residential	Single_Family	Drying	14	-1	0.87141	001	001	004
Residential	Single_Family	Drying	14	0	0.87141	001	001	004
Residential	Single_Family	Drying	14	1	0.87141	001	001	004
Residential	Single_Family	Drying	14	2	0.87141	001	001	004
Residential	Single_Family	Drying	14	3	0.87141	001	001	004
Residential	Single_Family	Drying	14	4	0.87141	001	001	004
Residential	Single_Family	Drying	14	5	0.87141	001	001	004
Residential	Single_Family	Drying	14	6	0.87141	001	001	004
Residential	Single_Family	Drying	14	7	0.87141	001	001	004
Residential	Single_Family	Drying	14	8	0.87141	001	001	004
Residential	Single_Family	Drying	14	9	0.87141	001	001	004
Residential	Single_Family	Drying	14	10	0.87141	001	001	004
Residential	Single_Family	Drying	14	11	0.87141	001	001	004
Residential	Single_Family	Drying	14	12	0.87141	001	001	004
Residential	Single_Family	Drying	14	13	0.87141	001	001	004
Residential	Single_Family	Drying	14	14	0.87141	001	001	004
Residential	Single_Family	Drying	15	-2	0.86025	001	001	004
Residential	Single_Family	Drying	15	-1	0.87141	001	001	004
Residential	Single_Family	Drying	15	0	0.87141	001	001	004
Residential	Single_Family	Drying	15	1	0.87141	001	001	004
Residential	Single_Family	Drying	15	2	0.87141	001	001	004
Residential	Single_Family	Drying	15	3	0.87141	001	001	004
Residential	Single_Family	Drying	15	4	0.87141	001	001	004
Residential	Single_Family	Drying	15	5	0.87141	001	001	004
Residential	Single_Family	Drying	15	6	0.87141	001	001	004
Residential	Single_Family	Drying	15	7	0.87141	001	001	004
Residential	Single_Family	Drying	15	8	0.87141	001	001	004
Residential	Single_Family	Drying	15	9	0.87141	001	001	004
Residential	Single_Family	Drying	15	10	0.87141	001	001	004
Residential	Single_Family	Drying	15	11	0.87141	001	001	004
Residential	Single_Family	Drying	15	12	0.87141	001	001	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Drying	15	13	0.87141	001	001	004
Residential	Single_Family	Drying	15	14	0.87141	001	001	004
Residential	Single_Family	Drying	15	15	0.87141	001	001	004
Residential	Single_Family	Pool	0	-2	0.18082	001	001	005
Residential	Single_Family	Pool	0	-1	0.2102	001	001	005
Residential	Single_Family	Pool	0	0	0.2102	001	001	005
Residential	Single_Family	Pool	1	-2	0.18082	001	001	005
Residential	Single_Family	Pool	1	-1	0.2102	001	001	005
Residential	Single_Family	Pool	1	0	0.2102	001	001	005
Residential	Single_Family	Pool	1	1	0.2102	001	001	005
Residential	Single_Family	Pool	2	-2	0.18082	001	001	005
Residential	Single_Family	Pool	2	-1	0.2102	001	001	005
Residential	Single_Family	Pool	2	0	0.2102	001	001	005
Residential	Single_Family	Pool	2	1	0.2102	001	001	005
Residential	Single_Family	Pool	2	2	0.2102	001	001	005
Residential	Single_Family	Pool	3	-2	0.18082	001	001	005
Residential	Single_Family	Pool	3	-1	0.2102	001	001	005
Residential	Single_Family	Pool	3	0	0.2102	001	001	005
Residential	Single_Family	Pool	3	1	0.2102	001	001	005
Residential	Single_Family	Pool	3	2	0.2102	001	001	005
Residential	Single_Family	Pool	3	3	0.2102	001	001	005
Residential	Single_Family	Pool	4	-2	0.18082	001	001	005
Residential	Single_Family	Pool	4	-1	0.2102	001	001	005
Residential	Single_Family	Pool	4	0	0.2102	001	001	005
Residential	Single_Family	Pool	4	1	0.2102	001	001	005
Residential	Single_Family	Pool	4	2	0.2102	001	001	005
Residential	Single_Family	Pool	4	3	0.2102	001	001	005
Residential	Single_Family	Pool	4	4	0.2102	001	001	005
Residential	Single_Family	Pool	5	-2	0.18082	001	001	005
Residential	Single_Family	Pool	5	-1	0.2102	001	001	005
Residential	Single_Family	Pool	5	0	0.2102	001	001	005
Residential	Single_Family	Pool	5	1	0.2102	001	001	005

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Pool	5	2	0.2102	001	001	005
Residential	Single_Family	Pool	5	3	0.2102	001	001	005
Residential	Single_Family	Pool	5	4	0.2102	001	001	005
Residential	Single_Family	Pool	5	5	0.2102	001	001	005
Residential	Single_Family	Pool	6	-2	0.18082	001	001	005
Residential	Single_Family	Pool	6	-1	0.2102	001	001	005
Residential	Single_Family	Pool	6	0	0.2102	001	001	005
Residential	Single_Family	Pool	6	1	0.2102	001	001	005
Residential	Single_Family	Pool	6	2	0.2102	001	001	005
Residential	Single_Family	Pool	6	3	0.2102	001	001	005
Residential	Single_Family	Pool	6	4	0.2102	001	001	005
Residential	Single_Family	Pool	6	5	0.2102	001	001	005
Residential	Single_Family	Pool	6	6	0.2102	001	001	005
Residential	Single_Family	Pool	7	-2	0.18082	001	001	005
Residential	Single_Family	Pool	7	-1	0.2102	001	001	005
Residential	Single_Family	Pool	7	0	0.2102	001	001	005
Residential	Single_Family	Pool	7	1	0.2102	001	001	005
Residential	Single_Family	Pool	7	2	0.2102	001	001	005
Residential	Single_Family	Pool	7	3	0.2102	001	001	005
Residential	Single_Family	Pool	7	4	0.2102	001	001	005
Residential	Single_Family	Pool	7	5	0.2102	001	001	005
Residential	Single_Family	Pool	7	6	0.2102	001	001	005
Residential	Single_Family	Pool	7	7	0.2102	001	001	005
Residential	Single_Family	Pool	8	-2	0.18082	001	001	005
Residential	Single_Family	Pool	8	-1	0.2102	001	001	005
Residential	Single_Family	Pool	8	0	0.2102	001	001	005
Residential	Single_Family	Pool	8	1	0.2102	001	001	005
Residential	Single_Family	Pool	8	2	0.2102	001	001	005
Residential	Single_Family	Pool	8	3	0.2102	001	001	005
Residential	Single_Family	Pool	8	4	0.2102	001	001	005
Residential	Single_Family	Pool	8	5	0.2102	001	001	005
Residential	Single_Family	Pool	8	6	0.2102	001	001	005

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Pool	8	7	0.2102	001	001	005
Residential	Single_Family	Pool	8	8	0.2102	001	001	005
Residential	Single_Family	Pool	9	-2	0.18082	001	001	005
Residential	Single_Family	Pool	9	-1	0.2102	001	001	005
Residential	Single_Family	Pool	9	0	0.2102	001	001	005
Residential	Single_Family	Pool	9	1	0.2102	001	001	005
Residential	Single_Family	Pool	9	2	0.2102	001	001	005
Residential	Single_Family	Pool	9	3	0.2102	001	001	005
Residential	Single_Family	Pool	9	4	0.2102	001	001	005
Residential	Single_Family	Pool	9	5	0.2102	001	001	005
Residential	Single_Family	Pool	9	6	0.2102	001	001	005
Residential	Single_Family	Pool	9	7	0.2102	001	001	005
Residential	Single_Family	Pool	9	8	0.2102	001	001	005
Residential	Single_Family	Pool	9	9	0.2102	001	001	005
Residential	Single_Family	Pool	10	-2	0.18082	001	001	005
Residential	Single_Family	Pool	10	-1	0.2102	001	001	005
Residential	Single_Family	Pool	10	0	0.2102	001	001	005
Residential	Single_Family	Pool	10	1	0.2102	001	001	005
Residential	Single_Family	Pool	10	2	0.2102	001	001	005
Residential	Single_Family	Pool	10	3	0.2102	001	001	005
Residential	Single_Family	Pool	10	4	0.2102	001	001	005
Residential	Single_Family	Pool	10	5	0.2102	001	001	005
Residential	Single_Family	Pool	10	6	0.2102	001	001	005
Residential	Single_Family	Pool	10	7	0.2102	001	001	005
Residential	Single_Family	Pool	10	8	0.2102	001	001	005
Residential	Single_Family	Pool	10	9	0.2102	001	001	005
Residential	Single_Family	Pool	10	10	0.2102	001	001	005
Residential	Single_Family	Pool	11	-2	0.18082	001	001	005
Residential	Single_Family	Pool	11	-1	0.2102	001	001	005
Residential	Single_Family	Pool	11	0	0.2102	001	001	005
Residential	Single_Family	Pool	11	1	0.2102	001	001	005
Residential	Single_Family	Pool	11	2	0.2102	001	001	005

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Pool	11	3	0.2102	001	001	005
Residential	Single_Family	Pool	11	4	0.2102	001	001	005
Residential	Single_Family	Pool	11	5	0.2102	001	001	005
Residential	Single_Family	Pool	11	6	0.2102	001	001	005
Residential	Single_Family	Pool	11	7	0.2102	001	001	005
Residential	Single_Family	Pool	11	8	0.2102	001	001	005
Residential	Single_Family	Pool	11	9	0.2102	001	001	005
Residential	Single_Family	Pool	11	10	0.2102	001	001	005
Residential	Single_Family	Pool	11	11	0.2102	001	001	005
Residential	Single_Family	Pool	12	-2	0.18082	001	001	005
Residential	Single_Family	Pool	12	-1	0.2102	001	001	005
Residential	Single_Family	Pool	12	0	0.2102	001	001	005
Residential	Single_Family	Pool	12	1	0.2102	001	001	005
Residential	Single_Family	Pool	12	2	0.2102	001	001	005
Residential	Single_Family	Pool	12	3	0.2102	001	001	005
Residential	Single_Family	Pool	12	4	0.2102	001	001	005
Residential	Single_Family	Pool	12	5	0.2102	001	001	005
Residential	Single_Family	Pool	12	6	0.2102	001	001	005
Residential	Single_Family	Pool	12	7	0.2102	001	001	005
Residential	Single_Family	Pool	12	8	0.2102	001	001	005
Residential	Single_Family	Pool	12	9	0.2102	001	001	005
Residential	Single_Family	Pool	12	10	0.2102	001	001	005
Residential	Single_Family	Pool	12	11	0.2102	001	001	005
Residential	Single_Family	Pool	12	12	0.2102	001	001	005
Residential	Single_Family	Pool	13	-2	0.18082	001	001	005
Residential	Single_Family	Pool	13	-1	0.2102	001	001	005
Residential	Single_Family	Pool	13	0	0.2102	001	001	005
Residential	Single_Family	Pool	13	1	0.2102	001	001	005
Residential	Single_Family	Pool	13	2	0.2102	001	001	005
Residential	Single_Family	Pool	13	3	0.2102	001	001	005
Residential	Single_Family	Pool	13	4	0.2102	001	001	005
Residential	Single_Family	Pool	13	5	0.2102	001	001	005

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Pool	13	6	0.2102	001	001	005
Residential	Single_Family	Pool	13	7	0.2102	001	001	005
Residential	Single_Family	Pool	13	8	0.2102	001	001	005
Residential	Single_Family	Pool	13	9	0.2102	001	001	005
Residential	Single_Family	Pool	13	10	0.2102	001	001	005
Residential	Single_Family	Pool	13	11	0.2102	001	001	005
Residential	Single_Family	Pool	13	12	0.2102	001	001	005
Residential	Single_Family	Pool	13	13	0.2102	001	001	005
Residential	Single_Family	Pool	14	-2	0.18082	001	001	005
Residential	Single_Family	Pool	14	-1	0.2102	001	001	005
Residential	Single_Family	Pool	14	0	0.2102	001	001	005
Residential	Single_Family	Pool	14	1	0.2102	001	001	005
Residential	Single_Family	Pool	14	2	0.2102	001	001	005
Residential	Single_Family	Pool	14	3	0.2102	001	001	005
Residential	Single_Family	Pool	14	4	0.2102	001	001	005
Residential	Single_Family	Pool	14	5	0.2102	001	001	005
Residential	Single_Family	Pool	14	6	0.2102	001	001	005
Residential	Single_Family	Pool	14	7	0.2102	001	001	005
Residential	Single_Family	Pool	14	8	0.2102	001	001	005
Residential	Single_Family	Pool	14	9	0.2102	001	001	005
Residential	Single_Family	Pool	14	10	0.2102	001	001	005
Residential	Single_Family	Pool	14	11	0.2102	001	001	005
Residential	Single_Family	Pool	14	12	0.2102	001	001	005
Residential	Single_Family	Pool	14	13	0.2102	001	001	005
Residential	Single_Family	Pool	14	14	0.2102	001	001	005
Residential	Single_Family	Pool	15	-2	0.18082	001	001	005
Residential	Single_Family	Pool	15	-1	0.2102	001	001	005
Residential	Single_Family	Pool	15	0	0.2102	001	001	005
Residential	Single_Family	Pool	15	1	0.2102	001	001	005
Residential	Single_Family	Pool	15	2	0.2102	001	001	005
Residential	Single_Family	Pool	15	3	0.2102	001	001	005
Residential	Single_Family	Pool	15	4	0.2102	001	001	005

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Pool	15	5	0.2102	001	001	005
Residential	Single_Family	Pool	15	6	0.2102	001	001	005
Residential	Single_Family	Pool	15	7	0.2102	001	001	005
Residential	Single_Family	Pool	15	8	0.2102	001	001	005
Residential	Single_Family	Pool	15	9	0.2102	001	001	005
Residential	Single_Family	Pool	15	10	0.2102	001	001	005
Residential	Single_Family	Pool	15	11	0.2102	001	001	005
Residential	Single_Family	Pool	15	12	0.2102	001	001	005
Residential	Single_Family	Pool	15	13	0.2102	001	001	005
Residential	Single_Family	Pool	15	14	0.2102	001	001	005
Residential	Single_Family	Pool	15	15	0.2102	001	001	005
Residential	Single_Family	Spa	0	-2	0.12932	001	001	006
Residential	Single_Family	Spa	0	-1	0.21799	001	001	006
Residential	Single_Family	Spa	0	0	0.21799	001	001	006
Residential	Single_Family	Spa	1	-2	0.12932	001	001	006
Residential	Single_Family	Spa	1	-1	0.21799	001	001	006
Residential	Single_Family	Spa	1	0	0.21799	001	001	006
Residential	Single_Family	Spa	1	1	0.21799	001	001	006
Residential	Single_Family	Spa	2	-2	0.12932	001	001	006
Residential	Single_Family	Spa	2	-1	0.21799	001	001	006
Residential	Single_Family	Spa	2	0	0.21799	001	001	006
Residential	Single_Family	Spa	2	1	0.21799	001	001	006
Residential	Single_Family	Spa	2	2	0.21799	001	001	006
Residential	Single_Family	Spa	3	-2	0.12932	001	001	006
Residential	Single_Family	Spa	3	-1	0.21799	001	001	006
Residential	Single_Family	Spa	3	0	0.21799	001	001	006
Residential	Single_Family	Spa	3	1	0.21799	001	001	006
Residential	Single_Family	Spa	3	2	0.21799	001	001	006
Residential	Single_Family	Spa	3	3	0.21799	001	001	006
Residential	Single_Family	Spa	4	-2	0.12932	001	001	006
Residential	Single_Family	Spa	4	-1	0.21799	001	001	006
Residential	Single_Family	Spa	4	0	0.21799	001	001	006

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Spa	4	1	0.21799	001	001	006
Residential	Single_Family	Spa	4	2	0.21799	001	001	006
Residential	Single_Family	Spa	4	3	0.21799	001	001	006
Residential	Single_Family	Spa	4	4	0.21799	001	001	006
Residential	Single_Family	Spa	5	-2	0.12932	001	001	006
Residential	Single_Family	Spa	5	-1	0.21799	001	001	006
Residential	Single_Family	Spa	5	0	0.21799	001	001	006
Residential	Single_Family	Spa	5	1	0.21799	001	001	006
Residential	Single_Family	Spa	5	2	0.21799	001	001	006
Residential	Single_Family	Spa	5	3	0.21799	001	001	006
Residential	Single_Family	Spa	5	4	0.21799	001	001	006
Residential	Single_Family	Spa	5	5	0.21799	001	001	006
Residential	Single_Family	Spa	6	-2	0.12932	001	001	006
Residential	Single_Family	Spa	6	-1	0.21799	001	001	006
Residential	Single_Family	Spa	6	0	0.21799	001	001	006
Residential	Single_Family	Spa	6	1	0.21799	001	001	006
Residential	Single_Family	Spa	6	2	0.21799	001	001	006
Residential	Single_Family	Spa	6	3	0.21799	001	001	006
Residential	Single_Family	Spa	6	4	0.21799	001	001	006
Residential	Single_Family	Spa	6	5	0.21799	001	001	006
Residential	Single_Family	Spa	6	6	0.21799	001	001	006
Residential	Single_Family	Spa	7	-2	0.12932	001	001	006
Residential	Single_Family	Spa	7	-1	0.21799	001	001	006
Residential	Single_Family	Spa	7	0	0.21799	001	001	006
Residential	Single_Family	Spa	7	1	0.21799	001	001	006
Residential	Single_Family	Spa	7	2	0.21799	001	001	006
Residential	Single_Family	Spa	7	3	0.21799	001	001	006
Residential	Single_Family	Spa	7	4	0.21799	001	001	006
Residential	Single_Family	Spa	7	5	0.21799	001	001	006
Residential	Single_Family	Spa	7	6	0.21799	001	001	006
Residential	Single_Family	Spa	7	7	0.21799	001	001	006
Residential	Single_Family	Spa	8	-2	0.12932	001	001	006

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Spa	8	-1	0.21799	001	001	006
Residential	Single_Family	Spa	8	0	0.21799	001	001	006
Residential	Single_Family	Spa	8	1	0.21799	001	001	006
Residential	Single_Family	Spa	8	2	0.21799	001	001	006
Residential	Single_Family	Spa	8	3	0.21799	001	001	006
Residential	Single_Family	Spa	8	4	0.21799	001	001	006
Residential	Single_Family	Spa	8	5	0.21799	001	001	006
Residential	Single_Family	Spa	8	6	0.21799	001	001	006
Residential	Single_Family	Spa	8	7	0.21799	001	001	006
Residential	Single_Family	Spa	8	8	0.21799	001	001	006
Residential	Single_Family	Spa	9	-2	0.12932	001	001	006
Residential	Single_Family	Spa	9	-1	0.21799	001	001	006
Residential	Single_Family	Spa	9	0	0.21799	001	001	006
Residential	Single_Family	Spa	9	1	0.21799	001	001	006
Residential	Single_Family	Spa	9	2	0.21799	001	001	006
Residential	Single_Family	Spa	9	3	0.21799	001	001	006
Residential	Single_Family	Spa	9	4	0.21799	001	001	006
Residential	Single_Family	Spa	9	5	0.21799	001	001	006
Residential	Single_Family	Spa	9	6	0.21799	001	001	006
Residential	Single_Family	Spa	9	7	0.21799	001	001	006
Residential	Single_Family	Spa	9	8	0.21799	001	001	006
Residential	Single_Family	Spa	9	9	0.21799	001	001	006
Residential	Single_Family	Spa	10	-2	0.12932	001	001	006
Residential	Single_Family	Spa	10	-1	0.21799	001	001	006
Residential	Single_Family	Spa	10	0	0.21799	001	001	006
Residential	Single_Family	Spa	10	1	0.21799	001	001	006
Residential	Single_Family	Spa	10	2	0.21799	001	001	006
Residential	Single_Family	Spa	10	3	0.21799	001	001	006
Residential	Single_Family	Spa	10	4	0.21799	001	001	006
Residential	Single_Family	Spa	10	5	0.21799	001	001	006
Residential	Single_Family	Spa	10	6	0.21799	001	001	006
Residential	Single_Family	Spa	10	7	0.21799	001	001	006

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Spa	10	8	0.21799	001	001	006
Residential	Single_Family	Spa	10	9	0.21799	001	001	006
Residential	Single_Family	Spa	10	10	0.21799	001	001	006
Residential	Single_Family	Spa	11	-2	0.12932	001	001	006
Residential	Single_Family	Spa	11	-1	0.21799	001	001	006
Residential	Single_Family	Spa	11	0	0.21799	001	001	006
Residential	Single_Family	Spa	11	1	0.21799	001	001	006
Residential	Single_Family	Spa	11	2	0.21799	001	001	006
Residential	Single_Family	Spa	11	3	0.21799	001	001	006
Residential	Single_Family	Spa	11	4	0.21799	001	001	006
Residential	Single_Family	Spa	11	5	0.21799	001	001	006
Residential	Single_Family	Spa	11	6	0.21799	001	001	006
Residential	Single_Family	Spa	11	7	0.21799	001	001	006
Residential	Single_Family	Spa	11	8	0.21799	001	001	006
Residential	Single_Family	Spa	11	9	0.21799	001	001	006
Residential	Single_Family	Spa	11	10	0.21799	001	001	006
Residential	Single_Family	Spa	11	11	0.21799	001	001	006
Residential	Single_Family	Spa	12	-2	0.12932	001	001	006
Residential	Single_Family	Spa	12	-1	0.21799	001	001	006
Residential	Single_Family	Spa	12	0	0.21799	001	001	006
Residential	Single_Family	Spa	12	1	0.21799	001	001	006
Residential	Single_Family	Spa	12	2	0.21799	001	001	006
Residential	Single_Family	Spa	12	3	0.21799	001	001	006
Residential	Single_Family	Spa	12	4	0.21799	001	001	006
Residential	Single_Family	Spa	12	5	0.21799	001	001	006
Residential	Single_Family	Spa	12	6	0.21799	001	001	006
Residential	Single_Family	Spa	12	7	0.21799	001	001	006
Residential	Single_Family	Spa	12	8	0.21799	001	001	006
Residential	Single_Family	Spa	12	9	0.21799	001	001	006
Residential	Single_Family	Spa	12	10	0.21799	001	001	006
Residential	Single_Family	Spa	12	11	0.21799	001	001	006
Residential	Single_Family	Spa	12	12	0.21799	001	001	006

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Spa	13	-2	0.12932	001	001	006
Residential	Single_Family	Spa	13	-1	0.21799	001	001	006
Residential	Single_Family	Spa	13	0	0.21799	001	001	006
Residential	Single_Family	Spa	13	1	0.21799	001	001	006
Residential	Single_Family	Spa	13	2	0.21799	001	001	006
Residential	Single_Family	Spa	13	3	0.21799	001	001	006
Residential	Single_Family	Spa	13	4	0.21799	001	001	006
Residential	Single_Family	Spa	13	5	0.21799	001	001	006
Residential	Single_Family	Spa	13	6	0.21799	001	001	006
Residential	Single_Family	Spa	13	7	0.21799	001	001	006
Residential	Single_Family	Spa	13	8	0.21799	001	001	006
Residential	Single_Family	Spa	13	9	0.21799	001	001	006
Residential	Single_Family	Spa	13	10	0.21799	001	001	006
Residential	Single_Family	Spa	13	11	0.21799	001	001	006
Residential	Single_Family	Spa	13	12	0.21799	001	001	006
Residential	Single_Family	Spa	13	13	0.21799	001	001	006
Residential	Single_Family	Spa	14	-2	0.12932	001	001	006
Residential	Single_Family	Spa	14	-1	0.21799	001	001	006
Residential	Single_Family	Spa	14	0	0.21799	001	001	006
Residential	Single_Family	Spa	14	1	0.21799	001	001	006
Residential	Single_Family	Spa	14	2	0.21799	001	001	006
Residential	Single_Family	Spa	14	3	0.21799	001	001	006
Residential	Single_Family	Spa	14	4	0.21799	001	001	006
Residential	Single_Family	Spa	14	5	0.21799	001	001	006
Residential	Single_Family	Spa	14	6	0.21799	001	001	006
Residential	Single_Family	Spa	14	7	0.21799	001	001	006
Residential	Single_Family	Spa	14	8	0.21799	001	001	006
Residential	Single_Family	Spa	14	9	0.21799	001	001	006
Residential	Single_Family	Spa	14	10	0.21799	001	001	006
Residential	Single_Family	Spa	14	11	0.21799	001	001	006
Residential	Single_Family	Spa	14	12	0.21799	001	001	006
Residential	Single_Family	Spa	14	13	0.21799	001	001	006

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Spa	14	14	0.21799	001	001	006
Residential	Single_Family	Spa	15	-2	0.12932	001	001	006
Residential	Single_Family	Spa	15	-1	0.21799	001	001	006
Residential	Single_Family	Spa	15	0	0.21799	001	001	006
Residential	Single_Family	Spa	15	1	0.21799	001	001	006
Residential	Single_Family	Spa	15	2	0.21799	001	001	006
Residential	Single_Family	Spa	15	3	0.21799	001	001	006
Residential	Single_Family	Spa	15	4	0.21799	001	001	006
Residential	Single_Family	Spa	15	5	0.21799	001	001	006
Residential	Single_Family	Spa	15	6	0.21799	001	001	006
Residential	Single_Family	Spa	15	7	0.21799	001	001	006
Residential	Single_Family	Spa	15	8	0.21799	001	001	006
Residential	Single_Family	Spa	15	9	0.21799	001	001	006
Residential	Single_Family	Spa	15	10	0.21799	001	001	006
Residential	Single_Family	Spa	15	11	0.21799	001	001	006
Residential	Single_Family	Spa	15	12	0.21799	001	001	006
Residential	Single_Family	Spa	15	13	0.21799	001	001	006
Residential	Single_Family	Spa	15	14	0.21799	001	001	006
Residential	Single_Family	Spa	15	15	0.21799	001	001	006
Residential	Single_Family	Fireplace	0	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	0	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	0	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	1	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	1	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	1	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	1	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	2	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	2	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	2	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	2	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	2	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	3	-2	0.1191	001	001	007

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Fireplace	3	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	3	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	3	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	3	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	3	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	4	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	4	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	4	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	4	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	4	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	4	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	4	4	0.16112	001	001	007
Residential	Single_Family	Fireplace	5	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	5	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	5	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	5	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	5	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	5	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	5	4	0.16112	001	001	007
Residential	Single_Family	Fireplace	5	5	0.16112	001	001	007
Residential	Single_Family	Fireplace	6	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	6	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	6	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	6	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	6	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	6	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	6	4	0.16112	001	001	007
Residential	Single_Family	Fireplace	6	5	0.16112	001	001	007
Residential	Single_Family	Fireplace	6	6	0.16112	001	001	007
Residential	Single_Family	Fireplace	7	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	7	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	7	0	0.16112	001	001	007

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Fireplace	7	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	7	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	7	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	7	4	0.16112	001	001	007
Residential	Single_Family	Fireplace	7	5	0.16112	001	001	007
Residential	Single_Family	Fireplace	7	6	0.16112	001	001	007
Residential	Single_Family	Fireplace	7	7	0.16112	001	001	007
Residential	Single_Family	Fireplace	8	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	8	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	8	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	8	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	8	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	8	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	8	4	0.16112	001	001	007
Residential	Single_Family	Fireplace	8	5	0.16112	001	001	007
Residential	Single_Family	Fireplace	8	6	0.16112	001	001	007
Residential	Single_Family	Fireplace	8	7	0.16112	001	001	007
Residential	Single_Family	Fireplace	8	8	0.16112	001	001	007
Residential	Single_Family	Fireplace	9	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	9	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	9	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	9	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	9	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	9	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	9	4	0.16112	001	001	007
Residential	Single_Family	Fireplace	9	5	0.16112	001	001	007
Residential	Single_Family	Fireplace	9	6	0.16112	001	001	007
Residential	Single_Family	Fireplace	9	7	0.16112	001	001	007
Residential	Single_Family	Fireplace	9	8	0.16112	001	001	007
Residential	Single_Family	Fireplace	9	9	0.16112	001	001	007
Residential	Single_Family	Fireplace	10	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	10	-1	0.16112	001	001	007

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Fireplace	10	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	10	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	10	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	10	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	10	4	0.16112	001	001	007
Residential	Single_Family	Fireplace	10	5	0.16112	001	001	007
Residential	Single_Family	Fireplace	10	6	0.16112	001	001	007
Residential	Single_Family	Fireplace	10	7	0.16112	001	001	007
Residential	Single_Family	Fireplace	10	8	0.16112	001	001	007
Residential	Single_Family	Fireplace	10	9	0.16112	001	001	007
Residential	Single_Family	Fireplace	10	10	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	11	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	4	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	5	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	6	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	7	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	8	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	9	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	10	0.16112	001	001	007
Residential	Single_Family	Fireplace	11	11	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	12	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	4	0.16112	001	001	007

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Fireplace	12	5	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	6	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	7	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	8	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	9	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	10	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	11	0.16112	001	001	007
Residential	Single_Family	Fireplace	12	12	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	13	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	4	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	5	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	6	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	7	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	8	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	9	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	10	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	11	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	12	0.16112	001	001	007
Residential	Single_Family	Fireplace	13	13	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	14	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	4	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	5	0.16112	001	001	007

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Fireplace	14	6	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	7	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	8	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	9	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	10	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	11	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	12	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	13	0.16112	001	001	007
Residential	Single_Family	Fireplace	14	14	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	-2	0.1191	001	001	007
Residential	Single_Family	Fireplace	15	-1	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	0	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	1	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	2	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	3	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	4	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	5	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	6	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	7	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	8	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	9	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	10	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	11	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	12	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	13	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	14	0.16112	001	001	007
Residential	Single_Family	Fireplace	15	15	0.16112	001	001	007
Residential	Single_Family	Barbecue	0	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	0	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	0	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	1	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	1	-1	0.46785	001	001	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Barbecue	1	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	1	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	2	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	2	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	2	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	2	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	2	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	3	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	3	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	3	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	3	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	3	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	3	3	0.46785	001	001	008
Residential	Single_Family	Barbecue	4	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	4	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	4	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	4	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	4	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	4	3	0.46785	001	001	008
Residential	Single_Family	Barbecue	4	4	0.46785	001	001	008
Residential	Single_Family	Barbecue	5	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	5	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	5	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	5	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	5	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	5	3	0.46785	001	001	008
Residential	Single_Family	Barbecue	5	4	0.46785	001	001	008
Residential	Single_Family	Barbecue	5	5	0.46785	001	001	008
Residential	Single_Family	Barbecue	6	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	6	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	6	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	6	1	0.46785	001	001	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Barbecue	6	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	6	3	0.46785	001	001	008
Residential	Single_Family	Barbecue	6	4	0.46785	001	001	008
Residential	Single_Family	Barbecue	6	5	0.46785	001	001	008
Residential	Single_Family	Barbecue	6	6	0.46785	001	001	008
Residential	Single_Family	Barbecue	7	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	7	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	7	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	7	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	7	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	7	3	0.46785	001	001	008
Residential	Single_Family	Barbecue	7	4	0.46785	001	001	008
Residential	Single_Family	Barbecue	7	5	0.46785	001	001	008
Residential	Single_Family	Barbecue	7	6	0.46785	001	001	008
Residential	Single_Family	Barbecue	7	7	0.46785	001	001	008
Residential	Single_Family	Barbecue	8	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	8	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	8	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	8	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	8	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	8	3	0.46785	001	001	008
Residential	Single_Family	Barbecue	8	4	0.46785	001	001	008
Residential	Single_Family	Barbecue	8	5	0.46785	001	001	008
Residential	Single_Family	Barbecue	8	6	0.46785	001	001	008
Residential	Single_Family	Barbecue	8	7	0.46785	001	001	008
Residential	Single_Family	Barbecue	8	8	0.46785	001	001	008
Residential	Single_Family	Barbecue	9	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	9	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	9	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	9	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	9	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	9	3	0.46785	001	001	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Barbecue	9	4	0.46785	001	001	008
Residential	Single_Family	Barbecue	9	5	0.46785	001	001	008
Residential	Single_Family	Barbecue	9	6	0.46785	001	001	008
Residential	Single_Family	Barbecue	9	7	0.46785	001	001	008
Residential	Single_Family	Barbecue	9	8	0.46785	001	001	008
Residential	Single_Family	Barbecue	9	9	0.46785	001	001	008
Residential	Single_Family	Barbecue	10	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	10	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	10	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	10	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	10	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	10	3	0.46785	001	001	008
Residential	Single_Family	Barbecue	10	4	0.46785	001	001	008
Residential	Single_Family	Barbecue	10	5	0.46785	001	001	008
Residential	Single_Family	Barbecue	10	6	0.46785	001	001	008
Residential	Single_Family	Barbecue	10	7	0.46785	001	001	008
Residential	Single_Family	Barbecue	10	8	0.46785	001	001	008
Residential	Single_Family	Barbecue	10	9	0.46785	001	001	008
Residential	Single_Family	Barbecue	10	10	0.46785	001	001	008
Residential	Single_Family	Barbecue	11	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	11	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	11	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	11	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	11	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	11	3	0.46785	001	001	008
Residential	Single_Family	Barbecue	11	4	0.46785	001	001	008
Residential	Single_Family	Barbecue	11	5	0.46785	001	001	008
Residential	Single_Family	Barbecue	11	6	0.46785	001	001	008
Residential	Single_Family	Barbecue	11	7	0.46785	001	001	008
Residential	Single_Family	Barbecue	11	8	0.46785	001	001	008
Residential	Single_Family	Barbecue	11	9	0.46785	001	001	008
Residential	Single_Family	Barbecue	11	10	0.46785	001	001	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Barbecue	11	11	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	12	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	3	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	4	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	5	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	6	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	7	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	8	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	9	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	10	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	11	0.46785	001	001	008
Residential	Single_Family	Barbecue	12	12	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	13	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	3	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	4	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	5	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	6	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	7	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	8	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	9	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	10	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	11	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	12	0.46785	001	001	008
Residential	Single_Family	Barbecue	13	13	0.46785	001	001	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Barbecue	14	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	14	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	3	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	4	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	5	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	6	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	7	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	8	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	9	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	10	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	11	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	12	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	13	0.46785	001	001	008
Residential	Single_Family	Barbecue	14	14	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	-2	0.37085	001	001	008
Residential	Single_Family	Barbecue	15	-1	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	0	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	1	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	2	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	3	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	4	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	5	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	6	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	7	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	8	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	9	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	10	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	11	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	12	0.46785	001	001	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Barbecue	15	13	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	14	0.46785	001	001	008
Residential	Single_Family	Barbecue	15	15	0.46785	001	001	008
Residential	Single_Family	Other	0	-2		1	001	001
Residential	Single_Family	Other	0	-1		1	001	001
Residential	Single_Family	Other	0	0		1	001	001
Residential	Single_Family	Other	1	-2		1	001	001
Residential	Single_Family	Other	1	-1		1	001	001
Residential	Single_Family	Other	1	0		1	001	001
Residential	Single_Family	Other	1	1		1	001	001
Residential	Single_Family	Other	2	-2		1	001	001
Residential	Single_Family	Other	2	-1		1	001	001
Residential	Single_Family	Other	2	0		1	001	001
Residential	Single_Family	Other	2	1		1	001	001
Residential	Single_Family	Other	2	2		1	001	001
Residential	Single_Family	Other	3	-2		1	001	001
Residential	Single_Family	Other	3	-1		1	001	001
Residential	Single_Family	Other	3	0		1	001	001
Residential	Single_Family	Other	3	1		1	001	001
Residential	Single_Family	Other	3	2		1	001	001
Residential	Single_Family	Other	3	3		1	001	001
Residential	Single_Family	Other	4	-2		1	001	001
Residential	Single_Family	Other	4	-1		1	001	001
Residential	Single_Family	Other	4	0		1	001	001
Residential	Single_Family	Other	4	1		1	001	001
Residential	Single_Family	Other	4	2		1	001	001
Residential	Single_Family	Other	4	3		1	001	001
Residential	Single_Family	Other	4	4		1	001	001
Residential	Single_Family	Other	5	-2		1	001	001
Residential	Single_Family	Other	5	-1		1	001	001
Residential	Single_Family	Other	5	0		1	001	001
Residential	Single_Family	Other	5	1		1	001	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Other	5	2	1	001	001	009
Residential	Single_Family	Other	5	3	1	001	001	009
Residential	Single_Family	Other	5	4	1	001	001	009
Residential	Single_Family	Other	5	5	1	001	001	009
Residential	Single_Family	Other	6	-2	1	001	001	009
Residential	Single_Family	Other	6	-1	1	001	001	009
Residential	Single_Family	Other	6	0	1	001	001	009
Residential	Single_Family	Other	6	1	1	001	001	009
Residential	Single_Family	Other	6	2	1	001	001	009
Residential	Single_Family	Other	6	3	1	001	001	009
Residential	Single_Family	Other	6	4	1	001	001	009
Residential	Single_Family	Other	6	5	1	001	001	009
Residential	Single_Family	Other	6	6	1	001	001	009
Residential	Single_Family	Other	7	-2	1	001	001	009
Residential	Single_Family	Other	7	-1	1	001	001	009
Residential	Single_Family	Other	7	0	1	001	001	009
Residential	Single_Family	Other	7	1	1	001	001	009
Residential	Single_Family	Other	7	2	1	001	001	009
Residential	Single_Family	Other	7	3	1	001	001	009
Residential	Single_Family	Other	7	4	1	001	001	009
Residential	Single_Family	Other	7	5	1	001	001	009
Residential	Single_Family	Other	7	6	1	001	001	009
Residential	Single_Family	Other	7	7	1	001	001	009
Residential	Single_Family	Other	8	-2	1	001	001	009
Residential	Single_Family	Other	8	-1	1	001	001	009
Residential	Single_Family	Other	8	0	1	001	001	009
Residential	Single_Family	Other	8	1	1	001	001	009
Residential	Single_Family	Other	8	2	1	001	001	009
Residential	Single_Family	Other	8	3	1	001	001	009
Residential	Single_Family	Other	8	4	1	001	001	009
Residential	Single_Family	Other	8	5	1	001	001	009
Residential	Single_Family	Other	8	6	1	001	001	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Other	8	7	1	001	001	009
Residential	Single_Family	Other	8	8	1	001	001	009
Residential	Single_Family	Other	9	-2	1	001	001	009
Residential	Single_Family	Other	9	-1	1	001	001	009
Residential	Single_Family	Other	9	0	1	001	001	009
Residential	Single_Family	Other	9	1	1	001	001	009
Residential	Single_Family	Other	9	2	1	001	001	009
Residential	Single_Family	Other	9	3	1	001	001	009
Residential	Single_Family	Other	9	4	1	001	001	009
Residential	Single_Family	Other	9	5	1	001	001	009
Residential	Single_Family	Other	9	6	1	001	001	009
Residential	Single_Family	Other	9	7	1	001	001	009
Residential	Single_Family	Other	9	8	1	001	001	009
Residential	Single_Family	Other	9	9	1	001	001	009
Residential	Single_Family	Other	10	-2	1	001	001	009
Residential	Single_Family	Other	10	-1	1	001	001	009
Residential	Single_Family	Other	10	0	1	001	001	009
Residential	Single_Family	Other	10	1	1	001	001	009
Residential	Single_Family	Other	10	2	1	001	001	009
Residential	Single_Family	Other	10	3	1	001	001	009
Residential	Single_Family	Other	10	4	1	001	001	009
Residential	Single_Family	Other	10	5	1	001	001	009
Residential	Single_Family	Other	10	6	1	001	001	009
Residential	Single_Family	Other	10	7	1	001	001	009
Residential	Single_Family	Other	10	8	1	001	001	009
Residential	Single_Family	Other	10	9	1	001	001	009
Residential	Single_Family	Other	10	10	1	001	001	009
Residential	Single_Family	Other	11	-2	1	001	001	009
Residential	Single_Family	Other	11	-1	1	001	001	009
Residential	Single_Family	Other	11	0	1	001	001	009
Residential	Single_Family	Other	11	1	1	001	001	009
Residential	Single_Family	Other	11	2	1	001	001	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Other	11	3	1	001	001	009
Residential	Single_Family	Other	11	4	1	001	001	009
Residential	Single_Family	Other	11	5	1	001	001	009
Residential	Single_Family	Other	11	6	1	001	001	009
Residential	Single_Family	Other	11	7	1	001	001	009
Residential	Single_Family	Other	11	8	1	001	001	009
Residential	Single_Family	Other	11	9	1	001	001	009
Residential	Single_Family	Other	11	10	1	001	001	009
Residential	Single_Family	Other	11	11	1	001	001	009
Residential	Single_Family	Other	12	-2	1	001	001	009
Residential	Single_Family	Other	12	-1	1	001	001	009
Residential	Single_Family	Other	12	0	1	001	001	009
Residential	Single_Family	Other	12	1	1	001	001	009
Residential	Single_Family	Other	12	2	1	001	001	009
Residential	Single_Family	Other	12	3	1	001	001	009
Residential	Single_Family	Other	12	4	1	001	001	009
Residential	Single_Family	Other	12	5	1	001	001	009
Residential	Single_Family	Other	12	6	1	001	001	009
Residential	Single_Family	Other	12	7	1	001	001	009
Residential	Single_Family	Other	12	8	1	001	001	009
Residential	Single_Family	Other	12	9	1	001	001	009
Residential	Single_Family	Other	12	10	1	001	001	009
Residential	Single_Family	Other	12	11	1	001	001	009
Residential	Single_Family	Other	12	12	1	001	001	009
Residential	Single_Family	Other	13	-2	1	001	001	009
Residential	Single_Family	Other	13	-1	1	001	001	009
Residential	Single_Family	Other	13	0	1	001	001	009
Residential	Single_Family	Other	13	1	1	001	001	009
Residential	Single_Family	Other	13	2	1	001	001	009
Residential	Single_Family	Other	13	3	1	001	001	009
Residential	Single_Family	Other	13	4	1	001	001	009
Residential	Single_Family	Other	13	5	1	001	001	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Other	13	6	1	001	001	009
Residential	Single_Family	Other	13	7	1	001	001	009
Residential	Single_Family	Other	13	8	1	001	001	009
Residential	Single_Family	Other	13	9	1	001	001	009
Residential	Single_Family	Other	13	10	1	001	001	009
Residential	Single_Family	Other	13	11	1	001	001	009
Residential	Single_Family	Other	13	12	1	001	001	009
Residential	Single_Family	Other	13	13	1	001	001	009
Residential	Single_Family	Other	14	-2	1	001	001	009
Residential	Single_Family	Other	14	-1	1	001	001	009
Residential	Single_Family	Other	14	0	1	001	001	009
Residential	Single_Family	Other	14	1	1	001	001	009
Residential	Single_Family	Other	14	2	1	001	001	009
Residential	Single_Family	Other	14	3	1	001	001	009
Residential	Single_Family	Other	14	4	1	001	001	009
Residential	Single_Family	Other	14	5	1	001	001	009
Residential	Single_Family	Other	14	6	1	001	001	009
Residential	Single_Family	Other	14	7	1	001	001	009
Residential	Single_Family	Other	14	8	1	001	001	009
Residential	Single_Family	Other	14	9	1	001	001	009
Residential	Single_Family	Other	14	10	1	001	001	009
Residential	Single_Family	Other	14	11	1	001	001	009
Residential	Single_Family	Other	14	12	1	001	001	009
Residential	Single_Family	Other	14	13	1	001	001	009
Residential	Single_Family	Other	14	14	1	001	001	009
Residential	Single_Family	Other	15	-2	1	001	001	009
Residential	Single_Family	Other	15	-1	1	001	001	009
Residential	Single_Family	Other	15	0	1	001	001	009
Residential	Single_Family	Other	15	1	1	001	001	009
Residential	Single_Family	Other	15	2	1	001	001	009
Residential	Single_Family	Other	15	3	1	001	001	009
Residential	Single_Family	Other	15	4	1	001	001	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	Single_Family	Other	15	5	1	001	001	009
Residential	Single_Family	Other	15	6	1	001	001	009
Residential	Single_Family	Other	15	7	1	001	001	009
Residential	Single_Family	Other	15	8	1	001	001	009
Residential	Single_Family	Other	15	9	1	001	001	009
Residential	Single_Family	Other	15	10	1	001	001	009
Residential	Single_Family	Other	15	11	1	001	001	009
Residential	Single_Family	Other	15	12	1	001	001	009
Residential	Single_Family	Other	15	13	1	001	001	009
Residential	Single_Family	Other	15	14	1	001	001	009
Residential	Single_Family	Other	15	15	1	001	001	009
Residential	MF2_2_TO_4_Units	Space_Heat	0	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	0	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	0	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	1	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	1	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	1	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	1	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	2	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	2	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	2	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	2	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	2	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	3	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	3	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	3	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	3	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	3	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	3	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	4	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	4	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	4	0	1	001	002	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Space_Heat	4	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	4	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	4	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	4	4	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	5	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	5	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	5	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	5	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	5	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	5	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	5	4	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	5	5	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	6	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	6	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	6	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	6	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	6	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	6	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	6	4	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	6	5	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	6	6	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	7	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	7	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	7	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	7	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	7	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	7	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	7	4	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	7	5	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	7	6	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	7	7	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	8	-2	1	001	002	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Space_Heat	8	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	8	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	8	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	8	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	8	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	8	4	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	8	5	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	8	6	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	8	7	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	8	8	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	9	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	9	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	9	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	9	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	9	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	9	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	9	4	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	9	5	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	9	6	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	9	7	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	9	8	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	9	9	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	10	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	10	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	10	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	10	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	10	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	10	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	10	4	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	10	5	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	10	6	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	10	7	1	001	002	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Space_Heat	10	8	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	10	9	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	10	10	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	4	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	5	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	6	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	7	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	8	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	9	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	10	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	11	11	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	4	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	5	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	6	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	7	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	8	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	9	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	10	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	11	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	12	12	1	001	002	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Space_Heat	13	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	4	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	5	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	6	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	7	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	8	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	9	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	10	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	11	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	12	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	13	13	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	4	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	5	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	6	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	7	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	8	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	9	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	10	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	11	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	12	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	14	13	1	001	002	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Space_Heat	14	14	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	-2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	-1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	0	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	1	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	2	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	3	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	4	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	5	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	6	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	7	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	8	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	9	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	10	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	11	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	12	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	13	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	14	1	001	002	001
Residential	MF2_2_TO_4_Units	Space_Heat	15	15	1	001	002	001
Residential	MF2_2_TO_4_Units	Water_Heat	0	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	0	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	0	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	1	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	1	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	1	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	1	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	2	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	2	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	2	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	2	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	2	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	3	-2	1	001	002	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Water_Heat	3	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	3	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	3	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	3	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	3	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	4	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	4	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	4	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	4	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	4	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	4	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	4	4	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	5	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	5	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	5	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	5	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	5	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	5	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	5	4	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	5	5	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	6	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	6	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	6	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	6	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	6	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	6	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	6	4	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	6	5	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	6	6	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	7	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	7	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	7	0	1	001	002	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Water_Heat	7	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	7	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	7	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	7	4	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	7	5	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	7	6	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	7	7	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	8	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	8	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	8	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	8	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	8	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	8	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	8	4	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	8	5	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	8	6	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	8	7	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	8	8	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	9	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	9	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	9	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	9	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	9	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	9	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	9	4	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	9	5	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	9	6	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	9	7	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	9	8	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	9	9	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	10	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	10	-1	1	001	002	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Water_Heat	10	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	10	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	10	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	10	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	10	4	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	10	5	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	10	6	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	10	7	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	10	8	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	10	9	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	10	10	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	4	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	5	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	6	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	7	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	8	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	9	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	10	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	11	11	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	4	1	001	002	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Water_Heat	12	5	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	6	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	7	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	8	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	9	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	10	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	11	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	12	12	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	4	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	5	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	6	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	7	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	8	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	9	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	10	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	11	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	12	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	13	13	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	4	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	5	1	001	002	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Water_Heat	14	6	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	7	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	8	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	9	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	10	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	11	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	12	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	13	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	14	14	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	-2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	-1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	0	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	1	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	2	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	3	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	4	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	5	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	6	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	7	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	8	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	9	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	10	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	11	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	12	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	13	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	14	1	001	002	002
Residential	MF2_2_TO_4_Units	Water_Heat	15	15	1	001	002	002
Residential	MF2_2_TO_4_Units	Cooking	0	-2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	0	-1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	0	0	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	1	-2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	1	-1	1	001	002	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Cooking	1	0		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	1	1		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	2	-2		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	2	-1		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	2	0		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	2	1		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	2	2		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	3	-2		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	3	-1		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	3	0		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	3	1		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	3	2		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	3	3		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	4	-2		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	4	-1		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	4	0		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	4	1		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	4	2		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	4	3		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	4	4		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	5	-2		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	5	-1		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	5	0		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	5	1		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	5	2		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	5	3		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	5	4		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	5	5		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	6	-2		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	6	-1		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	6	0		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	6	1		1	001	002 003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Cooking	6	2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	6	3	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	6	4	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	6	5	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	6	6	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	7	-2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	7	-1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	7	0	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	7	1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	7	2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	7	3	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	7	4	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	7	5	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	7	6	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	7	7	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	8	-2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	8	-1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	8	0	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	8	1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	8	2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	8	3	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	8	4	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	8	5	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	8	6	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	8	7	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	8	8	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	9	-2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	9	-1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	9	0	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	9	1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	9	2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	9	3	1	001	002	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Cooking	9	4	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	9	5	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	9	6	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	9	7	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	9	8	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	9	9	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	-2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	-1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	0	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	3	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	4	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	5	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	6	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	7	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	8	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	9	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	10	10	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	-2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	-1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	0	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	3	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	4	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	5	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	6	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	7	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	8	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	9	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	11	10	1	001	002	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Cooking	11	11	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	-2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	-1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	0	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	3	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	4	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	5	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	6	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	7	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	8	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	9	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	10	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	11	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	12	12	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	-2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	-1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	0	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	3	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	4	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	5	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	6	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	7	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	8	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	9	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	10	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	11	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	12	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	13	13	1	001	002	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Cooking	14	-2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	-1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	0	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	3	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	4	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	5	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	6	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	7	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	8	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	9	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	10	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	11	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	12	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	13	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	14	14	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	-2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	-1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	0	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	1	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	2	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	3	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	4	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	5	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	6	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	7	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	8	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	9	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	10	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	11	1	001	002	003
Residential	MF2_2_TO_4_Units	Cooking	15	12	1	001	002	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Cooking	15	13		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	15	14		1	001	002 003
Residential	MF2_2_TO_4_Units	Cooking	15	15		1	001	002 003
Residential	MF2_2_TO_4_Units	Drying	0	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	0	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	0	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	1	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	1	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	1	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	1	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	2	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	2	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	2	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	2	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	2	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	3	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	3	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	3	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	3	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	3	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	3	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	4	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	4	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	4	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	4	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	4	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	4	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	4	4	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	5	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	5	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	5	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	5	1	0.72167	001	002	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Drying	5	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	5	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	5	4	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	5	5	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	6	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	6	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	6	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	6	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	6	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	6	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	6	4	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	6	5	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	6	6	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	7	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	7	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	7	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	7	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	7	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	7	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	7	4	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	7	5	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	7	6	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	7	7	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	8	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	8	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	8	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	8	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	8	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	8	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	8	4	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	8	5	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	8	6	0.72167	001	002	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Drying	8	7	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	8	8	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	9	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	9	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	9	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	9	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	9	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	9	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	9	4	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	9	5	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	9	6	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	9	7	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	9	8	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	9	9	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	4	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	5	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	6	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	7	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	8	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	9	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	10	10	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	2	0.72167	001	002	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Drying	11	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	4	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	5	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	6	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	7	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	8	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	9	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	10	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	11	11	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	4	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	5	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	6	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	7	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	8	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	9	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	10	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	11	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	12	12	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	4	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	5	0.72167	001	002	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Drying	13	6	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	7	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	8	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	9	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	10	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	11	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	12	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	13	13	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	4	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	5	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	6	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	7	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	8	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	9	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	10	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	11	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	12	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	13	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	14	14	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	-2	0.655	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	-1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	0	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	1	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	2	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	3	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	4	0.72167	001	002	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Drying	15	5	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	6	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	7	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	8	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	9	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	10	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	11	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	12	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	13	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	14	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Drying	15	15	0.72167	001	002	004
Residential	MF2_2_TO_4_Units	Barbecue	0	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	0	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	0	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	1	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	1	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	1	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	1	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	2	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	2	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	2	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	2	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	2	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	3	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	3	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	3	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	3	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	3	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	3	3	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	4	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	4	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	4	0	0.23758	001	002	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Barbecue	4	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	4	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	4	3	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	4	4	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	5	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	5	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	5	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	5	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	5	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	5	3	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	5	4	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	5	5	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	6	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	6	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	6	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	6	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	6	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	6	3	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	6	4	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	6	5	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	6	6	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	7	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	7	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	7	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	7	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	7	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	7	3	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	7	4	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	7	5	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	7	6	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	7	7	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	8	-2	0.18312	001	002	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Barbecue	8	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	8	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	8	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	8	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	8	3	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	8	4	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	8	5	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	8	6	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	8	7	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	8	8	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	9	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	9	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	9	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	9	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	9	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	9	3	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	9	4	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	9	5	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	9	6	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	9	7	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	9	8	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	9	9	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	10	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	10	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	10	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	10	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	10	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	10	3	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	10	4	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	10	5	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	10	6	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	10	7	0.23758	001	002	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Barbecue	10	8	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	10	9	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	10	10	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	3	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	4	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	5	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	6	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	7	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	8	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	9	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	10	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	11	11	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	3	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	4	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	5	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	6	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	7	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	8	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	9	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	10	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	11	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	12	12	0.23758	001	002	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Barbecue	13	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	3	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	4	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	5	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	6	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	7	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	8	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	9	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	10	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	11	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	12	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	13	13	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	-2	0.18312	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	-1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	0	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	1	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	2	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	3	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	4	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	5	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	6	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	7	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	8	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	9	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	10	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	11	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	12	0.23758	001	002	008
Residential	MF2_2_TO_4_Units	Barbecue	14	13	0.23758	001	002	008

zName	bName	nName	year	vintage	saturation	z	b	n	
Residential	MF2_2_TO_4_Units	Barbecue	14	14	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	-2	0.18312	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	-1	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	0	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	1	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	2	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	3	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	4	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	5	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	6	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	7	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	8	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	9	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	10	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	11	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	12	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	13	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	14	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Barbecue	15	15	0.23758	001	002	008	
Residential	MF2_2_TO_4_Units	Other	0	-2		1	001	002	009
Residential	MF2_2_TO_4_Units	Other	0	-1		1	001	002	009
Residential	MF2_2_TO_4_Units	Other	0	0		1	001	002	009
Residential	MF2_2_TO_4_Units	Other	1	-2		1	001	002	009
Residential	MF2_2_TO_4_Units	Other	1	-1		1	001	002	009
Residential	MF2_2_TO_4_Units	Other	1	0		1	001	002	009
Residential	MF2_2_TO_4_Units	Other	1	1		1	001	002	009
Residential	MF2_2_TO_4_Units	Other	2	-2		1	001	002	009
Residential	MF2_2_TO_4_Units	Other	2	-1		1	001	002	009
Residential	MF2_2_TO_4_Units	Other	2	0		1	001	002	009
Residential	MF2_2_TO_4_Units	Other	2	1		1	001	002	009
Residential	MF2_2_TO_4_Units	Other	2	2		1	001	002	009
Residential	MF2_2_TO_4_Units	Other	3	-2		1	001	002	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Other	3	-1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	3	0	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	3	1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	3	2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	3	3	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	4	-2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	4	-1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	4	0	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	4	1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	4	2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	4	3	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	4	4	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	5	-2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	5	-1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	5	0	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	5	1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	5	2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	5	3	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	5	4	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	5	5	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	6	-2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	6	-1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	6	0	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	6	1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	6	2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	6	3	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	6	4	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	6	5	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	6	6	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	7	-2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	7	-1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	7	0	1	001	002	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Other	7	1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	7	2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	7	3	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	7	4	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	7	5	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	7	6	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	7	7	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	8	-2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	8	-1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	8	0	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	8	1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	8	2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	8	3	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	8	4	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	8	5	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	8	6	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	8	7	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	8	8	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	9	-2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	9	-1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	9	0	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	9	1	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	9	2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	9	3	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	9	4	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	9	5	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	9	6	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	9	7	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	9	8	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	9	9	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	10	-2	1	001	002	009
Residential	MF2_2_TO_4_Units	Other	10	-1	1	001	002	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Other	10	0		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	10	1		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	10	2		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	10	3		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	10	4		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	10	5		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	10	6		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	10	7		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	10	8		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	10	9		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	10	10		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	-2		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	-1		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	0		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	1		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	2		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	3		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	4		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	5		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	6		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	7		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	8		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	9		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	10		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	11	11		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	-2		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	-1		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	0		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	1		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	2		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	3		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	4		1	001	002 009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Other	12	5		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	6		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	7		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	8		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	9		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	10		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	11		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	12	12		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	-2		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	-1		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	0		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	1		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	2		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	3		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	4		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	5		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	6		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	7		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	8		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	9		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	10		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	11		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	12		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	13	13		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	-2		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	-1		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	0		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	1		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	2		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	3		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	4		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	5		1	001	002 009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF2_2_TO_4_Units	Other	14	6		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	7		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	8		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	9		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	10		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	11		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	12		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	13		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	14	14		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	-2		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	-1		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	0		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	1		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	2		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	3		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	4		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	5		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	6		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	7		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	8		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	9		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	10		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	11		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	12		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	13		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	14		1	001	002 009
Residential	MF2_2_TO_4_Units	Other	15	15		1	001	002 009
Residential	MF3_GE_5_Units	Space_Heat	0	-2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	0	-1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	0	0		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	1	-2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	1	-1		1	001	003 001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Space_Heat	1	0		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	1	1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	2	-2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	2	-1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	2	0		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	2	1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	2	2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	3	-2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	3	-1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	3	0		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	3	1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	3	2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	3	3		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	4	-2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	4	-1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	4	0		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	4	1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	4	2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	4	3		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	4	4		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	5	-2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	5	-1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	5	0		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	5	1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	5	2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	5	3		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	5	4		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	5	5		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	6	-2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	6	-1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	6	0		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	6	1		1	001	003 001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Space_Heat	6	2	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	6	3	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	6	4	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	6	5	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	6	6	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	7	-2	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	7	-1	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	7	0	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	7	1	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	7	2	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	7	3	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	7	4	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	7	5	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	7	6	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	7	7	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	8	-2	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	8	-1	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	8	0	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	8	1	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	8	2	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	8	3	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	8	4	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	8	5	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	8	6	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	8	7	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	8	8	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	9	-2	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	9	-1	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	9	0	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	9	1	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	9	2	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	9	3	1	001	003	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Space_Heat	9	4		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	9	5		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	9	6		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	9	7		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	9	8		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	9	9		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	-2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	-1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	0		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	3		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	4		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	5		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	6		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	7		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	8		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	9		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	10	10		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	-2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	-1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	0		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	3		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	4		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	5		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	6		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	7		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	8		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	9		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	11	10		1	001	003 001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Space_Heat	11	11		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	-2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	-1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	0		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	3		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	4		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	5		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	6		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	7		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	8		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	9		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	10		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	11		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	12	12		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	-2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	-1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	0		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	1		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	2		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	3		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	4		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	5		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	6		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	7		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	8		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	9		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	10		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	11		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	12		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	13	13		1	001	003 001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Space_Heat	14	-2	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	-1	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	0	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	1	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	2	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	3	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	4	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	5	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	6	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	7	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	8	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	9	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	10	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	11	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	12	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	13	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	14	14	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	-2	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	-1	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	0	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	1	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	2	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	3	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	4	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	5	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	6	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	7	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	8	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	9	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	10	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	11	1	001	003	001
Residential	MF3_GE_5_Units	Space_Heat	15	12	1	001	003	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Space_Heat	15	13		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	15	14		1	001	003 001
Residential	MF3_GE_5_Units	Space_Heat	15	15		1	001	003 001
Residential	MF3_GE_5_Units	Water_Heat	0	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	0	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	0	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	1	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	1	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	1	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	1	1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	2	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	2	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	2	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	2	1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	2	2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	3	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	3	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	3	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	3	1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	3	2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	3	3		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	4	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	4	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	4	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	4	1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	4	2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	4	3		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	4	4		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	5	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	5	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	5	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	5	1		1	001	003 002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Water_Heat	5	2	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	5	3	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	5	4	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	5	5	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	6	-2	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	6	-1	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	6	0	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	6	1	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	6	2	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	6	3	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	6	4	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	6	5	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	6	6	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	7	-2	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	7	-1	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	7	0	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	7	1	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	7	2	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	7	3	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	7	4	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	7	5	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	7	6	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	7	7	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	8	-2	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	8	-1	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	8	0	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	8	1	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	8	2	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	8	3	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	8	4	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	8	5	1	001	003	002
Residential	MF3_GE_5_Units	Water_Heat	8	6	1	001	003	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Water_Heat	8	7		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	8	8		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	9	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	9	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	9	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	9	1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	9	2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	9	3		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	9	4		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	9	5		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	9	6		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	9	7		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	9	8		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	9	9		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	3		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	4		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	5		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	6		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	7		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	8		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	9		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	10	10		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	2		1	001	003 002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Water_Heat	11	3		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	4		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	5		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	6		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	7		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	8		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	9		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	10		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	11	11		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	3		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	4		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	5		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	6		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	7		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	8		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	9		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	10		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	11		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	12	12		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	3		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	4		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	5		1	001	003 002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Water_Heat	13	6		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	7		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	8		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	9		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	10		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	11		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	12		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	13	13		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	3		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	4		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	5		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	6		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	7		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	8		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	9		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	10		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	11		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	12		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	13		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	14	14		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	-2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	-1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	0		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	1		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	2		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	3		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	4		1	001	003 002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Water_Heat	15	5		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	6		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	7		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	8		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	9		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	10		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	11		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	12		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	13		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	14		1	001	003 002
Residential	MF3_GE_5_Units	Water_Heat	15	15		1	001	003 002
Residential	MF3_GE_5_Units	Cooking	0	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	0	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	0	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	1	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	1	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	1	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	1	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	2	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	2	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	2	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	2	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	2	2		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	3	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	3	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	3	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	3	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	3	2		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	3	3		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	4	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	4	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	4	0		1	001	003 003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Cooking	4	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	4	2		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	4	3		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	4	4		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	5	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	5	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	5	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	5	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	5	2		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	5	3		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	5	4		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	5	5		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	6	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	6	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	6	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	6	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	6	2		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	6	3		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	6	4		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	6	5		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	6	6		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	7	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	7	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	7	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	7	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	7	2		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	7	3		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	7	4		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	7	5		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	7	6		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	7	7		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	8	-2	0.99633	001	003	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Cooking	8	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	8	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	8	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	8	2		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	8	3		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	8	4		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	8	5		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	8	6		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	8	7		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	8	8		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	9	-2	0.99633	1	001	003 003
Residential	MF3_GE_5_Units	Cooking	9	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	9	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	9	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	9	2		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	9	3		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	9	4		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	9	5		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	9	6		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	9	7		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	9	8		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	9	9		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	10	-2	0.99633	1	001	003 003
Residential	MF3_GE_5_Units	Cooking	10	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	10	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	10	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	10	2		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	10	3		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	10	4		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	10	5		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	10	6		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	10	7		1	001	003 003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Cooking	10	8		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	10	9		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	10	10		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	11	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	2		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	3		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	4		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	5		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	6		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	7		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	8		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	9		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	10		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	11	11		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	12	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	2		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	3		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	4		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	5		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	6		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	7		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	8		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	9		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	10		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	11		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	12	12		1	001	003 003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Cooking	13	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	13	-1		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	0		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	1		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	2		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	3		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	4		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	5		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	6		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	7		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	8		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	9		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	10		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	11		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	12		1	001	003
Residential	MF3_GE_5_Units	Cooking	13	13		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	14	-1		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	0		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	1		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	2		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	3		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	4		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	5		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	6		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	7		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	8		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	9		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	10		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	11		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	12		1	001	003
Residential	MF3_GE_5_Units	Cooking	14	13		1	001	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Cooking	14	14		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	-2	0.99633	001	003	003
Residential	MF3_GE_5_Units	Cooking	15	-1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	0		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	1		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	2		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	3		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	4		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	5		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	6		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	7		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	8		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	9		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	10		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	11		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	12		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	13		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	14		1	001	003 003
Residential	MF3_GE_5_Units	Cooking	15	15		1	001	003 003
Residential	MF3_GE_5_Units	Drying	0	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	0	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	0	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	1	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	1	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	1	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	1	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	2	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	2	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	2	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	2	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	2	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	3	-2	0.34537	001	003	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Drying	3	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	3	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	3	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	3	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	3	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	4	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	4	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	4	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	4	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	4	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	4	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	4	4	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	5	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	5	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	5	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	5	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	5	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	5	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	5	4	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	5	5	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	6	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	6	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	6	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	6	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	6	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	6	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	6	4	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	6	5	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	6	6	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	7	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	7	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	7	0	0.47509	001	003	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Drying	7	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	7	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	7	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	7	4	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	7	5	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	7	6	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	7	7	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	8	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	8	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	8	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	8	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	8	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	8	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	8	4	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	8	5	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	8	6	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	8	7	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	8	8	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	9	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	9	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	9	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	9	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	9	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	9	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	9	4	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	9	5	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	9	6	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	9	7	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	9	8	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	9	9	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	10	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	10	-1	0.47509	001	003	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Drying	10	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	10	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	10	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	10	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	10	4	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	10	5	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	10	6	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	10	7	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	10	8	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	10	9	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	10	10	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	11	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	4	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	5	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	6	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	7	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	8	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	9	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	10	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	11	11	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	12	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	4	0.47509	001	003	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Drying	12	5	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	6	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	7	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	8	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	9	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	10	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	11	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	12	12	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	13	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	4	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	5	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	6	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	7	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	8	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	9	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	10	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	11	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	12	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	13	13	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	14	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	4	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	5	0.47509	001	003	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Drying	14	6	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	7	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	8	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	9	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	10	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	11	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	12	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	13	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	14	14	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	-2	0.34537	001	003	004
Residential	MF3_GE_5_Units	Drying	15	-1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	0	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	1	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	2	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	3	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	4	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	5	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	6	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	7	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	8	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	9	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	10	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	11	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	12	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	13	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	14	0.47509	001	003	004
Residential	MF3_GE_5_Units	Drying	15	15	0.47509	001	003	004
Residential	MF3_GE_5_Units	Barbecue	0	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	0	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	0	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	1	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	1	-1	0.13616	001	003	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Barbecue	1	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	1	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	2	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	2	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	2	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	2	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	2	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	3	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	3	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	3	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	3	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	3	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	3	3	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	4	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	4	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	4	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	4	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	4	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	4	3	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	4	4	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	5	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	5	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	5	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	5	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	5	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	5	3	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	5	4	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	5	5	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	6	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	6	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	6	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	6	1	0.13616	001	003	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Barbecue	6	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	6	3	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	6	4	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	6	5	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	6	6	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	7	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	7	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	7	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	7	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	7	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	7	3	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	7	4	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	7	5	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	7	6	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	7	7	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	8	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	8	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	8	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	8	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	8	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	8	3	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	8	4	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	8	5	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	8	6	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	8	7	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	8	8	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	9	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	9	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	9	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	9	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	9	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	9	3	0.13616	001	003	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Barbecue	9	4	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	9	5	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	9	6	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	9	7	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	9	8	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	9	9	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	3	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	4	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	5	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	6	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	7	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	8	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	9	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	10	10	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	3	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	4	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	5	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	6	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	7	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	8	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	9	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	11	10	0.13616	001	003	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Barbecue	11	11	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	3	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	4	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	5	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	6	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	7	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	8	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	9	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	10	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	11	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	12	12	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	3	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	4	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	5	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	6	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	7	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	8	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	9	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	10	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	11	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	12	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	13	13	0.13616	001	003	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Barbecue	14	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	3	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	4	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	5	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	6	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	7	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	8	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	9	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	10	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	11	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	12	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	13	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	14	14	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	-2	0.10879	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	-1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	0	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	1	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	2	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	3	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	4	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	5	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	6	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	7	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	8	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	9	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	10	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	11	0.13616	001	003	008
Residential	MF3_GE_5_Units	Barbecue	15	12	0.13616	001	003	008

zName	bName	nName	year	vintage	saturation	z	b	n	
Residential	MF3_GE_5_Units	Barbecue	15	13	0.13616	001	003	008	
Residential	MF3_GE_5_Units	Barbecue	15	14	0.13616	001	003	008	
Residential	MF3_GE_5_Units	Barbecue	15	15	0.13616	001	003	008	
Residential	MF3_GE_5_Units	Other	0	-2		1	001	003	009
Residential	MF3_GE_5_Units	Other	0	-1		1	001	003	009
Residential	MF3_GE_5_Units	Other	0	0		1	001	003	009
Residential	MF3_GE_5_Units	Other	1	-2		1	001	003	009
Residential	MF3_GE_5_Units	Other	1	-1		1	001	003	009
Residential	MF3_GE_5_Units	Other	1	0		1	001	003	009
Residential	MF3_GE_5_Units	Other	1	1		1	001	003	009
Residential	MF3_GE_5_Units	Other	2	-2		1	001	003	009
Residential	MF3_GE_5_Units	Other	2	-1		1	001	003	009
Residential	MF3_GE_5_Units	Other	2	0		1	001	003	009
Residential	MF3_GE_5_Units	Other	2	1		1	001	003	009
Residential	MF3_GE_5_Units	Other	2	2		1	001	003	009
Residential	MF3_GE_5_Units	Other	3	-2		1	001	003	009
Residential	MF3_GE_5_Units	Other	3	-1		1	001	003	009
Residential	MF3_GE_5_Units	Other	3	0		1	001	003	009
Residential	MF3_GE_5_Units	Other	3	1		1	001	003	009
Residential	MF3_GE_5_Units	Other	3	2		1	001	003	009
Residential	MF3_GE_5_Units	Other	3	3		1	001	003	009
Residential	MF3_GE_5_Units	Other	4	-2		1	001	003	009
Residential	MF3_GE_5_Units	Other	4	-1		1	001	003	009
Residential	MF3_GE_5_Units	Other	4	0		1	001	003	009
Residential	MF3_GE_5_Units	Other	4	1		1	001	003	009
Residential	MF3_GE_5_Units	Other	4	2		1	001	003	009
Residential	MF3_GE_5_Units	Other	4	3		1	001	003	009
Residential	MF3_GE_5_Units	Other	4	4		1	001	003	009
Residential	MF3_GE_5_Units	Other	5	-2		1	001	003	009
Residential	MF3_GE_5_Units	Other	5	-1		1	001	003	009
Residential	MF3_GE_5_Units	Other	5	0		1	001	003	009
Residential	MF3_GE_5_Units	Other	5	1		1	001	003	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Other	5	2	1	001	003	009
Residential	MF3_GE_5_Units	Other	5	3	1	001	003	009
Residential	MF3_GE_5_Units	Other	5	4	1	001	003	009
Residential	MF3_GE_5_Units	Other	5	5	1	001	003	009
Residential	MF3_GE_5_Units	Other	6	-2	1	001	003	009
Residential	MF3_GE_5_Units	Other	6	-1	1	001	003	009
Residential	MF3_GE_5_Units	Other	6	0	1	001	003	009
Residential	MF3_GE_5_Units	Other	6	1	1	001	003	009
Residential	MF3_GE_5_Units	Other	6	2	1	001	003	009
Residential	MF3_GE_5_Units	Other	6	3	1	001	003	009
Residential	MF3_GE_5_Units	Other	6	4	1	001	003	009
Residential	MF3_GE_5_Units	Other	6	5	1	001	003	009
Residential	MF3_GE_5_Units	Other	6	6	1	001	003	009
Residential	MF3_GE_5_Units	Other	7	-2	1	001	003	009
Residential	MF3_GE_5_Units	Other	7	-1	1	001	003	009
Residential	MF3_GE_5_Units	Other	7	0	1	001	003	009
Residential	MF3_GE_5_Units	Other	7	1	1	001	003	009
Residential	MF3_GE_5_Units	Other	7	2	1	001	003	009
Residential	MF3_GE_5_Units	Other	7	3	1	001	003	009
Residential	MF3_GE_5_Units	Other	7	4	1	001	003	009
Residential	MF3_GE_5_Units	Other	7	5	1	001	003	009
Residential	MF3_GE_5_Units	Other	7	6	1	001	003	009
Residential	MF3_GE_5_Units	Other	7	7	1	001	003	009
Residential	MF3_GE_5_Units	Other	8	-2	1	001	003	009
Residential	MF3_GE_5_Units	Other	8	-1	1	001	003	009
Residential	MF3_GE_5_Units	Other	8	0	1	001	003	009
Residential	MF3_GE_5_Units	Other	8	1	1	001	003	009
Residential	MF3_GE_5_Units	Other	8	2	1	001	003	009
Residential	MF3_GE_5_Units	Other	8	3	1	001	003	009
Residential	MF3_GE_5_Units	Other	8	4	1	001	003	009
Residential	MF3_GE_5_Units	Other	8	5	1	001	003	009
Residential	MF3_GE_5_Units	Other	8	6	1	001	003	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Other	8	7		1	001	003 009
Residential	MF3_GE_5_Units	Other	8	8		1	001	003 009
Residential	MF3_GE_5_Units	Other	9	-2		1	001	003 009
Residential	MF3_GE_5_Units	Other	9	-1		1	001	003 009
Residential	MF3_GE_5_Units	Other	9	0		1	001	003 009
Residential	MF3_GE_5_Units	Other	9	1		1	001	003 009
Residential	MF3_GE_5_Units	Other	9	2		1	001	003 009
Residential	MF3_GE_5_Units	Other	9	3		1	001	003 009
Residential	MF3_GE_5_Units	Other	9	4		1	001	003 009
Residential	MF3_GE_5_Units	Other	9	5		1	001	003 009
Residential	MF3_GE_5_Units	Other	9	6		1	001	003 009
Residential	MF3_GE_5_Units	Other	9	7		1	001	003 009
Residential	MF3_GE_5_Units	Other	9	8		1	001	003 009
Residential	MF3_GE_5_Units	Other	9	9		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	-2		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	-1		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	0		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	1		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	2		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	3		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	4		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	5		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	6		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	7		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	8		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	9		1	001	003 009
Residential	MF3_GE_5_Units	Other	10	10		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	-2		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	-1		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	0		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	1		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	2		1	001	003 009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Other	11	3		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	4		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	5		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	6		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	7		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	8		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	9		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	10		1	001	003 009
Residential	MF3_GE_5_Units	Other	11	11		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	-2		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	-1		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	0		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	1		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	2		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	3		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	4		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	5		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	6		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	7		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	8		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	9		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	10		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	11		1	001	003 009
Residential	MF3_GE_5_Units	Other	12	12		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	-2		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	-1		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	0		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	1		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	2		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	3		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	4		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	5		1	001	003 009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Other	13	6		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	7		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	8		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	9		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	10		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	11		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	12		1	001	003 009
Residential	MF3_GE_5_Units	Other	13	13		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	-2		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	-1		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	0		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	1		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	2		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	3		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	4		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	5		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	6		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	7		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	8		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	9		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	10		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	11		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	12		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	13		1	001	003 009
Residential	MF3_GE_5_Units	Other	14	14		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	-2		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	-1		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	0		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	1		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	2		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	3		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	4		1	001	003 009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MF3_GE_5_Units	Other	15	5		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	6		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	7		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	8		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	9		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	10		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	11		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	12		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	13		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	14		1	001	003 009
Residential	MF3_GE_5_Units	Other	15	15		1	001	003 009
Residential	MM_Master_Meter	Space_Heat	0	-2		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	0	-1		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	0	0		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	1	-2		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	1	-1		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	1	0		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	1	1		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	2	-2		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	2	-1		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	2	0		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	2	1		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	2	2		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	3	-2		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	3	-1		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	3	0		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	3	1		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	3	2		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	3	3		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	4	-2		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	4	-1		1	001	004 001
Residential	MM_Master_Meter	Space_Heat	4	0		1	001	004 001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Space_Heat	4	1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	4	2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	4	3	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	4	4	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	5	-2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	5	-1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	5	0	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	5	1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	5	2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	5	3	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	5	4	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	5	5	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	6	-2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	6	-1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	6	0	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	6	1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	6	2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	6	3	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	6	4	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	6	5	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	6	6	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	7	-2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	7	-1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	7	0	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	7	1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	7	2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	7	3	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	7	4	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	7	5	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	7	6	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	7	7	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	8	-2	1	001	004	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Space_Heat	8	-1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	8	0	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	8	1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	8	2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	8	3	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	8	4	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	8	5	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	8	6	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	8	7	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	8	8	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	9	-2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	9	-1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	9	0	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	9	1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	9	2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	9	3	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	9	4	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	9	5	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	9	6	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	9	7	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	9	8	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	9	9	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	10	-2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	10	-1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	10	0	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	10	1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	10	2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	10	3	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	10	4	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	10	5	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	10	6	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	10	7	1	001	004	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Space_Heat	10	8	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	10	9	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	10	10	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	-2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	-1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	0	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	3	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	4	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	5	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	6	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	7	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	8	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	9	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	10	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	11	11	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	-2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	-1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	0	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	3	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	4	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	5	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	6	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	7	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	8	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	9	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	10	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	11	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	12	12	1	001	004	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Space_Heat	13	-2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	-1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	0	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	3	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	4	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	5	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	6	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	7	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	8	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	9	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	10	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	11	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	12	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	13	13	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	-2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	-1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	0	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	3	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	4	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	5	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	6	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	7	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	8	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	9	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	10	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	11	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	12	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	14	13	1	001	004	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Space_Heat	14	14	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	-2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	-1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	0	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	1	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	2	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	3	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	4	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	5	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	6	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	7	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	8	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	9	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	10	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	11	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	12	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	13	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	14	1	001	004	001
Residential	MM_Master_Meter	Space_Heat	15	15	1	001	004	001
Residential	MM_Master_Meter	Water_Heat	0	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	0	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	0	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	1	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	1	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	1	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	1	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	2	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	2	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	2	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	2	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	2	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	3	-2	1	001	004	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Water_Heat	3	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	3	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	3	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	3	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	3	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	4	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	4	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	4	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	4	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	4	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	4	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	4	4	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	5	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	5	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	5	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	5	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	5	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	5	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	5	4	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	5	5	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	6	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	6	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	6	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	6	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	6	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	6	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	6	4	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	6	5	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	6	6	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	7	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	7	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	7	0	1	001	004	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Water_Heat	7	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	7	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	7	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	7	4	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	7	5	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	7	6	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	7	7	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	8	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	8	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	8	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	8	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	8	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	8	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	8	4	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	8	5	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	8	6	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	8	7	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	8	8	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	9	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	9	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	9	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	9	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	9	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	9	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	9	4	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	9	5	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	9	6	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	9	7	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	9	8	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	9	9	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	10	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	10	-1	1	001	004	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Water_Heat	10	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	10	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	10	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	10	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	10	4	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	10	5	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	10	6	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	10	7	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	10	8	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	10	9	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	10	10	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	4	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	5	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	6	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	7	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	8	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	9	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	10	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	11	11	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	4	1	001	004	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Water_Heat	12	5	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	6	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	7	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	8	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	9	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	10	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	11	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	12	12	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	4	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	5	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	6	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	7	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	8	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	9	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	10	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	11	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	12	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	13	13	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	4	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	5	1	001	004	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Water_Heat	14	6	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	7	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	8	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	9	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	10	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	11	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	12	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	13	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	14	14	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	-2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	-1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	0	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	1	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	2	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	3	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	4	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	5	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	6	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	7	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	8	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	9	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	10	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	11	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	12	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	13	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	14	1	001	004	002
Residential	MM_Master_Meter	Water_Heat	15	15	1	001	004	002
Residential	MM_Master_Meter	Cooking	0	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	0	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	0	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	1	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	1	-1	1	001	004	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Cooking	1	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	1	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	2	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	2	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	2	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	2	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	2	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	3	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	3	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	3	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	3	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	3	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	3	3	1	001	004	003
Residential	MM_Master_Meter	Cooking	4	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	4	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	4	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	4	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	4	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	4	3	1	001	004	003
Residential	MM_Master_Meter	Cooking	4	4	1	001	004	003
Residential	MM_Master_Meter	Cooking	5	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	5	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	5	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	5	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	5	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	5	3	1	001	004	003
Residential	MM_Master_Meter	Cooking	5	4	1	001	004	003
Residential	MM_Master_Meter	Cooking	5	5	1	001	004	003
Residential	MM_Master_Meter	Cooking	6	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	6	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	6	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	6	1	1	001	004	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Cooking	6	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	6	3	1	001	004	003
Residential	MM_Master_Meter	Cooking	6	4	1	001	004	003
Residential	MM_Master_Meter	Cooking	6	5	1	001	004	003
Residential	MM_Master_Meter	Cooking	6	6	1	001	004	003
Residential	MM_Master_Meter	Cooking	7	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	7	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	7	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	7	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	7	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	7	3	1	001	004	003
Residential	MM_Master_Meter	Cooking	7	4	1	001	004	003
Residential	MM_Master_Meter	Cooking	7	5	1	001	004	003
Residential	MM_Master_Meter	Cooking	7	6	1	001	004	003
Residential	MM_Master_Meter	Cooking	7	7	1	001	004	003
Residential	MM_Master_Meter	Cooking	8	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	8	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	8	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	8	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	8	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	8	3	1	001	004	003
Residential	MM_Master_Meter	Cooking	8	4	1	001	004	003
Residential	MM_Master_Meter	Cooking	8	5	1	001	004	003
Residential	MM_Master_Meter	Cooking	8	6	1	001	004	003
Residential	MM_Master_Meter	Cooking	8	7	1	001	004	003
Residential	MM_Master_Meter	Cooking	8	8	1	001	004	003
Residential	MM_Master_Meter	Cooking	9	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	9	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	9	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	9	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	9	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	9	3	1	001	004	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Cooking	9	4	1	001	004	003
Residential	MM_Master_Meter	Cooking	9	5	1	001	004	003
Residential	MM_Master_Meter	Cooking	9	6	1	001	004	003
Residential	MM_Master_Meter	Cooking	9	7	1	001	004	003
Residential	MM_Master_Meter	Cooking	9	8	1	001	004	003
Residential	MM_Master_Meter	Cooking	9	9	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	3	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	4	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	5	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	6	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	7	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	8	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	9	1	001	004	003
Residential	MM_Master_Meter	Cooking	10	10	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	3	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	4	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	5	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	6	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	7	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	8	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	9	1	001	004	003
Residential	MM_Master_Meter	Cooking	11	10	1	001	004	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Cooking	11	11	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	3	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	4	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	5	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	6	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	7	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	8	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	9	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	10	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	11	1	001	004	003
Residential	MM_Master_Meter	Cooking	12	12	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	3	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	4	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	5	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	6	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	7	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	8	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	9	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	10	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	11	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	12	1	001	004	003
Residential	MM_Master_Meter	Cooking	13	13	1	001	004	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Cooking	14	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	3	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	4	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	5	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	6	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	7	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	8	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	9	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	10	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	11	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	12	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	13	1	001	004	003
Residential	MM_Master_Meter	Cooking	14	14	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	-2	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	-1	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	0	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	1	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	2	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	3	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	4	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	5	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	6	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	7	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	8	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	9	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	10	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	11	1	001	004	003
Residential	MM_Master_Meter	Cooking	15	12	1	001	004	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Cooking	15	13		1	001	004 003
Residential	MM_Master_Meter	Cooking	15	14		1	001	004 003
Residential	MM_Master_Meter	Cooking	15	15		1	001	004 003
Residential	MM_Master_Meter	Drying	0	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	0	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	0	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	1	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	1	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	1	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	1	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	2	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	2	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	2	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	2	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	2	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	3	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	3	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	3	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	3	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	3	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	3	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	4	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	4	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	4	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	4	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	4	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	4	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	4	4	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	5	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	5	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	5	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	5	1	0.57182	001	004	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Drying	5	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	5	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	5	4	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	5	5	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	6	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	6	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	6	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	6	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	6	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	6	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	6	4	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	6	5	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	6	6	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	7	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	7	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	7	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	7	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	7	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	7	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	7	4	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	7	5	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	7	6	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	7	7	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	8	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	8	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	8	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	8	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	8	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	8	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	8	4	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	8	5	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	8	6	0.57182	001	004	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Drying	8	7	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	8	8	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	9	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	9	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	9	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	9	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	9	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	9	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	9	4	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	9	5	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	9	6	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	9	7	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	9	8	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	9	9	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	10	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	10	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	10	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	10	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	10	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	10	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	10	4	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	10	5	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	10	6	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	10	7	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	10	8	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	10	9	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	10	10	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	11	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	11	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	11	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	11	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	11	2	0.57182	001	004	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Drying	11	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	11	4	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	11	5	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	11	6	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	11	7	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	11	8	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	11	9	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	11	10	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	11	11	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	12	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	4	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	5	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	6	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	7	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	8	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	9	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	10	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	11	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	12	12	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	13	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	4	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	5	0.57182	001	004	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Drying	13	6	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	7	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	8	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	9	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	10	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	11	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	12	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	13	13	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	14	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	4	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	5	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	6	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	7	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	8	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	9	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	10	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	11	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	12	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	13	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	14	14	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	-2	0.47158	001	004	004
Residential	MM_Master_Meter	Drying	15	-1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	0	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	1	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	2	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	3	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	4	0.57182	001	004	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Drying	15	5	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	6	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	7	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	8	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	9	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	10	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	11	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	12	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	13	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	14	0.57182	001	004	004
Residential	MM_Master_Meter	Drying	15	15	0.57182	001	004	004
Residential	MM_Master_Meter	Barbecue	0	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	0	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	0	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	1	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	1	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	1	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	1	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	2	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	2	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	2	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	2	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	2	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	3	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	3	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	3	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	3	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	3	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	3	3	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	4	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	4	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	4	0	0.10179	001	004	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Barbecue	4	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	4	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	4	3	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	4	4	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	5	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	5	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	5	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	5	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	5	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	5	3	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	5	4	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	5	5	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	6	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	6	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	6	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	6	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	6	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	6	3	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	6	4	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	6	5	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	6	6	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	7	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	7	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	7	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	7	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	7	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	7	3	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	7	4	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	7	5	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	7	6	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	7	7	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	8	-2	0.07424	001	004	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Barbecue	8	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	8	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	8	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	8	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	8	3	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	8	4	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	8	5	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	8	6	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	8	7	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	8	8	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	9	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	9	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	9	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	9	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	9	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	9	3	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	9	4	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	9	5	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	9	6	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	9	7	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	9	8	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	9	9	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	10	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	10	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	10	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	10	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	10	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	10	3	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	10	4	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	10	5	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	10	6	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	10	7	0.10179	001	004	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Barbecue	10	8	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	10	9	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	10	10	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	11	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	3	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	4	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	5	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	6	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	7	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	8	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	9	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	10	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	11	11	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	12	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	3	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	4	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	5	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	6	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	7	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	8	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	9	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	10	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	11	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	12	12	0.10179	001	004	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Barbecue	13	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	13	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	3	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	4	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	5	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	6	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	7	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	8	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	9	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	10	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	11	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	12	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	13	13	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	-2	0.07424	001	004	008
Residential	MM_Master_Meter	Barbecue	14	-1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	0	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	1	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	2	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	3	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	4	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	5	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	6	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	7	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	8	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	9	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	10	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	11	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	12	0.10179	001	004	008
Residential	MM_Master_Meter	Barbecue	14	13	0.10179	001	004	008

zName	bName	nName	year	vintage	saturation	z	b	n	
Residential	MM_Master_Meter	Barbecue	14	14	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	-2	0.07424	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	-1	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	0	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	1	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	2	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	3	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	4	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	5	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	6	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	7	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	8	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	9	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	10	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	11	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	12	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	13	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	14	0.10179	001	004	008	
Residential	MM_Master_Meter	Barbecue	15	15	0.10179	001	004	008	
Residential	MM_Master_Meter	Other	0	-2		1	001	004	009
Residential	MM_Master_Meter	Other	0	-1		1	001	004	009
Residential	MM_Master_Meter	Other	0	0		1	001	004	009
Residential	MM_Master_Meter	Other	1	-2		1	001	004	009
Residential	MM_Master_Meter	Other	1	-1		1	001	004	009
Residential	MM_Master_Meter	Other	1	0		1	001	004	009
Residential	MM_Master_Meter	Other	1	1		1	001	004	009
Residential	MM_Master_Meter	Other	2	-2		1	001	004	009
Residential	MM_Master_Meter	Other	2	-1		1	001	004	009
Residential	MM_Master_Meter	Other	2	0		1	001	004	009
Residential	MM_Master_Meter	Other	2	1		1	001	004	009
Residential	MM_Master_Meter	Other	2	2		1	001	004	009
Residential	MM_Master_Meter	Other	3	-2		1	001	004	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Other	3	-1	1	001	004	009
Residential	MM_Master_Meter	Other	3	0	1	001	004	009
Residential	MM_Master_Meter	Other	3	1	1	001	004	009
Residential	MM_Master_Meter	Other	3	2	1	001	004	009
Residential	MM_Master_Meter	Other	3	3	1	001	004	009
Residential	MM_Master_Meter	Other	4	-2	1	001	004	009
Residential	MM_Master_Meter	Other	4	-1	1	001	004	009
Residential	MM_Master_Meter	Other	4	0	1	001	004	009
Residential	MM_Master_Meter	Other	4	1	1	001	004	009
Residential	MM_Master_Meter	Other	4	2	1	001	004	009
Residential	MM_Master_Meter	Other	4	3	1	001	004	009
Residential	MM_Master_Meter	Other	4	4	1	001	004	009
Residential	MM_Master_Meter	Other	5	-2	1	001	004	009
Residential	MM_Master_Meter	Other	5	-1	1	001	004	009
Residential	MM_Master_Meter	Other	5	0	1	001	004	009
Residential	MM_Master_Meter	Other	5	1	1	001	004	009
Residential	MM_Master_Meter	Other	5	2	1	001	004	009
Residential	MM_Master_Meter	Other	5	3	1	001	004	009
Residential	MM_Master_Meter	Other	5	4	1	001	004	009
Residential	MM_Master_Meter	Other	5	5	1	001	004	009
Residential	MM_Master_Meter	Other	6	-2	1	001	004	009
Residential	MM_Master_Meter	Other	6	-1	1	001	004	009
Residential	MM_Master_Meter	Other	6	0	1	001	004	009
Residential	MM_Master_Meter	Other	6	1	1	001	004	009
Residential	MM_Master_Meter	Other	6	2	1	001	004	009
Residential	MM_Master_Meter	Other	6	3	1	001	004	009
Residential	MM_Master_Meter	Other	6	4	1	001	004	009
Residential	MM_Master_Meter	Other	6	5	1	001	004	009
Residential	MM_Master_Meter	Other	6	6	1	001	004	009
Residential	MM_Master_Meter	Other	7	-2	1	001	004	009
Residential	MM_Master_Meter	Other	7	-1	1	001	004	009
Residential	MM_Master_Meter	Other	7	0	1	001	004	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Other	7	1	1	001	004	009
Residential	MM_Master_Meter	Other	7	2	1	001	004	009
Residential	MM_Master_Meter	Other	7	3	1	001	004	009
Residential	MM_Master_Meter	Other	7	4	1	001	004	009
Residential	MM_Master_Meter	Other	7	5	1	001	004	009
Residential	MM_Master_Meter	Other	7	6	1	001	004	009
Residential	MM_Master_Meter	Other	7	7	1	001	004	009
Residential	MM_Master_Meter	Other	8	-2	1	001	004	009
Residential	MM_Master_Meter	Other	8	-1	1	001	004	009
Residential	MM_Master_Meter	Other	8	0	1	001	004	009
Residential	MM_Master_Meter	Other	8	1	1	001	004	009
Residential	MM_Master_Meter	Other	8	2	1	001	004	009
Residential	MM_Master_Meter	Other	8	3	1	001	004	009
Residential	MM_Master_Meter	Other	8	4	1	001	004	009
Residential	MM_Master_Meter	Other	8	5	1	001	004	009
Residential	MM_Master_Meter	Other	8	6	1	001	004	009
Residential	MM_Master_Meter	Other	8	7	1	001	004	009
Residential	MM_Master_Meter	Other	8	8	1	001	004	009
Residential	MM_Master_Meter	Other	9	-2	1	001	004	009
Residential	MM_Master_Meter	Other	9	-1	1	001	004	009
Residential	MM_Master_Meter	Other	9	0	1	001	004	009
Residential	MM_Master_Meter	Other	9	1	1	001	004	009
Residential	MM_Master_Meter	Other	9	2	1	001	004	009
Residential	MM_Master_Meter	Other	9	3	1	001	004	009
Residential	MM_Master_Meter	Other	9	4	1	001	004	009
Residential	MM_Master_Meter	Other	9	5	1	001	004	009
Residential	MM_Master_Meter	Other	9	6	1	001	004	009
Residential	MM_Master_Meter	Other	9	7	1	001	004	009
Residential	MM_Master_Meter	Other	9	8	1	001	004	009
Residential	MM_Master_Meter	Other	9	9	1	001	004	009
Residential	MM_Master_Meter	Other	10	-2	1	001	004	009
Residential	MM_Master_Meter	Other	10	-1	1	001	004	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Other	10	0		1	001	004 009
Residential	MM_Master_Meter	Other	10	1		1	001	004 009
Residential	MM_Master_Meter	Other	10	2		1	001	004 009
Residential	MM_Master_Meter	Other	10	3		1	001	004 009
Residential	MM_Master_Meter	Other	10	4		1	001	004 009
Residential	MM_Master_Meter	Other	10	5		1	001	004 009
Residential	MM_Master_Meter	Other	10	6		1	001	004 009
Residential	MM_Master_Meter	Other	10	7		1	001	004 009
Residential	MM_Master_Meter	Other	10	8		1	001	004 009
Residential	MM_Master_Meter	Other	10	9		1	001	004 009
Residential	MM_Master_Meter	Other	10	10		1	001	004 009
Residential	MM_Master_Meter	Other	11	-2		1	001	004 009
Residential	MM_Master_Meter	Other	11	-1		1	001	004 009
Residential	MM_Master_Meter	Other	11	0		1	001	004 009
Residential	MM_Master_Meter	Other	11	1		1	001	004 009
Residential	MM_Master_Meter	Other	11	2		1	001	004 009
Residential	MM_Master_Meter	Other	11	3		1	001	004 009
Residential	MM_Master_Meter	Other	11	4		1	001	004 009
Residential	MM_Master_Meter	Other	11	5		1	001	004 009
Residential	MM_Master_Meter	Other	11	6		1	001	004 009
Residential	MM_Master_Meter	Other	11	7		1	001	004 009
Residential	MM_Master_Meter	Other	11	8		1	001	004 009
Residential	MM_Master_Meter	Other	11	9		1	001	004 009
Residential	MM_Master_Meter	Other	11	10		1	001	004 009
Residential	MM_Master_Meter	Other	11	11		1	001	004 009
Residential	MM_Master_Meter	Other	12	-2		1	001	004 009
Residential	MM_Master_Meter	Other	12	-1		1	001	004 009
Residential	MM_Master_Meter	Other	12	0		1	001	004 009
Residential	MM_Master_Meter	Other	12	1		1	001	004 009
Residential	MM_Master_Meter	Other	12	2		1	001	004 009
Residential	MM_Master_Meter	Other	12	3		1	001	004 009
Residential	MM_Master_Meter	Other	12	4		1	001	004 009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Other	12	5		1	001	004 009
Residential	MM_Master_Meter	Other	12	6		1	001	004 009
Residential	MM_Master_Meter	Other	12	7		1	001	004 009
Residential	MM_Master_Meter	Other	12	8		1	001	004 009
Residential	MM_Master_Meter	Other	12	9		1	001	004 009
Residential	MM_Master_Meter	Other	12	10		1	001	004 009
Residential	MM_Master_Meter	Other	12	11		1	001	004 009
Residential	MM_Master_Meter	Other	12	12		1	001	004 009
Residential	MM_Master_Meter	Other	13	-2		1	001	004 009
Residential	MM_Master_Meter	Other	13	-1		1	001	004 009
Residential	MM_Master_Meter	Other	13	0		1	001	004 009
Residential	MM_Master_Meter	Other	13	1		1	001	004 009
Residential	MM_Master_Meter	Other	13	2		1	001	004 009
Residential	MM_Master_Meter	Other	13	3		1	001	004 009
Residential	MM_Master_Meter	Other	13	4		1	001	004 009
Residential	MM_Master_Meter	Other	13	5		1	001	004 009
Residential	MM_Master_Meter	Other	13	6		1	001	004 009
Residential	MM_Master_Meter	Other	13	7		1	001	004 009
Residential	MM_Master_Meter	Other	13	8		1	001	004 009
Residential	MM_Master_Meter	Other	13	9		1	001	004 009
Residential	MM_Master_Meter	Other	13	10		1	001	004 009
Residential	MM_Master_Meter	Other	13	11		1	001	004 009
Residential	MM_Master_Meter	Other	13	12		1	001	004 009
Residential	MM_Master_Meter	Other	13	13		1	001	004 009
Residential	MM_Master_Meter	Other	14	-2		1	001	004 009
Residential	MM_Master_Meter	Other	14	-1		1	001	004 009
Residential	MM_Master_Meter	Other	14	0		1	001	004 009
Residential	MM_Master_Meter	Other	14	1		1	001	004 009
Residential	MM_Master_Meter	Other	14	2		1	001	004 009
Residential	MM_Master_Meter	Other	14	3		1	001	004 009
Residential	MM_Master_Meter	Other	14	4		1	001	004 009
Residential	MM_Master_Meter	Other	14	5		1	001	004 009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	MM_Master_Meter	Other	14	6		1	001	004 009
Residential	MM_Master_Meter	Other	14	7		1	001	004 009
Residential	MM_Master_Meter	Other	14	8		1	001	004 009
Residential	MM_Master_Meter	Other	14	9		1	001	004 009
Residential	MM_Master_Meter	Other	14	10		1	001	004 009
Residential	MM_Master_Meter	Other	14	11		1	001	004 009
Residential	MM_Master_Meter	Other	14	12		1	001	004 009
Residential	MM_Master_Meter	Other	14	13		1	001	004 009
Residential	MM_Master_Meter	Other	14	14		1	001	004 009
Residential	MM_Master_Meter	Other	15	-2		1	001	004 009
Residential	MM_Master_Meter	Other	15	-1		1	001	004 009
Residential	MM_Master_Meter	Other	15	0		1	001	004 009
Residential	MM_Master_Meter	Other	15	1		1	001	004 009
Residential	MM_Master_Meter	Other	15	2		1	001	004 009
Residential	MM_Master_Meter	Other	15	3		1	001	004 009
Residential	MM_Master_Meter	Other	15	4		1	001	004 009
Residential	MM_Master_Meter	Other	15	5		1	001	004 009
Residential	MM_Master_Meter	Other	15	6		1	001	004 009
Residential	MM_Master_Meter	Other	15	7		1	001	004 009
Residential	MM_Master_Meter	Other	15	8		1	001	004 009
Residential	MM_Master_Meter	Other	15	9		1	001	004 009
Residential	MM_Master_Meter	Other	15	10		1	001	004 009
Residential	MM_Master_Meter	Other	15	11		1	001	004 009
Residential	MM_Master_Meter	Other	15	12		1	001	004 009
Residential	MM_Master_Meter	Other	15	13		1	001	004 009
Residential	MM_Master_Meter	Other	15	14		1	001	004 009
Residential	MM_Master_Meter	Other	15	15		1	001	004 009
Residential	SM_Sub_Meter	Space_Heat	0	-2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	0	-1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	0	0		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	1	-2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	1	-1		1	001	005 001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Space_Heat	1	0		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	1	1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	2	-2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	2	-1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	2	0		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	2	1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	2	2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	3	-2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	3	-1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	3	0		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	3	1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	3	2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	3	3		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	4	-2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	4	-1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	4	0		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	4	1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	4	2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	4	3		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	4	4		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	5	-2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	5	-1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	5	0		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	5	1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	5	2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	5	3		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	5	4		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	5	5		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	6	-2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	6	-1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	6	0		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	6	1		1	001	005 001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Space_Heat	6	2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	6	3	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	6	4	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	6	5	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	6	6	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	7	-2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	7	-1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	7	0	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	7	1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	7	2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	7	3	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	7	4	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	7	5	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	7	6	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	7	7	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	8	-2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	8	-1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	8	0	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	8	1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	8	2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	8	3	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	8	4	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	8	5	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	8	6	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	8	7	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	8	8	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	9	-2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	9	-1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	9	0	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	9	1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	9	2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	9	3	1	001	005	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Space_Heat	9	4	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	9	5	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	9	6	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	9	7	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	9	8	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	9	9	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	-2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	-1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	0	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	3	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	4	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	5	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	6	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	7	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	8	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	9	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	10	10	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	-2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	-1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	0	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	3	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	4	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	5	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	6	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	7	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	8	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	9	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	11	10	1	001	005	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Space_Heat	11	11	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	-2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	-1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	0	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	3	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	4	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	5	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	6	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	7	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	8	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	9	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	10	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	11	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	12	12	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	-2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	-1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	0	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	1	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	2	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	3	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	4	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	5	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	6	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	7	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	8	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	9	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	10	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	11	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	12	1	001	005	001
Residential	SM_Sub_Meter	Space_Heat	13	13	1	001	005	001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Space_Heat	14	-2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	-1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	0		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	3		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	4		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	5		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	6		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	7		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	8		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	9		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	10		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	11		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	12		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	13		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	14	14		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	-2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	-1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	0		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	1		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	2		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	3		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	4		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	5		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	6		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	7		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	8		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	9		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	10		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	11		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	12		1	001	005 001

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Space_Heat	15	13		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	14		1	001	005 001
Residential	SM_Sub_Meter	Space_Heat	15	15		1	001	005 001
Residential	SM_Sub_Meter	Water_Heat	0	-2		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	0	-1		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	0	0		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	1	-2		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	1	-1		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	1	0		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	1	1		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	2	-2		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	2	-1		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	2	0		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	2	1		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	2	2		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	3	-2		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	3	-1		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	3	0		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	3	1		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	3	2		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	3	3		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	4	-2		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	4	-1		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	4	0		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	4	1		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	4	2		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	4	3		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	4	4		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	5	-2		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	5	-1		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	5	0		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	5	1		1	001	005 002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Water_Heat	5	2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	5	3	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	5	4	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	5	5	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	6	-2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	6	-1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	6	0	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	6	1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	6	2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	6	3	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	6	4	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	6	5	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	6	6	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	7	-2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	7	-1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	7	0	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	7	1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	7	2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	7	3	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	7	4	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	7	5	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	7	6	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	7	7	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	8	-2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	8	-1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	8	0	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	8	1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	8	2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	8	3	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	8	4	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	8	5	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	8	6	1	001	005	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Water_Heat	8	7	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	8	8	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	9	-2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	9	-1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	9	0	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	9	1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	9	2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	9	3	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	9	4	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	9	5	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	9	6	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	9	7	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	9	8	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	9	9	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	-2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	-1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	0	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	3	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	4	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	5	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	6	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	7	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	8	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	9	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	10	10	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	-2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	-1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	0	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	2	1	001	005	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Water_Heat	11	3	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	4	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	5	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	6	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	7	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	8	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	9	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	10	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	11	11	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	-2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	-1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	0	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	3	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	4	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	5	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	6	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	7	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	8	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	9	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	10	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	11	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	12	12	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	-2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	-1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	0	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	3	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	4	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	5	1	001	005	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Water_Heat	13	6	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	7	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	8	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	9	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	10	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	11	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	12	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	13	13	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	-2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	-1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	0	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	3	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	4	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	5	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	6	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	7	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	8	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	9	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	10	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	11	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	12	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	13	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	14	14	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	15	-2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	15	-1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	15	0	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	15	1	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	15	2	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	15	3	1	001	005	002
Residential	SM_Sub_Meter	Water_Heat	15	4	1	001	005	002

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Water_Heat	15	5		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	15	6		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	15	7		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	15	8		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	15	9		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	15	10		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	15	11		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	15	12		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	15	13		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	15	14		1	001	005 002
Residential	SM_Sub_Meter	Water_Heat	15	15		1	001	005 002
Residential	SM_Sub_Meter	Cooking	0	-2		1	001	005 003
Residential	SM_Sub_Meter	Cooking	0	-1		1	001	005 003
Residential	SM_Sub_Meter	Cooking	0	0		1	001	005 003
Residential	SM_Sub_Meter	Cooking	1	-2		1	001	005 003
Residential	SM_Sub_Meter	Cooking	1	-1		1	001	005 003
Residential	SM_Sub_Meter	Cooking	1	0		1	001	005 003
Residential	SM_Sub_Meter	Cooking	1	1		1	001	005 003
Residential	SM_Sub_Meter	Cooking	2	-2		1	001	005 003
Residential	SM_Sub_Meter	Cooking	2	-1		1	001	005 003
Residential	SM_Sub_Meter	Cooking	2	0		1	001	005 003
Residential	SM_Sub_Meter	Cooking	2	1		1	001	005 003
Residential	SM_Sub_Meter	Cooking	2	2		1	001	005 003
Residential	SM_Sub_Meter	Cooking	3	-2		1	001	005 003
Residential	SM_Sub_Meter	Cooking	3	-1		1	001	005 003
Residential	SM_Sub_Meter	Cooking	3	0		1	001	005 003
Residential	SM_Sub_Meter	Cooking	3	1		1	001	005 003
Residential	SM_Sub_Meter	Cooking	3	2		1	001	005 003
Residential	SM_Sub_Meter	Cooking	3	3		1	001	005 003
Residential	SM_Sub_Meter	Cooking	4	-2		1	001	005 003
Residential	SM_Sub_Meter	Cooking	4	-1		1	001	005 003
Residential	SM_Sub_Meter	Cooking	4	0		1	001	005 003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Cooking	4	1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	4	2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	4	3	1	001	005	003
Residential	SM_Sub_Meter	Cooking	4	4	1	001	005	003
Residential	SM_Sub_Meter	Cooking	5	-2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	5	-1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	5	0	1	001	005	003
Residential	SM_Sub_Meter	Cooking	5	1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	5	2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	5	3	1	001	005	003
Residential	SM_Sub_Meter	Cooking	5	4	1	001	005	003
Residential	SM_Sub_Meter	Cooking	5	5	1	001	005	003
Residential	SM_Sub_Meter	Cooking	6	-2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	6	-1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	6	0	1	001	005	003
Residential	SM_Sub_Meter	Cooking	6	1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	6	2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	6	3	1	001	005	003
Residential	SM_Sub_Meter	Cooking	6	4	1	001	005	003
Residential	SM_Sub_Meter	Cooking	6	5	1	001	005	003
Residential	SM_Sub_Meter	Cooking	6	6	1	001	005	003
Residential	SM_Sub_Meter	Cooking	7	-2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	7	-1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	7	0	1	001	005	003
Residential	SM_Sub_Meter	Cooking	7	1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	7	2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	7	3	1	001	005	003
Residential	SM_Sub_Meter	Cooking	7	4	1	001	005	003
Residential	SM_Sub_Meter	Cooking	7	5	1	001	005	003
Residential	SM_Sub_Meter	Cooking	7	6	1	001	005	003
Residential	SM_Sub_Meter	Cooking	7	7	1	001	005	003
Residential	SM_Sub_Meter	Cooking	8	-2	1	001	005	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Cooking	8	-1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	8	0	1	001	005	003
Residential	SM_Sub_Meter	Cooking	8	1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	8	2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	8	3	1	001	005	003
Residential	SM_Sub_Meter	Cooking	8	4	1	001	005	003
Residential	SM_Sub_Meter	Cooking	8	5	1	001	005	003
Residential	SM_Sub_Meter	Cooking	8	6	1	001	005	003
Residential	SM_Sub_Meter	Cooking	8	7	1	001	005	003
Residential	SM_Sub_Meter	Cooking	8	8	1	001	005	003
Residential	SM_Sub_Meter	Cooking	9	-2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	9	-1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	9	0	1	001	005	003
Residential	SM_Sub_Meter	Cooking	9	1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	9	2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	9	3	1	001	005	003
Residential	SM_Sub_Meter	Cooking	9	4	1	001	005	003
Residential	SM_Sub_Meter	Cooking	9	5	1	001	005	003
Residential	SM_Sub_Meter	Cooking	9	6	1	001	005	003
Residential	SM_Sub_Meter	Cooking	9	7	1	001	005	003
Residential	SM_Sub_Meter	Cooking	9	8	1	001	005	003
Residential	SM_Sub_Meter	Cooking	9	9	1	001	005	003
Residential	SM_Sub_Meter	Cooking	10	-2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	10	-1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	10	0	1	001	005	003
Residential	SM_Sub_Meter	Cooking	10	1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	10	2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	10	3	1	001	005	003
Residential	SM_Sub_Meter	Cooking	10	4	1	001	005	003
Residential	SM_Sub_Meter	Cooking	10	5	1	001	005	003
Residential	SM_Sub_Meter	Cooking	10	6	1	001	005	003
Residential	SM_Sub_Meter	Cooking	10	7	1	001	005	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Cooking	10	8	1	001	005	003
Residential	SM_Sub_Meter	Cooking	10	9	1	001	005	003
Residential	SM_Sub_Meter	Cooking	10	10	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	-2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	-1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	0	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	3	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	4	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	5	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	6	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	7	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	8	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	9	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	10	1	001	005	003
Residential	SM_Sub_Meter	Cooking	11	11	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	-2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	-1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	0	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	3	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	4	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	5	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	6	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	7	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	8	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	9	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	10	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	11	1	001	005	003
Residential	SM_Sub_Meter	Cooking	12	12	1	001	005	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Cooking	13	-2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	-1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	0	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	3	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	4	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	5	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	6	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	7	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	8	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	9	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	10	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	11	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	12	1	001	005	003
Residential	SM_Sub_Meter	Cooking	13	13	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	-2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	-1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	0	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	1	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	2	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	3	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	4	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	5	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	6	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	7	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	8	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	9	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	10	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	11	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	12	1	001	005	003
Residential	SM_Sub_Meter	Cooking	14	13	1	001	005	003

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Cooking	14	14		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	-2		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	-1		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	0		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	1		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	2		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	3		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	4		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	5		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	6		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	7		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	8		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	9		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	10		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	11		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	12		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	13		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	14		1	001	005 003
Residential	SM_Sub_Meter	Cooking	15	15		1	001	005 003
Residential	SM_Sub_Meter	Drying	0	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	0	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	0	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	1	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	1	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	1	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	1	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	2	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	2	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	2	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	2	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	2	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	3	-2	0.47158	001	005	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Drying	3	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	3	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	3	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	3	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	3	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	4	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	4	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	4	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	4	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	4	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	4	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	4	4	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	5	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	5	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	5	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	5	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	5	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	5	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	5	4	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	5	5	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	6	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	6	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	6	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	6	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	6	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	6	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	6	4	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	6	5	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	6	6	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	7	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	7	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	7	0	0.57182	001	005	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Drying	7	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	7	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	7	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	7	4	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	7	5	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	7	6	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	7	7	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	8	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	8	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	8	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	8	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	8	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	8	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	8	4	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	8	5	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	8	6	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	8	7	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	8	8	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	9	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	9	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	9	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	9	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	9	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	9	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	9	4	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	9	5	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	9	6	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	9	7	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	9	8	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	9	9	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	10	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	10	-1	0.57182	001	005	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Drying	10	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	10	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	10	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	10	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	10	4	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	10	5	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	10	6	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	10	7	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	10	8	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	10	9	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	10	10	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	11	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	4	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	5	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	6	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	7	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	8	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	9	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	10	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	11	11	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	12	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	4	0.57182	001	005	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Drying	12	5	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	6	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	7	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	8	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	9	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	10	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	11	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	12	12	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	13	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	4	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	5	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	6	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	7	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	8	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	9	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	10	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	11	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	12	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	13	13	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	14	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	4	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	5	0.57182	001	005	004

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Drying	14	6	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	7	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	8	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	9	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	10	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	11	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	12	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	13	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	14	14	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	-2	0.47158	001	005	004
Residential	SM_Sub_Meter	Drying	15	-1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	0	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	1	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	2	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	3	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	4	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	5	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	6	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	7	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	8	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	9	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	10	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	11	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	12	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	13	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	14	0.57182	001	005	004
Residential	SM_Sub_Meter	Drying	15	15	0.57182	001	005	004
Residential	SM_Sub_Meter	Barbecue	0	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	0	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	0	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	1	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	1	-1	0.10179	001	005	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Barbecue	1	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	1	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	2	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	2	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	2	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	2	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	2	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	3	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	3	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	3	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	3	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	3	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	3	3	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	4	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	4	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	4	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	4	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	4	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	4	3	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	4	4	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	5	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	5	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	5	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	5	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	5	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	5	3	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	5	4	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	5	5	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	6	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	6	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	6	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	6	1	0.10179	001	005	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Barbecue	6	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	6	3	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	6	4	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	6	5	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	6	6	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	7	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	7	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	7	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	7	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	7	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	7	3	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	7	4	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	7	5	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	7	6	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	7	7	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	8	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	8	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	8	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	8	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	8	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	8	3	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	8	4	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	8	5	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	8	6	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	8	7	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	8	8	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	9	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	9	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	9	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	9	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	9	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	9	3	0.10179	001	005	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Barbecue	9	4	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	9	5	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	9	6	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	9	7	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	9	8	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	9	9	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	3	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	4	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	5	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	6	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	7	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	8	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	9	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	10	10	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	3	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	4	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	5	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	6	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	7	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	8	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	9	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	11	10	0.10179	001	005	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Barbecue	11	11	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	3	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	4	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	5	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	6	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	7	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	8	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	9	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	10	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	11	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	12	12	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	3	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	4	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	5	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	6	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	7	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	8	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	9	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	10	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	11	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	12	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	13	13	0.10179	001	005	008

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Barbecue	14	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	3	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	4	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	5	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	6	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	7	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	8	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	9	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	10	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	11	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	12	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	13	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	14	14	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	-2	0.07424	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	-1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	0	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	1	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	2	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	3	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	4	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	5	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	6	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	7	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	8	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	9	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	10	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	11	0.10179	001	005	008
Residential	SM_Sub_Meter	Barbecue	15	12	0.10179	001	005	008

zName	bName	nName	year	vintage	saturation	z	b	n	
Residential	SM_Sub_Meter	Barbecue	15	13	0.10179	001	005	008	
Residential	SM_Sub_Meter	Barbecue	15	14	0.10179	001	005	008	
Residential	SM_Sub_Meter	Barbecue	15	15	0.10179	001	005	008	
Residential	SM_Sub_Meter	Other	0	-2		1	001	005	009
Residential	SM_Sub_Meter	Other	0	-1		1	001	005	009
Residential	SM_Sub_Meter	Other	0	0		1	001	005	009
Residential	SM_Sub_Meter	Other	1	-2		1	001	005	009
Residential	SM_Sub_Meter	Other	1	-1		1	001	005	009
Residential	SM_Sub_Meter	Other	1	0		1	001	005	009
Residential	SM_Sub_Meter	Other	1	1		1	001	005	009
Residential	SM_Sub_Meter	Other	2	-2		1	001	005	009
Residential	SM_Sub_Meter	Other	2	-1		1	001	005	009
Residential	SM_Sub_Meter	Other	2	0		1	001	005	009
Residential	SM_Sub_Meter	Other	2	1		1	001	005	009
Residential	SM_Sub_Meter	Other	2	2		1	001	005	009
Residential	SM_Sub_Meter	Other	3	-2		1	001	005	009
Residential	SM_Sub_Meter	Other	3	-1		1	001	005	009
Residential	SM_Sub_Meter	Other	3	0		1	001	005	009
Residential	SM_Sub_Meter	Other	3	1		1	001	005	009
Residential	SM_Sub_Meter	Other	3	2		1	001	005	009
Residential	SM_Sub_Meter	Other	3	3		1	001	005	009
Residential	SM_Sub_Meter	Other	4	-2		1	001	005	009
Residential	SM_Sub_Meter	Other	4	-1		1	001	005	009
Residential	SM_Sub_Meter	Other	4	0		1	001	005	009
Residential	SM_Sub_Meter	Other	4	1		1	001	005	009
Residential	SM_Sub_Meter	Other	4	2		1	001	005	009
Residential	SM_Sub_Meter	Other	4	3		1	001	005	009
Residential	SM_Sub_Meter	Other	4	4		1	001	005	009
Residential	SM_Sub_Meter	Other	5	-2		1	001	005	009
Residential	SM_Sub_Meter	Other	5	-1		1	001	005	009
Residential	SM_Sub_Meter	Other	5	0		1	001	005	009
Residential	SM_Sub_Meter	Other	5	1		1	001	005	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Other	5	2	1	001	005	009
Residential	SM_Sub_Meter	Other	5	3	1	001	005	009
Residential	SM_Sub_Meter	Other	5	4	1	001	005	009
Residential	SM_Sub_Meter	Other	5	5	1	001	005	009
Residential	SM_Sub_Meter	Other	6	-2	1	001	005	009
Residential	SM_Sub_Meter	Other	6	-1	1	001	005	009
Residential	SM_Sub_Meter	Other	6	0	1	001	005	009
Residential	SM_Sub_Meter	Other	6	1	1	001	005	009
Residential	SM_Sub_Meter	Other	6	2	1	001	005	009
Residential	SM_Sub_Meter	Other	6	3	1	001	005	009
Residential	SM_Sub_Meter	Other	6	4	1	001	005	009
Residential	SM_Sub_Meter	Other	6	5	1	001	005	009
Residential	SM_Sub_Meter	Other	6	6	1	001	005	009
Residential	SM_Sub_Meter	Other	7	-2	1	001	005	009
Residential	SM_Sub_Meter	Other	7	-1	1	001	005	009
Residential	SM_Sub_Meter	Other	7	0	1	001	005	009
Residential	SM_Sub_Meter	Other	7	1	1	001	005	009
Residential	SM_Sub_Meter	Other	7	2	1	001	005	009
Residential	SM_Sub_Meter	Other	7	3	1	001	005	009
Residential	SM_Sub_Meter	Other	7	4	1	001	005	009
Residential	SM_Sub_Meter	Other	7	5	1	001	005	009
Residential	SM_Sub_Meter	Other	7	6	1	001	005	009
Residential	SM_Sub_Meter	Other	7	7	1	001	005	009
Residential	SM_Sub_Meter	Other	8	-2	1	001	005	009
Residential	SM_Sub_Meter	Other	8	-1	1	001	005	009
Residential	SM_Sub_Meter	Other	8	0	1	001	005	009
Residential	SM_Sub_Meter	Other	8	1	1	001	005	009
Residential	SM_Sub_Meter	Other	8	2	1	001	005	009
Residential	SM_Sub_Meter	Other	8	3	1	001	005	009
Residential	SM_Sub_Meter	Other	8	4	1	001	005	009
Residential	SM_Sub_Meter	Other	8	5	1	001	005	009
Residential	SM_Sub_Meter	Other	8	6	1	001	005	009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Other	8	7		1	001	005 009
Residential	SM_Sub_Meter	Other	8	8		1	001	005 009
Residential	SM_Sub_Meter	Other	9	-2		1	001	005 009
Residential	SM_Sub_Meter	Other	9	-1		1	001	005 009
Residential	SM_Sub_Meter	Other	9	0		1	001	005 009
Residential	SM_Sub_Meter	Other	9	1		1	001	005 009
Residential	SM_Sub_Meter	Other	9	2		1	001	005 009
Residential	SM_Sub_Meter	Other	9	3		1	001	005 009
Residential	SM_Sub_Meter	Other	9	4		1	001	005 009
Residential	SM_Sub_Meter	Other	9	5		1	001	005 009
Residential	SM_Sub_Meter	Other	9	6		1	001	005 009
Residential	SM_Sub_Meter	Other	9	7		1	001	005 009
Residential	SM_Sub_Meter	Other	9	8		1	001	005 009
Residential	SM_Sub_Meter	Other	9	9		1	001	005 009
Residential	SM_Sub_Meter	Other	10	-2		1	001	005 009
Residential	SM_Sub_Meter	Other	10	-1		1	001	005 009
Residential	SM_Sub_Meter	Other	10	0		1	001	005 009
Residential	SM_Sub_Meter	Other	10	1		1	001	005 009
Residential	SM_Sub_Meter	Other	10	2		1	001	005 009
Residential	SM_Sub_Meter	Other	10	3		1	001	005 009
Residential	SM_Sub_Meter	Other	10	4		1	001	005 009
Residential	SM_Sub_Meter	Other	10	5		1	001	005 009
Residential	SM_Sub_Meter	Other	10	6		1	001	005 009
Residential	SM_Sub_Meter	Other	10	7		1	001	005 009
Residential	SM_Sub_Meter	Other	10	8		1	001	005 009
Residential	SM_Sub_Meter	Other	10	9		1	001	005 009
Residential	SM_Sub_Meter	Other	10	10		1	001	005 009
Residential	SM_Sub_Meter	Other	11	-2		1	001	005 009
Residential	SM_Sub_Meter	Other	11	-1		1	001	005 009
Residential	SM_Sub_Meter	Other	11	0		1	001	005 009
Residential	SM_Sub_Meter	Other	11	1		1	001	005 009
Residential	SM_Sub_Meter	Other	11	2		1	001	005 009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Other	11	3		1	001	005 009
Residential	SM_Sub_Meter	Other	11	4		1	001	005 009
Residential	SM_Sub_Meter	Other	11	5		1	001	005 009
Residential	SM_Sub_Meter	Other	11	6		1	001	005 009
Residential	SM_Sub_Meter	Other	11	7		1	001	005 009
Residential	SM_Sub_Meter	Other	11	8		1	001	005 009
Residential	SM_Sub_Meter	Other	11	9		1	001	005 009
Residential	SM_Sub_Meter	Other	11	10		1	001	005 009
Residential	SM_Sub_Meter	Other	11	11		1	001	005 009
Residential	SM_Sub_Meter	Other	12	-2		1	001	005 009
Residential	SM_Sub_Meter	Other	12	-1		1	001	005 009
Residential	SM_Sub_Meter	Other	12	0		1	001	005 009
Residential	SM_Sub_Meter	Other	12	1		1	001	005 009
Residential	SM_Sub_Meter	Other	12	2		1	001	005 009
Residential	SM_Sub_Meter	Other	12	3		1	001	005 009
Residential	SM_Sub_Meter	Other	12	4		1	001	005 009
Residential	SM_Sub_Meter	Other	12	5		1	001	005 009
Residential	SM_Sub_Meter	Other	12	6		1	001	005 009
Residential	SM_Sub_Meter	Other	12	7		1	001	005 009
Residential	SM_Sub_Meter	Other	12	8		1	001	005 009
Residential	SM_Sub_Meter	Other	12	9		1	001	005 009
Residential	SM_Sub_Meter	Other	12	10		1	001	005 009
Residential	SM_Sub_Meter	Other	12	11		1	001	005 009
Residential	SM_Sub_Meter	Other	12	12		1	001	005 009
Residential	SM_Sub_Meter	Other	13	-2		1	001	005 009
Residential	SM_Sub_Meter	Other	13	-1		1	001	005 009
Residential	SM_Sub_Meter	Other	13	0		1	001	005 009
Residential	SM_Sub_Meter	Other	13	1		1	001	005 009
Residential	SM_Sub_Meter	Other	13	2		1	001	005 009
Residential	SM_Sub_Meter	Other	13	3		1	001	005 009
Residential	SM_Sub_Meter	Other	13	4		1	001	005 009
Residential	SM_Sub_Meter	Other	13	5		1	001	005 009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Other	13	6		1	001	005 009
Residential	SM_Sub_Meter	Other	13	7		1	001	005 009
Residential	SM_Sub_Meter	Other	13	8		1	001	005 009
Residential	SM_Sub_Meter	Other	13	9		1	001	005 009
Residential	SM_Sub_Meter	Other	13	10		1	001	005 009
Residential	SM_Sub_Meter	Other	13	11		1	001	005 009
Residential	SM_Sub_Meter	Other	13	12		1	001	005 009
Residential	SM_Sub_Meter	Other	13	13		1	001	005 009
Residential	SM_Sub_Meter	Other	14	-2		1	001	005 009
Residential	SM_Sub_Meter	Other	14	-1		1	001	005 009
Residential	SM_Sub_Meter	Other	14	0		1	001	005 009
Residential	SM_Sub_Meter	Other	14	1		1	001	005 009
Residential	SM_Sub_Meter	Other	14	2		1	001	005 009
Residential	SM_Sub_Meter	Other	14	3		1	001	005 009
Residential	SM_Sub_Meter	Other	14	4		1	001	005 009
Residential	SM_Sub_Meter	Other	14	5		1	001	005 009
Residential	SM_Sub_Meter	Other	14	6		1	001	005 009
Residential	SM_Sub_Meter	Other	14	7		1	001	005 009
Residential	SM_Sub_Meter	Other	14	8		1	001	005 009
Residential	SM_Sub_Meter	Other	14	9		1	001	005 009
Residential	SM_Sub_Meter	Other	14	10		1	001	005 009
Residential	SM_Sub_Meter	Other	14	11		1	001	005 009
Residential	SM_Sub_Meter	Other	14	12		1	001	005 009
Residential	SM_Sub_Meter	Other	14	13		1	001	005 009
Residential	SM_Sub_Meter	Other	14	14		1	001	005 009
Residential	SM_Sub_Meter	Other	15	-2		1	001	005 009
Residential	SM_Sub_Meter	Other	15	-1		1	001	005 009
Residential	SM_Sub_Meter	Other	15	0		1	001	005 009
Residential	SM_Sub_Meter	Other	15	1		1	001	005 009
Residential	SM_Sub_Meter	Other	15	2		1	001	005 009
Residential	SM_Sub_Meter	Other	15	3		1	001	005 009
Residential	SM_Sub_Meter	Other	15	4		1	001	005 009

zName	bName	nName	year	vintage	saturation	z	b	n
Residential	SM_Sub_Meter	Other	15	5	1	001	005	009
Residential	SM_Sub_Meter	Other	15	6	1	001	005	009
Residential	SM_Sub_Meter	Other	15	7	1	001	005	009
Residential	SM_Sub_Meter	Other	15	8	1	001	005	009
Residential	SM_Sub_Meter	Other	15	9	1	001	005	009
Residential	SM_Sub_Meter	Other	15	10	1	001	005	009
Residential	SM_Sub_Meter	Other	15	11	1	001	005	009
Residential	SM_Sub_Meter	Other	15	12	1	001	005	009
Residential	SM_Sub_Meter	Other	15	13	1	001	005	009
Residential	SM_Sub_Meter	Other	15	14	1	001	005	009
Residential	SM_Sub_Meter	Other	15	15	1	001	005	009

Cost allocation Proceeding
 SoCalGas Residential Market: Eshares

zName	bName	nName	fName	eName	z	b	n	f	e	baseAvgEShare	baseMargEShareExisting
Residential	Single_Family	Space_Heat	Natural_Gas	Stock	001	001	001	1	1	0.49	0.49
Residential	Single_Family	Space_Heat	Natural_Gas	Standard	001	001	001	1	2	0.39	0.39
Residential	Single_Family	Space_Heat	Natural_Gas	High	001	001	001	1	3	0.11	0.11
Residential	Single_Family	Space_Heat	Natural_Gas	Premium	001	001	001	1	4	0.01	0.01
Residential	Single_Family	Space_Heat	Electric	Stock	001	001	001	2	1	1	1
Residential	Single_Family	Water_Heat	Natural_Gas	Stock	001	001	002	1	1	0.1	0.1
Residential	Single_Family	Water_Heat	Natural_Gas	Standard	001	001	002	1	2	0.58	0.58
Residential	Single_Family	Water_Heat	Natural_Gas	High	001	001	002	1	3	0.31	0.31
Residential	Single_Family	Water_Heat	Natural_Gas	Premium	001	001	002	1	4	0.01	0.01
Residential	Single_Family	Water_Heat	Electric	Stock	001	001	002	2	1	0.1	0.1
Residential	Single_Family	Water_Heat	Electric	Standard	001	001	002	2	2	0.58	0.58
Residential	Single_Family	Water_Heat	Electric	High	001	001	002	2	3	0.31	0.31
Residential	Single_Family	Water_Heat	Electric	Premium	001	001	002	2	4	0.01	0.01
Residential	Single_Family	Cooking	Natural_Gas	Stock	001	001	003	1	1	0.9	0.9
Residential	Single_Family	Cooking	Natural_Gas	Standard	001	001	003	1	2	0.1	0.1
Residential	Single_Family	Cooking	Electric	Stock	001	001	003	2	1	0.9	0.9
Residential	Single_Family	Cooking	Electric	Standard	001	001	003	2	2	0.1	0.1
Residential	Single_Family	Drying	Natural_Gas	Stock	001	001	004	1	1	0.75	0.75
Residential	Single_Family	Drying	Natural_Gas	Standard	001	001	004	1	2	0.25	0.25
Residential	Single_Family	Drying	Electric	Stock	001	001	004	2	1	0.75	0.75
Residential	Single_Family	Drying	Electric	Standard	001	001	004	2	2	0.25	0.25
Residential	Single_Family	Pool	Natural_Gas	Stock	001	001	005	1	1	1	1
Residential	Single_Family	Pool	Electric	Stock	001	001	005	2	1	1	1
Residential	Single_Family	Spa	Natural_Gas	Stock	001	001	006	1	1	1	1
Residential	Single_Family	Spa	Electric	Stock	001	001	006	2	1	1	1
Residential	Single_Family	Fireplace	Natural_Gas	Stock	001	001	007	1	1	1	1
Residential	Single_Family	Fireplace	Electric	Stock	001	001	007	2	1	1	1
Residential	Single_Family	Barbecue	Natural_Gas	Stock	001	001	008	1	1	1	1
Residential	Single_Family	Barbecue	Electric	Stock	001	001	008	2	1	1	1
Residential	Single_Family	Other	Natural_Gas	Stock	001	001	009	1	1	1	1

zName	bName	nName	fName	eName	z	b	n	f	e	baseAvgEShare	baseMargEShare	Existing
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	Stock	001	002	001	1	1	0.6		0.6
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	Standard	001	002	001	1	2	0.38		0.38
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	High	001	002	001	1	3	0.01		0.01
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	Premium	001	002	001	1	4	0.01		0.01
Residential	MF2_2_TO_4_Units	Space_Heat	Electric	Stock	001	002	001	2	1	1		1
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	Stock	001	002	002	1	1	0.18		0.18
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	Standard	001	002	002	1	2	0.65		0.65
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	High	001	002	002	1	3	0.16		0.16
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	Premium	001	002	002	1	4	0.01		0.01
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	Stock	001	002	002	2	1	0.18		0.18
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	Standard	001	002	002	2	2	0.65		0.65
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	High	001	002	002	2	3	0.16		0.16
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	Premium	001	002	002	2	4	0.01		0.01
Residential	MF2_2_TO_4_Units	Cooking	Natural_Gas	Stock	001	002	003	1	1	0.95		0.95
Residential	MF2_2_TO_4_Units	Cooking	Natural_Gas	Standard	001	002	003	1	2	0.05		0.05
Residential	MF2_2_TO_4_Units	Cooking	Electric	Stock	001	002	003	2	1	0.95		0.95
Residential	MF2_2_TO_4_Units	Cooking	Electric	Standard	001	002	003	2	2	0.05		0.05
Residential	MF2_2_TO_4_Units	Drying	Natural_Gas	Stock	001	002	004	1	1	0.75		0.75
Residential	MF2_2_TO_4_Units	Drying	Natural_Gas	Standard	001	002	004	1	2	0.25		0.25
Residential	MF2_2_TO_4_Units	Drying	Electric	Stock	001	002	004	2	1	0.75		0.75
Residential	MF2_2_TO_4_Units	Drying	Electric	Standard	001	002	004	2	2	0.25		0.25
Residential	MF2_2_TO_4_Units	Barbecue	Natural_Gas	Stock	001	002	008	1	1	1		1
Residential	MF2_2_TO_4_Units	Barbecue	Electric	Stock	001	002	008	2	1	1		1
Residential	MF2_2_TO_4_Units	Other	Natural_Gas	Stock	001	002	009	1	1	1		1
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	Stock	001	003	001	1	1	0.4		0.4
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	Standard	001	003	001	1	2	0.58		0.58
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	High	001	003	001	1	3	0.01		0.01
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	Premium	001	003	001	1	4	0.01		0.01
Residential	MF3_GE_5_Units	Space_Heat	Electric	Stock	001	003	001	2	1	1		1
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	Stock	001	003	002	1	1	0.13		0.13
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	Standard	001	003	002	1	2	0.1		0.1
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	High	001	003	002	1	3	0.86		0.86
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	Premium	001	003	002	1	4	0.01		0.01

zName	bName	nName	fName	eName	z	b	n	f	e	baseAvgEShare	baseMargEShare	Existing
Residential	MF3_GE_5_Units	Water_Heat	Electric	Stock	001	003	002	2	1	0.13		0.13
Residential	MF3_GE_5_Units	Water_Heat	Electric	Standard	001	003	002	2	2	0.1		0.1
Residential	MF3_GE_5_Units	Water_Heat	Electric	High	001	003	002	2	3	0.86		0.86
Residential	MF3_GE_5_Units	Water_Heat	Electric	Premium	001	003	002	2	4	0.01		0.01
Residential	MF3_GE_5_Units	Cooking	Natural_Gas	Stock	001	003	003	1	1	0.95		0.95
Residential	MF3_GE_5_Units	Cooking	Natural_Gas	Standard	001	003	003	1	2	0.05		0.05
Residential	MF3_GE_5_Units	Cooking	Electric	Stock	001	003	003	2	1	0.95		0.95
Residential	MF3_GE_5_Units	Cooking	Electric	Standard	001	003	003	2	2	0.05		0.05
Residential	MF3_GE_5_Units	Drying	Natural_Gas	Stock	001	003	004	1	1	0.75		0.75
Residential	MF3_GE_5_Units	Drying	Natural_Gas	Standard	001	003	004	1	2	0.25		0.25
Residential	MF3_GE_5_Units	Drying	Electric	Stock	001	003	004	2	1	0.75		0.75
Residential	MF3_GE_5_Units	Drying	Electric	Standard	001	003	004	2	2	0.25		0.25
Residential	MF3_GE_5_Units	Barbecue	Natural_Gas	Stock	001	003	008	1	1	1		1
Residential	MF3_GE_5_Units	Barbecue	Electric	Stock	001	003	008	2	1	1		1
Residential	MF3_GE_5_Units	Other	Natural_Gas	Stock	001	003	009	1	1	1		1
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	Stock	001	004	001	1	1	0.4		0.4
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	Standard	001	004	001	1	2	0.58		0.58
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	High	001	004	001	1	3	0.01		0.01
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	Premium	001	004	001	1	4	0.01		0.01
Residential	MM_Master_Meter	Space_Heat	Electric	Stock	001	004	001	2	1	1		1
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	Stock	001	004	002	1	1	0.13		0.13
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	Standard	001	004	002	1	2	0.1		0.1
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	High	001	004	002	1	3	0.86		0.86
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	Premium	001	004	002	1	4	0.01		0.01
Residential	MM_Master_Meter	Water_Heat	Electric	Stock	001	004	002	2	1	0.13		0.13
Residential	MM_Master_Meter	Water_Heat	Electric	Standard	001	004	002	2	2	0.1		0.1
Residential	MM_Master_Meter	Water_Heat	Electric	High	001	004	002	2	3	0.86		0.86
Residential	MM_Master_Meter	Water_Heat	Electric	Premium	001	004	002	2	4	0.01		0.01
Residential	MM_Master_Meter	Cooking	Natural_Gas	Stock	001	004	003	1	1	0.95		0.95
Residential	MM_Master_Meter	Cooking	Natural_Gas	Standard	001	004	003	1	2	0.05		0.05
Residential	MM_Master_Meter	Cooking	Electric	Stock	001	004	003	2	1	0.95		0.95
Residential	MM_Master_Meter	Cooking	Electric	Standard	001	004	003	2	2	0.05		0.05
Residential	MM_Master_Meter	Drying	Natural_Gas	Stock	001	004	004	1	1	0.75		0.75

zName	bName	nName	fName	eName	z	b	n	f	e	baseAvgEShare	baseMargEShare	Existing
Residential	MM_Master_Meter	Drying	Natural_Gas	Standard	001	004	004	1	2	0.25		0.25
Residential	MM_Master_Meter	Drying	Electric	Stock	001	004	004	2	1	0.75		0.75
Residential	MM_Master_Meter	Drying	Electric	Standard	001	004	004	2	2	0.25		0.25
Residential	MM_Master_Meter	Barbecue	Natural_Gas	Stock	001	004	008	1	1	1		1
Residential	MM_Master_Meter	Barbecue	Electric	Stock	001	004	008	2	1	1		1
Residential	MM_Master_Meter	Other	Natural_Gas	Stock	001	004	009	1	1	1		1
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	Stock	001	005	001	1	1	0.49		0.49
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	Standard	001	005	001	1	2	0.39		0.39
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	High	001	005	001	1	3	0.11		0.11
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	Premium	001	005	001	1	4	0.01		0.01
Residential	SM_Sub_Meter	Space_Heat	Electric	Stock	001	005	001	2	1	1		1
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	Stock	001	005	002	1	1	0.1		0.1
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	Standard	001	005	002	1	2	0.58		0.58
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	High	001	005	002	1	3	0.31		0.31
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	Premium	001	005	002	1	4	0.01		0.01
Residential	SM_Sub_Meter	Water_Heat	Electric	Stock	001	005	002	2	1	0.1		0.1
Residential	SM_Sub_Meter	Water_Heat	Electric	Standard	001	005	002	2	2	0.58		0.58
Residential	SM_Sub_Meter	Water_Heat	Electric	High	001	005	002	2	3	0.31		0.31
Residential	SM_Sub_Meter	Water_Heat	Electric	Premium	001	005	002	2	4	0.01		0.01
Residential	SM_Sub_Meter	Cooking	Natural_Gas	Stock	001	005	003	1	1	0.95		0.95
Residential	SM_Sub_Meter	Cooking	Natural_Gas	Standard	001	005	003	1	2	0.05		0.05
Residential	SM_Sub_Meter	Cooking	Electric	Stock	001	005	003	2	1	0.95		0.95
Residential	SM_Sub_Meter	Cooking	Electric	Standard	001	005	003	2	2	0.05		0.05
Residential	SM_Sub_Meter	Drying	Natural_Gas	Stock	001	005	004	1	1	0.75		0.75
Residential	SM_Sub_Meter	Drying	Natural_Gas	Standard	001	005	004	1	2	0.25		0.25
Residential	SM_Sub_Meter	Drying	Electric	Stock	001	005	004	2	1	0.75		0.75
Residential	SM_Sub_Meter	Drying	Electric	Standard	001	005	004	2	2	0.25		0.25
Residential	SM_Sub_Meter	Barbecue	Natural_Gas	Stock	001	005	008	1	1	1		1
Residential	SM_Sub_Meter	Barbecue	Electric	Stock	001	005	008	2	1	1		1
Residential	SM_Sub_Meter	Other	Natural_Gas	Stock	001	005	009	1	1	1		1

Cost allocation Proceeding SoCalGas Residential Market: Eshares

zName	bName	nName	fName	eName	z	b	n	f	e	baseMargEShareConversion	baseMargEShareNew
Residential	Single_Family	Space_Heat	Natural_Gas	Stock	001	001	001	1	1	0.49	0.49
Residential	Single_Family	Space_Heat	Natural_Gas	Standard	001	001	001	1	2	0.39	0.39
Residential	Single_Family	Space_Heat	Natural_Gas	High	001	001	001	1	3	0.11	0.11
Residential	Single_Family	Space_Heat	Natural_Gas	Premium	001	001	001	1	4	0.01	0.01
Residential	Single_Family	Space_Heat	Electric	Stock	001	001	001	2	1	1	1
Residential	Single_Family	Water_Heat	Natural_Gas	Stock	001	001	002	1	1	0.1	0.1
Residential	Single_Family	Water_Heat	Natural_Gas	Standard	001	001	002	1	2	0.58	0.58
Residential	Single_Family	Water_Heat	Natural_Gas	High	001	001	002	1	3	0.31	0.31
Residential	Single_Family	Water_Heat	Natural_Gas	Premium	001	001	002	1	4	0.01	0.01
Residential	Single_Family	Water_Heat	Electric	Stock	001	001	002	2	1	0.1	0.1
Residential	Single_Family	Water_Heat	Electric	Standard	001	001	002	2	2	0.58	0.58
Residential	Single_Family	Water_Heat	Electric	High	001	001	002	2	3	0.31	0.31
Residential	Single_Family	Water_Heat	Electric	Premium	001	001	002	2	4	0.01	0.01
Residential	Single_Family	Cooking	Natural_Gas	Stock	001	001	003	1	1	0.9	0.9
Residential	Single_Family	Cooking	Natural_Gas	Standard	001	001	003	1	2	0.1	0.1
Residential	Single_Family	Cooking	Electric	Stock	001	001	003	2	1	0.9	0.9
Residential	Single_Family	Cooking	Electric	Standard	001	001	003	2	2	0.1	0.1
Residential	Single_Family	Drying	Natural_Gas	Stock	001	001	004	1	1	0.75	0.75
Residential	Single_Family	Drying	Natural_Gas	Standard	001	001	004	1	2	0.25	0.25
Residential	Single_Family	Drying	Electric	Stock	001	001	004	2	1	0.75	0.75
Residential	Single_Family	Drying	Electric	Standard	001	001	004	2	2	0.25	0.25
Residential	Single_Family	Pool	Natural_Gas	Stock	001	001	005	1	1	1	1
Residential	Single_Family	Pool	Electric	Stock	001	001	005	2	1	1	1
Residential	Single_Family	Spa	Natural_Gas	Stock	001	001	006	1	1	1	1
Residential	Single_Family	Spa	Electric	Stock	001	001	006	2	1	1	1
Residential	Single_Family	Fireplace	Natural_Gas	Stock	001	001	007	1	1	1	1
Residential	Single_Family	Fireplace	Electric	Stock	001	001	007	2	1	1	1
Residential	Single_Family	Barbecue	Natural_Gas	Stock	001	001	008	1	1	1	1
Residential	Single_Family	Barbecue	Electric	Stock	001	001	008	2	1	1	1
Residential	Single_Family	Other	Natural_Gas	Stock	001	001	009	1	1	1	1

zName	bName	nName	fName	eName	z	b	n	f	e	baseMargEShareConversion	baseMargEShareNew
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	Stock	001	002	001	1	1	0.6	0.6
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	Standard	001	002	001	1	2	0.38	0.38
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	High	001	002	001	1	3	0.01	0.01
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	Premium	001	002	001	1	4	0.01	0.01
Residential	MF2_2_TO_4_Units	Space_Heat	Electric	Stock	001	002	001	2	1	1	1
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	Stock	001	002	002	1	1	0.18	0.18
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	Standard	001	002	002	1	2	0.65	0.65
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	High	001	002	002	1	3	0.16	0.16
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	Premium	001	002	002	1	4	0.01	0.01
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	Stock	001	002	002	2	1	0.18	0.18
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	Standard	001	002	002	2	2	0.65	0.65
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	High	001	002	002	2	3	0.16	0.16
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	Premium	001	002	002	2	4	0.01	0.01
Residential	MF2_2_TO_4_Units	Cooking	Natural_Gas	Stock	001	002	003	1	1	0.95	0.95
Residential	MF2_2_TO_4_Units	Cooking	Natural_Gas	Standard	001	002	003	1	2	0.05	0.05
Residential	MF2_2_TO_4_Units	Cooking	Electric	Stock	001	002	003	2	1	0.95	0.95
Residential	MF2_2_TO_4_Units	Cooking	Electric	Standard	001	002	003	2	2	0.05	0.05
Residential	MF2_2_TO_4_Units	Drying	Natural_Gas	Stock	001	002	004	1	1	0.75	0.75
Residential	MF2_2_TO_4_Units	Drying	Natural_Gas	Standard	001	002	004	1	2	0.25	0.25
Residential	MF2_2_TO_4_Units	Drying	Electric	Stock	001	002	004	2	1	0.75	0.75
Residential	MF2_2_TO_4_Units	Drying	Electric	Standard	001	002	004	2	2	0.25	0.25
Residential	MF2_2_TO_4_Units	Barbecue	Natural_Gas	Stock	001	002	008	1	1	1	1
Residential	MF2_2_TO_4_Units	Barbecue	Electric	Stock	001	002	008	2	1	1	1
Residential	MF2_2_TO_4_Units	Other	Natural_Gas	Stock	001	002	009	1	1	1	1
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	Stock	001	003	001	1	1	0.4	0.4
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	Standard	001	003	001	1	2	0.58	0.58
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	High	001	003	001	1	3	0.01	0.01
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	Premium	001	003	001	1	4	0.01	0.01
Residential	MF3_GE_5_Units	Space_Heat	Electric	Stock	001	003	001	2	1	1	1
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	Stock	001	003	002	1	1	0.13	0.13
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	Standard	001	003	002	1	2	0.1	0.1
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	High	001	003	002	1	3	0.86	0.86
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	Premium	001	003	002	1	4	0.01	0.01

zName	bName	nName	fName	eName	z	b	n	f	e	baseMargEShareConversion	baseMargEShareNew
Residential	MF3_GE_5_Units	Water_Heat	Electric	Stock	001	003	002	2	1	0.13	0.13
Residential	MF3_GE_5_Units	Water_Heat	Electric	Standard	001	003	002	2	2	0.1	0.1
Residential	MF3_GE_5_Units	Water_Heat	Electric	High	001	003	002	2	3	0.86	0.86
Residential	MF3_GE_5_Units	Water_Heat	Electric	Premium	001	003	002	2	4	0.01	0.01
Residential	MF3_GE_5_Units	Cooking	Natural_Gas	Stock	001	003	003	1	1	0.95	0.95
Residential	MF3_GE_5_Units	Cooking	Natural_Gas	Standard	001	003	003	1	2	0.05	0.05
Residential	MF3_GE_5_Units	Cooking	Electric	Stock	001	003	003	2	1	0.95	0.95
Residential	MF3_GE_5_Units	Cooking	Electric	Standard	001	003	003	2	2	0.05	0.05
Residential	MF3_GE_5_Units	Drying	Natural_Gas	Stock	001	003	004	1	1	0.75	0.75
Residential	MF3_GE_5_Units	Drying	Natural_Gas	Standard	001	003	004	1	2	0.25	0.25
Residential	MF3_GE_5_Units	Drying	Electric	Stock	001	003	004	2	1	0.75	0.75
Residential	MF3_GE_5_Units	Drying	Electric	Standard	001	003	004	2	2	0.25	0.25
Residential	MF3_GE_5_Units	Barbecue	Natural_Gas	Stock	001	003	008	1	1	1	1
Residential	MF3_GE_5_Units	Barbecue	Electric	Stock	001	003	008	2	1	1	1
Residential	MF3_GE_5_Units	Other	Natural_Gas	Stock	001	003	009	1	1	1	1
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	Stock	001	004	001	1	1	0.4	0.4
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	Standard	001	004	001	1	2	0.58	0.58
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	High	001	004	001	1	3	0.01	0.01
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	Premium	001	004	001	1	4	0.01	0.01
Residential	MM_Master_Meter	Space_Heat	Electric	Stock	001	004	001	2	1	1	1
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	Stock	001	004	002	1	1	0.13	0.13
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	Standard	001	004	002	1	2	0.1	0.1
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	High	001	004	002	1	3	0.86	0.86
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	Premium	001	004	002	1	4	0.01	0.01
Residential	MM_Master_Meter	Water_Heat	Electric	Stock	001	004	002	2	1	0.13	0.13
Residential	MM_Master_Meter	Water_Heat	Electric	Standard	001	004	002	2	2	0.1	0.1
Residential	MM_Master_Meter	Water_Heat	Electric	High	001	004	002	2	3	0.86	0.86
Residential	MM_Master_Meter	Water_Heat	Electric	Premium	001	004	002	2	4	0.01	0.01
Residential	MM_Master_Meter	Cooking	Natural_Gas	Stock	001	004	003	1	1	0.95	0.95
Residential	MM_Master_Meter	Cooking	Natural_Gas	Standard	001	004	003	1	2	0.05	0.05
Residential	MM_Master_Meter	Cooking	Electric	Stock	001	004	003	2	1	0.95	0.95
Residential	MM_Master_Meter	Cooking	Electric	Standard	001	004	003	2	2	0.05	0.05
Residential	MM_Master_Meter	Drying	Natural_Gas	Stock	001	004	004	1	1	0.75	0.75

zName	bName	nName	fName	eName	z	b	n	f	e	baseMargEShareConversion	baseMargEShareNew
Residential	MM_Master_Meter	Drying	Natural_Gas	Standard	001	004	004	1	2	0.25	0.25
Residential	MM_Master_Meter	Drying	Electric	Stock	001	004	004	2	1	0.75	0.75
Residential	MM_Master_Meter	Drying	Electric	Standard	001	004	004	2	2	0.25	0.25
Residential	MM_Master_Meter	Barbecue	Natural_Gas	Stock	001	004	008	1	1	1	1
Residential	MM_Master_Meter	Barbecue	Electric	Stock	001	004	008	2	1	1	1
Residential	MM_Master_Meter	Other	Natural_Gas	Stock	001	004	009	1	1	1	1
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	Stock	001	005	001	1	1	0.49	0.49
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	Standard	001	005	001	1	2	0.39	0.39
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	High	001	005	001	1	3	0.11	0.11
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	Premium	001	005	001	1	4	0.01	0.01
Residential	SM_Sub_Meter	Space_Heat	Electric	Stock	001	005	001	2	1	1	1
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	Stock	001	005	002	1	1	0.1	0.1
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	Standard	001	005	002	1	2	0.58	0.58
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	High	001	005	002	1	3	0.31	0.31
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	Premium	001	005	002	1	4	0.01	0.01
Residential	SM_Sub_Meter	Water_Heat	Electric	Stock	001	005	002	2	1	0.1	0.1
Residential	SM_Sub_Meter	Water_Heat	Electric	Standard	001	005	002	2	2	0.58	0.58
Residential	SM_Sub_Meter	Water_Heat	Electric	High	001	005	002	2	3	0.31	0.31
Residential	SM_Sub_Meter	Water_Heat	Electric	Premium	001	005	002	2	4	0.01	0.01
Residential	SM_Sub_Meter	Cooking	Natural_Gas	Stock	001	005	003	1	1	0.95	0.95
Residential	SM_Sub_Meter	Cooking	Natural_Gas	Standard	001	005	003	1	2	0.05	0.05
Residential	SM_Sub_Meter	Cooking	Electric	Stock	001	005	003	2	1	0.95	0.95
Residential	SM_Sub_Meter	Cooking	Electric	Standard	001	005	003	2	2	0.05	0.05
Residential	SM_Sub_Meter	Drying	Natural_Gas	Stock	001	005	004	1	1	0.75	0.75
Residential	SM_Sub_Meter	Drying	Natural_Gas	Standard	001	005	004	1	2	0.25	0.25
Residential	SM_Sub_Meter	Drying	Electric	Stock	001	005	004	2	1	0.75	0.75
Residential	SM_Sub_Meter	Drying	Electric	Standard	001	005	004	2	2	0.25	0.25
Residential	SM_Sub_Meter	Barbecue	Natural_Gas	Stock	001	005	008	1	1	1	1
Residential	SM_Sub_Meter	Barbecue	Electric	Stock	001	005	008	2	1	1	1
Residential	SM_Sub_Meter	Other	Natural_Gas	Stock	001	005	009	1	1	1	1

Cost allocation Proceeding SoCalGas Residential Market: Eshares

zName	bName	nName	fName	eName	z	b	n	f	e	peakDayLoadFactor
Residential	Single_Family	Space_Heat	Natural_Gas	Stock	001	001	001	1	1	0.002739726
Residential	Single_Family	Space_Heat	Natural_Gas	Standard	001	001	001	1	2	0.002739726
Residential	Single_Family	Space_Heat	Natural_Gas	High	001	001	001	1	3	0.002739726
Residential	Single_Family	Space_Heat	Natural_Gas	Premium	001	001	001	1	4	0.002739726
Residential	Single_Family	Space_Heat	Electric	Stock	001	001	001	2	1	0.002739726
Residential	Single_Family	Water_Heat	Natural_Gas	Stock	001	001	002	1	1	0.002739726
Residential	Single_Family	Water_Heat	Natural_Gas	Standard	001	001	002	1	2	0.002739726
Residential	Single_Family	Water_Heat	Natural_Gas	High	001	001	002	1	3	0.002739726
Residential	Single_Family	Water_Heat	Natural_Gas	Premium	001	001	002	1	4	0.002739726
Residential	Single_Family	Water_Heat	Electric	Stock	001	001	002	2	1	0.002739726
Residential	Single_Family	Water_Heat	Electric	Standard	001	001	002	2	2	0.002739726
Residential	Single_Family	Water_Heat	Electric	High	001	001	002	2	3	0.002739726
Residential	Single_Family	Water_Heat	Electric	Premium	001	001	002	2	4	0.002739726
Residential	Single_Family	Cooking	Natural_Gas	Stock	001	001	003	1	1	0.002739726
Residential	Single_Family	Cooking	Natural_Gas	Standard	001	001	003	1	2	0.002739726
Residential	Single_Family	Cooking	Electric	Stock	001	001	003	2	1	0.002739726
Residential	Single_Family	Cooking	Electric	Standard	001	001	003	2	2	0.002739726
Residential	Single_Family	Drying	Natural_Gas	Stock	001	001	004	1	1	0.002739726
Residential	Single_Family	Drying	Natural_Gas	Standard	001	001	004	1	2	0.002739726
Residential	Single_Family	Drying	Electric	Stock	001	001	004	2	1	0.002739726
Residential	Single_Family	Drying	Electric	Standard	001	001	004	2	2	0.002739726
Residential	Single_Family	Pool	Natural_Gas	Stock	001	001	005	1	1	0.002739726
Residential	Single_Family	Pool	Electric	Stock	001	001	005	2	1	0.002739726
Residential	Single_Family	Spa	Natural_Gas	Stock	001	001	006	1	1	0.002739726
Residential	Single_Family	Spa	Electric	Stock	001	001	006	2	1	0.002739726
Residential	Single_Family	Fireplace	Natural_Gas	Stock	001	001	007	1	1	0.002739726
Residential	Single_Family	Fireplace	Electric	Stock	001	001	007	2	1	0.002739726
Residential	Single_Family	Barbecue	Natural_Gas	Stock	001	001	008	1	1	0.002739726
Residential	Single_Family	Barbecue	Electric	Stock	001	001	008	2	1	0.002739726
Residential	Single_Family	Other	Natural_Gas	Stock	001	001	009	1	1	0.002739726

zName	bName	nName	fName	eName	z	b	n	f	e	peakDayLoadFactor
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	Stock	001	002	001	1	1	0.002739726
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	Standard	001	002	001	1	2	0.002739726
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	High	001	002	001	1	3	0.002739726
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	Premium	001	002	001	1	4	0.002739726
Residential	MF2_2_TO_4_Units	Space_Heat	Electric	Stock	001	002	001	2	1	0.002739726
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	Stock	001	002	002	1	1	0.002739726
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	Standard	001	002	002	1	2	0.002739726
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	High	001	002	002	1	3	0.002739726
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	Premium	001	002	002	1	4	0.002739726
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	Stock	001	002	002	2	1	0.002739726
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	Standard	001	002	002	2	2	0.002739726
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	High	001	002	002	2	3	0.002739726
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	Premium	001	002	002	2	4	0.002739726
Residential	MF2_2_TO_4_Units	Cooking	Natural_Gas	Stock	001	002	003	1	1	0.002739726
Residential	MF2_2_TO_4_Units	Cooking	Natural_Gas	Standard	001	002	003	1	2	0.002739726
Residential	MF2_2_TO_4_Units	Cooking	Electric	Stock	001	002	003	2	1	0.002739726
Residential	MF2_2_TO_4_Units	Cooking	Electric	Standard	001	002	003	2	2	0.002739726
Residential	MF2_2_TO_4_Units	Drying	Natural_Gas	Stock	001	002	004	1	1	0.002739726
Residential	MF2_2_TO_4_Units	Drying	Natural_Gas	Standard	001	002	004	1	2	0.002739726
Residential	MF2_2_TO_4_Units	Drying	Electric	Stock	001	002	004	2	1	0.002739726
Residential	MF2_2_TO_4_Units	Drying	Electric	Standard	001	002	004	2	2	0.002739726
Residential	MF2_2_TO_4_Units	Barbecue	Natural_Gas	Stock	001	002	008	1	1	0.002739726
Residential	MF2_2_TO_4_Units	Barbecue	Electric	Stock	001	002	008	2	1	0.002739726
Residential	MF2_2_TO_4_Units	Other	Natural_Gas	Stock	001	002	009	1	1	0.002739726
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	Stock	001	003	001	1	1	0.002739726
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	Standard	001	003	001	1	2	0.002739726
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	High	001	003	001	1	3	0.002739726
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	Premium	001	003	001	1	4	0.002739726
Residential	MF3_GE_5_Units	Space_Heat	Electric	Stock	001	003	001	2	1	0.002739726
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	Stock	001	003	002	1	1	0.002739726
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	Standard	001	003	002	1	2	0.002739726
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	High	001	003	002	1	3	0.002739726
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	Premium	001	003	002	1	4	0.002739726

zName	bName	nName	fName	eName	z	b	n	f	e	peakDayLoadFactor
Residential	MF3_GE_5_Units	Water_Heat	Electric	Stock	001	003	002	2	1	0.002739726
Residential	MF3_GE_5_Units	Water_Heat	Electric	Standard	001	003	002	2	2	0.002739726
Residential	MF3_GE_5_Units	Water_Heat	Electric	High	001	003	002	2	3	0.002739726
Residential	MF3_GE_5_Units	Water_Heat	Electric	Premium	001	003	002	2	4	0.002739726
Residential	MF3_GE_5_Units	Cooking	Natural_Gas	Stock	001	003	003	1	1	0.002739726
Residential	MF3_GE_5_Units	Cooking	Natural_Gas	Standard	001	003	003	1	2	0.002739726
Residential	MF3_GE_5_Units	Cooking	Electric	Stock	001	003	003	2	1	0.002739726
Residential	MF3_GE_5_Units	Cooking	Electric	Standard	001	003	003	2	2	0.002739726
Residential	MF3_GE_5_Units	Drying	Natural_Gas	Stock	001	003	004	1	1	0.002739726
Residential	MF3_GE_5_Units	Drying	Natural_Gas	Standard	001	003	004	1	2	0.002739726
Residential	MF3_GE_5_Units	Drying	Electric	Stock	001	003	004	2	1	0.002739726
Residential	MF3_GE_5_Units	Drying	Electric	Standard	001	003	004	2	2	0.002739726
Residential	MF3_GE_5_Units	Barbecue	Natural_Gas	Stock	001	003	008	1	1	0.002739726
Residential	MF3_GE_5_Units	Barbecue	Electric	Stock	001	003	008	2	1	0.002739726
Residential	MF3_GE_5_Units	Other	Natural_Gas	Stock	001	003	009	1	1	0.002739726
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	Stock	001	004	001	1	1	0.002739726
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	Standard	001	004	001	1	2	0.002739726
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	High	001	004	001	1	3	0.002739726
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	Premium	001	004	001	1	4	0.002739726
Residential	MM_Master_Meter	Space_Heat	Electric	Stock	001	004	001	2	1	0.002739726
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	Stock	001	004	002	1	1	0.002739726
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	Standard	001	004	002	1	2	0.002739726
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	High	001	004	002	1	3	0.002739726
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	Premium	001	004	002	1	4	0.002739726
Residential	MM_Master_Meter	Water_Heat	Electric	Stock	001	004	002	2	1	0.002739726
Residential	MM_Master_Meter	Water_Heat	Electric	Standard	001	004	002	2	2	0.002739726
Residential	MM_Master_Meter	Water_Heat	Electric	High	001	004	002	2	3	0.002739726
Residential	MM_Master_Meter	Water_Heat	Electric	Premium	001	004	002	2	4	0.002739726
Residential	MM_Master_Meter	Cooking	Natural_Gas	Stock	001	004	003	1	1	0.002739726
Residential	MM_Master_Meter	Cooking	Natural_Gas	Standard	001	004	003	1	2	0.002739726
Residential	MM_Master_Meter	Cooking	Electric	Stock	001	004	003	2	1	0.002739726
Residential	MM_Master_Meter	Cooking	Electric	Standard	001	004	003	2	2	0.002739726
Residential	MM_Master_Meter	Drying	Natural_Gas	Stock	001	004	004	1	1	0.002739726

zName	bName	nName	fName	eName	z	b	n	f	e	peakDayLoadFactor
Residential	MM_Master_Meter	Drying	Natural_Gas	Standard	001	004	004	1	2	0.002739726
Residential	MM_Master_Meter	Drying	Electric	Stock	001	004	004	2	1	0.002739726
Residential	MM_Master_Meter	Drying	Electric	Standard	001	004	004	2	2	0.002739726
Residential	MM_Master_Meter	Barbecue	Natural_Gas	Stock	001	004	008	1	1	0.002739726
Residential	MM_Master_Meter	Barbecue	Electric	Stock	001	004	008	2	1	0.002739726
Residential	MM_Master_Meter	Other	Natural_Gas	Stock	001	004	009	1	1	0.002739726
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	Stock	001	005	001	1	1	0.002739726
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	Standard	001	005	001	1	2	0.002739726
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	High	001	005	001	1	3	0.002739726
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	Premium	001	005	001	1	4	0.002739726
Residential	SM_Sub_Meter	Space_Heat	Electric	Stock	001	005	001	2	1	0.002739726
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	Stock	001	005	002	1	1	0.002739726
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	Standard	001	005	002	1	2	0.002739726
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	High	001	005	002	1	3	0.002739726
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	Premium	001	005	002	1	4	0.002739726
Residential	SM_Sub_Meter	Water_Heat	Electric	Stock	001	005	002	2	1	0.002739726
Residential	SM_Sub_Meter	Water_Heat	Electric	Standard	001	005	002	2	2	0.002739726
Residential	SM_Sub_Meter	Water_Heat	Electric	High	001	005	002	2	3	0.002739726
Residential	SM_Sub_Meter	Water_Heat	Electric	Premium	001	005	002	2	4	0.002739726
Residential	SM_Sub_Meter	Cooking	Natural_Gas	Stock	001	005	003	1	1	0.002739726
Residential	SM_Sub_Meter	Cooking	Natural_Gas	Standard	001	005	003	1	2	0.002739726
Residential	SM_Sub_Meter	Cooking	Electric	Stock	001	005	003	2	1	0.002739726
Residential	SM_Sub_Meter	Cooking	Electric	Standard	001	005	003	2	2	0.002739726
Residential	SM_Sub_Meter	Drying	Natural_Gas	Stock	001	005	004	1	1	0.002739726
Residential	SM_Sub_Meter	Drying	Natural_Gas	Standard	001	005	004	1	2	0.002739726
Residential	SM_Sub_Meter	Drying	Electric	Stock	001	005	004	2	1	0.002739726
Residential	SM_Sub_Meter	Drying	Electric	Standard	001	005	004	2	2	0.002739726
Residential	SM_Sub_Meter	Barbecue	Natural_Gas	Stock	001	005	008	1	1	0.002739726
Residential	SM_Sub_Meter	Barbecue	Electric	Stock	001	005	008	2	1	0.002739726
Residential	SM_Sub_Meter	Other	Natural_Gas	Stock	001	005	009	1	1	0.002739726

Cost Allocation Proceeding
SoCalGas Residential Market: F Shares

zName	bName	nName	fName	z	b	n	f	baseAvgFShare	baseMargFShareExisting	baseMargFShareConversion
Residential	Single_Family	Space_Heat	Natural_Gas	001	001	001	1	0.97971	0.922753357	0.922753357
Residential	Single_Family	Space_Heat	Electric	001	001	001	2	0.02029	0.077246643	0.077246643
Residential	Single_Family	Water_Heat	Natural_Gas	001	001	002	1	0.97278	0.958312924	1
Residential	Single_Family	Water_Heat	Electric	001	001	002	2	0.02722	0.041687076	0
Residential	Single_Family	Cooking	Natural_Gas	001	001	003	1	0.81052	0.723421156	0.723421156
Residential	Single_Family	Cooking	Electric	001	001	003	2	0.18948	0.276578844	0.276578844
Residential	Single_Family	Drying	Natural_Gas	001	001	004	1	0.80524	0.760039071	0.760039071
Residential	Single_Family	Drying	Electric	001	001	004	2	0.19476	0.239960929	0.239960929
Residential	Single_Family	Pool	Natural_Gas	001	001	005	1	0.40874	0.808709672	0.808709672
Residential	Single_Family	Pool	Electric	001	001	005	2	0.59126	0.191290328	0.191290328
Residential	Single_Family	Spa	Natural_Gas	001	001	006	1	0.55756	0.535153293	0.535153293
Residential	Single_Family	Spa	Electric	001	001	006	2	0.44244	0.464846707	0.464846707
Residential	Single_Family	Fireplace	Natural_Gas	001	001	007	1	0.43101	0.581563136	0.581563136
Residential	Single_Family	Fireplace	Electric	001	001	007	2	0.56899	0.418436864	0.418436864
Residential	Single_Family	Barbecue	Natural_Gas	001	001	008	1	0.32633	0.233711209	0.233711209
Residential	Single_Family	Barbecue	Electric	001	001	008	2	0.67367	0.766288791	0.766288791
Residential	Single_Family	Other	Natural_Gas	001	001	009	1	1	1	1
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	001	002	001	1	0.94706	0.916761865	0.916761865
Residential	MF2_2_TO_4_Units	Space_Heat	Electric	001	002	001	2	0.05294	0.083238135	0.083238135
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	001	002	002	1	0.83919	0.963744862	1
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	001	002	002	2	0.16081	0.036255138	0
Residential	MF2_2_TO_4_Units	Cooking	Natural_Gas	001	002	003	1	0.70497	0.768358086	0.768358086
Residential	MF2_2_TO_4_Units	Cooking	Electric	001	002	003	2	0.29503	0.231641914	0.231641914
Residential	MF2_2_TO_4_Units	Drying	Natural_Gas	001	002	004	1	0.68598	0.722859745	0.722859745
Residential	MF2_2_TO_4_Units	Drying	Electric	001	002	004	2	0.31402	0.277140255	0.277140255
Residential	MF2_2_TO_4_Units	Barbecue	Natural_Gas	001	002	008	1	0.27999	0.20207569	0.20207569
Residential	MF2_2_TO_4_Units	Barbecue	Electric	001	002	008	2	0.72001	0.79792431	0.79792431
Residential	MF2_2_TO_4_Units	Other	Natural_Gas	001	002	009	1	1	1	1
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	001	003	001	1	0.84323	0.850991428	0.850991428
Residential	MF3_GE_5_Units	Space_Heat	Electric	001	003	001	2	0.15677	0.149008572	0.149008572

zName	bName	nName	fName	z	b	n	f	baseAvgFShare	baseMargFShareExisting	baseMargFShareConversion
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	001	003	002	1	0.70918	0.902447158	1
Residential	MF3_GE_5_Units	Water_Heat	Electric	001	003	002	2	0.29082	0.097552842	0
Residential	MF3_GE_5_Units	Cooking	Natural_Gas	001	003	003	1	0.81593	0.860093177	0.860093177
Residential	MF3_GE_5_Units	Cooking	Electric	001	003	003	2	0.18407	0.139906823	0.139906823
Residential	MF3_GE_5_Units	Drying	Natural_Gas	001	003	004	1	0.44673	0.664849831	0.664849831
Residential	MF3_GE_5_Units	Drying	Electric	001	003	004	2	0.55327	0.335150169	0.335150169
Residential	MF3_GE_5_Units	Barbecue	Natural_Gas	001	003	008	1	0.37609	0.141486694	0.141486694
Residential	MF3_GE_5_Units	Barbecue	Electric	001	003	008	2	0.62391	0.858513306	0.858513306
Residential	MF3_GE_5_Units	Other	Natural_Gas	001	003	009	1	1	1	1
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	001	004	001	1	0.92461	0.96097894	0.96097894
Residential	MM_Master_Meter	Space_Heat	Electric	001	004	001	2	0.07539	0.03902106	0.03902106
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	001	004	002	1	0.92997	0.961358896	1
Residential	MM_Master_Meter	Water_Heat	Electric	001	004	002	2	0.07003	0.038641104	0
Residential	MM_Master_Meter	Cooking	Natural_Gas	001	004	003	1	0.81058	0.874390507	0.874390507
Residential	MM_Master_Meter	Cooking	Electric	001	004	003	2	0.18942	0.125609493	0.125609493
Residential	MM_Master_Meter	Drying	Natural_Gas	001	004	004	1	0.703062484	0.718982088	0.718982088
Residential	MM_Master_Meter	Drying	Electric	001	004	004	2	0.296937516	0.281017912	0.281017912
Residential	MM_Master_Meter	Barbecue	Natural_Gas	001	004	008	1	0.892335374	0.022999709	0.022999709
Residential	MM_Master_Meter	Barbecue	Electric	001	004	008	2	0.107664626	0.977000291	0.977000291
Residential	MM_Master_Meter	Other	Natural_Gas	001	004	009	1	1	1	1
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	001	005	001	1	0.92461	0.96097894	0.96097894
Residential	SM_Sub_Meter	Space_Heat	Electric	001	005	001	2	0.07539	0.03902106	0.03902106
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	001	005	002	1	0.92997	0.961358896	1
Residential	SM_Sub_Meter	Water_Heat	Electric	001	005	002	2	0.07003	0.038641104	0
Residential	SM_Sub_Meter	Cooking	Natural_Gas	001	005	003	1	0.81058	0.874390507	0.874390507
Residential	SM_Sub_Meter	Cooking	Electric	001	005	003	2	0.18942	0.125609493	0.125609493
Residential	SM_Sub_Meter	Drying	Natural_Gas	001	005	004	1	0.703062484	0.718982088	0.718982088
Residential	SM_Sub_Meter	Drying	Electric	001	005	004	2	0.296937516	0.281017912	0.281017912
Residential	SM_Sub_Meter	Barbecue	Natural_Gas	001	005	008	1	0.892335374	0.022999709	0.022999709
Residential	SM_Sub_Meter	Barbecue	Electric	001	005	008	2	0.107664626	0.977000291	0.977000291
Residential	SM_Sub_Meter	Other	Natural_Gas	001	005	009	1	1	1	1

Cost Allocation Proceeding
SoCalGas Residential Market: F Shares

zName	bName	nName	fName	z	b	n	f	baseMargFShareNew
Residential	Single_Family	Space_Heat	Natural_Gas	001	001	001	1	0.9922
Residential	Single_Family	Space_Heat	Electric	001	001	001	2	0.0078
Residential	Single_Family	Water_Heat	Natural_Gas	001	001	002	1	0.95397
Residential	Single_Family	Water_Heat	Electric	001	001	002	2	0.04603
Residential	Single_Family	Cooking	Natural_Gas	001	001	003	1	0.89682
Residential	Single_Family	Cooking	Electric	001	001	003	2	0.10318
Residential	Single_Family	Drying	Natural_Gas	001	001	004	1	0.84902
Residential	Single_Family	Drying	Electric	001	001	004	2	0.15098
Residential	Single_Family	Pool	Natural_Gas	001	001	005	1	0.56185
Residential	Single_Family	Pool	Electric	001	001	005	2	0.43815
Residential	Single_Family	Spa	Natural_Gas	001	001	006	1	0.66065
Residential	Single_Family	Spa	Electric	001	001	006	2	0.33935
Residential	Single_Family	Fireplace	Natural_Gas	001	001	007	1	0.81146
Residential	Single_Family	Fireplace	Electric	001	001	007	2	0.18854
Residential	Single_Family	Barbecue	Natural_Gas	001	001	008	1	0.50768
Residential	Single_Family	Barbecue	Electric	001	001	008	2	0.49232
Residential	Single_Family	Other	Natural_Gas	001	001	009	1	1
Residential	MF2_2_TO_4_Units	Space_Heat	Natural_Gas	001	002	001	1	0.94963
Residential	MF2_2_TO_4_Units	Space_Heat	Electric	001	002	001	2	0.05037
Residential	MF2_2_TO_4_Units	Water_Heat	Natural_Gas	001	002	002	1	0.89645
Residential	MF2_2_TO_4_Units	Water_Heat	Electric	001	002	002	2	0.10355
Residential	MF2_2_TO_4_Units	Cooking	Natural_Gas	001	002	003	1	0.83544
Residential	MF2_2_TO_4_Units	Cooking	Electric	001	002	003	2	0.16456
Residential	MF2_2_TO_4_Units	Drying	Natural_Gas	001	002	004	1	0.71177
Residential	MF2_2_TO_4_Units	Drying	Electric	001	002	004	2	0.28823
Residential	MF2_2_TO_4_Units	Barbecue	Natural_Gas	001	002	008	1	0.36225
Residential	MF2_2_TO_4_Units	Barbecue	Electric	001	002	008	2	0.63775
Residential	MF2_2_TO_4_Units	Other	Natural_Gas	001	002	009	1	1
Residential	MF3_GE_5_Units	Space_Heat	Natural_Gas	001	003	001	1	0.80694
Residential	MF3_GE_5_Units	Space_Heat	Electric	001	003	001	2	0.19306

zName	bName	nName	fName	z	b	n	f	baseMargFShareNew
Residential	MF3_GE_5_Units	Water_Heat	Natural_Gas	001	003	002	1	0.75825
Residential	MF3_GE_5_Units	Water_Heat	Electric	001	003	002	2	0.24175
Residential	MF3_GE_5_Units	Cooking	Natural_Gas	001	003	003	1	0.79414
Residential	MF3_GE_5_Units	Cooking	Electric	001	003	003	2	0.20586
Residential	MF3_GE_5_Units	Drying	Natural_Gas	001	003	004	1	0.5325
Residential	MF3_GE_5_Units	Drying	Electric	001	003	004	2	0.4675
Residential	MF3_GE_5_Units	Barbecue	Natural_Gas	001	003	008	1	0.35434
Residential	MF3_GE_5_Units	Barbecue	Electric	001	003	008	2	0.64566
Residential	MF3_GE_5_Units	Other	Natural_Gas	001	003	009	1	1
Residential	MM_Master_Meter	Space_Heat	Natural_Gas	001	004	001	1	0.6
Residential	MM_Master_Meter	Space_Heat	Electric	001	004	001	2	0.4
Residential	MM_Master_Meter	Water_Heat	Natural_Gas	001	004	002	1	1
Residential	MM_Master_Meter	Water_Heat	Electric	001	004	002	2	0
Residential	MM_Master_Meter	Cooking	Natural_Gas	001	004	003	1	0.6
Residential	MM_Master_Meter	Cooking	Electric	001	004	003	2	0.4
Residential	MM_Master_Meter	Drying	Natural_Gas	001	004	004	1	0.6
Residential	MM_Master_Meter	Drying	Electric	001	004	004	2	0.4
Residential	MM_Master_Meter	Barbecue	Natural_Gas	001	004	008	1	0
Residential	MM_Master_Meter	Barbecue	Electric	001	004	008	2	1
Residential	MM_Master_Meter	Other	Natural_Gas	001	004	009	1	1
Residential	SM_Sub_Meter	Space_Heat	Natural_Gas	001	005	001	1	1
Residential	SM_Sub_Meter	Space_Heat	Electric	001	005	001	2	0
Residential	SM_Sub_Meter	Water_Heat	Natural_Gas	001	005	002	1	1
Residential	SM_Sub_Meter	Water_Heat	Electric	001	005	002	2	0
Residential	SM_Sub_Meter	Cooking	Natural_Gas	001	005	003	1	1
Residential	SM_Sub_Meter	Cooking	Electric	001	005	003	2	0
Residential	SM_Sub_Meter	Drying	Natural_Gas	001	005	004	1	0
Residential	SM_Sub_Meter	Drying	Electric	001	005	004	2	1
Residential	SM_Sub_Meter	Barbecue	Natural_Gas	001	005	008	1	0
Residential	SM_Sub_Meter	Barbecue	Electric	001	005	008	2	1
Residential	SM_Sub_Meter	Other	Natural_Gas	001	005	009	1	1

CORE COMMERCIAL & INDUSTRIAL



Core Commercial and Industrial End Use Model Cost Allocation Proceeding/SoCalGas

Introduction

The G10 commercial and industrial gas demand forecast used the EUForecaster model to generate annual gas demand forecasts for the years 2022 through 2027.

The model segments the G-10 commercial and industrial markets into 14 sectors and 11 sectors by type of business activity, respectively. Business activity is determined by the NAICS code assigned to the customer and carried on the customer's billing record. A second segmentation within each specific business type involved further disaggregation into end-uses.

The gas demand forecast that results from the EUForecaster model is at the annual design HDD total of 1,248 for an Average Year. The gas demand forecasts under Cold, Hot and Base temperature were then constructed based on Cold Year (Hdd = 1,476, Hot Year (Hdd=1,020) and Base Year (Hdd=0) annual assumptions. The annual Hdd's were adjusted annually. The annual values used can be found under the weather section of the 2022 CGR workpapers.

This *end use* forecasts under the above four temperature scenarios are then adjusted for a set of *post-model* adjustments. These adjustments consist of *reductions* for the EE/DSM savings provided by the EE/DSM group. An addition to load associated with (existing) G10 commercial and industrial customers who install electric self-generation equipment was included. This program was established initially by the State of California through AB970 and is now known as SGIP. Other adjustments to the load consist of the anticipated core to noncore migration expected and a reduction in load for the City of Vernon customers. The final adjustment adds both the Gas AC and Gas Engine demand forecasts into commercial G10 forecast. All of these post-model adjustments are summarized in tables that follow.

Data Sources

The key set of information used to perform the modeling and to generate the forecast includes historical year 2021 consumption and customer counts, employment forecasts, gas and electric energy use intensity (EUI) values, end-use saturations, fuel and efficiency shares, gas and electric price forecasts, equipment age, use per meter for existing and new customers, and equipment cost. A description of each component follows.

A. Historical Year 2021 Sales:

The historical data are extracted from the billing tables in the Customer Information System (CIS). The gas consumption by business type was adjusted to our 1,248 average year HDD.

B. Employment Data:

The level of employment in each business type is used as a measure of economic activity in the G-10 commercial and industrial demand forecast models. The employment data series matches the NAICS categories used to develop the historical consumption data. The employment data were compiled and totaled for the 12 counties comprising SoCalGas' service territory. The Global Insight's 2022 Q1 forecast release was utilized to prepare the outlook.

Gas Price Data:

Average and marginal gas prices (\$/therm) were calculated from forecasts of the G-10 rate components. We used detailed consumption data on our core commercial G-10 customers, to separate monthly consumption for customers by each business type into the respective G-10 consumption tiers.

For a given business type, the average gas commodity rate for the 12-month period was calculated for each year. The average commodity rate in each forecast year was developed using the same monthly consumption pattern, but with the forecasts of rates for each G-10 rate tier. The average gas price each year was then calculated by including the non-volumetric customer charges with the year's average gas commodity rate.

Each respective business type's marginal gas commodity rate (for each month) was calculated by "pricing" the entire month's consumption at the G-10 rate's tier that was the last tier with non-zero consumption, the marginal consumption tier, for the customers of the given business type. The marginal gas price was then calculated as the simple average of the 12 monthly marginal commodity rates. The forecasts for each year used the same monthly consumption pattern, but used the projected G-10 price of the marginal consumption tier.

Electric Price Data:

Both average prices (cents/kWh) and marginal prices (cents/kWh) were developed as electricity price inputs. Forecasts for the SCE *small commercial* customer class were developed based on the California Energy Commission's updated forecast rates for California energy demand (forecast for the SCE planning area, under "Mid-Case" demand for electricity) for the SCE service area through our forecast time horizon.

The resulting price projections for *small commercial* were set equal to 112% of the CEC's projections for the SCE commercial class. These were the average electricity prices for the G-10 core commercial market, overall.

The marginal prices were calculated by multiplying each year's respective average price by a ratio. This ratio, 1.000, was estimated from an analysis of the SCE GS-2 rate schedule posted on their web-site. (These customers were assumed to be small non-self-generation customers who also were not on time-of-use rates.)

To impute, in each year, average and marginal electricity prices to each core commercial business type, we simply calculated the ratio of the average (or marginal) gas price to the overall core commercial gas price for each business type, then multiplied by the overall average (or marginal) electricity price.

E. Building and Equipment Decay Rates:

Building decay rates are based on buildings' lifetimes, where the lifetime is defined as the length of time it takes for either a demolition or a major renovation in which major systems are replaced. For existing core buildings and facilities, an exponential rate of decay of 1% per year was assumed, consistent with an average remaining life for existing buildings of 100 years. (A building decay rate concept is not relevant to non-core large gas transport customers. In both the commercial and industrial non-core models the existing building decay rate was set equal to zero.)

All new construction decay rates were assumed to be zero over the forecast horizon. This assumption was required because the growth of new buildings and facilities was tied directly to the econometric models.

End-Use lifetimes were derived from a variety of sources.

Commercial:

Space heat: 25 years
Water heat: 15 years
AC/compressor: 20 years
All other commercial end-uses: 15 years

Industrial:

Fire-tube boiler: 25 years
Water-tube boiler: 25 years
Engine (motors): 25 years
All other industrial end-uses: 20 years

F. Equipment Saturations, Fuel Shares, and Efficiency Shares:

EUForecaster defines saturation as the percentage of customers in any segment that has a particular end use, independent of fuel shares. EUForecaster adjusted core commercial fuel shares according to a set of fuel-choice equations over the forecast horizon.

End-use saturations in the industrial model were initially set equal to 100%. Industrial end-use gas fuel shares were initially approximated. We then used an iterative procedure to further adjust industrial saturation and fuel shares such that the EUForecaster sales totals matched SoCalGas industrial sales figures, and our estimates of electric usage by SoCalGas customers. Finally, all commercial and industrial fuel shares were held constant over the forecast horizon.

Energy efficiency varied within the major gas end-uses/processes, including all boilers, space heat, and water heat. Four levels of efficiency were assigned to gas equipment: low, medium (standard) high, and premium for core commercial and three levels of efficiency were assigned to gas equipment: low, medium (standard), and high for core industrial market. California and federal standards have effectively eliminated the lowest efficiency alternatives for several gas end-uses from being purchased as new or replacement equipment. The lowest efficiency alternative for these end uses is, therefore, allowed to exist in the base year stock, but the customer must then purchase either medium (e.g., equipment that just meets Government standards), high or premium efficiency equipment as these units decay.

For existing equipment stock, the low efficiency share was set to 50%, whereas the medium efficiency share ranges from 40 to 45%, and the high efficiency share ranges from 5 to 10%.

EUForecaster's choice module prorates the low share to the medium, high and premium alternatives in proportion to their shares noted above. Therefore, replacement and new construction efficiency shares for medium range from 80% to 90%, and high ranges from 10% to 20%.

G. ENERGY EFFICIENCY Forecast:

The end-use gas demand forecast developed with EUForecaster does not capture the effects of SoCalGas' EE/DSM programs. Energy savings goals from the CPUC's mandated energy efficiency/energy conservation programs for the core commercial and industrial were provided by SoCalGas' DSM department. These savings are subtracted from the forecast generated by the core commercial and industrial forecasts generated by EUForecaster.

Gas Air Conditioning and Gas Engines

A special tariff for gas air-conditioning rates went into effect at the end of 1993, while a special tariff for gas engine rates started in early 1995. The forecasts of core gas air conditioning and gas engine demand are based on the latest information provided by customers. Both segments are forecasted based on the expected number of customers in each market times their usage per customer.

Fuel Substitution:

An adjustment was made to the baseline forecast to account for forecasted fuel substitution for the core commercial market. The fuel substitution scenario utilized was the AAFS 2 from the CEC's 2021 IEPR, Volume IV *California Energy Demand Forecast*, Appendix A.

Climate Change:

The weather design was reduced by 6 hdd per year over the forecast period to account for weather being less cold over the 20 year historical period. The effect of the hdd reduction is a dampening of the core commercial forecast.

CORE COMMERCIAL WORKPAPERS

Cost Allocation Proceeding

G10 Forecasts SoCalGas: Average, Cold, Hot and Base Scenarios

SOUTHERN CALIFORNIA GAS COMPANY G10 COMMERCIAL FORECAST (Mdth) AVERAGE WEATHER

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
2021	8,596.6	8,064.4	7,283.1	6,622.3	5,608.4	5,096.7	4,961.2	4,957.1	4,995.4	5,385.4	6,808.4	8,871.6	77,250.7
2022	8,403.8	7,884.9	7,123.0	6,479.9	5,490.5	5,017.4	4,859.5	4,855.5	4,892.9	5,273.1	6,660.8	8,671.4	75,612.9
2023	8,138.5	7,637.3	6,901.4	6,281.5	5,325.0	4,843.4	4,715.6	4,711.8	4,747.8	5,115.1	6,455.7	8,396.3	73,269.5
2024	7,908.5	7,422.8	6,709.6	6,110.0	5,182.2	4,715.6	4,591.7	4,588.0	4,622.9	4,978.9	6,278.3	8,157.8	71,266.3
2025	7,701.1	7,229.4	6,536.7	5,955.6	5,053.7	4,600.9	4,480.4	4,476.8	4,510.7	4,856.5	6,118.5	7,942.5	69,462.8
2026	7,516.8	7,057.7	6,383.4	5,818.9	4,940.1	4,499.5	4,382.1	4,378.6	4,411.6	4,748.2	5,977.0	7,751.3	67,865.2
2027	7,339.5	6,892.5	6,235.8	5,687.2	4,830.8	4,401.9	4,287.5	4,284.1	4,316.2	4,644.0	5,840.7	7,567.2	66,327.4

SOUTHERN CALIFORNIA GAS COMPANY G10 COMMERCIAL FORECAST (Mdth) COLD WEATHER

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
2021	9,207.6	8,584.3	7,673.5	6,853.0	5,701.4	5,096.1	4,941.7	4,936.9	4,982.0	5,436.4	7,091.4	9,552.8	80,057.2
2022	9,044.2	8,433.6	7,541.1	6,738.3	5,609.1	5,016.1	4,864.8	4,860.0	4,904.2	5,349.5	6,971.4	9,381.9	78,714.2
2023	8,765.3	8,174.4	7,310.5	6,534.3	5,440.9	4,867.1	4,720.6	4,716.0	4,758.8	5,189.7	6,759.5	9,091.8	76,328.9
2024	8,522.0	7,948.4	7,109.9	6,357.3	5,295.5	4,738.6	4,596.3	4,591.9	4,633.4	5,051.8	6,575.6	8,838.5	74,259.4
2025	8,301.5	7,743.8	6,928.5	6,197.6	5,164.5	4,623.2	4,484.8	4,480.4	4,520.8	4,927.6	6,409.4	8,608.9	72,390.9
2026	8,105.7	7,562.2	6,767.7	6,056.4	5,049.1	4,521.8	4,386.9	4,382.6	4,422.0	4,818.4	6,262.4	8,404.6	70,740.0
2027	7,917.0	7,387.3	6,612.9	5,920.5	4,938.1	4,424.3	4,292.6	4,288.5	4,326.9	4,713.3	6,120.9	8,207.9	69,150.2

**SOUTHERN CALIFORNIA GAS COMPANY
 G10 COMMERCIAL FORECAST (Mdth)
 HOT WEATHER**

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
2021	7,899.9	7,464.0	6,820.0	6,325.4	5,459.4	5,046.4	4,931.2	4,927.9	4,959.0	5,280.6	6,457.4	8,101.9	73,673.2
2022	7,763.7	7,336.4	6,705.2	6,221.7	5,372.1	4,967.5	4,854.5	4,851.2	4,881.7	5,196.9	6,350.5	7,961.0	72,462.4
2023	7,511.3	7,099.9	6,492.0	6,028.4	5,208.8	4,819.5	4,710.5	4,707.4	4,736.7	5,040.3	6,151.5	7,700.4	70,206.7
2024	7,294.0	6,896.3	6,308.4	5,861.9	5,068.2	4,692.0	4,586.5	4,583.5	4,611.8	4,905.4	5,980.2	7,475.9	68,264.0
2025	7,098.9	6,713.5	6,143.5	5,712.4	4,941.9	4,577.5	4,475.1	4,472.2	4,499.6	4,784.3	5,826.3	7,274.5	66,519.8
2026	6,928.0	6,553.2	5,999.0	5,581.3	4,831.2	4,477.1	4,377.4	4,374.6	4,401.3	4,678.1	5,691.5	7,097.9	64,990.5
2027	6,763.7	6,399.2	5,860.1	5,455.3	4,724.6	4,380.5	4,283.4	4,280.6	4,306.6	4,575.8	5,561.8	6,928.2	63,519.7

**SOUTHERN CALIFORNIA GAS COMPANY
 G10 COMMERCIAL FORECAST (Mdth)
 BASE YEAR FORECAST**

YEAR	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
2021	5,020.3	4,696.3	5,026.9	4,866.9	5,035.2	4,874.5	5,038.5	5,038.5	4,875.0	5,036.4	4,865.9	5,019.0	59,393.2
2022	4,956.5	4,636.6	4,963.2	4,805.3	4,971.8	4,813.1	4,975.1	4,975.1	4,813.6	4,972.9	4,804.3	4,955.1	58,642.8
2023	4,803.1	4,493.1	4,810.0	4,657.0	4,818.8	4,665.1	4,822.2	4,822.2	4,665.6	4,819.9	4,656.1	4,801.6	56,834.5
2024	4,675.1	4,373.3	4,682.1	4,533.4	4,691.2	4,541.6	4,694.7	4,694.7	4,542.2	4,692.4	4,532.4	4,673.6	55,326.6
2025	4,562.9	4,268.4	4,570.1	4,425.0	4,579.3	4,433.5	4,582.9	4,582.9	4,434.0	4,580.6	4,424.0	4,561.3	54,004.9
2026	4,468.1	4,179.7	4,475.4	4,333.3	4,484.6	4,341.8	4,488.2	4,488.2	4,342.3	4,485.8	4,332.3	4,466.6	52,886.2
2027	4,377.3	4,094.8	4,384.6	4,245.5	4,393.8	4,253.9	4,397.4	4,397.4	4,254.5	4,395.0	4,244.5	4,375.8	51,814.4

**SOUTHERN CALIFORNIA GAS COMPANY
COMMERCIAL LOAD FUEL SUBSTITUTION FORECAST,
UNITS = Mdt)**

SOURCE	YEAR	AAFS
G10Commercial	2021	0.00
G10Commercial	2022	5.66
G10Commercial	2023	60.61
G10Commercial	2024	148.97
G10Commercial	2025	232.27
G10Commercial	2026	322.71
G10Commercial	2027	416.86

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SOUTHERN CALIFORNIA GAS COMPANY
 G10 2021 BASE YEAR INPUT DATA

Segment	2021 Therm Sales	2021 Meter Count	2021 Meter Count, Existing/Old customers	2021 Meter Count New Customers	Avg Use Per Meter Existing Customers	Avg Use Per Meter New Customers	Price Elasticity
Office	74,497,623	44,310	44,164	146	1,675	3,642	-0.135376
Restaurant	220,315,759	40,162	40,113	49	5,486	5,528	-0.091877
Retail	56,566,385	23,409	23,271	138	2,415	2,739	-0.265060
Laundry	50,631,123	3,668	3,656	12	13,799	15,239	-0.122795
Warehouse	14,565,421	7,250	7,217	33	1,985	7,185	-0.043035
School	34,989,163	6,715	6,700	15	5,209	5,815	-0.000001
College	22,146,080	2,692	2,681	11	8,230	7,370	-0.037179
Health	58,103,035	6,526	6,502	24	8,891	12,313	-0.096826
Lodging	50,872,609	4,741	4,712	29	10,608	30,588	-0.105697
Misc	86,252,296	35,145	34,726	419	2,437	3,878	-0.000001
Government	24,465,041	3,712	3,695	17	6,607	3,059	-0.095709
TCU	22,452,204	5,772	5,748	24	3,880	6,164	-0.129301
Construction	7,828,624	5,724	5,692	32	1,370	1,023	-0.161076
Agriculture	48,821,882	1,321	1,316	5	36,440	173,250	-0.315282

Cost Allocation Proceeding

G10 Forecasts: Employment by Business Type

**SOUTHERN CALIFORNIA GAS COMPANY
 G10 COMMERCIAL
 EMPLOYMENT (IN MILLIONS)**

YEAR	Office	Restaurant	Retail	Laundry	Warehouse	School	College	Health	Lodging	Misc
2022	1.3545	0.6552	0.9388	0.0849	0.5635	0.6639	0.2213	1.3809	0.1230	0.2487
2023	1.4079	0.6330	0.9060	0.0886	0.5842	0.6731	0.2244	1.3821	0.1370	0.2592
2024	1.4322	0.6064	0.8690	0.0896	0.5979	0.6766	0.2255	1.3994	0.1413	0.2622
2025	1.4567	0.5857	0.8387	0.0907	0.6131	0.6804	0.2268	1.4197	0.1423	0.2655
2026	1.4810	0.5773	0.8266	0.0917	0.6241	0.6840	0.2280	1.4405	0.1428	0.2685
2027	1.5096	0.5681	0.8135	0.0929	0.6306	0.6882	0.2294	1.4601	0.1435	0.2720

YEAR	Government	TCU	Construction	Agriculture	Total
2022	0.5366	0.6276	0.4425	0.2320	8.0734
2023	0.5441	0.6387	0.4478	0.2315	8.1573
2024	0.5470	0.6554	0.4482	0.2306	8.1813
2025	0.5500	0.6689	0.4513	0.2300	8.2197
2026	0.5529	0.6744	0.4542	0.2299	8.2759
2027	0.5563	0.6731	0.4559	0.2299	8.3232

**SOUTHERN CALIFORNIA GAS COMPANY
 USE PER METER (STOCK)**

Sector	Space Heater	Water Heater	Cooktop	Griddle	Fryer	Other Cooking Equipment	Kitchen Equipment	AC	Dryer	Engine	Other	Total Building	
Office	512	1,909	386	157	113	63		3	3	96	71	335	3,642
Restaurant	181	1,679	916	1,459	290	548		1	1	1	1	456	5,528
Retail	1,710	550	274	4	11	191		1	1	1	1	1	2,739
Laundry	1	5,940	1	1	1	1		1	1	9,299	1	1	15,239
Warehouse	5,906	1,255	2	25	2	2		2	2	2	2	2	7,185
School	684	5,024	21	53	3	28		1	1	2	1	1	5,815
College	509	5,473	3	3	3	3		3	3	3	3	1,388	7,370
Health	6,828	5,465	12	3	4	4		3	3	3	3	3	12,313
Lodging	5,150	24,399	2	17	1	2		2	2	703	2	319	30,588
Misc	386	2,635	151	232	43	84		1	1	34	91	222	3,878
Government	210	2,848	0	0	0	0		0	0	0	1	0	3,059
TCU	2	1	1	1	1	1		1	1	1	1,704	4,459	6,164
Construction	383	219	218	52	151	0		0	0	0	0	0	1,023
Agriculture	6	6	6	6	6	6		6	6	2,311	170,939	6	173,250

**SOUTHERN CALIFORNIA GAS COMPANY
 USE PER METER (NEW)**

Sector	Space Heater	Water Heater	Cooktop	Griddle	Fryer	Other Cooking Equipment	Kitchen Equipment	AC	Dryer	Engine	Other	Total Building
Office	512	1,909	386	157	113	63	3	3	96	71	335	3,642
Restaurant	181	1,679	916	1,459	290	548	1	1	1	1	456	5,528
Retail	1,710	550	274	4	11	191	1	1	1	1	1	2,739
Laundry	1	5,940	1	1	1	1	1	1	9,299	1	1	15,239
Warehouse	5,906	1,255	2	25	2	2	2	2	2	2	2	7,185
School	684	5,024	21	53	3	28	1	1	2	1	1	5,815
College	509	5,473	3	3	3	3	3	3	3	3	1,388	7,370
Health	6,828	5,465	12	3	4	4	3	3	3	3	3	12,313
Lodging	5,150	24,399	2	17	1	2	2	2	703	2	319	30,588
Misc	386	2,635	151	232	43	84	1	1	34	91	222	3,878
Government	210	2,848	0	0	0	0	0	0	0	1	0	3,059
TCU	2	1	1	1	1	1	1	1	1	1,704	4,459	6,164
Construction	383	219	218	52	151	0	0	0	0	0	0	1,023
Agriculture	6	6	6	6	6	6	6	6	2,311	170,939	6	173,250

Cost Allocation Proceeding

G10 Forecasts: Fuel Prices

**SOUTHERN CALIFORNIA GAS COMPANY
 G10 COMMERCIAL
 AVERAGE AND MARGINAL GAS PRICES (\$/THERM)**

Year	C Agriculture Average Price	C Agriculture Marginal Price	C College Average Price	C College Marginal Price	C Construction Average Price	C Construction Marginal Price	C Government Average Price	C Government Marginal Price	C Health Average Price	C Health Marginal Price	C Laundry Average Price	C Laundry Marginal Price	C Lodging Average Price	C Lodging Marginal Price	C Misc Average Price
2022	1.3799	1.2095	1.3791	1.2429	1.3747	1.2238	1.2551	1.1596	1.3077	1.1418	1.3081	1.1440	1.1596	1.0454	1.1754
2023	1.32706	1.15505	1.32709	1.18905	1.32218	1.16958	1.20124	1.10425	1.25389	1.08615	1.25483	1.08835	1.10395	0.98805	1.12002
2024	1.32678	1.15240	1.32796	1.18725	1.32231	1.16729	1.19943	1.10033	1.25211	1.08178	1.25387	1.08403	1.09961	0.98123	1.11607
2025	1.30657	1.12959	1.30899	1.16537	1.30255	1.14488	1.17755	1.07614	1.23027	1.05709	1.23292	1.05941	1.07496	0.95388	1.09184
2026	1.32902	1.14913	1.33286	1.18594	1.32551	1.16486	1.19812	1.09411	1.25089	1.07451	1.25454	1.07689	1.09242	0.96828	1.10977
2027	1.35104	1.16805	1.35637	1.20598	1.34807	1.18426	1.21814	1.11138	1.27096	1.09119	1.27567	1.09364	1.10914	0.98176	1.12699

Year	C Misc Marginal Price	C Office Average Price	C Office Marginal Price	C Restaurant Average Price	C Restaurant Marginal Price	C Retail Average Price	C Retail Marginal Price	C School Average Price	C School Marginal Price	C TCU Average Price	C TCU Marginal Price	C Warehouse Average Price	C Warehouse Marginal Price
2022	1.0789	1.2445	1.1282	1.3189	1.1621	1.2231	1.0942	1.2108	1.0830	1.3429	1.1620	1.0270	0.9666
2023	1.02213	1.19034	1.07226	1.26533	1.10675	1.16842	1.03770	1.15572	1.02631	1.28920	1.10671	0.96920	0.90790
2024	1.01617	1.18815	1.06754	1.26394	1.10290	1.16550	1.03213	1.15223	1.02045	1.28764	1.10285	0.96181	0.89908
2025	0.98974	1.16586	1.04248	1.24251	1.07878	1.14240	1.00612	1.12850	0.99413	1.26602	1.07872	0.93382	0.86954
2026	1.00519	1.18597	1.05947	1.26359	1.09682	1.16160	1.02205	1.14699	1.00971	1.28688	1.09677	0.94752	0.88148
2027	1.01978	1.20550	1.07569	1.28416	1.11418	1.18017	1.03715	1.16481	1.02444	1.30723	1.11412	0.96025	0.89235

**SOUTHERN CALIFORNIA GAS COMPANY
 G10 COMMERCIAL
 AVERAGE AND MARGINAL ELECTRIC PRICES (CENTS/KWH)**

Year	C Agriculture		C College		C Construction		C Government		C Health		C Laundry		C Lodging	
	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price
2022	22.84	22.38	22.83	23.00	22.76	22.64	20.78	21.46	21.65	21.13	21.65	21.17	19.20	19.34
2023	23.51	23.03	23.51	23.71	23.42	23.32	21.28	22.02	22.21	21.65	22.23	21.70	19.56	19.70
2024	23.98	23.50	24.00	24.21	23.90	23.80	21.68	22.44	22.63	22.06	22.66	22.11	19.88	20.01
2025	25.05	24.55	25.10	25.33	24.97	24.89	22.58	23.39	23.59	22.98	23.64	23.03	20.61	20.73
2026	25.89	25.39	25.96	26.21	25.82	25.74	23.34	24.18	24.37	23.74	24.44	23.80	21.28	21.40
2027	26.42	25.93	26.52	26.77	26.36	26.29	23.82	24.67	24.85	24.22	24.94	24.28	21.69	21.79

Year	C Misc		C Office		C Restaurant		C Retail		C School		C TCU		C Warehouse	
	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price	Average Price	Marginal Price
2022	19.46	19.96	20.60	20.87	21.83	21.50	20.25	20.25	20.04	20.04	22.23	21.50	17.00	17.89
2023	19.84	20.38	21.09	21.38	22.42	22.07	20.70	20.69	20.47	20.46	22.84	22.06	17.17	18.10
2024	20.17	20.72	21.48	21.77	22.85	22.49	21.07	21.05	20.83	20.81	23.28	22.49	17.39	18.33
2025	20.93	21.51	22.35	22.66	23.82	23.45	21.90	21.87	21.64	21.61	24.27	23.45	17.90	18.90
2026	21.62	22.21	23.10	23.41	24.61	24.24	22.63	22.58	22.34	22.31	25.07	24.24	18.46	19.48
2027	22.03	22.64	23.57	23.88	25.11	24.73	23.07	23.02	22.77	22.74	25.56	24.73	18.77	19.81

**Southern California Gas Company
 Core Commercial Market
 Saturations**

zname	bname	nname	SAT	SOURCE
Commercial	Lodging	Cook_top	0.0840	CBECS
Commercial	Lodging	Drying	0.8200	CI_1996_STUDY
Commercial	Lodging	Fryer	0.0840	CBECS
Commercial	Lodging	Griddle	0.0840	CBECS
Commercial	Lodging	Other	1.0000	CI_1996_STUDY
Commercial	Lodging	Other_Cooking	0.0840	CBECS
Commercial	Lodging	Space_Heat	0.8950	SDGE_EUI_STUDY
Commercial	Lodging	Water_Heat	1.0000	CI_1996_STUDY
Commercial	Misc	AC_Compressor	0.7310	CBECS
Commercial	Misc	Cook_top	0.0210	CBECS
Commercial	Misc	Fryer	0.0210	CBECS
Commercial	Misc	Griddle	0.0210	CBECS
Commercial	Misc	Other	1.0000	CI_1996_STUDY
Commercial	Misc	Other_Cooking	0.0210	CBECS
Commercial	Misc	Space_Heat	0.6950	SDGE_EUI_STUDY
Commercial	Misc	Water_Heat	0.6900	CI_1996_STUDY
Commercial	Office	AC_Compressor	0.9310	CBECS
Commercial	Office	Cooking	0.0820	CBECS
Commercial	Office	Other	1.0000	CI_1996_STUDY
Commercial	Office	Space_Heat	0.8720	SDGE_EUI_STUDY
Commercial	Office	Water_Heat	0.7000	CI_1996_STUDY
Commercial	Restaurant	AC_Compressor	0.8710	CBECS
Commercial	Restaurant	Cook_top	0.7500	SCG_COOKING_STUDY
Commercial	Restaurant	Fryer	0.7290	SCG_COOKING_STUDY
Commercial	Restaurant	Griddle	0.5740	SCG_COOKING_STUDY
Commercial	Restaurant	Other	1.0000	CI_1996_STUDY
Commercial	Restaurant	Other_Cooking	0.9000	CI_1996_STUDY
Commercial	Restaurant	Space_Heat	0.8180	SDGE_EUI_STUDY
Commercial	Restaurant	Water_Heat	0.9600	CI_1996_STUDY
Commercial	Retail	Cooking	0.2450	CBECS
Commercial	Retail	Other	1.0000	CI_1996_STUDY
Commercial	Retail	Space_Heat	0.7710	SDGE_EUI_STUDY
Commercial	Retail	Water_Heat	0.6200	CI_1996_STUDY
Commercial	School	AC_Compressor	0.8850	CBECS
Commercial	School	Cook_top	0.1470	CBECS
Commercial	School	Fryer	0.1470	CBECS
Commercial	School	Griddle	0.1470	CBECS
Commercial	School	Other	1.0000	CI_1996_STUDY
Commercial	School	Other_Cooking	0.1470	CBECS
Commercial	School	Space_Heat	0.9670	SDGE_EUI_STUDY
Commercial	School	Water_Heat	0.9000	CI_1996_STUDY
Commercial	TCU	Engine	0.5000	Assumed
Commercial	TCU	Other	1.0000	CI_1996_STUDY
Commercial	TCU	Space_Heat	0.7200	CI_1996_STUDY
Commercial	TCU	Water_Heat	0.6900	CI_1996_STUDY
Commercial	Warehouse	Engine	0.2500	Assumed

**Southern California Gas Company
Core Commercial Market
Saturations**

zname	bname	nname	SAT	SOURCE
Commercial	Warehouse	Other	1.0000	DEFAULT
Commercial	Warehouse	Space_Heat	0.2310	SDGE_EUI_STUDY
Commercial	Warehouse	Water_Heat	0.8800	SDGE_EUI_STUDY

SAT_LOOKUP	SOURCE	FASHARE_ORIG	BNSUM_SAT	FASHARE_SDGE
OfficeSpace_Heat	SDGE_EUI_STUDY	0.7460000000000000	0.8720000000000000	0.8555045871559630
OfficeSpace_Heat	SDGE_EUI_STUDY	0.1260000000000000	0.8720000000000000	0.1444954128440370
OfficeWater_Heat	SDGE_EUI_STUDY	0.1620000000000000	0.9770000000000000	0.1658137154554760
OfficeWater_Heat	SDGE_EUI_STUDY	0.8150000000000000	0.9770000000000000	0.8341862845445240
OfficeCooking	SDGE_EUI_STUDY	0.0180000000000000	0.8700000000000000	0.0206896551724138
OfficeCooking	SDGE_EUI_STUDY	0.8520000000000000	0.8700000000000000	0.9793103448275860
OfficeAC_Compressor	CI_1996_STUDY	0.0600000000000000	1.0000000000000000	0.0600000000000000
OfficeAC_Compressor	CI_1996_STUDY	0.9400000000000000	1.0000000000000000	0.9400000000000000
OfficeOther	DEFAULT	0.1750000000000000	0.1750000000000000	1.0000000000000000
RestaurantSpace_Heat	SDGE_EUI_STUDY	0.4830000000000000	0.8180000000000000	0.5904645476772620
RestaurantSpace_Heat	SDGE_EUI_STUDY	0.3350000000000000	0.8180000000000000	0.4095354523227380
RestaurantWater_Heat	SDGE_EUI_STUDY	0.8840000000000000	0.9800000000000000	0.9020408163265310
RestaurantWater_Heat	SDGE_EUI_STUDY	0.0960000000000000	0.9800000000000000	0.0979591836734694
RestaurantCook_top	SCG_COOKING_STUDY	0.7330000000000000	0.7500000000000000	0.9773333333333330
RestaurantCook_top	SCG_COOKING_STUDY	0.0170000000000000	0.7500000000000000	0.0226666666666667
RestaurantFryer	SCG_COOKING_STUDY	0.6600000000000000	0.7290000000000000	0.9053497942386830
RestaurantFryer	SCG_COOKING_STUDY	0.0690000000000000	0.7290000000000000	0.0946502057613169
RestaurantGriddle	SCG_COOKING_STUDY	0.5570000000000000	0.5740000000000000	0.9703832752613240
RestaurantGriddle	SCG_COOKING_STUDY	0.0170000000000000	0.5740000000000000	0.0296167247386760
RestaurantOther_Cooking	SDGE_EUI_STUDY	0.6600000000000000	1.0000000000000000	0.6600000000000000
RestaurantOther_Cooking	SDGE_EUI_STUDY	0.3400000000000000	1.0000000000000000	0.3400000000000000
RestaurantAC_Compressor	CI_1996_STUDY	0.0600000000000000	1.0000000000000000	0.0600000000000000
RestaurantAC_Compressor	CI_1996_STUDY	0.9400000000000000	1.0000000000000000	0.9400000000000000
RestaurantOther	DEFAULT	0.0050000000000000	0.0050000000000000	1.0000000000000000
RetailSpace_Heat	SDGE_EUI_STUDY	0.3990000000000000	0.7710000000000000	0.5175097276264590
RetailSpace_Heat	SDGE_EUI_STUDY	0.3720000000000000	0.7710000000000000	0.4824902723735410
RetailWater_Heat	SDGE_EUI_STUDY	0.2800000000000000	0.9030000000000000	0.3100775193798450
RetailWater_Heat	SDGE_EUI_STUDY	0.6230000000000000	0.9030000000000000	0.6899224806201550
RetailCooking	SDGE_EUI_STUDY	0.0740000000000000	0.7900000000000000	0.0936708860759494
RetailCooking	SDGE_EUI_STUDY	0.7160000000000000	0.7900000000000000	0.9063291139240510
RetailOther	DEFAULT	1.0000000000000000	1.0000000000000000	1.0000000000000000
LaundrySpace_Heat	CI_1996_STUDY	0.6000000000000000	1.0400000000000000	0.5769230769230770
LaundrySpace_Heat	CI_1996_STUDY	0.4400000000000000	1.0400000000000000	0.4230769230769230
LaundryWater_Heat	CI_1996_STUDY	0.6900000000000000	1.0200000000000000	0.6764705882352940
LaundryWater_Heat	CI_1996_STUDY	0.3300000000000000	1.0200000000000000	0.3235294117647060
LaundryDrying	CI_1996_STUDY	0.6600000000000000	1.1000000000000000	0.6000000000000000
LaundryDrying	CI_1996_STUDY	0.4400000000000000	1.1000000000000000	0.4000000000000000
LaundryOther	DEFAULT	1.0000000000000000	1.0000000000000000	1.0000000000000000
WarehouseSpace_Heat	SDGE_EUI_STUDY	0.1010000000000000	0.2310000000000000	0.4372294372294370
WarehouseSpace_Heat	SDGE_EUI_STUDY	0.1300000000000000	0.2310000000000000	0.5627705627705630
WarehouseWater_Heat	SDGE_EUI_STUDY	0.0630000000000000	0.8800000000000000	0.0715909090909091
WarehouseWater_Heat	SDGE_EUI_STUDY	0.8170000000000000	0.8800000000000000	0.9284090909090910
WarehouseEngine	Assumed same as AC	0.0600000000000000	1.0000000000000000	0.0600000000000000
WarehouseEngine	Assumed same as AC	0.9400000000000000	1.0000000000000000	0.9400000000000000
WarehouseOther	DEFAULT	1.0000000000000000	1.0000000000000000	1.0000000000000000
SchoolSpace_Heat	SDGE_EUI_STUDY	0.7280000000000000	0.9670000000000000	0.7528438469493280
SchoolSpace_Heat	SDGE_EUI_STUDY	0.2390000000000000	0.9670000000000000	0.2471561530506720
SchoolWater_Heat	SDGE_EUI_STUDY	0.6970000000000000	0.9190000000000000	0.7584330794341680
SchoolWater_Heat	SDGE_EUI_STUDY	0.2220000000000000	0.9190000000000000	0.2415669205658320
SchoolCook_top	SDGE_EUI_STUDY	0.3900000000000000	0.9100000000000000	0.4285714285714290
SchoolCook_top	SDGE_EUI_STUDY	0.5200000000000000	0.9100000000000000	0.5714285714285710
SchoolFryer	SDGE_EUI_STUDY	0.3900000000000000	0.9100000000000000	0.4285714285714290
SchoolFryer	SDGE_EUI_STUDY	0.5200000000000000	0.9100000000000000	0.5714285714285710

SAT_LOOKUP	SOURCE	FASHARE_ORIG	BNSUM_SAT	FASHARE_SDGE
SchoolGriddle	SDGE_EUI_STUDY	0.3900000000000000	0.9100000000000000	0.4285714285714290
SchoolGriddle	SDGE_EUI_STUDY	0.5200000000000000	0.9100000000000000	0.5714285714285710
SchoolOther_Cooking	SDGE_EUI_STUDY	0.3900000000000000	0.9100000000000000	0.4285714285714290
SchoolOther_Cooking	SDGE_EUI_STUDY	0.5200000000000000	0.9100000000000000	0.5714285714285710
SchoolAC_Compressor	CI_1996_STUDY	0.0600000000000000	1.0000000000000000	0.0600000000000000
SchoolAC_Compressor	CI_1996_STUDY	0.9400000000000000	1.0000000000000000	0.9400000000000000
SchoolOther	DEFAULT	1.0000000000000000	1.0000000000000000	1.0000000000000000
CollegeSpace_Heat	SDGE_EUI_STUDY	0.2520000000000000	0.7630000000000000	0.3302752293577980
CollegeSpace_Heat	SDGE_EUI_STUDY	0.5110000000000000	0.7630000000000000	0.6697247706422020
CollegeWater_Heat	SDGE_EUI_STUDY	0.7800000000000000	0.9550000000000000	0.8167539267015710
CollegeWater_Heat	SDGE_EUI_STUDY	0.1750000000000000	0.9550000000000000	0.1832460732984290
CollegeCook_top	SDGE_EUI_STUDY	0.0350000000000000	0.7290000000000000	0.0480109739368999
CollegeCook_top	SDGE_EUI_STUDY	0.6940000000000000	0.7290000000000000	0.9519890260631000
CollegeFryer	SDGE_EUI_STUDY	0.0350000000000000	0.7290000000000000	0.0480109739368999
CollegeFryer	SDGE_EUI_STUDY	0.6940000000000000	0.7290000000000000	0.9519890260631000
CollegeGriddle	SDGE_EUI_STUDY	0.0350000000000000	0.7290000000000000	0.0480109739368999
CollegeGriddle	SDGE_EUI_STUDY	0.6940000000000000	0.7290000000000000	0.9519890260631000
CollegeOther_Cooking	SDGE_EUI_STUDY	0.0350000000000000	0.7290000000000000	0.0480109739368999
CollegeOther_Cooking	SDGE_EUI_STUDY	0.6940000000000000	0.7290000000000000	0.9519890260631000
CollegeAC_Compressor	CI_1996_STUDY	0.0600000000000000	1.0000000000000000	0.0600000000000000
CollegeAC_Compressor	CI_1996_STUDY	0.9400000000000000	1.0000000000000000	0.9400000000000000
CollegeOther	DEFAULT	0.0930000000000000	0.0930000000000000	1.0000000000000000
HealthSpace_Heat	SDGE_EUI_STUDY	0.6180000000000000	0.9360000000000000	0.6602564102564100
HealthSpace_Heat	SDGE_EUI_STUDY	0.3180000000000000	0.9360000000000000	0.3397435897435900
HealthWater_Heat	SDGE_EUI_STUDY	0.7220000000000000	0.8760000000000000	0.8242009132420090
HealthWater_Heat	SDGE_EUI_STUDY	0.1540000000000000	0.8760000000000000	0.1757990867579910
HealthCook_top	SDGE_EUI_STUDY	0.0870000000000000	0.9170000000000000	0.0948745910577972
HealthCook_top	SDGE_EUI_STUDY	0.8300000000000000	0.9170000000000000	0.9051254089422030
HealthFryer	SDGE_EUI_STUDY	0.0870000000000000	0.9170000000000000	0.0948745910577972
HealthFryer	SDGE_EUI_STUDY	0.8300000000000000	0.9170000000000000	0.9051254089422030
HealthGriddle	SDGE_EUI_STUDY	0.0870000000000000	0.9170000000000000	0.0948745910577972
HealthGriddle	SDGE_EUI_STUDY	0.8300000000000000	0.9170000000000000	0.9051254089422030
HealthOther_Cooking	SDGE_EUI_STUDY	0.6600000000000000	1.0000000000000000	0.6600000000000000
HealthOther_Cooking	SDGE_EUI_STUDY	0.3400000000000000	1.0000000000000000	0.3400000000000000
HealthDrying	CI_1996_STUDY	0.6600000000000000	1.1000000000000000	0.6000000000000000
HealthDrying	CI_1996_STUDY	0.4400000000000000	1.1000000000000000	0.4000000000000000
HealthAC_Compressor	CI_1996_STUDY	0.0600000000000000	1.0000000000000000	0.0600000000000000
HealthAC_Compressor	CI_1996_STUDY	0.9400000000000000	1.0000000000000000	0.9400000000000000
HealthOther	DEFAULT	0.2110000000000000	0.2110000000000000	1.0000000000000000
LodgingSpace_Heat	SDGE_EUI_STUDY	0.2430000000000000	0.8950000000000000	0.2715083798882680
LodgingSpace_Heat	SDGE_EUI_STUDY	0.6520000000000000	0.8950000000000000	0.7284916201117320
LodgingWater_Heat	SDGE_EUI_STUDY	0.9410000000000000	0.9510000000000000	0.9894847528916930
LodgingWater_Heat	SDGE_EUI_STUDY	0.0100000000000000	0.9510000000000000	0.0105152471083070
LodgingCook_top	SDGE_EUI_STUDY	0.3210000000000000	0.7140000000000000	0.4495798319327730
LodgingCook_top	SDGE_EUI_STUDY	0.3930000000000000	0.7140000000000000	0.5504201680672270
LodgingFryer	SDGE_EUI_STUDY	0.3210000000000000	0.7140000000000000	0.4495798319327730
LodgingFryer	SDGE_EUI_STUDY	0.3930000000000000	0.7140000000000000	0.5504201680672270
LodgingGriddle	SDGE_EUI_STUDY	0.3210000000000000	0.7140000000000000	0.4495798319327730
LodgingGriddle	SDGE_EUI_STUDY	0.3930000000000000	0.7140000000000000	0.5504201680672270
LodgingOther_Cooking	SDGE_EUI_STUDY	0.3210000000000000	0.7140000000000000	0.4495798319327730
LodgingOther_Cooking	SDGE_EUI_STUDY	0.3930000000000000	0.7140000000000000	0.5504201680672270
LodgingDrying	CI_1996_STUDY	0.6600000000000000	1.1000000000000000	0.6000000000000000
LodgingDrying	CI_1996_STUDY	0.4400000000000000	1.1000000000000000	0.4000000000000000

SAT_LOOKUP	SOURCE	FASHARE_ORIG	BNSUM_SAT	FASHARE_SDGE
LodgingAC_Compressor	CI_1996_STUDY	0.0600000000000000	1.0000000000000000	0.0600000000000000
LodgingAC_Compressor	CI_1996_STUDY	0.9400000000000000	1.0000000000000000	0.9400000000000000
LodgingOther	DEFAULT	0.4330000000000000	0.4330000000000000	1.0000000000000000
MiscSpace_Heat	SDGE_EUI_STUDY	0.3820000000000000	0.6950000000000000	0.5496402877697840
MiscSpace_Heat	SDGE_EUI_STUDY	0.3130000000000000	0.6950000000000000	0.4503597122302160
MiscWater_Heat	SDGE_EUI_STUDY	0.5040000000000000	0.9050000000000000	0.5569060773480660
MiscWater_Heat	SDGE_EUI_STUDY	0.4010000000000000	0.9050000000000000	0.4430939226519340
MiscCook_top	SCG_COOKING_STUDY	0.7330000000000000	0.7500000000000000	0.9773333333333333
MiscCook_top	SCG_COOKING_STUDY	0.0170000000000000	0.7500000000000000	0.0226666666666667
MiscFryer	SCG_COOKING_STUDY	0.6600000000000000	0.7290000000000000	0.9053497942386830
MiscFryer	SCG_COOKING_STUDY	0.0690000000000000	0.7290000000000000	0.0946502057613169
MiscGriddle	SCG_COOKING_STUDY	0.5570000000000000	0.5740000000000000	0.9703832752613240
MiscGriddle	SCG_COOKING_STUDY	0.0170000000000000	0.5740000000000000	0.0296167247386760
MiscOther_Cooking	SDGE_EUI_STUDY	0.6600000000000000	1.0000000000000000	0.6600000000000000
MiscOther_Cooking	SDGE_EUI_STUDY	0.3400000000000000	1.0000000000000000	0.3400000000000000
MiscAC_Compressor	CI_1996_STUDY	0.0600000000000000	1.0000000000000000	0.0600000000000000
MiscAC_Compressor	CI_1996_STUDY	0.9400000000000000	1.0000000000000000	0.9400000000000000
MiscOther	DEFAULT	0.0600000000000000	0.0600000000000000	1.0000000000000000
GovernmentSpace_Heat	SDGE_EUI_STUDY	0.7460000000000000	0.8720000000000000	0.8555045871559630
GovernmentSpace_Heat	SDGE_EUI_STUDY	0.1260000000000000	0.8720000000000000	0.1444954128440370
GovernmentWater_Heat	SDGE_EUI_STUDY	0.1620000000000000	0.9770000000000000	0.1658137154554760
GovernmentWater_Heat	SDGE_EUI_STUDY	0.8150000000000000	0.9770000000000000	0.8341862845445240
GovernmentCook_top	SCG_COOKING_STUDY	0.7330000000000000	0.7500000000000000	0.9773333333333333
GovernmentCook_top	SCG_COOKING_STUDY	0.0170000000000000	0.7500000000000000	0.0226666666666667
GovernmentFryer	SCG_COOKING_STUDY	0.6600000000000000	0.7290000000000000	0.9053497942386830
GovernmentFryer	SCG_COOKING_STUDY	0.0690000000000000	0.7290000000000000	0.0946502057613169
GovernmentGriddle	SCG_COOKING_STUDY	0.5570000000000000	0.5740000000000000	0.9703832752613240
GovernmentGriddle	SCG_COOKING_STUDY	0.0170000000000000	0.5740000000000000	0.0296167247386760
GovernmentOther_Cooking	SDGE_EUI_STUDY	0.6600000000000000	1.0000000000000000	0.6600000000000000
GovernmentOther_Cooking	SDGE_EUI_STUDY	0.3400000000000000	1.0000000000000000	0.3400000000000000
GovernmentAC_Compressor	CI_1996_STUDY	0.0600000000000000	1.0000000000000000	0.0600000000000000
GovernmentAC_Compressor	CI_1996_STUDY	0.9400000000000000	1.0000000000000000	0.9400000000000000
GovernmentOther	DEFAULT	0.1750000000000000	0.1750000000000000	1.0000000000000000
TCUSpace_Heat	CI_1996_STUDY	0.6000000000000000	1.0400000000000000	0.5769230769230770
TCUSpace_Heat	CI_1996_STUDY	0.4400000000000000	1.0400000000000000	0.4230769230769230
TCUWater_Heat	CI_1996_STUDY	0.6900000000000000	1.0200000000000000	0.6764705882352940
TCUWater_Heat	CI_1996_STUDY	0.3300000000000000	1.0200000000000000	0.3235294117647060
TCUEngine	Assumed same as AC	0.0600000000000000	1.0000000000000000	0.0600000000000000
TCUEngine	Assumed same as AC	0.9400000000000000	1.0000000000000000	0.9400000000000000
TCUOther	DEFAULT	1.0000000000000000	1.0000000000000000	1.0000000000000000
ConstructionSpace_Heat	CI_1996_STUDY	0.6000000000000000	1.0400000000000000	0.5769230769230770
ConstructionSpace_Heat	CI_1996_STUDY	0.4400000000000000	1.0400000000000000	0.4230769230769230
ConstructionWater_Heat	CI_1996_STUDY	0.6900000000000000	1.0200000000000000	0.6764705882352940
ConstructionWater_Heat	CI_1996_STUDY	0.3300000000000000	1.0200000000000000	0.3235294117647060
ConstructionOther	DEFAULT	1.0000000000000000	1.0000000000000000	1.0000000000000000
AgricultureSpace_Heat	CI_1996_STUDY	0.6000000000000000	1.0400000000000000	0.5769230769230770
AgricultureSpace_Heat	CI_1996_STUDY	0.4400000000000000	1.0400000000000000	0.4230769230769230
AgricultureWater_Heat	CI_1996_STUDY	0.6900000000000000	1.0200000000000000	0.6764705882352940
AgricultureWater_Heat	CI_1996_STUDY	0.3300000000000000	1.0200000000000000	0.3235294117647060
AgricultureDrying	NEED DATA	1.0000000000000000	1.0000000000000000	1.0000000000000000
AgricultureDrying	NEED DATA	0.0000000000000000	1.0000000000000000	0.0000000000000000
AgricultureEngine	Assumed same as AC	0.0600000000000000	1.0000000000000000	0.0600000000000000
AgricultureEngine	Assumed same as AC	0.9400000000000000	1.0000000000000000	0.9400000000000000

SAT_LOOKUP	SOURCE	FASHARE_ORIG	BNSUM_SAT	FASHARE_SDGE
AgricultureOther	DEFAULT	1.0000000000000000	1.0000000000000000	1.0000000000000000
GrocerySpace_Heat	SDGE_EUI_STUDY	0.4830000000000000	0.6470000000000000	0.7465224111282840
GrocerySpace_Heat	SDGE_EUI_STUDY	0.1640000000000000	0.6470000000000000	0.2534775888717160
GroceryWater_Heat	SDGE_EUI_STUDY	0.6950000000000000	0.9810000000000000	0.7084607543323140
GroceryWater_Heat	SDGE_EUI_STUDY	0.2860000000000000	0.9810000000000000	0.2915392456676860
GroceryCook_top	SDGE_EUI_STUDY	0.3210000000000000	0.9010000000000000	0.3562708102108770
GroceryCook_top	SDGE_EUI_STUDY	0.5800000000000000	0.9010000000000000	0.6437291897891230
GroceryFryer	SDGE_EUI_STUDY	0.3210000000000000	0.9010000000000000	0.3562708102108770
GroceryFryer	SDGE_EUI_STUDY	0.5800000000000000	0.9010000000000000	0.6437291897891230
GroceryGriddle	SDGE_EUI_STUDY	0.3210000000000000	0.9010000000000000	0.3562708102108770
GroceryGriddle	SDGE_EUI_STUDY	0.5800000000000000	0.9010000000000000	0.6437291897891230
GroceryOther_Cooking	SDGE_EUI_STUDY	0.3210000000000000	0.9010000000000000	0.3562708102108770
GroceryOther_Cooking	SDGE_EUI_STUDY	0.5800000000000000	0.9010000000000000	0.6437291897891230
GroceryAC_Compressor	CI_1996_STUDY	0.0600000000000000	1.0000000000000000	0.0600000000000000
GroceryAC_Compressor	CI_1996_STUDY	0.9400000000000000	1.0000000000000000	0.9400000000000000
GroceryOther	DEFAULT	1.0000000000000000	1.0000000000000000	1.0000000000000000

bname	nname	fname	_NAME_	Stock_Existing	Standard_Existing	High_Existing	Premium_Existing
Agriculture	Drying	Electric	B0	0.3120000	0.2808000	N/A	N/A
Agriculture	Drying	Natural_Gas	B0	0.2013300	0.1811970	N/A	N/A
Agriculture	Engine	Electric	B0	1.3416000	1.2074400	N/A	N/A
Agriculture	Engine	Natural_Gas	B0	0.8657190	0.7791471	N/A	N/A
Agriculture	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
Agriculture	Space_Heat	Electric	B0	0.6010000	0.5409000	N/A	N/A
Agriculture	Space_Heat	Natural_Gas	B0	0.1468600	0.1321740	0.1202783	0.1083827
Agriculture	Water_Heat	Electric	B0	0.3120000	0.2808000	0.2732184	0.2656368
Agriculture	Water_Heat	Natural_Gas	B0	0.2013300	0.1811970	0.1585474	0.1358978
College	AC_Compresso	Electric	B0	3.4630000	3.1167000	N/A	N/A
College	AC_Compresso	Natural_Gas	B0	0.1181922	0.1063730	N/A	N/A
College	Cook_top	Electric	B0	0.7620000	0.6858000	N/A	N/A
College	Cook_top	Natural_Gas	B0	0.0486000	0.0437400	N/A	N/A
College	Fryer	Electric	B0	0.7620000	0.6858000	N/A	N/A
College	Fryer	Natural_Gas	B0	0.0485700	0.0437130	N/A	N/A
College	Griddle	Electric	B0	0.7620000	0.6858000	N/A	N/A
College	Griddle	Natural_Gas	B0	0.0485700	0.0437130	N/A	N/A
College	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
College	Other_Cooking	Electric	B0	0.7620000	0.6858000	N/A	N/A
College	Other_Cooking	Natural_Gas	B0	0.0486000	0.0437400	N/A	N/A
College	Space_Heat	Electric	B0	0.1990000	0.1791000	N/A	N/A
College	Space_Heat	Natural_Gas	B0	0.2664300	0.2397870	0.2182062	0.1966253
College	Water_Heat	Electric	B0	0.6400000	0.5760000	0.5604480	0.5448960
College	Water_Heat	Natural_Gas	B0	0.2871500	0.2584350	0.2261306	0.1938263
Construction	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
Construction	Space_Heat	Electric	B0	0.6010000	0.5409000	N/A	N/A
Construction	Space_Heat	Natural_Gas	B0	0.1468600	0.1321740	0.1202783	0.1083827
Construction	Water_Heat	Electric	B0	0.3120000	0.2808000	0.2732184	0.2656368
Construction	Water_Heat	Natural_Gas	B0	0.2013300	0.1811970	0.1585474	0.1358978
Government	AC_Compresso	Electric	B0	3.0560000	2.7504000	N/A	N/A
Government	AC_Compresso	Natural_Gas	B0	0.1043013	0.0938712	N/A	N/A
Government	Cook_top	Electric	B0	0.4510000	0.4059000	N/A	N/A
Government	Cook_top	Natural_Gas	B0	0.0346000	0.0311400	N/A	N/A
Government	Fryer	Electric	B0	0.4510000	0.4059000	N/A	N/A
Government	Fryer	Natural_Gas	B0	0.0345900	0.0311310	N/A	N/A
Government	Griddle	Electric	B0	0.4510000	0.4059000	N/A	N/A
Government	Griddle	Natural_Gas	B0	0.0345900	0.0311310	N/A	N/A
Government	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
Government	Other_Cooking	Electric	B0	0.4510000	0.4059000	N/A	N/A
Government	Other_Cooking	Natural_Gas	B0	0.0346000	0.0311400	N/A	N/A
Government	Space_Heat	Electric	B0	0.8450000	N/A	N/A	N/A
Government	Space_Heat	Natural_Gas	B0	0.3046400	0.2741760	0.2495002	0.2248243
Government	Water_Heat	Electric	B0	0.1790000	0.1611000	0.1567503	0.1524006
Government	Water_Heat	Natural_Gas	B0	0.0473900	0.0426510	0.0373196	0.0319883
Grocery	AC_Compresso	Electric	B0	5.5860000	5.0274000	N/A	N/A
Grocery	AC_Compresso	Natural_Gas	B0	0.1906502	0.1715852	N/A	N/A
Grocery	Cook_top	Electric	B0	5.2450000	4.7205000	N/A	N/A
Grocery	Cook_top	Natural_Gas	B0	0.0418300	0.0376470	N/A	N/A
Grocery	Fryer	Electric	B0	5.2450000	4.7205000	N/A	N/A
Grocery	Fryer	Natural_Gas	B0	0.4183200	0.3764880	N/A	N/A
Grocery	Griddle	Electric	B0	5.2450000	4.7205000	N/A	N/A
Grocery	Griddle	Natural_Gas	B0	0.4183200	0.3764880	N/A	N/A
Grocery	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
Grocery	Other_Cooking	Electric	B0	5.2450000	4.7205000	N/A	N/A
Grocery	Other_Cooking	Natural_Gas	B0	0.0418300	0.0376470	N/A	N/A
Grocery	Space_Heat	Electric	B0	0.7350000	N/A	N/A	N/A
Grocery	Space_Heat	Natural_Gas	B0	0.0976200	0.0878580	0.0799508	0.0720436
Grocery	Water_Heat	Electric	B0	1.7630000	1.5867000	1.5438591	1.5010182

bname	nname	fname	_NAME_	Stock_Existing	Standard_Existing	High_Existing	Premium_Existing
Grocery	Water_Heat	Natural_Gas	B0	0.3182700	0.2864430	0.2506376	0.2148323
Health	AC_Compresso	Electric	B0	3.3360000	3.0024000	N/A	N/A
Health	AC_Compresso	Natural_Gas	B0	0.1138577	0.1024719	N/A	N/A
Health	Cook_top	Electric	B0	1.1540000	1.0386000	N/A	N/A
Health	Cook_top	Natural_Gas	B0	0.2635800	0.2372220	N/A	N/A
Health	Drying	Electric	B0	0.7619500	0.6857550	N/A	N/A
Health	Drying	Natural_Gas	B0	0.1459815	0.1313834	N/A	N/A
Health	Fryer	Electric	B0	1.1540000	1.0386000	N/A	N/A
Health	Fryer	Natural_Gas	B0	0.2635800	0.2372220	N/A	N/A
Health	Griddle	Electric	B0	1.1540000	1.0386000	N/A	N/A
Health	Griddle	Natural_Gas	B0	0.2635800	0.2372220	N/A	N/A
Health	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
Health	Other_Cooking	Electric	B0	1.1540000	1.0386000	N/A	N/A
Health	Other_Cooking	Natural_Gas	B0	0.0263600	0.0237240	N/A	N/A
Health	Space_Heat	Electric	B0	0.4050000	0.3645000	N/A	N/A
Health	Space_Heat	Natural_Gas	B0	0.0689400	0.0620460	0.0564619	0.0508777
Health	Water_Heat	Electric	B0	2.1770000	1.9593000	1.9063989	1.8534978
Health	Water_Heat	Natural_Gas	B0	0.4170900	0.3753810	0.3284584	0.2815358
Laundry	Drying	Electric	B0	85.5136937	76.9623243	N/A	N/A
Laundry	Drying	Natural_Gas	B0	14.9366516	13.4429864	N/A	N/A
Laundry	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
Laundry	Space_Heat	Electric	B0	0.6010000	0.5409000	N/A	N/A
Laundry	Space_Heat	Natural_Gas	B0	0.1468600	0.1321740	0.1202783	0.1083827
Laundry	Water_Heat	Electric	B0	15.8040000	14.2236000	13.8395628	13.4555256
Laundry	Water_Heat	Natural_Gas	B0	2.7604800	2.4844320	2.1738780	1.8633240
Lodging	AC_Compresso	Electric	B0	1.6700000	1.5030000	N/A	N/A
Lodging	AC_Compresso	Natural_Gas	B0	0.0569971	0.0512974	N/A	N/A
Lodging	Cook_top	Electric	B0	39.3000000	35.3700000	N/A	N/A
Lodging	Cook_top	Natural_Gas	B0	0.3210000	0.2889000	N/A	N/A
Lodging	Drying	Electric	B0	0.9877500	0.8889750	N/A	N/A
Lodging	Drying	Natural_Gas	B0	0.1725300	0.1552770	N/A	N/A
Lodging	Fryer	Electric	B0	5.2450000	4.7205000	N/A	N/A
Lodging	Fryer	Natural_Gas	B0	0.4183200	0.3764880	N/A	N/A
Lodging	Griddle	Electric	B0	5.2450000	4.7205000	N/A	N/A
Lodging	Griddle	Natural_Gas	B0	0.4183200	0.3764880	N/A	N/A
Lodging	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
Lodging	Other_Cooking	Electric	B0	5.2450000	4.7205000	N/A	N/A
Lodging	Other_Cooking	Natural_Gas	B0	0.0410000	0.0369000	N/A	N/A
Lodging	Space_Heat	Electric	B0	0.5490000	0.4941000	N/A	N/A
Lodging	Space_Heat	Natural_Gas	B0	0.3869800	0.3482820	0.3169366	0.2855912
Lodging	Water_Heat	Electric	B0	3.9510000	3.5590000	3.4598907	3.3638814
Lodging	Water_Heat	Natural_Gas	B0	0.6901200	0.6211080	0.5434695	0.4658310
Misc	AC_Compresso	Electric	B0	3.8720000	3.4848000	N/A	N/A
Misc	AC_Compresso	Natural_Gas	B0	0.1321514	0.1189362	N/A	N/A
Misc	Cook_top	Electric	B0	0.5390000	0.4851000	N/A	N/A
Misc	Cook_top	Natural_Gas	B0	0.0430000	0.0387000	N/A	N/A
Misc	Fryer	Electric	B0	0.5390000	0.4851000	N/A	N/A
Misc	Fryer	Natural_Gas	B0	0.0430200	0.0387180	N/A	N/A
Misc	Griddle	Electric	B0	0.5390000	0.4851000	N/A	N/A
Misc	Griddle	Natural_Gas	B0	0.0430200	0.0387180	N/A	N/A
Misc	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
Misc	Other_Cooking	Electric	B0	0.5390000	0.4851000	N/A	N/A
Misc	Other_Cooking	Natural_Gas	B0	0.0430000	0.0387000	N/A	N/A
Misc	Space_Heat	Electric	B0	0.6010000	0.5409000	N/A	N/A
Misc	Space_Heat	Natural_Gas	B0	0.1468600	0.1321740	0.1202783	0.1083827
Misc	Water_Heat	Electric	B0	0.3120000	0.2808000	0.2732184	0.2656368
Misc	Water_Heat	Natural_Gas	B0	0.2013300	0.1811970	0.1585474	0.1358978
Office	AC_Compresso	Electric	B0	3.0560000	2.7504000	N/A	N/A

bname	nname	fname	_NAME_	Stock_Existing	Standard_Existing	High_Existing	Premium_Existing
Office	AC_Compresso	Natural_Gas	B0	0.1043013	0.0938712	N/A	N/A
Office	Cooking	Electric	B0	0.4510000	0.4059000	N/A	N/A
Office	Cooking	Natural_Gas	B0	0.0345900	0.0311310	N/A	N/A
Office	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
Office	Space_Heat	Electric	B0	0.8450000	0.7605000	N/A	N/A
Office	Space_Heat	Natural_Gas	B0	0.3046400	0.2741760	0.2495002	0.2248243
Office	Water_Heat	Electric	B0	0.1790000	0.1611000	0.1567503	0.1524006
Office	Water_Heat	Natural_Gas	B0	0.0473900	0.0426510	0.0373196	0.0319883
Restaurant	AC_Compresso	Electric	B0	5.9430000	5.3487000	N/A	N/A
Restaurant	AC_Compresso	Natural_Gas	B0	0.2028346	0.1825511	N/A	N/A
Restaurant	Cook_top	Electric	B0	1.5190269	1.3671242	N/A	N/A
Restaurant	Cook_top	Natural_Gas	B0	1.1985040	1.0786536	N/A	N/A
Restaurant	Fryer	Electric	B0	6.1654621	5.5489159	N/A	N/A
Restaurant	Fryer	Natural_Gas	B0	1.0791441	0.9712297	N/A	N/A
Restaurant	Griddle	Electric	B0	1.5190269	1.3671242	N/A	N/A
Restaurant	Griddle	Natural_Gas	B0	0.9107322	0.8196590	N/A	N/A
Restaurant	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
Restaurant	Other_Cooking	Electric	B0	27.3424841	24.6082357	N/A	N/A
Restaurant	Other_Cooking	Natural_Gas	B0	0.9712297	0.8741067	N/A	N/A
Restaurant	Space_Heat	Electric	B0	0.3430000	0.3087000	N/A	N/A
Restaurant	Space_Heat	Natural_Gas	B0	0.1176700	0.1059030	0.0963717	0.0868405
Restaurant	Water_Heat	Electric	B0	4.2600000	3.8340000	3.7304820	3.6269640
Restaurant	Water_Heat	Natural_Gas	B0	0.8665900	0.7799310	0.6824396	0.5849483
Retail	Cooking	Electric	B0	0.6930000	0.6237000	N/A	N/A
Retail	Cooking	Natural_Gas	B0	0.3078600	0.2770740	N/A	N/A
Retail	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
Retail	Space_Heat	Electric	B0	1.3560000	1.2204000	N/A	N/A
Retail	Space_Heat	Natural_Gas	B0	0.2455200	0.2209680	0.2010809	0.1811938
Retail	Water_Heat	Electric	B0	0.5280000	0.4752000	0.4623696	0.4495392
Retail	Water_Heat	Natural_Gas	B0	0.1092600	0.0983340	0.0860423	0.0737505
School	AC_Compresso	Electric	B0	1.9130000	1.7217000	N/A	N/A
School	AC_Compresso	Natural_Gas	B0	0.0652907	0.0587616	N/A	N/A
School	Cook_top	Electric	B0	0.5020000	0.4518000	N/A	N/A
School	Cook_top	Natural_Gas	B0	0.0460000	0.0414000	N/A	N/A
School	Fryer	Electric	B0	0.5020000	0.4518000	N/A	N/A
School	Fryer	Natural_Gas	B0	0.0461000	0.0414900	N/A	N/A
School	Griddle	Electric	B0	0.5020000	0.4518000	N/A	N/A
School	Griddle	Natural_Gas	B0	0.0461000	0.0414900	N/A	N/A
School	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
School	Other_Cooking	Electric	B0	0.5020000	0.4518000	N/A	N/A
School	Other_Cooking	Natural_Gas	B0	0.0460000	0.0414000	N/A	N/A
School	Space_Heat	Electric	B0	0.4840000	0.4356000	N/A	N/A
School	Space_Heat	Natural_Gas	B0	0.0923800	0.0831420	0.0756592	0.0681764
School	Water_Heat	Electric	B0	0.6880000	0.6192000	0.6024816	0.5857632
School	Water_Heat	Natural_Gas	B0	0.1232800	0.1109520	0.0970830	0.0832140
TCU	Engine	Electric	B0	3.7825983	3.4043385	N/A	N/A
TCU	Engine	Natural_Gas	B0	2.4408670	2.1967803	N/A	N/A
TCU	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
TCU	Space_Heat	Electric	B0	0.6010000	0.5409000	N/A	N/A
TCU	Space_Heat	Natural_Gas	B0	0.1468600	0.1321740	0.1202783	0.1083827
TCU	Water_Heat	Electric	B0	0.3120000	0.2808000	0.2732184	0.2656368
TCU	Water_Heat	Natural_Gas	B0	0.2013300	0.1811970	0.1585474	0.1358978
Warehouse	Engine	Electric	B0	33.4700769	30.1230692	N/A	N/A
Warehouse	Engine	Natural_Gas	B0	8.8838738	7.9954865	N/A	N/A
Warehouse	Other	Natural_Gas	B0	0.00	N/A	N/A	N/A
Warehouse	Space_Heat	Electric	B0	2.3400000	2.1060000	N/A	N/A
Warehouse	Space_Heat	Natural_Gas	B0	0.6211000	0.5589900	0.5086809	0.4583718
Warehouse	Water_Heat	Electric	B0	0.1300000	0.1170000	0.1138410	0.1106820

**Southern California Gas Company
Core Commercial Market
EUI Data**

bname	nname	fname	_NAME_	Stock_Existing	Standard_Existing	High_Existing	Premium_Existing
Warehouse	Water_Heat	Natural_Gas	B0	0.2048000	0.1843200	0.1612800	0.1382400

bname	nname	fname	_NAME_	SAT_LOOKUP	Stock_Qtec	Standard_Qtec	High_Qtec	Premium_Qtec
Agriculture	Drying	Electric	EASHARE	AgricultureDryingElectric	0.65	0.35	N/A	N/A
Agriculture	Drying	Natural_Gas	EASHARE	AgricultureDryingNatural_Gas	0.65	0.35	N/A	N/A
Agriculture	Engine	Electric	EASHARE	AgricultureEngineElectric	0.65	0.35	N/A	N/A
Agriculture	Engine	Natural_Gas	EASHARE	AgricultureEngineNatural_Gas	0.65	0.35	N/A	N/A
Agriculture	Other	Natural_Gas	EASHARE	AgricultureOtherNatural_Gas	1	N/A	N/A	N/A
Agriculture	Space_Heat	Electric	EASHARE	AgricultureSpace_HeatElectric	1	999	999	999
Agriculture	Space_Heat	Natural_Gas	EASHARE	AgricultureSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
Agriculture	Water_Heat	Electric	EASHARE	AgricultureWater_HeatElectric	0.4	0.5	0.08	0.02
Agriculture	Water_Heat	Natural_Gas	EASHARE	AgricultureWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
College	AC_Compressor	Electric	EASHARE	CollegeAC_CompressorElectric	0.65	0.35	N/A	N/A
College	AC_Compressor	Natural_Gas	EASHARE	CollegeAC_CompressorNatural_Gas	0.65	0.35	N/A	N/A
College	Cook_top	Electric	EASHARE	CollegeCook_topElectric	0.65	0.35	N/A	N/A
College	Cook_top	Natural_Gas	EASHARE	CollegeCook_topNatural_Gas	0.65	0.35	N/A	N/A
College	Fryer	Electric	EASHARE	CollegeFryerElectric	0.65	0.35	N/A	N/A
College	Fryer	Natural_Gas	EASHARE	CollegeFryerNatural_Gas	0.65	0.35	N/A	N/A
College	Griddle	Electric	EASHARE	CollegeGriddleElectric	0.65	0.35	N/A	N/A
College	Griddle	Natural_Gas	EASHARE	CollegeGriddleNatural_Gas	0.65	0.35	N/A	N/A
College	Other	Natural_Gas	EASHARE	CollegeOtherNatural_Gas	1	N/A	N/A	N/A
College	Other_Cooking	Electric	EASHARE	CollegeOther_CookingElectric	0.65	0.35	N/A	N/A
College	Other_Cooking	Natural_Gas	EASHARE	CollegeOther_CookingNatural_Gas	0.65	0.35	N/A	N/A
College	Space_Heat	Electric	EASHARE	CollegeSpace_HeatElectric	1	999	999	999
College	Space_Heat	Natural_Gas	EASHARE	CollegeSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
College	Water_Heat	Electric	EASHARE	CollegeWater_HeatElectric	0.4	0.5	0.08	0.02
College	Water_Heat	Natural_Gas	EASHARE	CollegeWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
Construction	Other	Natural_Gas	EASHARE	ConstructionOtherNatural_Gas	1	N/A	N/A	N/A
Construction	Space_Heat	Electric	EASHARE	ConstructionSpace_HeatElectric	1	999	999	999
Construction	Space_Heat	Natural_Gas	EASHARE	ConstructionSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
Construction	Water_Heat	Electric	EASHARE	ConstructionWater_HeatElectric	0.4	0.5	0.08	0.02
Construction	Water_Heat	Natural_Gas	EASHARE	ConstructionWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
Government	AC_Compressor	Electric	EASHARE	GovernmentAC_CompressorElectric	0.65	0.35	N/A	N/A
Government	AC_Compressor	Natural_Gas	EASHARE	GovernmentAC_CompressorNatural_Gas	0.65	0.35	N/A	N/A
Government	Cook_top	Electric	EASHARE	GovernmentCook_topElectric	0.65	0.35	N/A	N/A
Government	Cook_top	Natural_Gas	EASHARE	GovernmentCook_topNatural_Gas	0.65	0.35	N/A	N/A
Government	Fryer	Electric	EASHARE	GovernmentFryerElectric	0.65	0.35	N/A	N/A
Government	Fryer	Natural_Gas	EASHARE	GovernmentFryerNatural_Gas	0.65	0.35	N/A	N/A
Government	Griddle	Electric	EASHARE	GovernmentGriddleElectric	0.65	0.35	N/A	N/A
Government	Griddle	Natural_Gas	EASHARE	GovernmentGriddleNatural_Gas	0.65	0.35	N/A	N/A
Government	Other	Natural_Gas	EASHARE	GovernmentOtherNatural_Gas	1	N/A	N/A	N/A
Government	Other_Cooking	Electric	EASHARE	GovernmentOther_CookingElectric	0.65	0.35	N/A	N/A
Government	Other_Cooking	Natural_Gas	EASHARE	GovernmentOther_CookingNatural_Gas	0.65	0.35	N/A	N/A
Government	Space_Heat	Electric	EASHARE	GovernmentSpace_HeatElectric	1	999	999	999
Government	Space_Heat	Natural_Gas	EASHARE	GovernmentSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
Government	Water_Heat	Electric	EASHARE	GovernmentWater_HeatElectric	0.4	0.5	0.08	0.02
Government	Water_Heat	Natural_Gas	EASHARE	GovernmentWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
Grocery	AC_Compressor	Electric	EASHARE	GroceryAC_CompressorElectric	0.65	0.35	N/A	N/A
Grocery	AC_Compressor	Natural_Gas	EASHARE	GroceryAC_CompressorNatural_Gas	0.65	0.35	N/A	N/A
Grocery	Cook_top	Electric	EASHARE	GroceryCook_topElectric	0.65	0.35	N/A	N/A
Grocery	Cook_top	Natural_Gas	EASHARE	GroceryCook_topNatural_Gas	0.65	0.35	N/A	N/A
Grocery	Fryer	Electric	EASHARE	GroceryFryerElectric	0.65	0.35	N/A	N/A
Grocery	Fryer	Natural_Gas	EASHARE	GroceryFryerNatural_Gas	0.65	0.35	N/A	N/A
Grocery	Griddle	Electric	EASHARE	GroceryGriddleElectric	0.65	0.35	N/A	N/A
Grocery	Griddle	Natural_Gas	EASHARE	GroceryGriddleNatural_Gas	0.65	0.35	N/A	N/A
Grocery	Other	Natural_Gas	EASHARE	GroceryOtherNatural_Gas	1	N/A	N/A	N/A
Grocery	Other_Cooking	Electric	EASHARE	GroceryOther_CookingElectric	0.65	0.35	N/A	N/A
Grocery	Other_Cooking	Natural_Gas	EASHARE	GroceryOther_CookingNatural_Gas	0.65	0.35	N/A	N/A
Grocery	Space_Heat	Electric	EASHARE	GrocerySpace_HeatElectric	1	999	999	999
Grocery	Space_Heat	Natural_Gas	EASHARE	GrocerySpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
Grocery	Water_Heat	Electric	EASHARE	GroceryWater_HeatElectric	0.4	0.5	0.08	0.02
Grocery	Water_Heat	Natural_Gas	EASHARE	GroceryWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
Health	AC_Compressor	Electric	EASHARE	HealthAC_CompressorElectric	0.65	0.35	N/A	N/A
Health	AC_Compressor	Natural_Gas	EASHARE	HealthAC_CompressorNatural_Gas	0.65	0.35	N/A	N/A
Health	Cook_top	Electric	EASHARE	HealthCook_topElectric	0.65	0.35	N/A	N/A
Health	Cook_top	Natural_Gas	EASHARE	HealthCook_topNatural_Gas	0.65	0.35	N/A	N/A
Health	Drying	Electric	EASHARE	HealthDryingElectric	0.65	0.35	N/A	N/A
Health	Drying	Natural_Gas	EASHARE	HealthDryingNatural_Gas	0.65	0.35	N/A	N/A
Health	Fryer	Electric	EASHARE	HealthFryerElectric	0.65	0.35	N/A	N/A
Health	Fryer	Natural_Gas	EASHARE	HealthFryerNatural_Gas	0.65	0.35	N/A	N/A
Health	Griddle	Electric	EASHARE	HealthGriddleElectric	0.65	0.35	N/A	N/A
Health	Griddle	Natural_Gas	EASHARE	HealthGriddleNatural_Gas	0.65	0.35	N/A	N/A
Health	Other	Natural_Gas	EASHARE	HealthOtherNatural_Gas	1	N/A	N/A	N/A
Health	Other_Cooking	Electric	EASHARE	HealthOther_CookingElectric	0.65	0.35	N/A	N/A
Health	Other_Cooking	Natural_Gas	EASHARE	HealthOther_CookingNatural_Gas	0.65	0.35	N/A	N/A
Health	Space_Heat	Electric	EASHARE	HealthSpace_HeatElectric	1	999	999	999
Health	Space_Heat	Natural_Gas	EASHARE	HealthSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
Health	Water_Heat	Electric	EASHARE	HealthWater_HeatElectric	0.4	0.5	0.08	0.02
Health	Water_Heat	Natural_Gas	EASHARE	HealthWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
Laundry	Drying	Electric	EASHARE	LaundryDryingElectric	0.65	0.35	N/A	N/A

bname	nname	fname	_NAME_	SAT_LOOKUP	Stock_Qtec	Standard_Qtec	High_Qtec	Premium_Qtec
Laundry	Drying	Natural_Gas	EASHARE	LaundryDryingNatural_Gas	0.65	0.35	N/A	N/A
Laundry	Other	Natural_Gas	EASHARE	LaundryOtherNatural_Gas	1	N/A	N/A	N/A
Laundry	Space_Heat	Electric	EASHARE	LaundrySpace_HeatElectric	1	999	999	999
Laundry	Space_Heat	Natural_Gas	EASHARE	LaundrySpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
Laundry	Water_Heat	Electric	EASHARE	LaundryWater_HeatElectric	0.4	0.5	0.08	0.02
Laundry	Water_Heat	Natural_Gas	EASHARE	LaundryWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
Lodging	AC_Compressor	Electric	EASHARE	LodgingAC_CompressorElectric	0.65	0.35	N/A	N/A
Lodging	AC_Compressor	Natural_Gas	EASHARE	LodgingAC_CompressorNatural_Gas	0.65	0.35	N/A	N/A
Lodging	Cook_top	Electric	EASHARE	LodgingCook_topElectric	0.65	0.35	N/A	N/A
Lodging	Cook_top	Natural_Gas	EASHARE	LodgingCook_topNatural_Gas	0.65	0.35	N/A	N/A
Lodging	Drying	Electric	EASHARE	LodgingDryingElectric	0.65	0.35	N/A	N/A
Lodging	Drying	Natural_Gas	EASHARE	LodgingDryingNatural_Gas	0.65	0.35	N/A	N/A
Lodging	Fryer	Electric	EASHARE	LodgingFryerElectric	0.65	0.35	N/A	N/A
Lodging	Fryer	Natural_Gas	EASHARE	LodgingFryerNatural_Gas	0.65	0.35	N/A	N/A
Lodging	Griddle	Electric	EASHARE	LodgingGriddleElectric	0.65	0.35	N/A	N/A
Lodging	Griddle	Natural_Gas	EASHARE	LodgingGriddleNatural_Gas	0.65	0.35	N/A	N/A
Lodging	Other	Natural_Gas	EASHARE	LodgingOtherNatural_Gas	1	N/A	N/A	N/A
Lodging	Other_Cooking	Electric	EASHARE	LodgingOther_CookingElectric	0.65	0.35	N/A	N/A
Lodging	Other_Cooking	Natural_Gas	EASHARE	LodgingOther_CookingNatural_Gas	0.65	0.35	N/A	N/A
Lodging	Space_Heat	Electric	EASHARE	LodgingSpace_HeatElectric	1	999	999	999
Lodging	Space_Heat	Natural_Gas	EASHARE	LodgingSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
Lodging	Water_Heat	Electric	EASHARE	LodgingWater_HeatElectric	0.4	0.5	0.08	0.02
Lodging	Water_Heat	Natural_Gas	EASHARE	LodgingWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
Misc	AC_Compressor	Electric	EASHARE	MiscAC_CompressorElectric	0.65	0.35	N/A	N/A
Misc	AC_Compressor	Natural_Gas	EASHARE	MiscAC_CompressorNatural_Gas	0.65	0.35	N/A	N/A
Misc	Cook_top	Electric	EASHARE	MiscCook_topElectric	0.65	0.35	N/A	N/A
Misc	Cook_top	Natural_Gas	EASHARE	MiscCook_topNatural_Gas	0.65	0.35	N/A	N/A
Misc	Fryer	Electric	EASHARE	MiscFryerElectric	0.65	0.35	N/A	N/A
Misc	Fryer	Natural_Gas	EASHARE	MiscFryerNatural_Gas	0.65	0.35	N/A	N/A
Misc	Griddle	Electric	EASHARE	MiscGriddleElectric	0.65	0.35	N/A	N/A
Misc	Griddle	Natural_Gas	EASHARE	MiscGriddleNatural_Gas	0.65	0.35	N/A	N/A
Misc	Other	Natural_Gas	EASHARE	MiscOtherNatural_Gas	1	N/A	N/A	N/A
Misc	Other_Cooking	Electric	EASHARE	MiscOther_CookingElectric	0.65	0.35	N/A	N/A
Misc	Other_Cooking	Natural_Gas	EASHARE	MiscOther_CookingNatural_Gas	0.65	0.35	N/A	N/A
Misc	Space_Heat	Electric	EASHARE	MiscSpace_HeatElectric	1	999	999	999
Misc	Space_Heat	Natural_Gas	EASHARE	MiscSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
Misc	Water_Heat	Electric	EASHARE	MiscWater_HeatElectric	0.4	0.5	0.08	0.02
Misc	Water_Heat	Natural_Gas	EASHARE	MiscWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
Office	AC_Compressor	Electric	EASHARE	OfficeAC_CompressorElectric	0.65	0.35	N/A	N/A
Office	AC_Compressor	Natural_Gas	EASHARE	OfficeAC_CompressorNatural_Gas	0.65	0.35	N/A	N/A
Office	Cooking	Electric	EASHARE	OfficeCookingElectric	0.65	0.35	N/A	N/A
Office	Cooking	Natural_Gas	EASHARE	OfficeCookingNatural_Gas	0.65	0.35	N/A	N/A
Office	Other	Natural_Gas	EASHARE	OfficeOtherNatural_Gas	1	N/A	N/A	N/A
Office	Space_Heat	Electric	EASHARE	OfficeSpace_HeatElectric	1	999	999	999
Office	Space_Heat	Natural_Gas	EASHARE	OfficeSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
Office	Water_Heat	Electric	EASHARE	OfficeWater_HeatElectric	0.4	0.5	0.08	0.02
Office	Water_Heat	Natural_Gas	EASHARE	OfficeWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
Restaurant	AC_Compressor	Electric	EASHARE	RestaurantAC_CompressorElectric	0.65	0.35	N/A	N/A
Restaurant	AC_Compressor	Natural_Gas	EASHARE	RestaurantAC_CompressorNatural_Gas	0.65	0.35	N/A	N/A
Restaurant	Cook_top	Electric	EASHARE	RestaurantCook_topElectric	0.65	0.35	N/A	N/A
Restaurant	Cook_top	Natural_Gas	EASHARE	RestaurantCook_topNatural_Gas	0.65	0.35	N/A	N/A
Restaurant	Fryer	Electric	EASHARE	RestaurantFryerElectric	0.65	0.35	N/A	N/A
Restaurant	Fryer	Natural_Gas	EASHARE	RestaurantFryerNatural_Gas	0.65	0.35	N/A	N/A
Restaurant	Griddle	Electric	EASHARE	RestaurantGriddleElectric	0.65	0.35	N/A	N/A
Restaurant	Griddle	Natural_Gas	EASHARE	RestaurantGriddleNatural_Gas	0.65	0.35	N/A	N/A
Restaurant	Other	Natural_Gas	EASHARE	RestaurantOtherNatural_Gas	1	N/A	N/A	N/A
Restaurant	Other_Cooking	Electric	EASHARE	RestaurantOther_CookingElectric	0.65	0.35	N/A	N/A
Restaurant	Other_Cooking	Natural_Gas	EASHARE	RestaurantOther_CookingNatural_Gas	0.65	0.35	N/A	N/A
Restaurant	Space_Heat	Electric	EASHARE	RestaurantSpace_HeatElectric	1	999	999	999
Restaurant	Space_Heat	Natural_Gas	EASHARE	RestaurantSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
Restaurant	Water_Heat	Electric	EASHARE	RestaurantWater_HeatElectric	0.4	0.5	0.08	0.02
Restaurant	Water_Heat	Natural_Gas	EASHARE	RestaurantWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
Retail	Cooking	Electric	EASHARE	RetailCookingElectric	0.65	0.35	N/A	N/A
Retail	Cooking	Natural_Gas	EASHARE	RetailCookingNatural_Gas	0.65	0.35	N/A	N/A
Retail	Other	Natural_Gas	EASHARE	RetailOtherNatural_Gas	1	N/A	N/A	N/A
Retail	Space_Heat	Electric	EASHARE	RetailSpace_HeatElectric	1	999	999	999
Retail	Space_Heat	Natural_Gas	EASHARE	RetailSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
Retail	Water_Heat	Electric	EASHARE	RetailWater_HeatElectric	0.4	0.5	0.08	0.02
Retail	Water_Heat	Natural_Gas	EASHARE	RetailWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
School	AC_Compressor	Electric	EASHARE	SchoolAC_CompressorElectric	0.65	0.35	N/A	N/A
School	AC_Compressor	Natural_Gas	EASHARE	SchoolAC_CompressorNatural_Gas	0.65	0.35	N/A	N/A
School	Cook_top	Electric	EASHARE	SchoolCook_topElectric	0.65	0.35	N/A	N/A
School	Cook_top	Natural_Gas	EASHARE	SchoolCook_topNatural_Gas	0.65	0.35	N/A	N/A
School	Fryer	Electric	EASHARE	SchoolFryerElectric	0.65	0.35	N/A	N/A
School	Fryer	Natural_Gas	EASHARE	SchoolFryerNatural_Gas	0.65	0.35	N/A	N/A
School	Griddle	Electric	EASHARE	SchoolGriddleElectric	0.65	0.35	N/A	N/A
School	Griddle	Natural_Gas	EASHARE	SchoolGriddleNatural_Gas	0.65	0.35	N/A	N/A

bname	nname	fname	_NAME_ SAT_LOOKUP	Stock_Qtec	Standard_Qtec	High_Qtec	Premium_Qtec
School	Other	Natural_Gas	EASHARE SchoolOtherNatural_Gas	1	N/A	N/A	N/A
School	Other_Cooking	Electric	EASHARE SchoolOther_CookingElectric	0.65	0.35	N/A	N/A
School	Other_Cooking	Natural_Gas	EASHARE SchoolOther_CookingNatural_Gas	0.65	0.35	N/A	N/A
School	Space_Heat	Electric	EASHARE SchoolSpace_HeatElectric	1	999	999	999
School	Space_Heat	Natural_Gas	EASHARE SchoolSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
School	Water_Heat	Electric	EASHARE SchoolWater_HeatElectric	0.4	0.5	0.08	0.02
School	Water_Heat	Natural_Gas	EASHARE SchoolWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
TCU	Engine	Electric	EASHARE TCUEngineElectric	0.65	0.35	N/A	N/A
TCU	Engine	Natural_Gas	EASHARE TCUEngineNatural_Gas	0.65	0.35	N/A	N/A
TCU	Other	Natural_Gas	EASHARE TCUOtherNatural_Gas	1	N/A	N/A	N/A
TCU	Space_Heat	Electric	EASHARE TCUSpace_HeatElectric	1	999	999	999
TCU	Space_Heat	Natural_Gas	EASHARE TCUSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
TCU	Water_Heat	Electric	EASHARE TCUWater_HeatElectric	0.4	0.5	0.08	0.02
TCU	Water_Heat	Natural_Gas	EASHARE TCUWater_HeatNatural_Gas	0.4	0.5	0.08	0.02
Warehouse	Engine	Electric	EASHARE WarehouseEngineElectric	0.65	0.35	N/A	N/A
Warehouse	Engine	Natural_Gas	EASHARE WarehouseEngineNatural_Gas	0.65	0.35	N/A	N/A
Warehouse	Other	Natural_Gas	EASHARE WarehouseOtherNatural_Gas	1	999	N/A	N/A
Warehouse	Space_Heat	Electric	EASHARE WarehouseSpace_HeatElectric	1	999	999	999
Warehouse	Space_Heat	Natural_Gas	EASHARE WarehouseSpace_HeatNatural_Gas	0.65	0.3	0.04	0.01
Warehouse	Water_Heat	Electric	EASHARE WarehouseWater_HeatElectric	0.4	0.5	0.08	0.02
Warehouse	Water_Heat	Natural_Gas	EASHARE WarehouseWater_HeatNatural_Gas	0.4	0.5	0.08	0.02

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Southern California Gas Company
 Average Equipment Age
 Core Commercial Market

Sector	Space Heater	Water Heater	Cooktop	Griddle	Fryer	Other Cooking Equipment	Kitchen Equipment	AC	Dryer	Engine	Other
Office	1987	1983	1984	1977	1984	1983	1973	2000	1984	1988	1975
Restaurant	1987	1988	1987	1986	1986	1989	1981	1993	1985	1978	1980
Retail	1993	1983	1992	1985	1988	1992	1973	1976	1990	1994	1975
Laundry	1985	1999	2008	1995	1979	1979	1939	1975	1991		2006
Warehouse	1987	1984	1983	1983	2002	1995	1974	1975	1989	1996	1976
School	1993	1982	1981	1974	1979	1979	1968	1973	1980	1986	1973
College	1994	1988	1978	1980	1968	1986	1971	1979	1989	1981	1974
Health	1985	1984	1980	1976	1979	1981	1974	1975	1980	1981	1974
Lodging	1993	1990	1992	1979	1990	1991	1973	1975	1985	1984	1977
Misc	1982	1980	1982	1973	1981	1987	1970	1974	1982	1989	1971
Government	1987	1983	1981	1975	1981	1984	1986	1975	1986	1989	1973
TCU	1982	1980	1984	1982	1984	1986	1980	1975	1979	1979	1974
Construction	1986	1983	1988	1974	1993	1987	1972	1973	1993	1980	1974
Agriculture	1992	1989	1982	1965	1978	1978	1978	1976	1981	1998	1988

Cost Allocation Proceeding

Gas AC and Gas Engine Meter and Load Forecast(s)

Gas Engine Meters

ACTIVE Meter

Red values are Actuals

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2019	686	687	687	686	682	681	682	684	686	686	684	682	684
2020	678	672	667	656	659	659	659	665	663	663	658	661	663
2021	657	656	651	657	656	652	652	651	652	651	649	639	652
2022	672	671	666	672	671	667	667	666	667	666	664	654	667
2023	672	671	666	672	671	667	667	666	667	666	664	654	667
2024	672	671	666	672	671	667	667	666	667	666	664	654	667
2025	672	671	666	672	671	667	667	666	667	666	664	654	667
2026	672	671	666	672	671	667	667	666	667	666	664	654	667
2027	672	671	666	672	671	667	667	666	667	666	664	654	667

Gas Engine Load Forecast

(MDTH)

Mdth Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2019	84	73	67	108	154	176	223	245	224	160	129	79	1722
2020	49	83	143	75	157	244	281	286	264	197	145	102	2028
2021	90	105	125	161	209	277	305	291	244	185	118	86	2198
2022	75	86	110	115	173	230	269	275	245	182	133	90	1983
2023	75	86	110	115	173	230	269	275	245	182	133	90	1983
2024	75	86	110	115	173	230	269	275	245	182	133	90	1983
2025	75	86	110	115	173	230	269	275	245	182	133	90	1983
2026	75	86	110	115	173	230	269	275	245	182	133	90	1983
2027	75	86	110	115	173	230	269	275	245	182	133	90	1983

Gas AC Meters

AC Active METER

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2019	5	5	5	7	5	5	5	5	5	5	5	5	5
2020	5	5	5	5	5	5	4	4	4	4	4	4	5
2021	4	4	4	4	5	5	4	4	5	4	5	5	4
2022	5	5	5	5	5	5	4	4	4	4	4	4	4.5
2023	5	5	5	5	5	5	4	4	4	4	4	4	4.5
2024	5	5	5	5	5	5	4	4	4	4	4	4	4.5
2025	5	5	5	5	5	5	4	4	4	4	4	4	4.5
2026	5	5	5	5	5	5	4	4	4	4	4	4	4.5
2027	5	5	5	5	5	5	4	4	4	4	4	4	4.5

Red Values indicate Actuals

Gas AC Load Forecast

A/C FORECAST (IN MDTH)

Mdth Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
2019	1.3	1.3	1.0	1.4	1.6	1.9	1.7	2.7	1.8	2.4	2.0	1.1	20.1
2020	0.7	0.8	0.9	0.7	0.5	0.6	0.8	0.8	1.0	0.9	0.9	0.6	9.4
2021	0.5	0.8	0.1	0.5	1.0	1.1	1.8	1.9	1.7	1.3	1.0	1.0	12.7
2022	0.8	1.0	0.7	0.9	1.0	1.2	1.5	1.8	1.6	1.5	1.3	0.9	14.0
2023	0.8	1.0	0.7	0.9	1.0	1.2	1.5	1.8	1.6	1.5	1.3	0.9	14.0
2024	0.8	1.0	0.7	0.9	1.0	1.2	1.5	1.8	1.6	1.5	1.3	0.9	14.0
2025	0.8	1.0	0.7	0.9	1.0	1.2	1.5	1.8	1.6	1.5	1.3	0.9	14.0
2026	0.8	1.0	0.7	0.9	1.0	1.2	1.5	1.8	1.6	1.5	1.3	0.9	14.0
2027	0.8	1.0	0.7	0.9	1.0	1.2	1.5	1.8	1.6	1.5	1.3	0.9	14.0

G10 Industrial DATA TABLES

Southern California Gas Company G10 Core Industrial DATA TABLES

**Southern California Gas Company
 Industrial G10
 Core Industrial Demand Forecast (MdtH)
 Average Temperature**

Avg Year	Model Output					Final
	G10-Ind	EE/DSM	AB980	City of Vernon	C2NC Migration	
2021	21,026.7	0	0	0	0	21,026.7
2022	21,300.3	247.8	0.0	26.3	495.7	20,530.6
2023	21,342.8	519.9	0.0	52.5	495.7	20,274.7
2024	21,203.4	786.5	0.1	78.8	495.7	19,842.5
2025	21,104.4	1,064.3	0.1	105.1	495.7	19,439.4
2026	21,027.5	1,297.1	0.1	131.3	495.7	19,103.4
2027	21,015.1	1,541.2	0.1	157.6	495.7	18,820.7

**Southern California Gas Company
 Industrial G10
 Core Industrial Demand Forecast (Mdth)
 Cold Temperature**

Cold YEAR	Model Output					Final
	G10-Ind	EE/DSM	AB980	City of Vernon	C2NC Migration	
2021	21,321.6	0	0	0	0	21,321.6
2022	21,590.4	247.8	0.0	26.3	495.7	20,820.6
2023	21,628.0	519.9	0.0	52.5	495.7	20,559.8
2024	21,483.8	786.5	0.1	78.8	495.7	20,122.9
2025	21,380.1	1,064.3	0.1	105.1	495.7	19,715.1
2026	21,298.6	1,297.1	0.1	131.3	495.7	19,374.6
2027	21,281.7	1,541.2	0.1	157.6	495.7	19,087.3

Southern California Gas Company
Industrial G10
Core Industrial Demand Forecast (Mdt)
 Hot Temperature

Hot	Model Output					
<u>YEAR</u>	<u>G10-Ind</u>	<u>EE/DSM</u>	<u>AB980</u>	<u>City of Vernon</u>	<u>C2NC Migration</u>	<u>Final</u>
2021	20,731.7	0.0	0.0	0.0	0.0	20,731.7
2022	21,010.3	247.8	0.0	26.3	495.7	20,240.6
2023	21,057.6	519.9	0.0	52.5	495.7	19,989.5
2024	20,923.0	786.5	0.1	78.8	495.7	19,562.1
2025	20,828.6	1,064.3	0.1	105.1	495.7	19,163.7
2026	20,756.4	1,297.1	0.1	131.3	495.7	18,832.3
2027	20,748.5	1,541.2	0.1	157.6	495.7	18,554.2

**Southern California Gas Company
 Industrial G10
 Core Industrial Demand Forecast (Mdth)
 Base Temperature**

Base	Model Output					
<u>YEAR</u>	<u>G10-Ind</u>	<u>EE/DSM</u>	<u>AB980</u>	<u>City of Vernon</u>	<u>C2NC Migration</u>	<u>Final</u>
2021	19,412.2	0.0	0.0	0.0	0.0	19,412.2
2022	19,712.9	247.8	0.0	26.3	495.7	18,943.2
2023	19,781.9	519.9	0.0	52.5	495.7	18,713.7
2024	19,668.6	786.5	0.1	78.8	495.7	18,307.6
2025	19,595.1	1,064.3	0.1	105.1	495.7	17,930.2
2026	19,543.4	1,297.1	0.1	131.3	495.7	17,619.4
2027	19,555.8	1,541.2	0.1	157.6	495.7	17,361.5

**Southern California Gas Company
 Industrial G10
 Historical Throughput and Customer Counts**

<u>Business Type</u>	<u>therms_2021</u>	<u>meters_2021</u>	<u>meters_2021_</u> <u>ExCust</u>	<u>meters_2021_</u> <u>NewCust</u>	<u>avgUse_2021_</u> <u>ExCust</u>	<u>avgUse_2021_</u> <u>NewCust</u>	<u>Price Elasticity</u>	<u>Employment Elasticity</u>
Mining	1725824	199	197	2	8504	25254	0.000000	0.321451
Food	77457314	2718	2,688	30	28669	13169	0.000000	1.242506
Textile	8656376	441	441	0	19629	0	0.000000	0.033325
Wood_Paper	8795343	369	369	0	23836	0	-0.114000	0.508272
Chemical	17489343	984	978	6	17831	8459	0.000000	0.650067
Petroleum	13274235	133	133	0	99806	0	0.000000	0.084537
Stone	5252881	368	367	1	14305	3030	0.000000	0.416909
Prim_Metal	10399652	299	299	0	34781	0	0.000000	0.956685
Fab_Metal	21304069	1880	1,876	4	11353	1548	0.000000	1.023881
Transport	13357405	1364	1,363	1	9798	3000	0.000000	0.402505
Misc	32554137	5569	5,559	10	5823	18587	0.000000	0.879307

**Southern California Gas Company
 Industrial G10
 Employment Forecast (in thousands)**

YEAR	Mining	Food	Textile	Wood Paper	Chemical	Petroleum	Stone	Primary Metal	Fabricated Metal	Transportation	Miscellaneous	Total
2021	12.8542	119.4775	7.3158	28.2025	44.6258	8.8992	15.2425	9.4558	79.5175	74.8233	262.8592	663.2717
2022	13.2775	123.0608	7.2833	28.6117	46.1233	9.6117	15.4417	9.6075	80.8558	77.7767	267.9150	679.5675
2023	13.6300	123.5450	7.0908	28.2825	46.3367	9.4283	16.2208	9.3925	82.9492	81.7525	269.7400	688.3708
2024	13.6817	122.8625	6.8800	28.5317	45.3692	9.2117	16.6333	9.1800	85.3150	78.6358	267.0900	683.3942
2025	13.5108	123.4425	6.7667	28.5700	44.5542	8.9900	16.8600	9.0692	85.9208	75.0458	262.9433	675.6683
2026	13.3033	124.5700	6.7667	28.4050	44.0600	8.7675	16.8917	8.9275	85.4225	74.2692	258.4883	669.8717
2027	13.1867	125.8042	6.7783	27.9667	43.7200	8.5225	17.0867	8.8275	85.4875	75.3033	255.9458	668.6300

**Southern California Gas Company
 Industrial G10
 Average Use Per Meter (therm)**

<u>Business Type</u>	<u>Water_Boiler</u>	<u>Fire_Boiler</u>	<u>Space_Heat</u>	<u>Water_Heat</u>	<u>Dryer</u>	<u>Furnace_Oven_Kiln</u>	<u>AC</u>	<u>Engine</u>	<u>Other</u>	<u>Total</u>
Mining	0	4055	28	1252	50	0	0	2	3117	8504
Food	3763	11998	98	3369	6284	9	85	99	2962	28669
Textile	4456	6013	50	1188	6884	63	0	0	974	19629
Wood_Paper	4783	12840	492	1378	1721	128	0	4	2490	23836
Chemical	1674	6410	2349	1420	1757	565	2	72	3581	17831
Petroleum	2440	23170	148	144	46289	10	0	10179	17428	99806
Stone	533	1977	57	590	4824	4099	1	0	2224	14305
Prim_Metal	1649	2599	341	2046	6635	17646	12	0	3854	34781
Fab_Metal	342	666	211	1473	3157	2728	0	8	2769	11353
Transport	591	2416	1366	1350	1275	799	0	238	1763	9798
Misc	257	1154	372	561	1718	420	0	20	1320	5823

**Southern California Gas Company
 Industrial G10
 Use Per Meter for New Customers (therm)**

<u>Business Type</u>	<u>Fire_</u> <u>Tube_</u> <u>Boiler</u>	<u>Water_</u> <u>Tube_</u> <u>Boiler</u>	<u>Space_</u> <u>Heat</u>	<u>Water_</u> <u>Heat</u>	<u>Dryer</u>	<u>Furnace_</u> <u>Oven_</u> <u>Kiln</u>	<u>AC</u>	<u>Engine</u>	<u>Other</u>	<u>Total</u>
Mining	0	2	0	18181	0	0	0	0	7071	25254
Food	1979	7947	24	1203	1234	0	0	0	783	13169
Textile	0	0	0	0	0	0	0	0	0	0
Wood_Paper	0	0	0	0	0	0	0	0	0	0
Chemical	1720	3614	1006	793	1135	0	0	11	180	8459
Petroleum	0	0	0	0	0	0	0	0	0	0
Stone	0	0	327	0	2702	0	0	0	0	3030
Prim_Metal	0	0	0	0	0	0	0	0	0	0
Fab_Metal	0	56	3	8	1101	6	0	0	374	1548
Transport	0	573	335	105	359	567	0	1059	0	3000
Misc	2726	2637	459	1210	5367	285	0	22	5880	18587

**Southern California Gas Company
 Industrial G10
 Gas Price Forecast (\$/Therm)**

(a) Average Price Forecast

<u>Year</u>	<u>Price Deflator</u>	<u>Chemical</u>	<u>Fabricated Metal</u>	<u>Food</u>	<u>Mining</u>	<u>Petroleum</u>	<u>Primary Metal</u>	<u>Stone</u>	<u>Textile</u>	<u>Transport</u>	<u>Wood Paper</u>	<u>Misc</u>
2021	100.00	1.02	0.91	0.93	0.89	0.95	0.86	0.96	0.93	1.00	0.97	1.04
2022	105.03	1.15	1.04	1.05	1.02	1.08	0.98	1.09	1.05	1.12	1.09	1.17
2023	107.05	1.09	0.98	0.99	0.96	1.02	0.92	1.03	1.00	1.07	1.04	1.11
2024	109.29	1.08	0.98	0.99	0.95	1.02	0.91	1.03	0.99	1.06	1.03	1.11
2025	111.56	1.06	0.95	0.96	0.92	0.99	0.88	1.00	0.96	1.04	1.00	1.08
2026	114.02	1.08	0.96	0.97	0.93	1.01	0.90	1.02	0.98	1.05	1.02	1.10
2027	116.67	1.09	0.98	0.99	0.95	1.02	0.91	1.03	0.99	1.07	1.03	1.12

(b) Marginal Price Forecast

<u>Year</u>	<u>Price Deflator</u>	<u>Chemical</u>	<u>Fabricated Metal</u>	<u>Food</u>	<u>Mining</u>	<u>Petroleum</u>	<u>Primary Metal</u>	<u>Stone</u>	<u>Textile</u>	<u>Transport</u>	<u>Wood Paper</u>	<u>Misc</u>
2021	100.00	0.90	0.85	0.86	0.84	0.87	0.82	0.88	0.84	0.89	0.88	0.92
2022	105.03	1.03	0.98	0.98	0.96	0.99	0.94	1.00	0.96	1.02	1.01	1.04
2023	107.05	0.97	0.92	0.92	0.90	0.93	0.88	0.94	0.90	0.96	0.95	0.99
2024	109.29	0.96	0.91	0.92	0.89	0.93	0.87	0.94	0.90	0.95	0.94	0.98
2025	111.56	0.93	0.88	0.89	0.86	0.90	0.84	0.91	0.87	0.92	0.91	0.95
2026	114.02	0.95	0.89	0.90	0.87	0.91	0.85	0.92	0.88	0.94	0.93	0.97
2027	116.67	0.96	0.90	0.91	0.88	0.92	0.86	0.93	0.89	0.95	0.94	0.98

Southern California Gas Company
Industrial G10
Electric Price Forecasat (Cent/KWH)

(a) Average Price Forecast

<u>Year</u>	<u>Chemical</u>	<u>Fab Metal</u>	<u>Food</u>	<u>Mining</u>	<u>Petroleum</u>	<u>Prim Metal</u>	<u>Stone</u>	<u>Textile</u>	<u>Transport</u>	<u>Wood Paper</u>	<u>Misc</u>
2021	16.08	14.47	14.65	14.08	15.07	13.53	15.25	14.68	15.76	15.27	16.44
2022	17.37	15.78	15.96	15.40	16.38	14.86	16.56	16.00	17.06	16.58	17.73
2023	17.87	16.13	16.32	15.71	16.79	15.11	16.98	16.36	17.53	17.00	18.27
2024	18.24	16.41	16.61	15.96	17.10	15.34	17.30	16.65	17.88	17.32	18.65
2025	19.05	17.05	17.27	16.56	17.81	15.88	18.03	17.32	18.66	18.05	19.50
2026	19.70	17.60	17.84	17.10	18.40	16.39	18.63	17.89	19.29	18.65	20.16
2027	20.11	17.95	18.19	17.42	18.77	16.69	19.00	18.24	19.69	19.02	20.59

(b) Marginal Price Forecast

<u>Year</u>	<u>Chemical</u>	<u>Fab Metal</u>	<u>Food</u>	<u>Mining</u>	<u>Petroleum</u>	<u>Prim Metal</u>	<u>Stone</u>	<u>Textile</u>	<u>Transport</u>	<u>Wood Paper</u>	<u>Misc</u>
2021	12.29	11.64	11.74	11.43	11.87	11.16	11.99	11.48	12.17	12.06	12.54
2022	13.32	12.68	12.77	12.47	12.90	12.20	13.02	12.52	13.20	13.09	13.56
2023	13.68	12.97	13.07	12.74	13.21	12.44	13.35	12.79	13.55	13.42	13.94
2024	13.95	13.20	13.31	12.96	13.46	12.65	13.60	13.01	13.81	13.68	14.23
2025	14.55	13.73	13.85	13.46	14.01	13.12	14.17	13.52	14.40	14.25	14.86
2026	15.05	14.18	14.31	13.90	14.48	13.54	14.64	13.96	14.88	14.73	15.37
2027	15.36	14.46	14.59	14.17	14.77	13.79	14.94	14.23	15.18	15.03	15.69

**Southern California Gas Company
 Industrial G10
 Saturation Rate**

<u>Business Type</u>	<u>Fire_</u> <u>Tube_</u> <u>Boiler</u>	<u>Water_</u> <u>Tube_</u> <u>Boiler</u>	<u>Space_</u> <u>Heat</u>	<u>Water_</u> <u>Heat</u>	<u>Dryer</u>	<u>Furnace_</u> <u>Oven_</u> <u>Kiln</u>	<u>AC</u>	<u>Engine</u>	<u>Other</u>
Mining	0.01	0.01	0.73	0.73	0.03	0.06	0.64	0.87	1.00
Food	0.45	0.45	0.60	0.85	0.12	0.33	0.73	0.70	1.00
Textile	0.26	0.26	0.70	0.71	0.14	0.09	0.72	0.46	1.00
Wood_Paper	0.01	0.01	0.62	0.77	0.09	0.07	0.71	0.50	1.00
Chemical	0.14	0.14	0.73	0.73	0.12	0.10	0.74	0.70	1.00
Petroleum	0.14	0.14	0.73	0.73	0.12	0.10	0.74	0.70	1.00
Stone	0.01	0.01	0.73	0.73	0.03	0.06	0.64	0.87	1.00
Prim_Metal	0.07	0.07	0.73	0.76	0.15	0.10	0.68	0.86	1.00
Fab_Metal	0.07	0.07	0.73	0.76	0.15	0.10	0.68	0.86	1.00
Transport	0.14	0.14	0.73	0.73	0.12	0.10	0.74	0.70	1.00
Misc	0.14	0.14	0.73	0.73	0.12	0.10	0.74	0.70	1.00

**Southern California Gas Company
 Industrial G10
 The Year the Equipment Was Installed by Business Types**

Business Type	Fire_ Tube_ Boiler	Water_ Tube_ Boiler	Space_ Heat	Water_ Heat	Dryer	Furnace_ Oven_ Kiln	AC	Engine	Other
Mining	2002	1980	1979	1980	1968	1978	.	1970	1976
Food	2004	1999	2002	1992	1992	2002	1965	1994	1983
Textile	1999	1998	1994	1982	1992	1982	.	.	1980
Wood_Paper	1997	1994	1995	1981	1981	2006	.	.	1975
Chemical	2005	1995	2002	1986	1985	1981	.	1999	1976
Petroleum	2006	1990	2002	1975	1981	1971	.	.	1977
Stone	2007	1983	1996	1982	1982	1982	1985	2014	1975
Primary_Metal	1993	1991	1987	1982	1978	1982	.	1996	1976
Fabricated_Metal	2002	1989	1986	1980	1984	1980	.	1984	1975
Transport	1993	1994	1996	1981	1987	1983	1973	2003	1976
Misc	1996	1995	1994	1981	1987	1978	1984	1999	1978

**Southern California Gas Company
 Industrial G10
 Electric UEC (Kwh/SqFt)**

<u>Business Type</u>	<u>Fire_</u> <u>Tube_</u> <u>Boiler</u>	<u>Water_</u> <u>Tube_</u> <u>Boiler</u>	<u>Space_</u> <u>Heat</u>	<u>Water_</u> <u>Heat</u>	<u>Dryer</u>	<u>Furnace_</u> <u>Oven_</u> <u>Kiln</u>	<u>AC</u>	<u>Engine</u>	<u>Other</u>
Mining	12053557	117480	22540	4117	3349437	1388699	3261	2871579	0
Food	992080	234899	77958	15939	1062552	781260	24817	1163891	0
Textile	1428304	371125	20797	30369	3811277	1069238	74615	0	0
Wood_Paper	11051345	3626956	48301	2915	523062	985476	3282	0	0
Chemical	1169880	658201	34723	19440	26417	593554	1620	738	0
Petroleum	1527674	385215	15711	15192	13761553	60935	0	101154	0
Stone	4960873	985989	31975	22824	6850607	6237158	37820	0	0
Primary_Metal	174313	550730	55233	9317	25494	13916258	66288	0	0
Fabricated_Metal	605450	591011	55315	8658	57653	2084618	5763	0	0
Transportation	76358	44486	30560	6490	228869	392291	1456	7240	0
Miscellaneous	148060	104128	22745	4673	181266	1005453	8471	17618	0

**Southern California Gas Company
 Industrial G10
 GAS UEC (Therm per SqFt)**

<u>Business Type</u>	<u>Fire_</u> <u>Tube_</u> <u>Boiler</u>	<u>Water_</u> <u>Tube_</u> <u>Boiler</u>	<u>Space_</u> <u>Heat</u>	<u>Water_</u> <u>Heat</u>	<u>Dryer</u>	<u>Furnace_</u> <u>Oven_</u> <u>Kiln</u>	<u>AC</u>	<u>Engine</u>	<u>Other</u>
Mining	0	2241270	252	5268	91253	672	0	114	6627
Food	111173	105371	954	4330	187397	2237	39768	13205	3384
Textile	97756	84794	490	4406	97074	28811	0	0	2469
Wood_Paper	8370448	5798602	3701	3131	78733	32091	0	567	3558
Chemical	205830	167162	13968	3956	84011	226745	1213	3553	6903
Petroleum	211874	619041	1095	797	1339771	2325	0	235689	27337
Stone	1361622	1403586	286	1377	501090	171147	49	2	3023
Primary_Metal	659478	366908	2067	4478	123877	329457	2863	0	5996
Fabricated_Metal	352859	114530	1645	3351	65002	216651	55	950	3834
Transportation	219678	209547	7747	3077	44487	83150	0	31017	1883
Miscellaneous	107096	63857	2150	1293	53625	55446	5	2640	1626

**Southern California Gas Company
 Industrial G10
 Gas Market Shares**

<u>Business Type</u>	<u>Fire_</u> <u>Tube_</u> <u>Boiler</u>	<u>Water_</u> <u>Tube_</u> <u>Boiler</u>	<u>Space_</u> <u>Heat</u>	<u>Water_</u> <u>Heat</u>	<u>Dryer</u>	<u>Furnace_</u> <u>Oven_</u> <u>Kiln</u>	<u>AC</u>	<u>Engine</u>	<u>Other</u>
Chemical	0.0000	0.2778	0.2361	0.5000	0.0278	0.0139	0.0000	0.0278	0.7222
Fabricated_Metal	0.0636	0.2139	0.1445	0.7737	0.2362	0.0107	0.0025	0.0091	0.7399
Food	0.1978	0.3077	0.1648	0.4286	0.5714	0.0275	0.0000	0.0000	0.4451
Mining	0.0533	0.2067	0.2000	0.5333	0.2267	0.0533	0.0000	0.0133	0.6533
Miscellaneous	0.0685	0.3227	0.2714	0.5795	0.2054	0.0293	0.0024	0.0342	0.6113
Petroleum	0.0741	0.2407	0.1667	0.2222	0.2593	0.0370	0.0000	0.0556	0.5741
Primary_Metal	0.0315	0.1132	0.2201	0.4717	0.2579	0.3208	0.0189	0.0126	0.5912
Stone	0.0328	0.0929	0.2077	0.5519	0.3279	0.4918	0.0055	0.0109	0.5902
Textile	0.0136	0.0819	0.1733	0.5703	0.3192	0.1242	0.0014	0.0096	0.7121
Transportation	0.0159	0.0680	0.1996	0.4966	0.1973	0.0794	0.0000	0.0091	0.7732
Wood_Paper	0.0153	0.1153	0.2116	0.5312	0.2386	0.0677	0.0016	0.0095	0.7254

NATURAL GAS VEHICLES



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Workpaper NGV-2	SoCalGas G-NGV Forecast of Meter Count
Workpaper NGV-3	SoCalGas G-NGV Forecast of Volume and Meter Count Growth Rates

2. Data

Table 1 - SoCalGas Historic Volumes				
Years	Compressed		Uncompressed	
	Volume	Annual Growth	Volume	Annual Growth
	MMCCF	%	MMCCF	%
2013	2.3	-	111.5	-
2014	2.2	-4.23%	119.9	7.50%
2015	2.3	4.37%	125.2	4.45%
2016	2.3	0.16%	131.1	4.74%
2017	2.3	0.29%	138.3	5.43%
2018	3.56	51.38%	146.2	5.72%
2019	3.98	11.98%	150.9	3.23%
2020	4.74	19.00%	131.3	-13.02%
2021	5.83	22.96%	143.4	9.25%

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Table 2 - SoCalGas Monthly Volumes													
Year	January	February	March	April	May	June	July	August	September	October	November	December	Annual
Compressed Volumes - Total (Mdecatherms)													
2021	38.5	38.3	48.1	46.5	46.2	49.8	51.6	56.7	55.6	58.6	59.6	60.3	609.9
2022	45.4	45.2	56.8	54.9	54.5	58.7	60.9	66.8	65.6	69.1	70.3	71.2	719.6
2023	53.6	53.4	67.0	64.8	64.3	69.3	71.8	78.9	77.4	81.6	83.0	84.0	849.0
2024	63.2	63.0	79.1	76.4	75.8	81.8	84.8	93.0	91.3	96.2	97.9	99.1	1,001.6
2025	74.6	74.3	93.3	90.2	89.5	96.5	100.0	109.8	107.7	113.5	115.5	116.9	1,181.7
2026	87.3	86.9	109.1	105.5	104.7	112.8	117.0	128.4	126.0	132.8	135.1	136.7	1,382.4
2027	101.2	100.8	126.6	122.3	121.4	130.9	135.7	148.9	146.1	154.0	156.7	158.6	1,603.3

Compressed Volumes - Public Use (Mdecatherms)													
2021	26.0	26.7	34.2	33.9	33.7	36.5	38.1	42.5	41.8	44.7	46.6	47.2	451.7
2022	29.1	30.0	38.7	38.4	38.2	41.4	43.3	48.3	47.6	51.0	53.4	54.0	513.3
2023	34.8	35.9	46.2	45.8	45.5	49.3	51.6	57.6	56.7	60.7	63.4	64.2	611.8
2024	43.5	44.6	57.2	56.5	56.1	60.8	63.5	70.7	69.6	74.4	77.4	78.4	752.8
2025	53.7	54.9	70.1	69.1	68.6	74.3	77.5	86.1	84.8	90.4	93.8	95.0	918.3
2026	64.9	66.1	84.3	82.9	82.3	89.1	92.9	103.1	101.4	108.1	111.9	113.3	1,100.3
2027	78.9	80.0	101.8	99.7	99.1	107.1	111.6	123.6	121.6	129.3	133.5	135.1	1,321.2

Compressed Volumes - Utility Use (Mdecatherms)													
2021	12.5	11.7	13.9	12.7	12.5	13.3	13.5	14.2	13.8	13.9	13.0	13.2	158.2
2022	16.3	15.2	18.1	16.5	16.3	17.4	17.6	18.5	18.0	18.1	17.0	17.2	206.2
2023	18.8	17.5	20.9	19.0	18.8	20.0	20.2	21.3	20.7	20.8	19.5	19.7	237.2
2024	19.7	18.4	21.9	19.9	19.7	21.0	21.2	22.3	21.7	21.8	20.5	20.7	248.8
2025	20.9	19.4	23.2	21.1	20.9	22.2	22.5	23.6	22.9	23.1	21.7	21.9	263.4
2026	22.4	20.8	24.8	22.6	22.3	23.8	24.1	25.3	24.6	24.8	23.2	23.5	282.1
2027	22.4	20.8	24.8	22.6	22.3	23.8	24.1	25.3	24.6	24.8	23.2	23.5	282.1

Uncompressed Volumes - Total (MDecatherms)													
2021	1,061	1,021	1,198	1,197	1,199	1,243	1,280	1,347	1,330	1,335	1,288	1,303	14,801
2022	1,074	1,034	1,213	1,212	1,214	1,259	1,297	1,364	1,347	1,352	1,305	1,319	14,992
2023	1,088	1,048	1,229	1,228	1,230	1,276	1,313	1,382	1,365	1,370	1,322	1,337	15,187
2024	1,102	1,061	1,245	1,244	1,246	1,292	1,330	1,400	1,382	1,388	1,339	1,354	15,384
2025	1,117	1,075	1,261	1,260	1,262	1,309	1,348	1,418	1,400	1,406	1,356	1,371	15,583
2026	1,131	1,089	1,277	1,276	1,278	1,326	1,365	1,436	1,418	1,424	1,374	1,389	15,785
2027	1,146	1,103	1,294	1,293	1,295	1,343	1,383	1,455	1,437	1,442	1,392	1,407	15,989

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Uncompressed Volumes - Customer Owned Gas (Mdecatherms)													
2021	759	741	856	868	878	911	943	960	937	940	893	887	10,574
2022	769	751	867	879	889	923	955	972	949	953	905	899	10,711
2023	779	760	878	891	900	935	968	985	962	965	917	910	10,850
2024	789	770	890	902	912	947	980	998	974	977	929	922	10,990
2025	799	780	901	914	924	959	993	1,011	987	990	941	934	11,133
2026	809	790	913	926	936	972	1,006	1,024	999	1,003	953	946	11,277
2027	820	800	925	938	948	984	1,019	1,037	1,012	1,016	965	958	11,423

Uncompressed Volumes - Utility Procurement Customers (Mdecatherms)													
2021	301.6	280.2	341.9	328.5	321.0	332.1	336.8	386.9	392.8	394.7	394.9	415.4	4,226.8
2022	305.5	283.8	346.3	332.8	325.2	336.4	341.2	391.9	397.9	399.8	400.0	420.8	4,281.6
2023	309.5	287.5	350.8	337.1	329.4	340.8	345.6	397.0	403.0	405.0	405.2	426.3	4,337.1
2024	313.5	291.2	355.4	341.5	333.7	345.2	350.1	402.1	408.3	410.3	410.4	431.8	4,393.3
2025	317.5	295.0	360.0	345.9	338.0	349.7	354.6	407.3	413.6	415.6	415.7	437.4	4,450.2
2026	321.6	298.8	364.6	350.4	342.4	354.2	359.2	412.6	418.9	421.0	421.1	443.0	4,507.9
2027	325.8	302.7	369.3	354.9	346.8	358.8	363.9	418.0	424.3	426.4	426.6	448.8	4,566.3

Workpaper NGV-2

1. Title - SoCalGas G-NGV Forecast of Meter Count

2. Data

Table 1 - SoCalGas Historic Meter Counts						
Years	Uncompressed				Compressed	
	P-1	P-2A	Total	Annual Growth	Public Access	Fleet
	-	-	-	%	-	-
2013	187	80	267	-	-	-
2014	193	88	281	5.24%	-	-
2015	194	96	290	3.20%	-	-
2016	189	102	291	0.34%	-	-
2017	191	106	297	2.06%	12	9
2018	209	103	312	5.05%	13	12
2019	207	102	309	-0.96%	14	12
2020	213	105	318	2.91%	15	11
2021	204	121	325	2.20%	16	11

Workpaper NGV-2

Table 2 - SoCalGas Forecasted Meter Counts						
Years	Uncompressed			Compressed		
	P-1	P-2A	Total	Public Access	Fleet	Total
2022	208	123	331	16	12	28
2023	212	125	337	16	13	29
2024	216	127	343	16	14	30
2025	220	129	349	16	15	31
2026	224	131	355	16	16	32
2027	228	133	361	16	16	32
2028	232	135	367	16	16	32
2029	235	137	372	16	16	32
2030	238	138	376	16	16	32
2031	240	139	379	16	16	32
2032	241	140	381	16	16	32
2033	242	140	382	16	16	32
2034	242	140	382	16	16	32
2035	242	140	382	16	16	32

3. Source

Historic meter count data taken from utility G-NGV billing data.

1. Title - SoCalGas G-NGV Forecast of Volume and Meter Count Growth Rates

2. Data

Table 1 - SoCalGas Historic Volume and Meter Count Growth Rates			
Description	Uncompressed		Compressed
	Volume	Meter Count	Volume
3-Year Average Growth	-0.18%	1.38%	17.98%
4-Year Average Growth	1.30%	2.30%	26.33%
Annual Growth Rate Change (2026-2029)	-	-0.15%	-1.00%
Annual Growth Rate Change (2030-2033)	-	-0.30%	-2.00%
Annual Growth Rate Change (2034)	-	-0.45%	-3.00%

Table 2 - SoCalGas Compressed Volumes - Utility Use			
Year	CNG Fleet Vehicles		Volume
	Number	Growth Rate	MMCCF
2021	1,251	-	158.2
2022	1,631	30.4%	206.2
2023	1,876	15.0%	237.2
2024	1,968	4.9%	248.8
2025	2,083	5.8%	263.4

2026	2,231	7.1%	282.1
2027	2,231	0.0%	282.1
Annual Growth Rate (2028-2035)		0.0%	0.0%

SOURCE: CNG Fleet Vehicle figures provided by Mike Franco (Fleet Services) on March 23, 2022.

ENERGY EFFICIENCY



SocalGas Energy Efficiency (EE) forecast

SoCalGas' EE forecast is based upon inputs from the 2022-3 energy efficiency bi-annual budget advice letter (AL5898-A), utilizing program level energy savings values forecasted for the 2022 program year. Savings estimates from SoCalGas' 2022 EE programs are grouped by the classifications identified in the 2022 CGR (Residential, Commercial, Industrial, Industrial Refinery). These savings estimates are further split between the core and non-core classifications based on the estimated historical core and non-core savings achievements in 2017-2021. EE program savings for 2017-2021 have been updated for this report.

Forecasted savings for the 2023-2035 period are based on the 2022 EE forecast scaled to the goals approved in the recent EE proceeding goals decision, D.21-09-037, which set EE goals through 2032. Forecasted savings beyond 2032 are held constant based on 2032 forecasted values. Cumulative savings reflect the lifecycle EE program achievements from forecasted program savings starting in 2022 and does not include lifecycle savings from prior program years. SoCalGas currently uses a 15-year lifecycle for cumulative savings calculations.

2022-2032 Goals

	EE Incentive Programs [1] Goal (Net, MMTh)	EE C&S Programs [1] (Net, MMTh)	LI/ESA Potential [2] Potential (Net, MMTh)	Total w/o C&S Total (Net, MMTh)	Total w/C&S Total (Net, MMTh) [3]
2022	19	24	1.4	20.4	44.4
2023	21	26	1.4	22.4	48.4
Total System Benefit (TSB) [2]					
2024	\$94,305,917	26	1.4		27.4
2025	\$105,511,595	25	1.4		26.4
2026	\$115,302,575	16	1.4		17.4
2027	\$131,937,530	16	1.4		17.4
2028	\$141,969,329	15	1.4		16.4
2029	\$153,846,185	13	1.4		14.4
2030	\$168,151,490	13	1.4		14.4
2031	\$179,411,291	13	1.4		14.4
2032	\$188,296,981	12	1.4		13.4

[1] Therm savings figures based on EE program goals in D.21-09-037.

[2] CPUC has replaced current metrics (e.g., GWh, MW, MMTherms) with 1 new metric for EE portfolios: Total System Benefit (TSB) starting in PY2024.

[3] Total w/C&S is the sum of LI/ESA potential net MMTherms + C&S programs net MMTherms

SoCalGas 2022-2032 Energy Efficiency Goals of D.21-09-037

Year	Incentive Programs			Codes and Standards		
	GWh	MW	MMTherms	GWh	MW	MMTherms
2022	-	-	19	-	-	24
2023	-	-	21	-	-	26
Total System Benefit (TSB)						
2024	\$94,305,917			-	-	26
2025	\$105,511,595			-	-	25
2026	\$115,302,575			-	-	16
2027	\$131,937,530			-	-	16
2028	\$141,969,329			-	-	15
2029	\$153,846,185			-	-	13
2030	\$168,151,490			-	-	13
2031	\$179,411,291			-	-	13
2032	\$188,296,981			-	-	12

EE SCG 2022 CGR_04052022_v1.4.xlsx SoCalGas_2022_CGR_EE Portfolio

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	Reported 2010	Reported 2011	Reported 2012	Reported 2013	Reported 2014	Reported 2015	Reported 2016	Reported 2017	Reported 2018	Reported 2019	Reported 2020	Reported 2021	Forecast 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033	Forecast 2034	Forecast 2035	
SoCalGas EE Program TOTAL	27,413,193	37,233,416	32,077,678	25,817,960	28,856,008	21,620,562	30,155,462	33,320,672	48,732,219	52,121,053	45,002,960	31,819,333	44,096,262														
PUC Goal	28,000,000	30,000,000	32,000,000	24,120,000	23,190,000	25,300,000	29,100,000	30,300,000	46,000,000	48,000,000	35,400,000	35,400,000	44,440,000	48,440,000	47,440,000	49,440,000	41,440,000	43,440,000	43,440,000	42,440,000	44,440,000	45,440,000	44,440,000	44,440,000	44,440,000	44,440,000	44,440,000
Difference	(586,807)	7,233,416	77,678	1,697,960	5,666,008	(3,679,438)	1,055,462	3,020,672	2,732,219	4,121,053	9,602,960	(3,580,667)	(443,749)														

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
SoCalGas	9,072,268	12,564,473	8,445,100	5,173,505	7,371,223	7,837,522	14,912,116	20,533,175	35,227,014	39,152,937	31,729,807	24,624,620	28,179,230
Core Residential	7,457,290	10,030,218	6,608,803	2,380,370	4,093,890	6,286,602	11,216,376	10,448,422	11,831,578	12,031,527	9,194,225	6,070,938	12,521,271
Core Commercial	2,268,570	3,051,276	2,923,078	2,803,233	2,457,193	1,928,820	1,236,543	611,837	456,371	487,431	346,005	298,976	2,477,588
Core Industrial	1,054,214	1,431,391	1,371,252	293,874	2,168,951	1,878,668	335,445	290,846	56,422	188,032	85,288	-	-
NonCore Commercial	2,483,166	3,339,913	3,199,588	4,184,881	6,592,493	2,495,191	1,562,769	1,013,868	1,093,600	98,374	460,317	534,045	698,437
NonCore Industrial retail	5,067,684	6,816,146	6,529,768	7,982,006	6,172,268	1,993,759	892,212	122,423	67,235	152,753	3,207,229	256,577	222,726
NonCore Industrial refinery	27,413,193	37,233,416	32,077,678	25,817,960	28,856,008	21,620,562	30,155,462	33,320,672	48,732,219	52,121,053	45,002,960	31,819,333	44,096,262

Proportionally scale it down or up to match PUC Goals for 2010 - 2014

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
ANNUAL NET SAVINGS	2,800	3,000	3,200	2,412	2,319	2,162	3,016	3,332	4,673	5,212	4,500	3,540	4,410	4,844	4,744	4,944	4,144	4,344	4,344	4,244	4,444	4,544	4,444	4,444	4,444	4,444
Core Residential	927	1,012	842	764	592	704	1,491	2,083	3,523	3,915	3,173	2,496	2,818	3,095	3,031	3,159	2,648	2,776	2,776	2,712	2,940	2,903	2,840	2,940	2,940	2,940
Core Commercial	762	808	959	222	329	629	1,122	1,045	1,252	1,375	1,347	1,404	1,177	1,233	1,233	1,205	1,262	1,233	1,205	1,262	1,290	1,262	1,262	1,262	1,262	1,262
Core Industrial	232	246	292	262	197	193	124	61	46	35	27	248	272	287	278	233	244	244	244	238	250	255	250	250	250	250
NonCore Commercial	109	115	137	27	174	188	34	28	6	20	7	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NonCore Industrial retail	254	269	319	391	530	250	156	101	109	10	46	36	70	77	75	78	66	69	67	70	72	70	70	70	70	70
NonCore Industrial refinery	518	549	651	746	496	199	89	12	7	15	321	252	22	22	24	25	21	22	22	22	22	23	22	22	22	22
Total	2,800	3,000	3,200	2,412	2,319	2,162	3,016	3,332	4,673	5,212	4,500	3,540	4,410	4,844	4,744	4,944	4,144	4,344	4,344	4,244	4,444	4,544	4,444	4,444	4,444	4,444

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035			
Cumulative Savings Mth	2,818	5,913	8,944	12,103	14,751	17,527	20,302	23,014	25,854	28,757	31,597	34,436	37,276	40,116	42,956	45,796	48,636	51,476	54,316	57,156	60,000	62,844	65,688	68,532	71,376	74,220	
Core Residential	1,252	2,628	3,975	5,379	6,555	7,789	9,022	10,227	11,489	12,779	14,041	15,303	16,565	17,827	19,089	20,351	21,613	22,875	24,137	25,400	26,662	27,924	29,186	30,448	31,710	32,972	34,234
Core Commercial	248	520	786	1,064	1,297	1,541	1,785	2,024	2,273	2,529	2,778	3,028	3,278	3,527	3,777	4,027	4,277	4,527	4,777	5,027	5,277	5,527	5,777	6,027	6,277	6,527	6,777
Core Industrial	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NonCore Commercial	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NonCore Industrial retail	70	147	222	300	366	434	503	570	641	713	783	854	924	994	1,064	1,134	1,204	1,274	1,344	1,414	1,484	1,554	1,624	1,694	1,764	1,834	1,904
NonCore Industrial refinery	22	47	71	96	117	139	160	182	204	227	250	272	295	317	340	362	385	407	430	452	475	497	520	542	565	587	610
Total Load Impacts	4,410	9,254	13,998	18,942	23,086	27,430	31,774	36,018	40,462	45,006	49,450	53,894	58,338	62,782	67,226	71,670	76,114	80,558	85,002	89,446	93,890	98,334	102,778	107,222	111,666	116,110	120,554

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035			
Cumulative Savings MCMC	2,730	5,729	8,667	11,728	14,294	16,983	19,673	22,301	25,052	27,866	30,617	33,369	36,120	38,872	41,624	44,376	47,128	49,880	52,632	55,384	58,136	60,888	63,640	66,392	69,144	71,896	74,648
Core Residential	1,213	2,546	3,851	5,212	6,352	7,547	8,742	9,910	11,133	12,383	13,606	14,829	16,052	17,274	18,497	19,720	20,943	22,166	23,389	24,612	25,835	27,058	28,281	29,504	30,727	31,950	33,173
Core Commercial	240	504	762	1,031	1,257	1,493	1,730	1,961	2,203	2,450	2,692	2,934	3,176	3,418	3,660	3,902	4,144	4,386	4,628	4,870	5,112	5,354	5,596	5,838	6,080	6,322	6,564
Core Industrial	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NonCore Commercial	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NonCore Industrial retail	68	142	215	291	354	421	488	553	621	691	759	827	895	964	1,032	1,100	1,168	1,236	1,304	1,372	1,440	1,508	1,576	1,644	1,712	1,780	1,848
NonCore Industrial refinery	22	45	69	93	113	134	154	176	196	220	242	264	286	307	329	351	373	395	417	439	461	483	505	527	549	571	593
Total Cumulative Load	4,273	8,967	13,564	18,354	22,370	26,579	30,788	34,901	39,207	43,610	47,916	52,222	56,528	60,834	65,140	69,446	73,752	78,058	82,364	86,670	90,976	95,282	99,588	103,894	108,200	112,506	116,812

Forecast Year =====>

1	2	3	4	5	6	7	8	9	10	11	12	13	14
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Life cycle is 15 years.

EE SCG 2022 CGR_04052022_v1.4.xlsx SoCalGas_2022_CGR_IOU Programs

	Reported 2010	Reported 2011	Reported 2012	Reported 2013	Reported 2014	Reported 2015	Reported 2016	Reported 2017	Reported 2018	Reported 2019	Reported 2020	Reported 2021	Forecast 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033	Forecast 2034	Forecast 2035	
SoCalGas EE Program TOTAL	27,413,193	37,233,416	32,077,678	25,817,960	28,856,008	21,620,562	10,465,569	8,851,583	19,380,337	22,391,690	28,143,380	15,962,242	27,377,356														
PUC Goal	28,000,000	30,000,000	32,000,000	24,120,000	23,190,000	25,300,000	17,300,000	18,100,000	20,000,000	22,000,000	14,400,000	15,400,000	20,440,000	22,440,000	21,440,000	24,440,000	25,440,000	27,440,000	28,440,000	29,440,000	31,440,000	32,440,000	32,440,000	32,440,000	32,440,000	32,440,000	
Difference	(586,807)	7,233,416	77,678	1,697,960	5,666,008	(3,679,439)	(6,834,431)	(9,248,417)	(619,663)	391,690	13,743,380	582,242	6,937,356														
SoCalGas	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022														
Core Residential	9,072,288	12,564,473	8,465,190	5,173,595	7,371,223	7,037,522	3,950,507	4,295,816	13,457,604	18,507,428	19,765,627	13,002,500	15,794,664														
Core Commercial	7,457,290	10,030,218	9,608,803	2,380,370	4,093,890	6,286,602	2,458,094	2,515,592	4,249,106	4,527,673	5,298,914	1,890,045	8,183,941														
Core Industrial	2,268,570	3,051,276	2,923,078	2,893,233	2,457,193	1,928,620	1,236,543	811,937	456,371	487,431	346,005	298,976	2,477,588														
NonCore Commercial	1,584,214	1,431,391	1,371,252	293,874	2,168,951	1,878,668	335,445	290,846	56,422	188,032	65,288	-	-														
NonCore Industrial retail	2,483,166	3,339,913	3,199,588	4,184,881	6,592,493	2,495,191	1,562,769	1,013,868	1,093,600	98,374	460,317	534,045	698,437														
NonCore Industrial refinery	5,067,684	6,816,146	6,529,768	7,982,006	6,172,268	1,993,759	892,212	122,423	67,235	152,753	3,207,220	256,577	222,726														
Total	27,413,193	37,233,416	32,077,678	25,817,960	28,856,008	21,620,562	10,465,569	8,851,583	19,380,337	22,391,690	28,143,380	15,962,242	27,377,356														
Proportionally scale it down or up to match PUC Goals for 2010 - 2014																											
ANNUAL NET SAVINGS	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
Core Residential	927	1,012	842	764	592	704	398	430	1,346	1,693	1,877	1,300	1,579	1,296	1,237	1,410	1,468	1,583	1,641	1,698	1,814	1,872	1,872	1,872	1,872	1,872	
Core Commercial	762	908	969	222	329	629	246	252	425	453	530	189	818	671	641	731	760	820	850	880	940	970	970	970	970	970	
Core Industrial	232	246	292	262	197	193	124	61	46	49	35	248	203	203	194	221	230	248	257	266	285	294	294	294	294		
NonCore Commercial	109	115	137	27	174	188	34	29	6	20	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
NonCore Industrial retail	254	269	319	391	530	250	156	101	109	10	46	53	70	57	55	62	65	70	73	75	80	83	83	83	83		
NonCore Industrial refinery	518	549	651	746	496	199	89	12	7	15	321	26	22	18	17	20	21	22	23	24	26	26	26	26	26		
Total	2,800	3,000	3,200	2,412	2,319	2,162	1,047	885	1,938	2,239	2,814	1,598	2,738	2,244	2,144	2,444	2,544	2,744	2,844	2,944	3,144	3,244	3,244	3,244	3,244	3,244	
Cumulative Savings Mth		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035		
Core Residential		1,579	2,874	4,111	5,521	6,989	8,572	10,213	11,911	13,725	15,596	17,468	19,340	21,211	23,083												
Core Commercial		818	1,489	2,130	2,851	3,621	4,441	5,292	6,172	7,111	8,081	9,051	10,021	10,990	11,960												
Core Industrial		248	451	645	866	1,096	1,345	1,602	1,868	2,153	2,446	2,740	3,034	3,327	3,621												
NonCore Commercial		-	-	-	-	-	-	-	-	-	-	-	-	-	-												
NonCore Industrial retail		70	127	182	244	309	379	452	527	607	690	772	855	938	1,021												
NonCore Industrial refinery		22	41	58	76	95	121	144	168	194	220	246	273	299	325												
Total Load Impacts		2,738	4,982	7,126	9,570	12,114	14,858	17,702	20,646	23,790	27,034	30,278	33,522	36,766	40,010												
Cumulative Savings MMCF		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035		
Core Residential		-	-	-	-	-	-	-	-	-	-	1,530	2,785	3,984	5,350	6,772	8,306	9,896	11,542	13,239	15,113	16,926	18,740	20,553	22,367		
Core Commercial		-	-	-	-	-	-	-	-	-	-	793	1,443	2,064	2,772	3,509	4,304	5,128	5,980	6,891	7,831	8,770	9,710	10,650	11,589		
Core Industrial		-	-	-	-	-	-	-	-	-	-	240	437	625	839	1,062	1,303	1,552	1,810	2,086	2,371	2,655	2,940	3,224	3,509		
NonCore Commercial		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
NonCore Industrial retail		-	-	-	-	-	-	-	-	-	-	68	123	176	237	299	367	438	510	588	668	748	829	909	989		
NonCore Industrial refinery		-	-	-	-	-	-	-	-	-	-	22	39	56	75	95	117	140	163	188	213	239	264	290	315		
Total Cumulative Load		-	-	-	-	-	-	-	-	-	-	2,663	4,827	6,905	9,273	11,738	14,397	17,153	20,006	23,052	26,195	29,339	32,482	35,626	38,769		
Forecast Year =====>													1	2	3	4	5	6	7	8	9	10	11	12	13	14	

Life cycle is 15 years.

	Reported 2010	Reported 2011	Reported 2012	Reported 2013	Reported 2014	Reported 2015	Reported 2016	Reported 2017	Reported 2018	Reported 2019	Reported 2020	Reported 2021	Forecast 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033	Forecast 2034	Forecast 2035	
SoCalGas EE Program TOTAL	27,413,193	37,233,416	32,077,678	25,817,960	28,856,008	21,620,562	19,689,893	24,469,089	29,351,882	29,729,363	16,659,580	15,837,094	16,718,896														
PUC Goal	28,000,000	30,000,000	32,000,000	24,120,000	23,190,000	25,300,000	11,700,000	18,100,000	26,000,000	26,000,000	21,000,000	22,000,000	24,000,000														
Difference	(586,807)	7,233,416	77,678	1,697,960	5,666,008	(3,679,438)	7,989,893	6,369,089	3,351,882	3,729,363	(4,281,194)	(6,162,906)															
SoCalGas	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022														
Core Residential	9,072,288	12,564,473	8,445,190	5,173,595	7,371,223	7,037,522	10,931,811	16,536,259	21,706,410	22,245,310	12,994,470	11,696,200	12,381,566														
Core Commercial	7,457,290	10,030,218	9,608,803	2,380,370	4,093,890	6,286,602	8,758,283	7,932,831	7,582,472	7,503,854	3,895,310	4,180,893	4,337,330														
Core Industrial	2,268,570	3,051,276	2,923,078	2,893,233	2,457,193	1,928,620	-	-	-	-	-	-	-														
NonCore Commercial	1,594,214	1,431,391	1,371,252	293,874	2,168,951	1,878,668	-	-	-	-	-	-	-														
NonCore Industrial retail	2,483,166	3,339,913	3,199,588	4,184,881	6,592,493	2,495,191	-	-	-	-	-	-	-														
NonCore Industrial refinery	5,067,684	6,816,146	6,529,768	7,982,006	6,172,268	1,993,759	-	-	-	-	-	-	-														
Total	27,413,193	37,233,416	32,077,678	25,817,960	28,856,008	21,620,562	19,689,893	24,469,089	29,351,882	29,729,363	16,659,580	15,837,094	16,718,896														
Proportionally scale it down or up to match PUC Goals for 2010 - 2014																											
ANNUAL NET SAVINGS	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
Core Residential	927	-1,012	842	764	592	704	-1,093	1,654	2,177	2,223	1,296	1,168	1,238	1,925	1,925	1,851	1,185	1,185	1,111	963	963	963	889	889	889	889	
Core Commercial	782	908	969	222	329	629	876	793	758	750	390	418	434	675	675	649	415	389	337	337	311	311	311	311	311	311	
Core Industrial	232	246	292	262	197	193	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NonCore Commercial	109	115	137	27	174	188	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NonCore Industrial retail	254	269	319	391	530	250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NonCore Industrial refinery	518	549	651	746	496	199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total	2,800	3,000	3,200	2,412	2,319	2,162	1,969	2,447	2,935	2,973	1,686	1,584	1,672	2,600	2,600	2,800	1,600	1,600	1,900	1,300	1,300	1,300	1,200	1,200	1,200	1,200	
Cumulative Savings Mth			2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
Core Residential			1,238	3,164	5,089	6,941	8,125	9,310	10,421	11,384	12,347	13,309	14,198	15,087	15,976	16,864											
Core Commercial			434	1,108	1,783	2,431	2,846	3,261	3,651	3,988	4,325	4,662	4,974	5,285	5,596	5,908											
Core Industrial			-	-	-	-	-	-	-	-	-	-	-	-	-	-											
NonCore Commercial			-	-	-	-	-	-	-	-	-	-	-	-	-	-											
NonCore Industrial regular			-	-	-	-	-	-	-	-	-	-	-	-	-	-											
NonCore Industrial refinery			-	-	-	-	-	-	-	-	-	-	-	-	-	-											
Total Load Impacts			1,672	4,272	6,872	9,372	10,972	12,572	14,072	15,372	16,672	17,972	19,172	20,372	21,672	22,772											
Cumulative Savings MMCF			2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	
Core Residential			-	-	-	-	-	-	-	-	-	-	1,200	3,066	4,931	6,725	7,874	9,022	10,098	11,031	11,964	12,897	13,758	14,619	15,480	16,341	
Core Commercial			-	-	-	-	-	-	-	-	-	-	420	1,074	1,727	2,356	2,758	3,160	3,537	3,864	4,191	4,518	4,819	5,121	5,423	5,724	
Core Industrial			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NonCore Commercial			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NonCore Industrial regular			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
NonCore Industrial refinery			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Cumulative Load			-	-	-	-	-	-	-	-	-	-	1,620	4,139	6,659	9,081	10,632	12,182	13,636	14,896	16,155	17,415	18,577	19,740	20,903	22,066	
Forecast Year =====>														1	2	3	4	5	6	7	8	9	10	11	12	13	14

Life cycle is 15 years.

SUPPORTING DATA



WEATHER

**HEATING DEGREE DAYS – AVERAGE AND “COLD” YEAR DESIGNS AND WINTER PEAK
DAY DESIGN TEMPERATURES**

December HDD figures from 2002 to 2021. SoCalGas calculates the cold--temperature-year monthly HDD values using the same distribution of average-year HDDs. For example, 22.73 percent (283.6 / 1247.6) of average-temperature-year HDDs occurred in December, so the estimated number of HDDs during December for a 1-in-35 cold-year is equal to 1,476 HDDs multiplied by 22.73 percent, or 335.5 HDDs.

Table 4
 Calendar Month Heating Degree-Day Designs

	<u>Cold</u>		<u>Average</u>	<u>Hot</u>	
	<u>1-in-35 Design</u>	<u>1-in-10 Design</u>		<u>1-in-10 Design</u>	<u>1-in-35 Design</u>
January	302.3	286.4	255.6	224.9	208.9
February	259.0	245.3	219.0	192.7	179.0
March	197.3	186.9	166.9	146.8	136.4
April	122.0	115.5	103.1	90.7	84.3
May	56.0	53.0	47.3	41.6	38.7
June	11.5	10.9	9.7	8.5	7.9
July	2.4	2.3	2.1	1.8	1.7
August	2.1	2.0	1.8	1.5	1.4
September	5.3	5.0	4.5	4.0	3.7
October	36.0	34.1	30.5	26.8	24.9
November	146.6	138.8	123.9	109.0	101.3
December	335.5	317.7	283.6	249.5	231.8
	1476	1398	1248	1098	1020

IV. Adjusting Forecasted HDDs for a Climate-Change Trend

SoCalGas incorporates a climate-change warming trend that reduces HDDs by 6 HDDs per year over the forecast period. The annual reduction is based on the latest twenty-year trend in 20-year-averaged HDDs. That is, they are based on the observed trend in changes starting with average HDDs for years 1983-2002, then 1984-2003, 1985-2004...and ending with the average HDDs for years 2002-2021.

Table 5 below shows system HDDs, rolling 20-year averaged HDDs, and the annual changes in those rolling 20-year averages. The actual average annual change is -7.0 HDDs for the most recent twenty of the 20-year averages (with ending years from 2002 through 2021). A simple “ordinary least squares” regression-fitted time trend (using Microsoft Excel’s “LINEST” function) was applied to those same annual changes, resulting in a fitted estimation of -6.2 HDDs per year. Based on the fitted trend, it was decided to decrease average-year and cold-year forecasted HDD’s by an even 6 HDDs per year, starting with the first forecast year of 2022.

GAS PRICE FORECAST



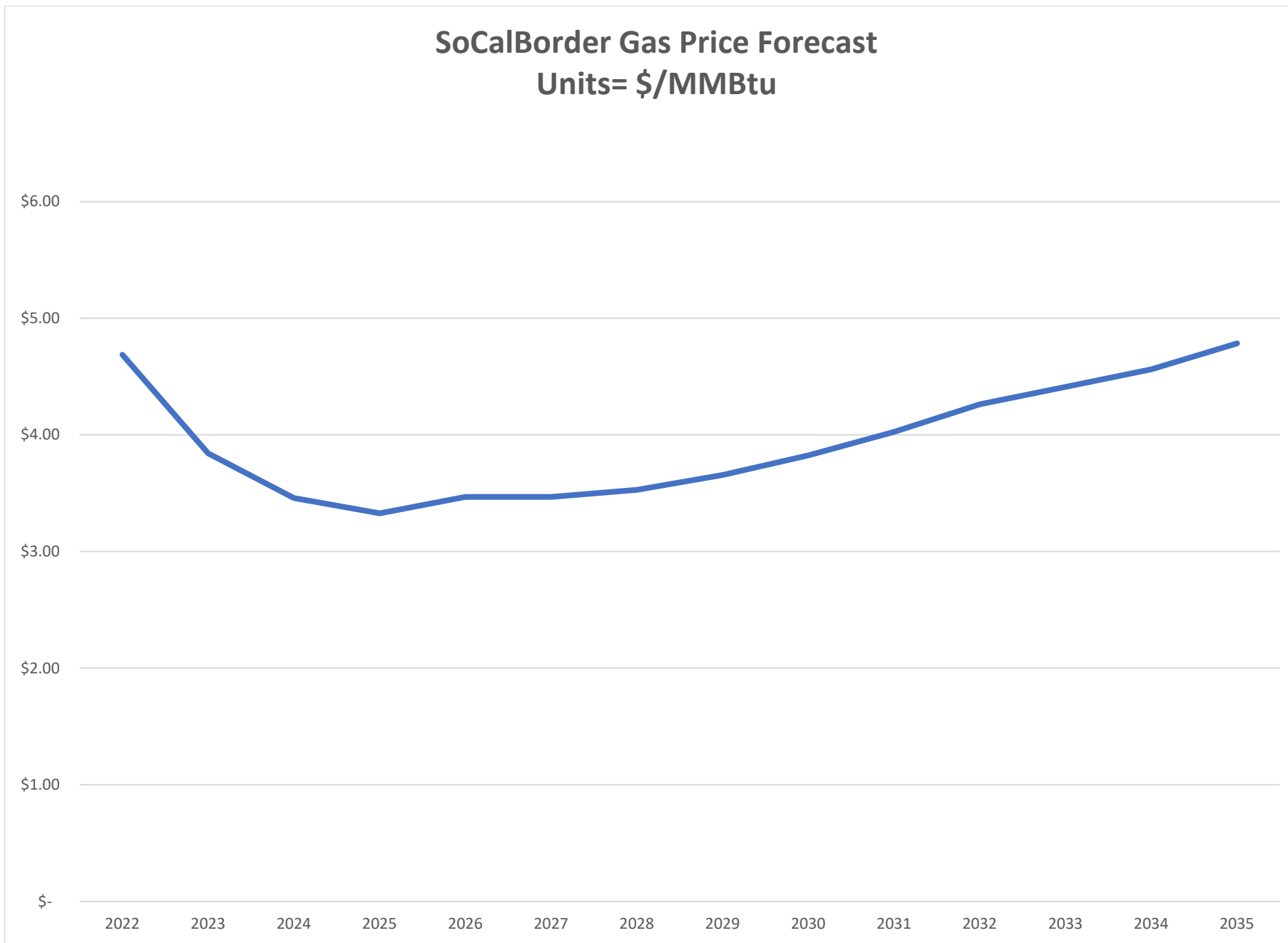
A  Sempra Energy utility™

The natural gas price forecast used to develop the demand forecasts for SoCalGas and SDG&E was prepared in March 2022 using New York Mercantile Exchange (NYMEX)-based natural gas futures prices and other forecast sources. Consistent with the gas price forecast methodology used to develop demand forecasts authorized by Commission Decision (D.)09-11-006,¹ SoCalGas and SDG&E used this methodology to forecast the cost of gas to be used for determining the cost of Unaccounted-For (UAF) and Company-Use (CU) fuel.

This forecast is based on NYMEX Henry Hub ClearPort Basis Swap futures prices through December 2027. For the period covering January 2028 to December 2029, the natural gas price was forecast was spliced. Beginning January 2030, the gas price forecast at Henry Hub was a blended forecast composed of a composite of proprietary and public market gas price forecasts.

¹ D.09-11-002 approved a settlement agreement in Phase 2 of SoCalGas and SDG&E's 2009 BCAP.

SoCalBorder Gas Price Forecast Units= \$/MMBtu



SERVICE AREA ECONOMIC FORECAST



SOUTHERN CALIFORNIA GAS COMPANY SERVICE AREA ECONOMIC FORECAST
(Employment based on Global Insight's November 2021 Regional Forecast)

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
EMPLOYMENT (1000's)										
Total	9,025.7	9,187.3	9,368.5	9,512.2	8,789.1	8,955.6	9,305.2	9,404.5	9,431.7	9,470.2
Agriculture	241.3	240.1	238.2	238.9	228.0	231.7	232.0	231.5	230.6	230.0
Total Non-farm	8,784.4	8,947.2	9,130.4	9,273.2	8,561.1	8,723.9	9,073.2	9,173.0	9,201.2	9,240.2
Mining	15.2	14.6	15.5	15.9	13.6	12.9	13.3	13.6	13.7	13.5
Construction	391.2	409.3	434.0	441.6	428.9	436.6	442.5	447.8	448.2	451.3
Manufacturing	721.3	713.1	708.0	706.9	659.0	650.4	666.3	674.7	669.7	662.2
Transportation, Information, Utilities	588.6	587.6	600.9	616.1	578.8	598.1	627.6	638.7	655.4	668.9
Trade	1,492.3	1,512.7	1,526.8	1,524.0	1,430.7	1,486.1	1,502.3	1,490.1	1,466.8	1,451.7
Retail	1,010.1	1,016.5	1,014.4	1,001.5	918.2	950.7	938.8	906.0	869.0	838.7
Wholesale (including warehousing)	482.2	496.2	512.5	522.5	512.5	535.4	563.5	584.2	597.9	613.1
Restaurants	758.3	781.9	796.7	811.3	633.2	664.2	655.2	633.0	606.4	585.7
Finance, Insurance & Real Estate	437.9	441.0	441.4	440.6	423.2	417.8	436.4	442.4	449.2	455.6
Services	2,873.5	2,949.7	3,044.5	3,140.6	2,886.1	2,979.6	3,192.0	3,274.6	3,324.7	3,374.9
Accomodation	137.5	141.5	143.4	145.3	98.9	105.0	123.0	137.0	141.3	142.3
Personal & Laundry Services	96.7	98.7	101.8	104.1	72.3	73.7	84.9	88.6	89.6	90.7
Professional & Business Services	1,196.8	1,214.4	1,256.0	1,294.7	1,214.5	1,246.2	1,354.5	1,407.9	1,432.2	1,456.7
Health & Social Services	1,193.8	1,244.3	1,283.8	1,327.6	1,309.2	1,338.5	1,380.9	1,382.1	1,399.4	1,419.7
Misc. Services	248.7	250.9	259.5	268.9	191.2	216.2	248.7	259.2	262.2	265.5
Government & Education	1,506.1	1,537.3	1,562.5	1,576.3	1,507.7	1,478.3	1,537.6	1,558.0	1,567.0	1,576.4
OTHER INDICATORS										
Southern California Consumer Inflation*	1.9%	2.8%	3.8%	3.1%	1.6%	3.8%	5.0%	1.9%	2.1%	2.1%
Inflation--US Gross Domestic Product**	0.7%	1.9%	2.3%	1.5%	1.2%	3.9%	4.4%	2.2%	2.1%	2.1%

* Consumer Price Index for Greater Los Angeles area (Los Angeles and Orange Counties), from Global Insight's February 2022 Regional Forecast.

** Chained Price Index--US GDP: from Global Insight's February 2022 Forecast of the U.S. Economy; beyond 2032 is from their November 2021 long-term forecast.

SOUTHERN CALIFORNIA GAS COMPANY SERVICE AREA ECONOMIC FORECAST
 (Employment based on Global Insight's November 2021 Regional Forecast)

	2026	2027
EMPLOYMENT (1000's)		
Total	9,522.3	9,564.0
Agriculture	229.9	229.9
Total Non-farm	9,292.4	9,334.1
Mining	13.3	13.2
Construction	454.2	455.9
Manufacturing	656.6	655.4
Transportation, Information, Utilities	674.4	673.1
Trade	1,450.7	1,444.1
Retail	826.6	813.5
Wholesale (including warehousing)	624.1	630.6
Restaurants	577.3	568.1
Finance, Insurance & Real Estate	456.1	451.6
Services	3,424.5	3,478.2
Accommodation	142.8	143.5
Personal & Laundry Services	91.7	92.9
Professional & Business Services	1,481.0	1,509.6
Health & Social Services	1,440.5	1,460.1
Misc. Services	268.5	272.0
Government & Education	1,585.3	1,594.5
OTHER INDICATORS		
Southern California Consumer Inflation*	2.2%	2.3%
Inflation--US Gross Domestic Product**	2.1%	2.2%

* Consumer Price Index for Greater Los Angeles area (Los Angeles and Orange Counties), from Global Insight's February 2022 Regional Forecast.

** Chained Price Index--US GDP: from Global Insight's February 2022 Forecast of the U.S. Economy; beyond 2032 is from their November 2021 long-term forecast.

CORE BROKERAGE FEE STUDY



Brokerage Fee Summary

Current Brokerage Fee	0.21 cents per therm
Proposed Brokerage Fee (SoCalGas)	0.310 cents per therm
Proposed Brokerage Fee (SoCalGas+SDG&E)	0.299 cents per therm

TCAP Gas Purchases

SoCalGas Core (MTherms)	3,017,768 core throughput =3,646,701
SDG&E Core (MTherms)	426,089 core throughput=502,042
Total SCG & SDG&E	3,443,857

Total Cost Estimate	Difference					
	Labor	NonLabor	Overheads	Direct Cost	Rent	Total
Gas Acquisition	\$4,471,095	\$474,356	\$3,233,704	\$8,179,155	\$590,241	\$8,769,397
Demand Forecasting	\$44,511	\$6,625	\$29,974	\$81,110	\$11,000	\$92,110
Case Management	\$9,096	\$199	\$4,864	\$14,159	\$1,341	\$15,500
Regulatory Tariff	\$72,524	\$9,650	\$55,205	\$137,380	\$7,646	\$145,027
Human Resources	\$9,925	\$130	\$8,359	\$18,413	\$2,414.62	\$20,828
Law	\$172,500	\$15,525	\$108,675	\$296,700	\$30,537.94	\$327,238
Total	\$4,779,651	\$506,485	\$3,440,781	\$8,726,917	\$643,182	\$9,370,099

(Costs in \$000)	2021
Gas Procurement	\$ 8,769
Sales & Supply Forecasting	\$ 92
Reg Affairs+Law+HR	\$ 493
Total	\$9,355

	Rate Base	Return & Tax	Total
SoCalGas Commodity-Related Cash Working Capital	\$7,820,812	9.39%	\$734,374
SDG&E Commodity-Related Cash Working Capital	\$1,768,815	11.59%	\$205,006
Total			\$10,309,479

Rent Estimate

	% Labor	Sq. Ft.	
Gas Acquisition	#N/A	14,849	44 persons
Demand Forecasting	82.00%	277	
Case Management	10.00%	34	
Regulatory Tariff	57.00%	192	
Human Resources	18.00%	61	
Law	33.17%	768	
Total		16,181	337 Avg. Chargeable Sq. Ft. per person \$39.75 Rent All-Inconclusive Rate (\$ per SqFt)

Labor to NonLabor and Overheads Ratio

	Labor	NonLabor Ratio	Overheads Ratio
Except Gas Acq and Law	\$136,056	\$16,604	\$98,402
		12.20%	72.32%

Chargeable Square Feet

	CSF	Persons	CSF/Person
2200-0838 hr	6,797	19	358
2200-2309 tariff	3,584	3	1,195
2200-2075 case mgmt	690	10	69
2100-2308 fcst	1,753	6	292
Total	12,824	38	337

Source: Zita Gonzales
Updated December 2021
Directly Related to Core Procurement Activities (2021 Recorded/estimated costs)
Excludes SMS, GHG C&T, and LCFS/Pilot RNG Admin Costs

Labor	\$4,471,095
Non-Labor	\$474,356
Vacation & Sick	\$872,262

Name of person who supports core gas procurement function:	Team A Person 1
Group Name:	Demand Forecasting
Number of Employees in group:	6
Cost Center:	2200-2308
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:	809,287.97	\$138,795.94	\$134,881.33
Non-Labor:	77,943.29	\$213,836.37	\$12,990.55
Overhead	N/A	\$352,632.31	\$58,772.05
Labor	N/A	\$138,795.94	
Non-Labor	N/A	\$213,836.37	

Describe Your Activities/Responsibilities Related to Procurement	Percent of Time	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 monthly true up reporting	2.00%	\$2,697.63	\$2,598.11	\$11,754.41	\$17,050.15
2 DLFM Forecast	3.00%				
3 AMI Data Clean Up and Analysis for Gas Procurement	4.00%				
4 Southern System	1.00%				
5 Total	10.00%	\$2,697.63	\$2,598.11	\$11,754.41	\$17,050.15

Core Brokerage Fee Survey

Name of person who supports core gas procurement function:	Team A Person 2
Group Name:	Demand Forecasting
Number of Employees in group:	6
Cost Center:	2200-2308
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:	809,287.97	\$138,795.94	\$134,881.33
Non-Labor:	77,943.29	\$213,836.37	\$12,990.55
Overhead	N/A	\$352,632.31	\$58,772.05
Labor	N/A	\$138,795.94	
Non-Labor	N/A	\$213,836.37	

Describe Your Activities/Responsibilities Related to Procurement	Percent of Time	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 monthly true up reporting UBR work	1.00%	\$1,348.81	\$129.91	\$587.72	\$2,066.44
2					
3					
4					
5					
Total	1.00%	\$1,348.81	\$129.91	\$587.72	\$2,066.44

Name of person who supports core gas procurement function:	Team A Person 3
Group Name:	Demand Forecasting
Number of Employees in group:	6
Cost Center:	2200-2308
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:	809,287.97	\$138,795.94	\$134,881.33
Non-Labor:	77,943.29	\$213,836.37	\$12,990.55
Overhead	N/A	\$352,632.31	\$58,772.05
Labor	N/A	\$138,795.94	
Non-Labor	N/A	\$213,836.37	

Describe Your Activities/Responsibilities Related to Procurement	Percent of Time	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 Provision and analysis of AMI, weather, LUAF and company use fuel	2.00%	\$2,697.63	\$259.81	\$1,175.44	\$4,132.88
2 DLFM modeling and support for gas acquisition	2.00%	\$2,697.63	\$259.81	\$1,175.44	\$4,132.88
3		\$0.00	\$0.00	\$0.00	\$0.00
4					
5					
Total	4.00%	\$5,395.25	\$519.62	\$2,350.88	\$8,265.76

Core Brokerage Fee Survey

Name of person who supports core gas procurement function:	Team A Person 4
Group Name:	Demand Forecasting
Number of Employees in group:	6
Cost Center:	2200-2308
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:	809,287.97	\$138,795.94	\$134,881.33
Non-Labor:	77,943.29	\$213,836.37	\$12,990.55
Overhead	N/A	\$352,632.31	\$58,772.05
Labor	N/A	\$138,795.94	
Non-Labor	N/A	\$213,836.37	

Describe Your Activities/Responsibilities Related to Procurement	Percent of Time	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 DLFM model updates and improvement	15.00%	\$20,232.20	\$1,948.58	\$8,815.81	\$30,996.59
2 DLFM forecasts daily tracking reporting and adjustments	12.00%				
3 monthly core true up imbalance reporting	4.00%				
4 estimate daily LUAF and Co Use for DAS system	4.00%				
5 DAS daily data validation and analysis	3.00%				
6 Southern System daily core share of system load reporting	8.00%				
7 Miscellaneous tasks (monthly CAT summary reporting, DLFM server issues resolving and related data requests)	5.00%				
Total	51.00%	\$20,232.20	\$1,948.58	\$8,815.81	\$30,996.59

0

Name of person who supports core gas procurement function:	Team A Person 5
Group Name:	Demand Forecasting
Number of Employees in group:	6
Cost Center:	2200-2308
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:	809,287.97	\$138,795.94	\$134,881.33
Non-Labor:	77,943.29	\$213,836.37	\$12,990.55
Overhead	N/A	\$352,632.31	\$58,772.05
Labor	N/A	\$138,795.94	
Non-Labor	N/A	\$213,836.37	

Describe Your Activities/Responsibilities Related to Procurement	Percent of Time	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 DLFM Model Updates and Improvement	10.00%	\$13,488.13	\$1,299.05	\$5,877.21	\$20,664.39
2 DLFM forecasts daily tracking, reporting and adjustments	5.00%				
3					
4					
5					
Total	15.00%	\$13,488.13	\$1,299.05	\$5,877.21	\$20,664.39

Core Brokerage Fee Survey

Name of person who supports core gas procurement function: Team A Person 6
 Group Name: Demand Forecasting
 Number of Employees in group: 6
 Cost Center: **2200-2308**
 Cost Center:
 Cost Center:

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:	809,287.97	\$138,795.94	\$134,881.33
Non-Labor:	77,943.29	\$213,836.37	\$12,990.55
Overhead	N/A	\$352,632.31	\$58,772.05
Labor	N/A	\$138,795.94	
Non-Labor	N/A	\$213,836.37	

Describe Your Activities/Responsibilities Related to Procurement	Percent of Time	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 Monthly true up reporting (with Gas Acq as users of the monthly UBR and SDGE core decomposition work	1.00%	\$1,348.81	\$129.91	\$587.72	\$2,066.44
2					
3					
4					
5					
Total	1.00%	\$1,348.81	\$129.91	\$587.72	\$2,066.44

Core Brokerage Fee Survey

Name of person who supports core gas procurement function:	Team B person 1
Group Name:	Regulatory Tariff
Number of Employees in group:	3
Cost Center:	2200-2309
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:	\$381,707.83	\$114,841.94	\$127,235.94
Non-Labor:	\$50,790.85	\$175,713.23	\$16,930.28
Overhead	N/a	\$290,555.17	\$96,851.72
Labor	N/a	\$114,841.94	
Non-Labor	N/a	\$175,713.23	

Describe Your Activities/Responsibilities Related to Procurement	Percent of Time	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 Core procurement charge, cross-over rate, buy-back rates and standby advice letter filings	19.00%	\$24,174.83	\$3,216.75	\$18,401.83	\$45,793.41
2					
3					
4					
5					
Total	19.00%	\$24,174.83	\$3,216.75	\$18,401.83	\$45,793.41

Core Brokerage Fee Survey

Name of person who supports core gas procurement function:	Team B person 2
Group Name:	Regulatory Tariff
Number of Employees in group:	3
Cost Center:	2200-2309
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:	\$381,707.83	\$114,841.94	\$127,235.94
Non-Labor:	\$50,790.85	\$175,713.23	\$16,930.28
Overhead	N/a	\$290,555.17	\$96,851.72
Labor	N/a	\$114,841.94	
Non-Labor	N/a	\$175,713.23	

	Describe Your Activities/Responsibilities Related to Procurement	Percent of				Total (\$)
		Time	Labor (\$)	NonLabor (\$)	Overhead (\$)	
1	Core procurement charge, cross-over rate, buy-back rates, and standby advice letter filings	19.00%	\$24,174.83	\$3,216.75	\$18,401.83	\$45,793.41
2						
3						
4						
5	Total	19.00%	\$24,174.83	\$3,216.75	\$18,401.83	\$45,793.41

Core Brokerage Fee Survey

Name of person who supports core gas procurement function:	Team B Person 3
Group Name:	Regulatory Tariff
Number of Employees in group:	3
Cost Center:	2200-2309
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:	\$381,707.83	\$114,841.94	\$127,235.94
Non-Labor:	\$50,790.85	\$175,713.23	\$16,930.28
Overhead	N/a	\$290,555.17	\$96,851.72
Labor	N/a	\$114,841.94	
Non-Labor	N/a	\$175,713.23	

Describe Your Activities/Responsibilities Related to Procurement	Percent of Time	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 Core procurement charge, cross-over rate, buy-back rates, and standby advice letter filings	19.00%	\$24,174.83	\$3,216.75	\$18,401.83	\$45,793.41
2					
3					
4					
5					
Total	19.00%	\$24,174.83	\$3,216.75	\$18,401.83	\$45,793.41

Core Brokerage Fee Survey

Name of person who supports core gas procurement function:	Team C Person 1
Group Name:	Gas Case Management
Number of Employees in group:	10
Cost Center:	2200-2075
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:	\$1,010,646.26	\$262,453.11	\$101,064.63
Non-Labor:	\$22,135.87	\$401,335.32	\$2,213.59
Overhead	n/a	\$540,418.97	\$54,041.90
Labor	n/a	\$262,453.11	
Non-Labor	n/a	\$401,335.32	

Describe Your Activities/Responsibilities Related to Procurement	Percent of Time	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 GCIM application, data requests, preparations	7.00%	\$7,074.52	\$154.95	\$3,782.93	\$11,012.41
2 Two monthly meetings with CalPA and Energy Division on all activities related to procurement	1.00%	\$1,010.65	\$22.14	\$540.42	\$1,573.20
3 various monitoring and reporting of other cases related to procurement group	1.00%	\$1,010.65	\$22.14	\$540.42	\$1,573.20
4 coordination of interactions with regulators and other parties on interstate contracts/compliance with regulatory requests	1.00%				
	0.00%				
Total	10.00%	\$9,095.82	\$199.22	\$4,863.77	\$14,158.81

Core Brokerage Fee Survey

Name of person who supports core gas procurement function:	Team D Person 1
Group Name:	SoCalGas Law
Number of Employees in group:	
Cost Center:	2200-2362
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:			
Non-Labor:			9%
Overhead			63%
Labor			
Non-Labor			

Describe Your Activities/Responsibilities Related to Procurement	Hours	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 Gas acquisition meetings, legal advice, GCIM application and support related to GCIM Proceeding	170	\$42,500.00	\$3,825.00	\$26,775.00	\$73,100.00
2 Total	170	\$42,500.00	\$3,825.00	\$26,775.00	\$73,100.00

Core Brokerage Fee Survey

Name of person who supports core gas procurement function:	Team D person 2
Group Name:	SoCalGas Law
Number of Employees in group:	
Cost Center:	2200-2362
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:			
Non-Labor:			9%
Overhead			63%
Labor			
Non-Labor			

Describe Your Activities/Responsibilities Related to Procurement	Hours	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 Gas Acquisition meetings, contracting drafting and review plus miscellaneous legal advice	180	\$45,000.00	\$4,050.00	\$28,350.00	\$77,400.00
2 Total	180	\$45,000.00	\$4,050.00	\$28,350.00	\$77,400.00

Core Brokerage Fee Survey

Name of person who supports core gas procurement function:	Team D Person 3
Group Name:	SoCalGas Law
Number of Employees in group:	
Cost Center:	2200-2362
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:			
Non-Labor:			9%
Overhead			63%
Labor			
Non-Labor			

Describe Your Activities/Responsibilities Related to Procurement	Hours	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 Legal advice on assorted issues, support to other attorneys	5	\$1,250.00	\$112.50	\$787.50	\$2,150.00
2 Total	5	\$1,250.00	\$112.50	\$787.50	\$2,150.00

Core Brokerage Fee Survey

Name of person who supports core gas procurement function:	Team D Person 4
Group Name:	SoCalGas Law
Number of Employees in group:	
Cost Center:	2200-2155
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:			
Non-Labor:			9%
Overhead			63%
Labor			
Non-Labor			

Describe Your Activities/Responsibilities Related to Procurement	Hours	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 Gas acquisition meetings, FERC proceedings, Pipeline Settlements, Advice and Counsel	320	\$80,000.00	\$7,200.00	\$50,400.00	\$137,600.00
2 Total	320	\$80,000.00	\$7,200.00	\$50,400.00	\$137,600.00

Core Brokerage Fee Survey

Name of person who supports core gas procurement function:	Team D Person 5
Group Name:	SoCalGas Law
Number of Employees in group:	
Cost Center:	2200-2362
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:			
Non-Labor:			9%
Overhead			63%
Labor			
Non-Labor			

Describe Your Activities/Responsibilities Related to Procurement	Hours	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 Gas acquisition meetings and legal advice on contractual remedies/positions	15	\$3,750.00	\$337.50	\$2,362.50	\$6,450.00
2 Total	15	\$3,750.00	\$337.50	\$2,362.50	\$6,450.00

Core Brokerage Fee Survey

Name of person who supports core gas procurement function:	Team E Person 1
Group Name:	Human Resources
Number of Employees in group:	19
Cost Center:	2200-0838 Business Partners
Cost Center:	
Cost Center:	

Budget Associated with the Cost Center(s) above	Direct	Indirect	Per Person
Labor:	\$1,047,587.45	\$632,002	\$55,136.18
Non-Labor:	\$13,690.95	\$250,315.01	\$720.58
Overhead	n/a	\$882,316.77	\$46,437.72
Labor	n/a	\$632,001.76	
Non-Labor	n/a	\$250,315.01	

Describe Your Activities/Responsibilities Related to Procurement	Percent of Time	Labor (\$)	NonLabor (\$)	Overhead (\$)	Total (\$)
1 HR Advisor to Gas Acquisition (Patricia Ramirez)	10.00%	\$5,513.62	\$72.06	\$4,643.77	\$10,229.45
2 Recruiting (Yolanda Santiago)	5.00%	\$2,756.81	\$36.03	\$2,321.89	\$5,114.72
3 Compensation Misc. (Kahye Bang)	3.00%	\$1,654.09	\$21.62	\$1,393.13	\$3,068.83
4					
5					
Total	18.00%	\$9,924.51	\$129.70	\$8,358.79	\$18,413.01

Fuel Substitution Assumptions: CEC



Additional Achievable Fuel Substitution (2021 AAFS)

***- IEPR Volume IV (p33-49 & Appendix A)
“CA Energy Demand Forecast”***

<https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report>





Used AAEE as a template for **AAFS**

- *For 2021 we developed Additional Achievable Fuel Substitution (AAFS) as an hourly load modifier to the baseline demand forecast.*
- We used a manner similar to the one which was developed for AAEE for AAFS; ie. a “template”
- **AAFS was conceptualized as separate from AAEE**



2021 Additions and Enhancements

Removed Fuel Substitution

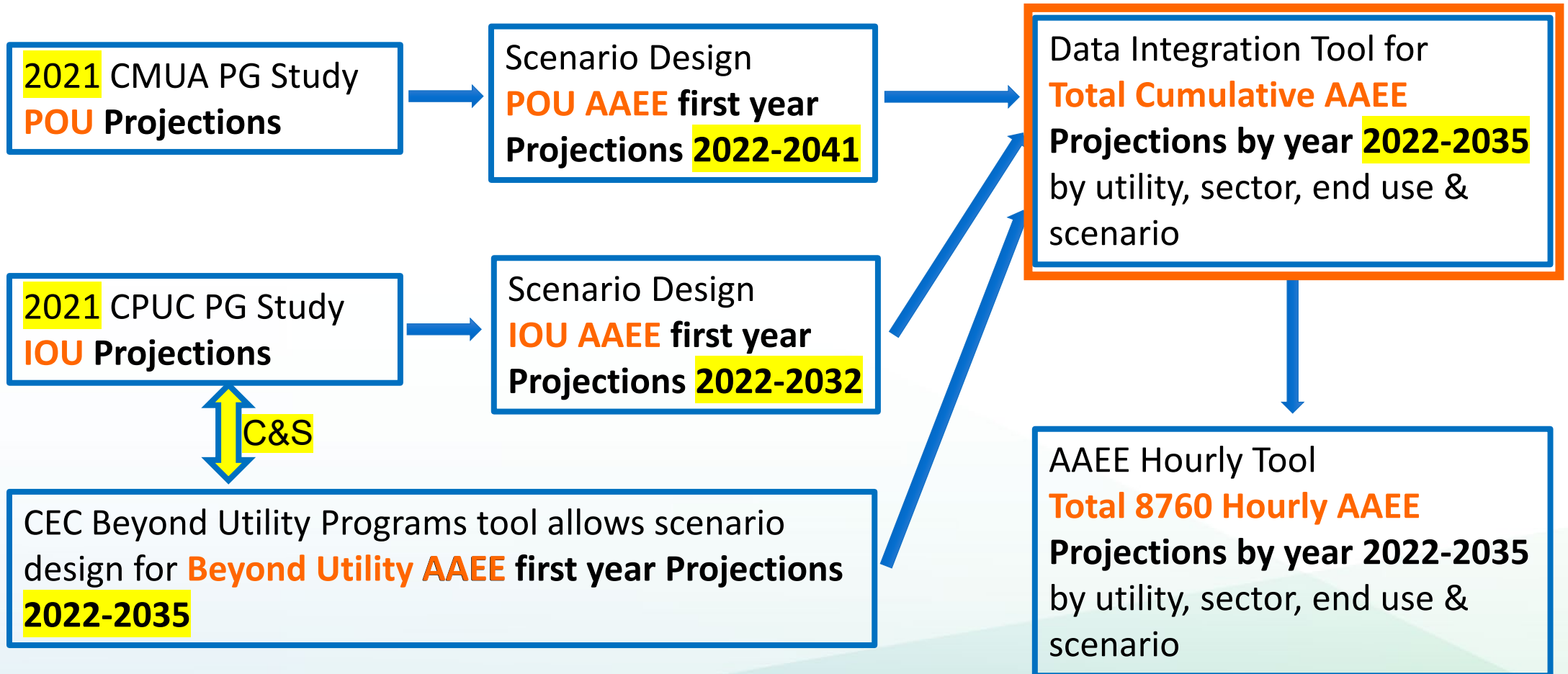
- Supplanted by Additional Achievable Fuel Substitution (AAFS)

ADDED new workbooks

- CCA and REN Program Savings (not yet modeled in PG Study)
- T24 Res & Com New Construction Fuel Sub
- Clean Energy Optimization Program (CEOP)
- IOU Low Income Fuel Sub
- POU Fuel Sub
- SGIP HPWH Incentives
- TECH-BUILD
(SB 1477 Low Emissions Buildings and Sources of Heat Energy))
- Food Processing Investment Program (FPIP)



Additional Achievable Energy Efficiency (AAEE) 2021 Process Flow Overview





Scenario Development for 2021 AEE

Lever	Mid - Very Low (Scenario 1)	Mid - Low (Scenario 2)	Mid - Mid (Scenario 3)	Mid - High (Scenario 4)	Mid - Very High (Scenario 5)	Mid - High Plus (Scenario 6)
Building Stock	2019 IEPR Mid-Case					
Retail Prices						

IOU Potential Program Savings

POU Potential Program Savings

Codes and Standards Savings

Beyond Utility Program Savings



Development of 2021 AAFS



Scenario Development for 2021 AAFS

				<i>actually more conservative planing scenarios ></i>		
				<i>more FS penetration</i>	<i>meet AB 3232 goals ?</i>	<i>meet mid-century goals ?</i>
				<i>less FS penetration</i>	<i>reference BAU</i>	
Lever	Mid - Low (Scenario 2)	Mid - Mid (Scenario 3)	Mid - Mid Plus (Scenario 4)	Mid - High (Scenario 5)	Mid - High Plus (Scenario 6)	
Building Stock	2019 IEPR Mid-Case					
Retail Prices						

IOU Potential Program Impacts

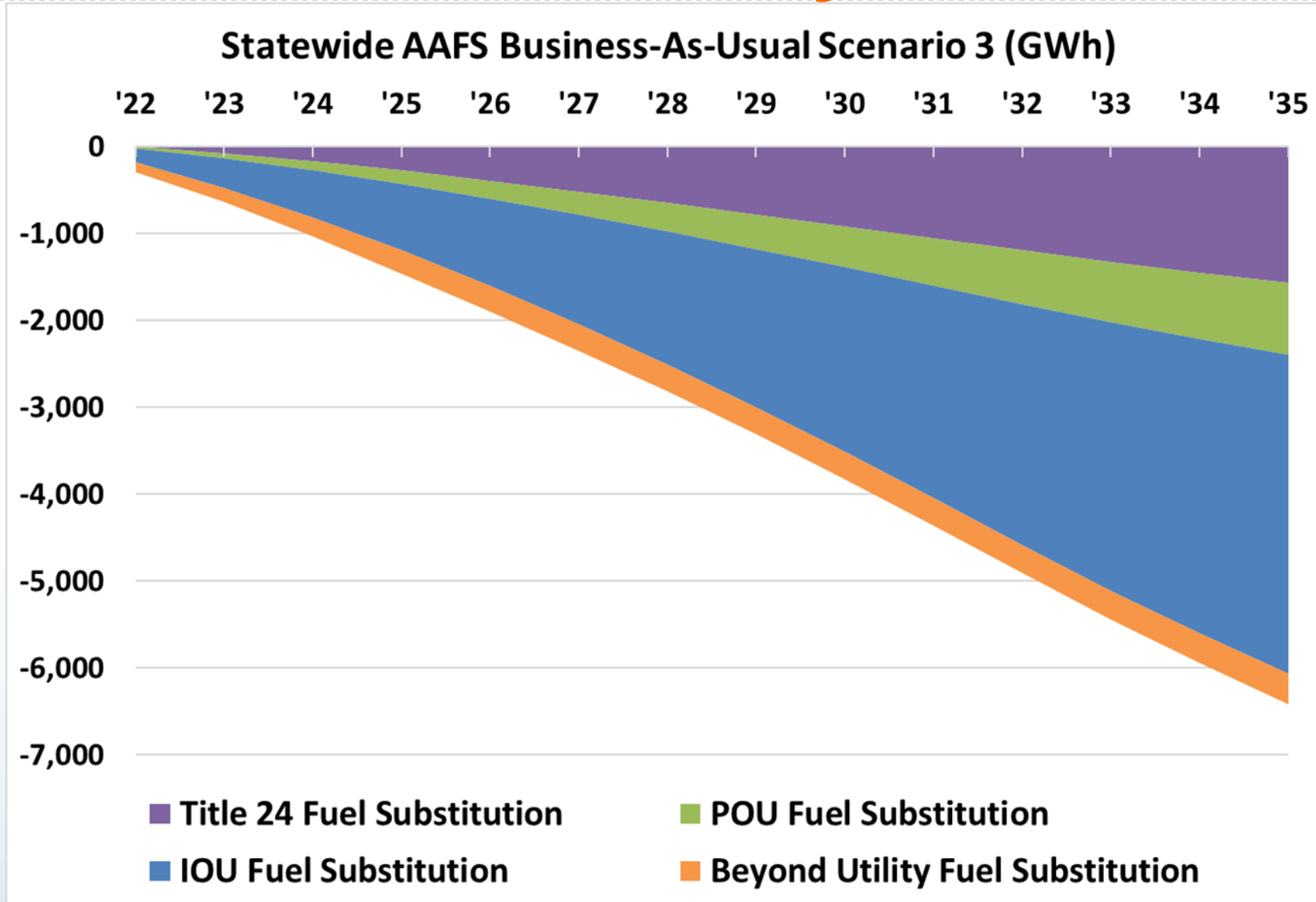
POU Potential Program Impacts

Codes and Standards Impacts

Beyond Utility Program Impacts

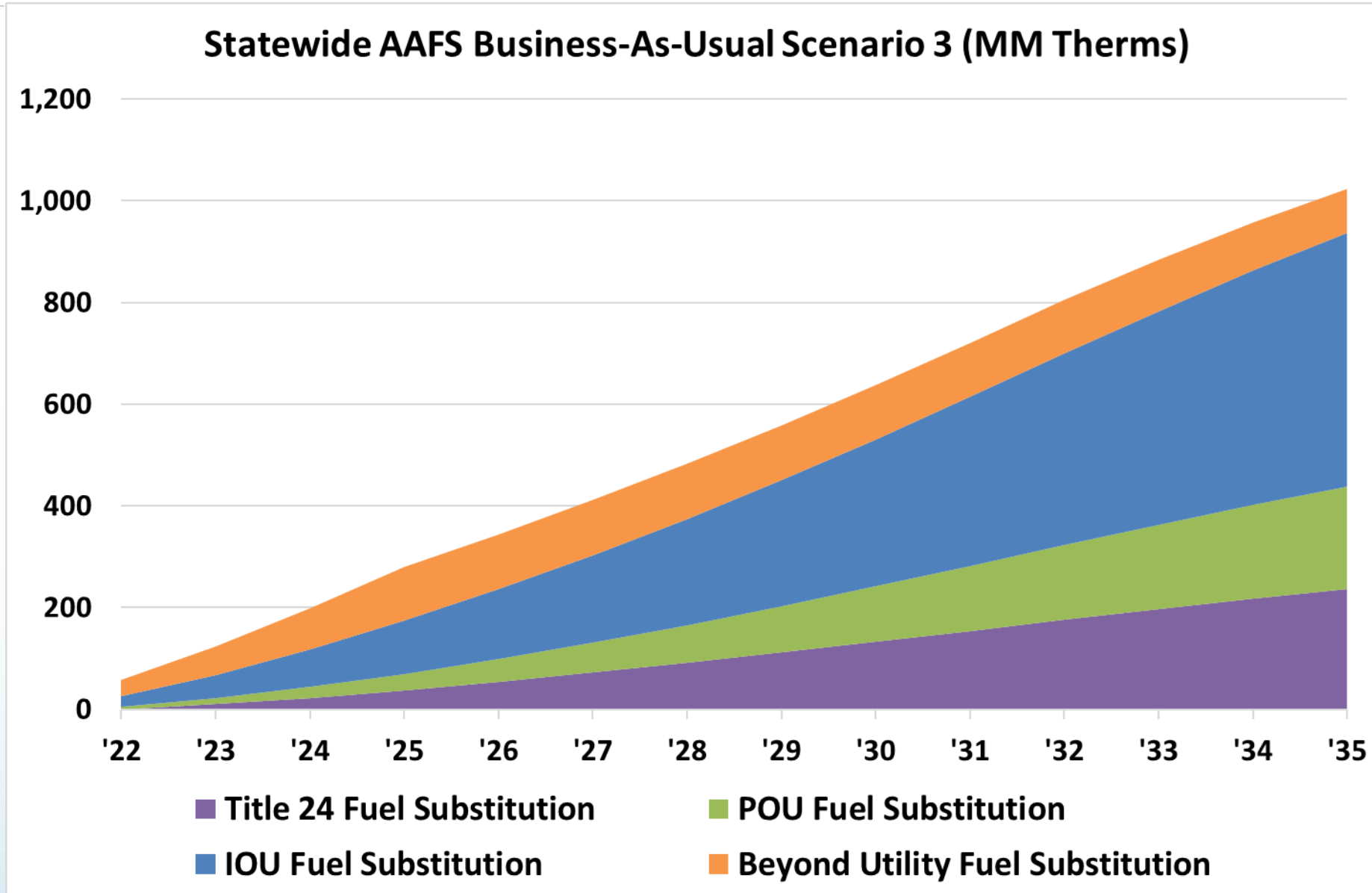


2021 AAFS Annual Impacts Scenario 3 - Statewide Electricity



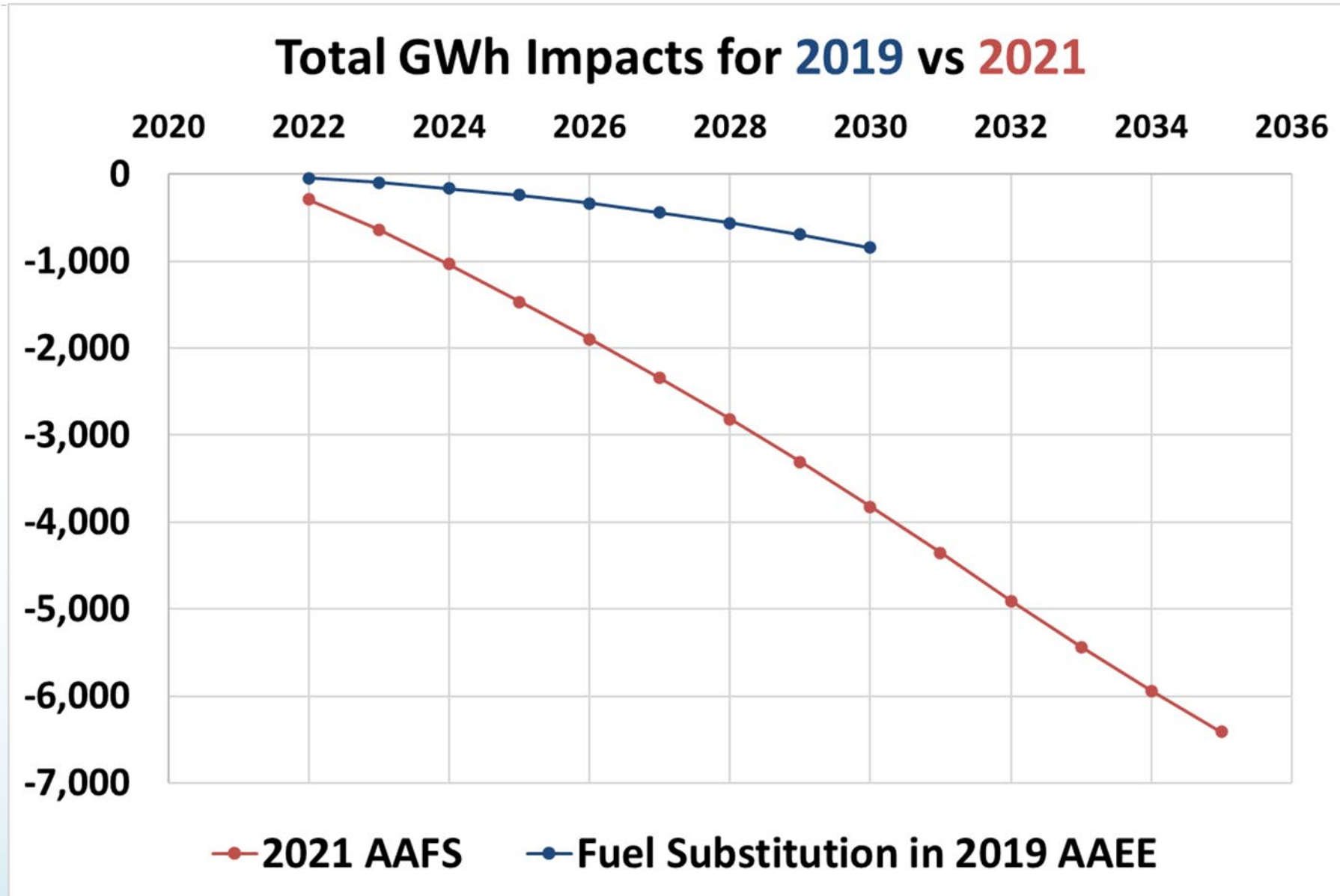


2021 AAFS Annual Impacts Scenario 3 - Statewide Gas



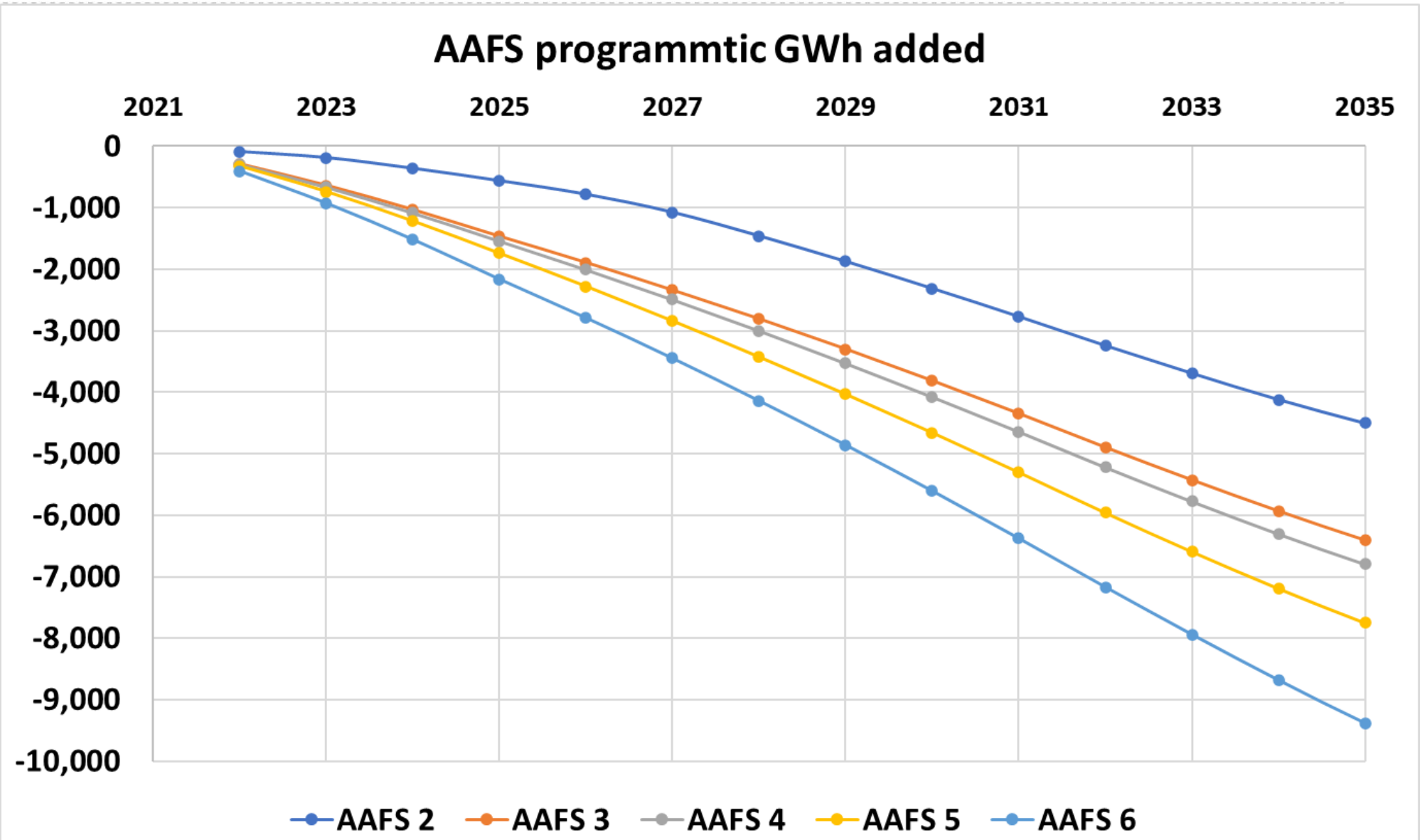


Comparing Total Statewide 2021 AAFS BAU Forecast to 2019 AAFS BAU Forecast - Electricity



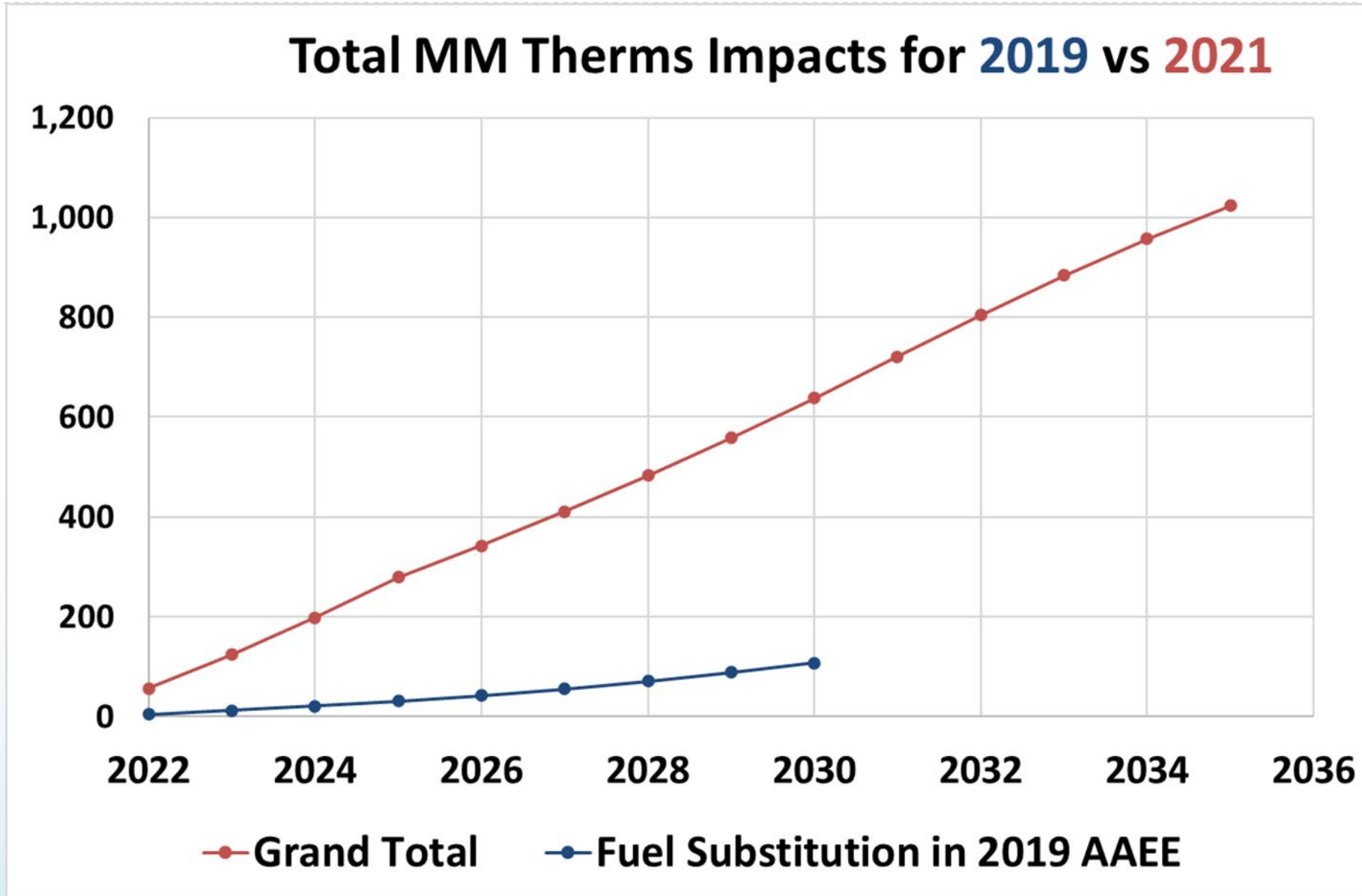


Comparing Total Statewide Spectrum of 2021 AAFS Scenarios – Electricity



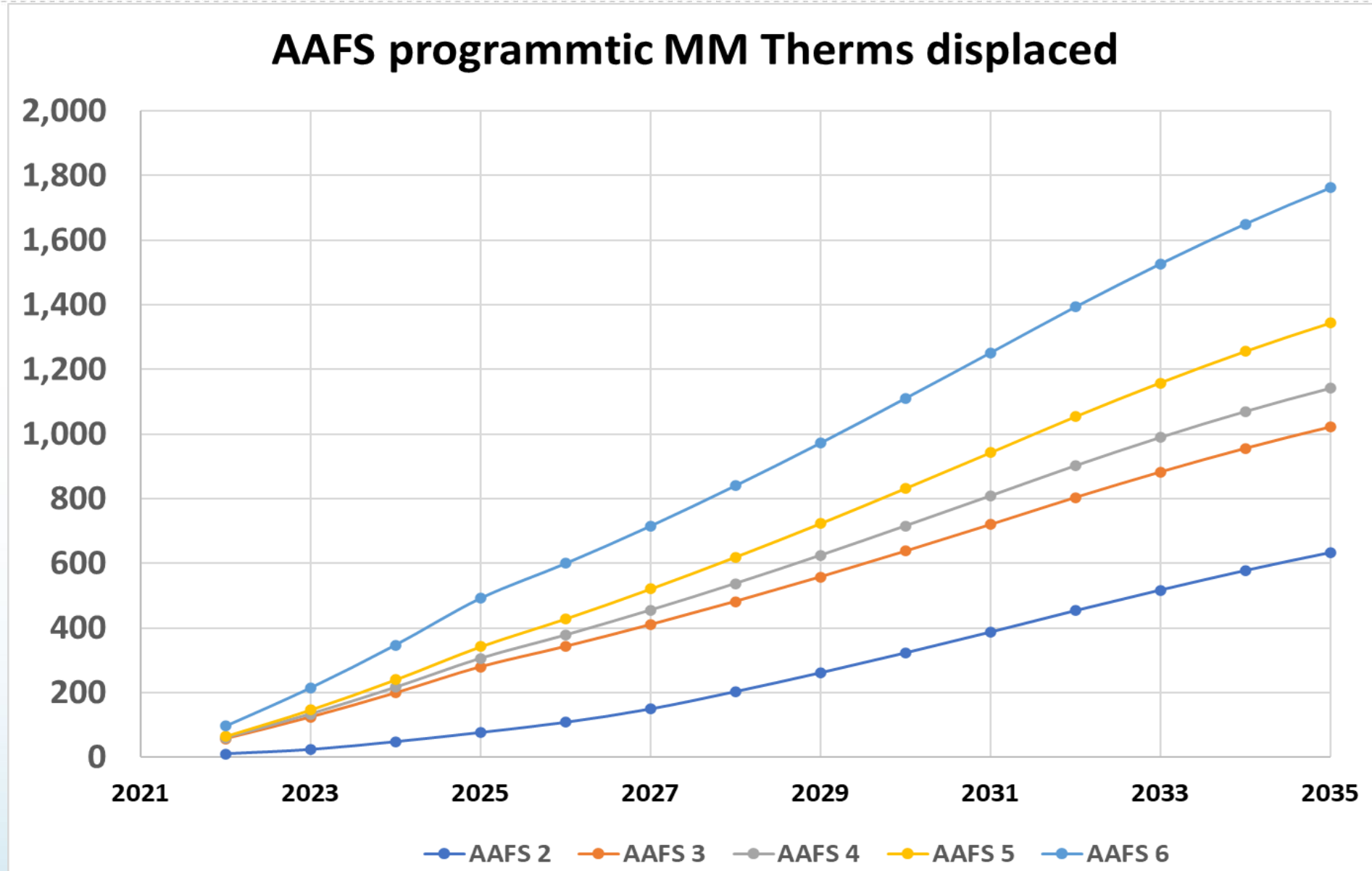


Comparing Total Statewide 2021 AAFS BAU Forecast to 2019 AAFS BAU Forecast – Gas





Comparing Total Statewide Spectrum of 2021 AAFS Scenarios – Gas



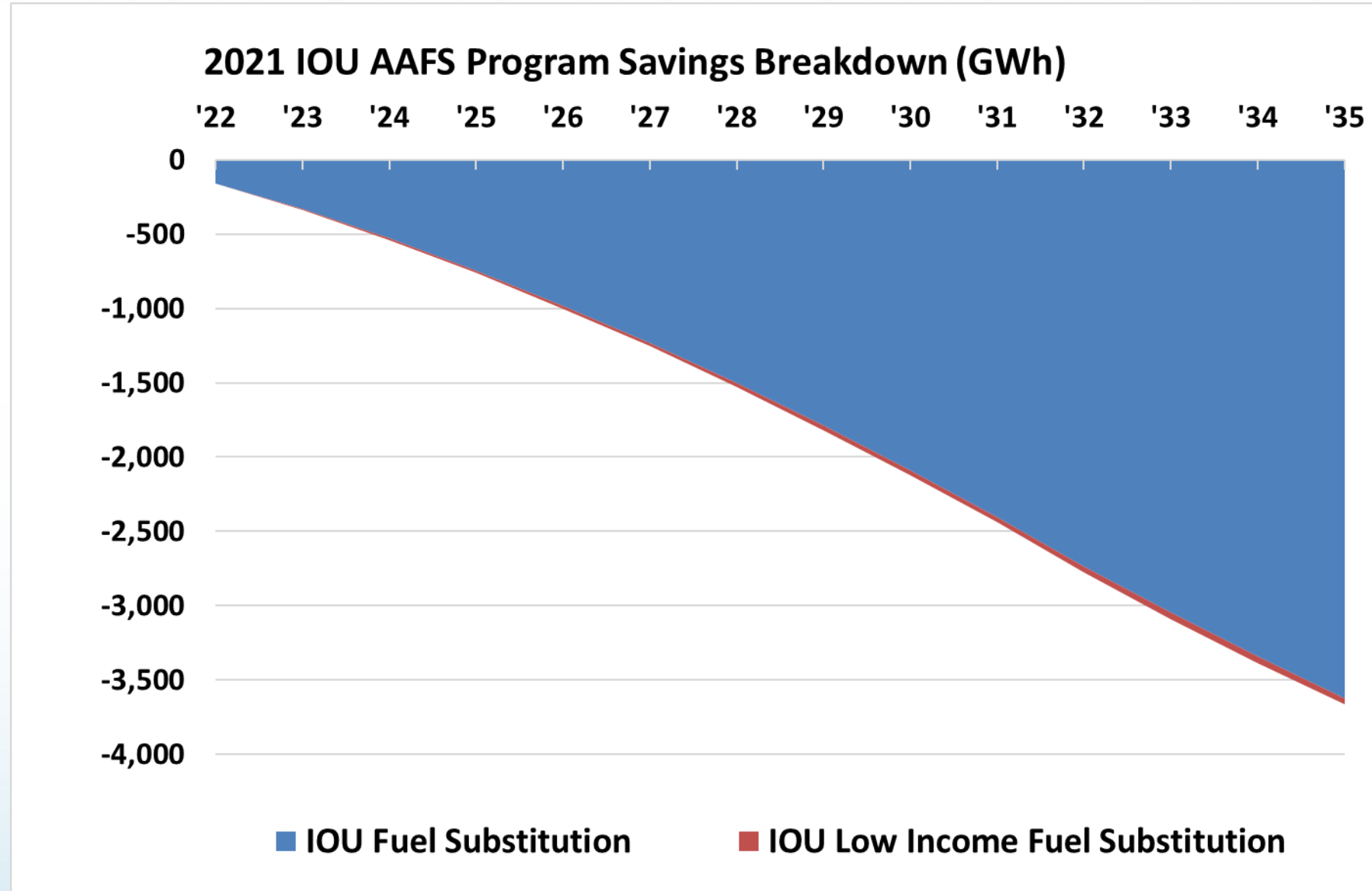


2021 IOU AAFS Scenario Design

Lever	Mid - Low (Scenario 2)	Mid - Mid (Scenario 3)	Mid - Mid Plus (Scenario 4)	Mid - High (Scenario 5)	Mid - High Plus (Scenario 6)
Building Stock	2019 IEPR Mid-Case				
Retail Prices					
AIMS	Reference	Reference	Average of Reference & Aggressive	Aggressive	
Incentive Levels	capped at 25% of incremental cost	capped at 50% of incremental cost	capped at 50% of incremental cost	capped at 75% of incremental cost	
C-E Measure Screening Threshold (TRC using 2020 ACC for 2022-2023; 2021 ACC for 2024-2032)	1	0.85	0.85	0.75	
Marketing & Outreach = Rebate Program Engagement Assumptions	Default calibrated value	Default calibrated value = Reference	Increased marketing strength		
Financing Programs	No modeled impacts	No modeled impacts	IOU financing programs broadly available to Res and Com customers		
FS program cost adjustments	20% more than existing levels	no change		20% less than existing levels	
FS equipment cost adjustments	20% more than existing levels	no change		20% less than existing levels	
DR co-benefits: on vs. off	off			on	
IOU Low Income Fuel Substitution Program Contributions	low FS impacts	reference FS impacts		aggressive FS impacts	

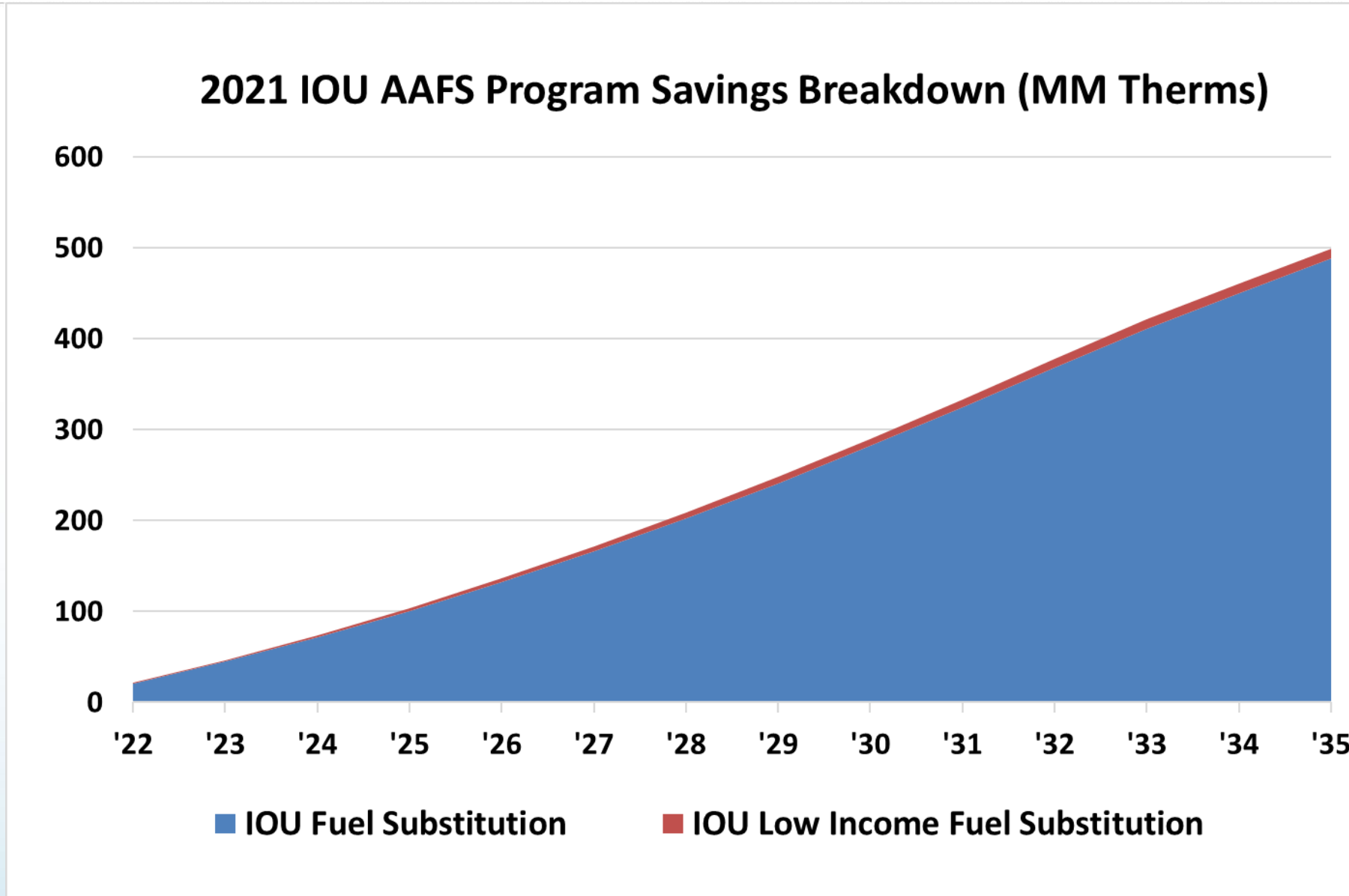


IOU Program Impacts in the BAU 2021 AAFS Scenario - Electricity





IOU Program Impacts in the BAU 2021 AAFS Scenario – Gas



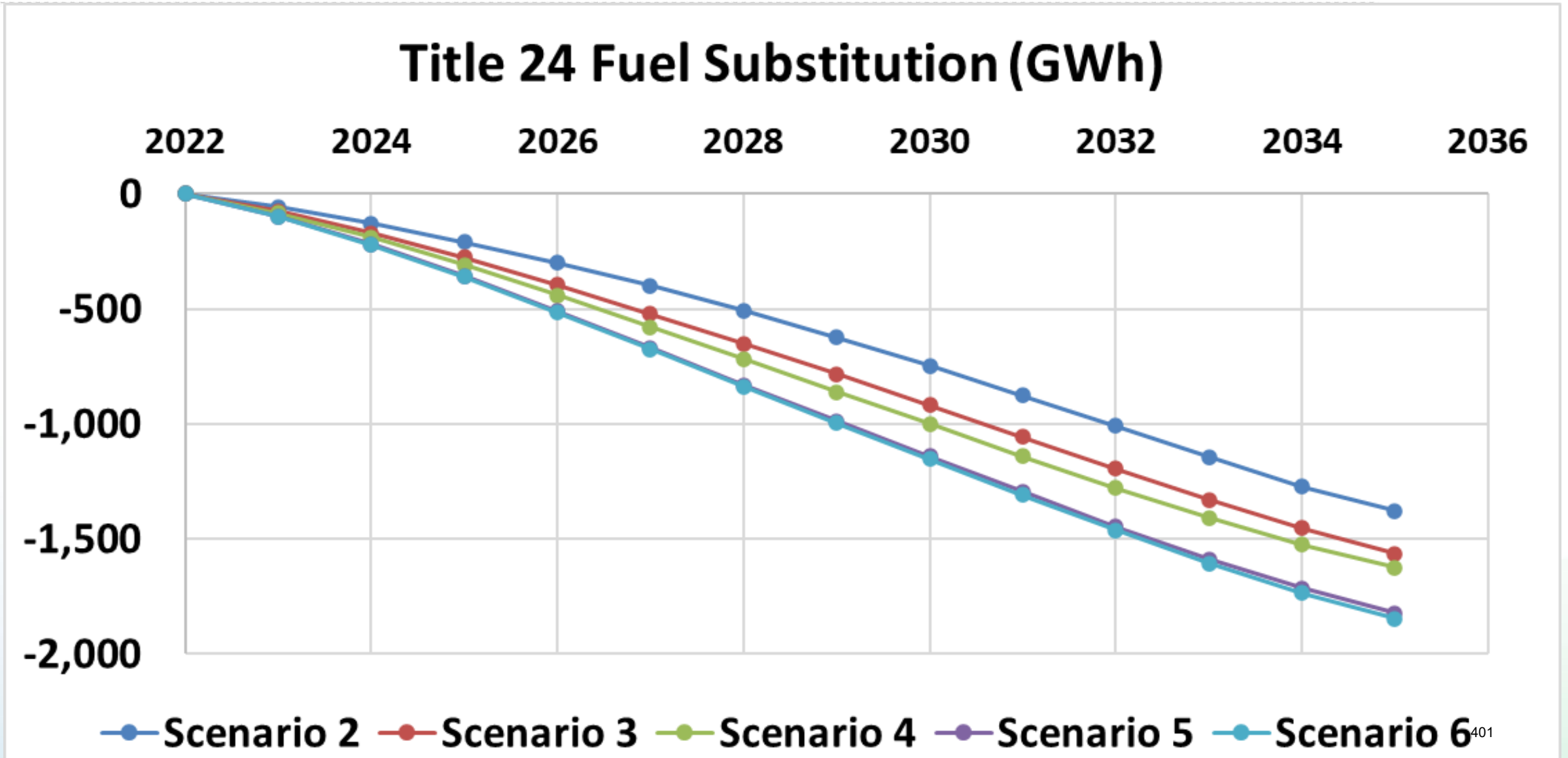


2021 C&S AAFS Scenario Design

Lever	Mid - Low (Scenario 2)	Mid - Mid (Scenario 3)	Mid - Mid Plus (Scenario 4)	Mid - High (Scenario 5)	Mid - High Plus (Scenario 6)
Building Stock	2019 IEPR Mid-Case				
Retail Prices					
Title 24				adding potential updates in the 2028 Standards at a compliance rate reduction and low uptake rate	adding potential updates in the 2028 Standards at the reference compliance rate and high uptake rate
			adding potential updates in the 2025 Standards at a compliance rate reduction and low uptake rate	adding potential updates in the 2025 Standards at a compliance rate reduction and low uptake rate	adding potential updates in the 2025 Standards at the reference compliance rate and high uptake rate
		adding the building electrification encouraged by the 2022 Standards at a 20% compliance rate reduction and low uptake rate	adding the building electrification encouraged by the 2022 Standards at the reference compliance rate and reference uptake rate	adding the building electrification encouraged by the 2022 Standards at at a 20% compliance rate enhancement and high uptake rate	



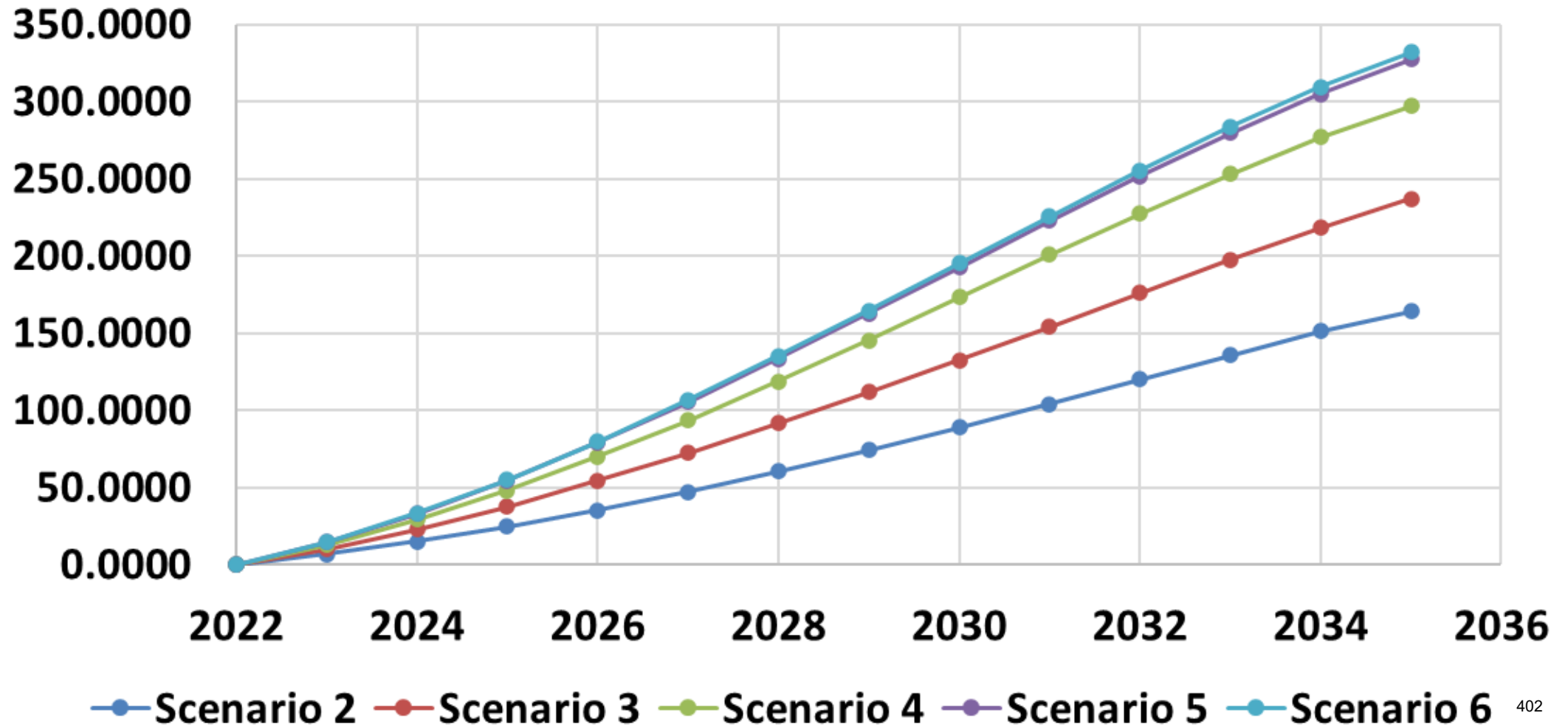
Title 24 Building Standards Impacts in 2021 AAFS Scenarios - Electricity





Title 24 Building Standards Impacts in 2021 AAFS Scenarios – Gas

Title 24 Fuel Substitution (MM Therm)





2021 Beyond Utility AAFS Scenario Design

Lever	Mid - Low (Scenario 2)	Mid - Mid (Scenario 3)	Mid - Mid Plus (Scenario 4)	Mid - High (Scenario 5)	Mid - High Plus (Scenario 6)
Building Stock	2019 IEPR Mid-Case				
Retail Prices	2019 IEPR Mid-Case				
CCA RENs 2021 New	none	low FS impacts	reference FS impacts		aggressive FS impacts
LGO 2021					
CEOP 2021 New					
TECH-BUILD 2021 New		low FS impacts	reference FS impacts		aggressive FS impacts
SGIP HPWH 2021 New					
FPIP 2021 New					
Industrial 2021		none	conservative FS impacts	reference FS impacts	aggressive FS impacts
Ag 2021					

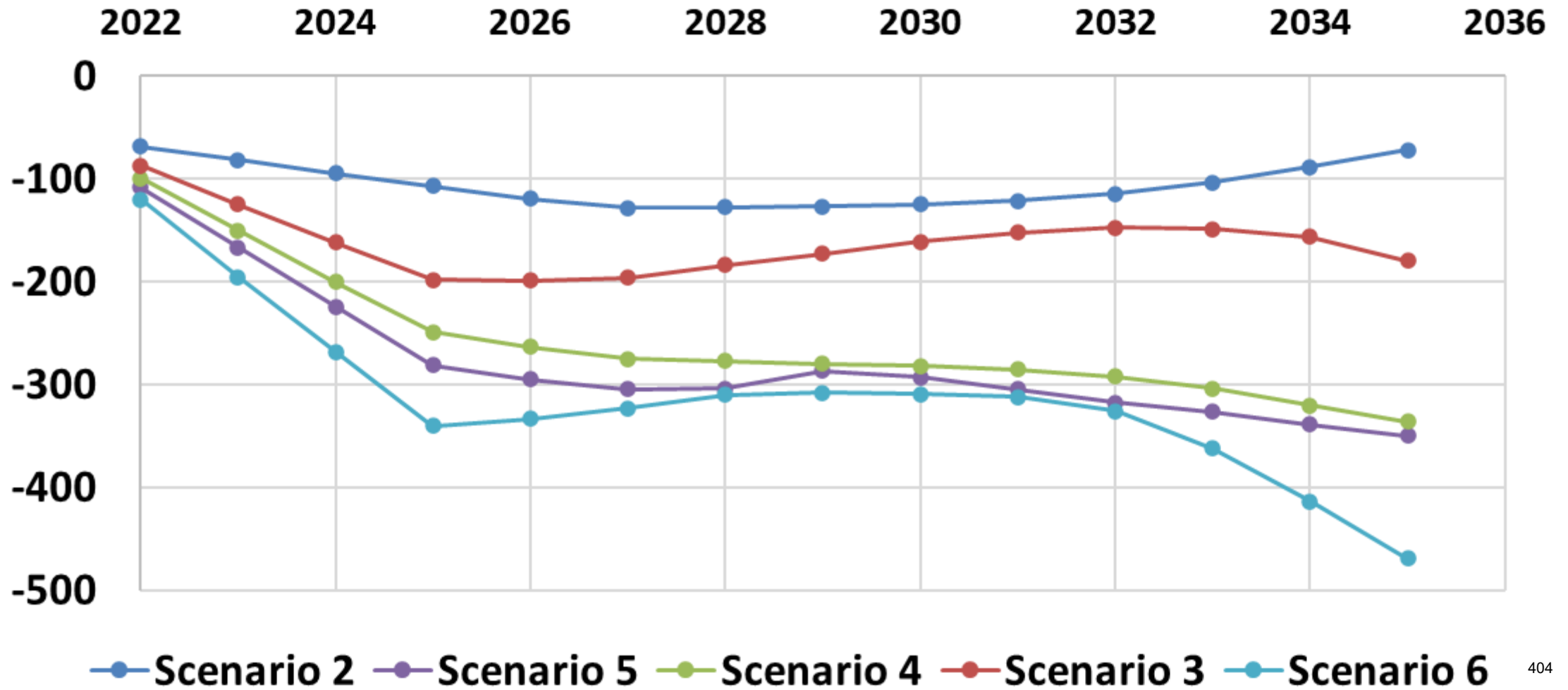
- Programmatic FS may not be of the magnitude needed to meet various policy goals
- Programmatic FS can be input to the FSSAT to determine what remaining gas displacement remains

Speculative FSSAT Contribution	% NC	none	none	additional "what if" substitution added to meet minimum AB 3232 goals	additional "what if" substitution added to meet mid-century GHG goals
	% ROB				
	% RET				



Beyond Utility Program Impacts in 2021 AAFS Scenarios - Electricity

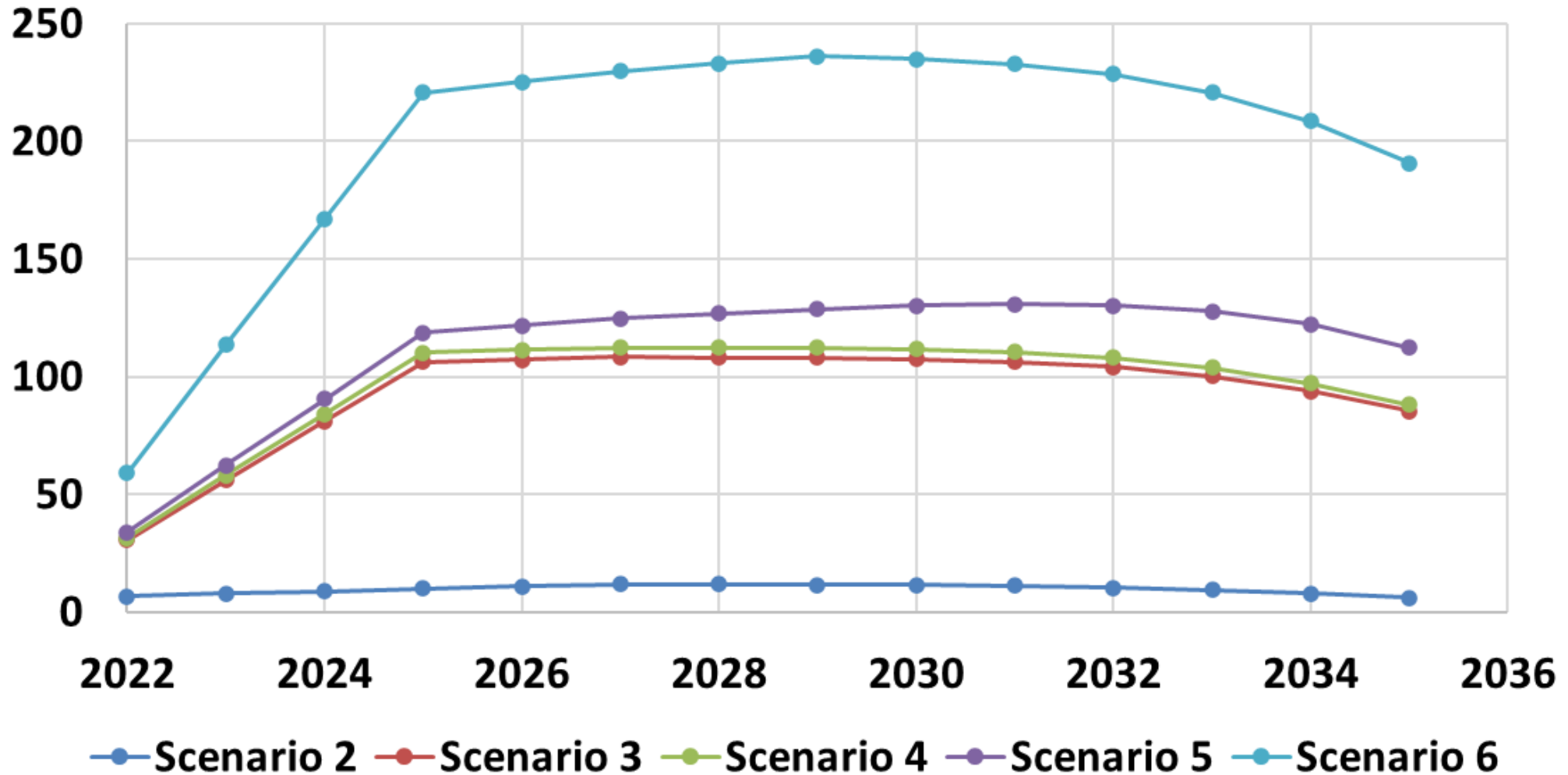
Beyond Utility Fuel Substitution (GWh)





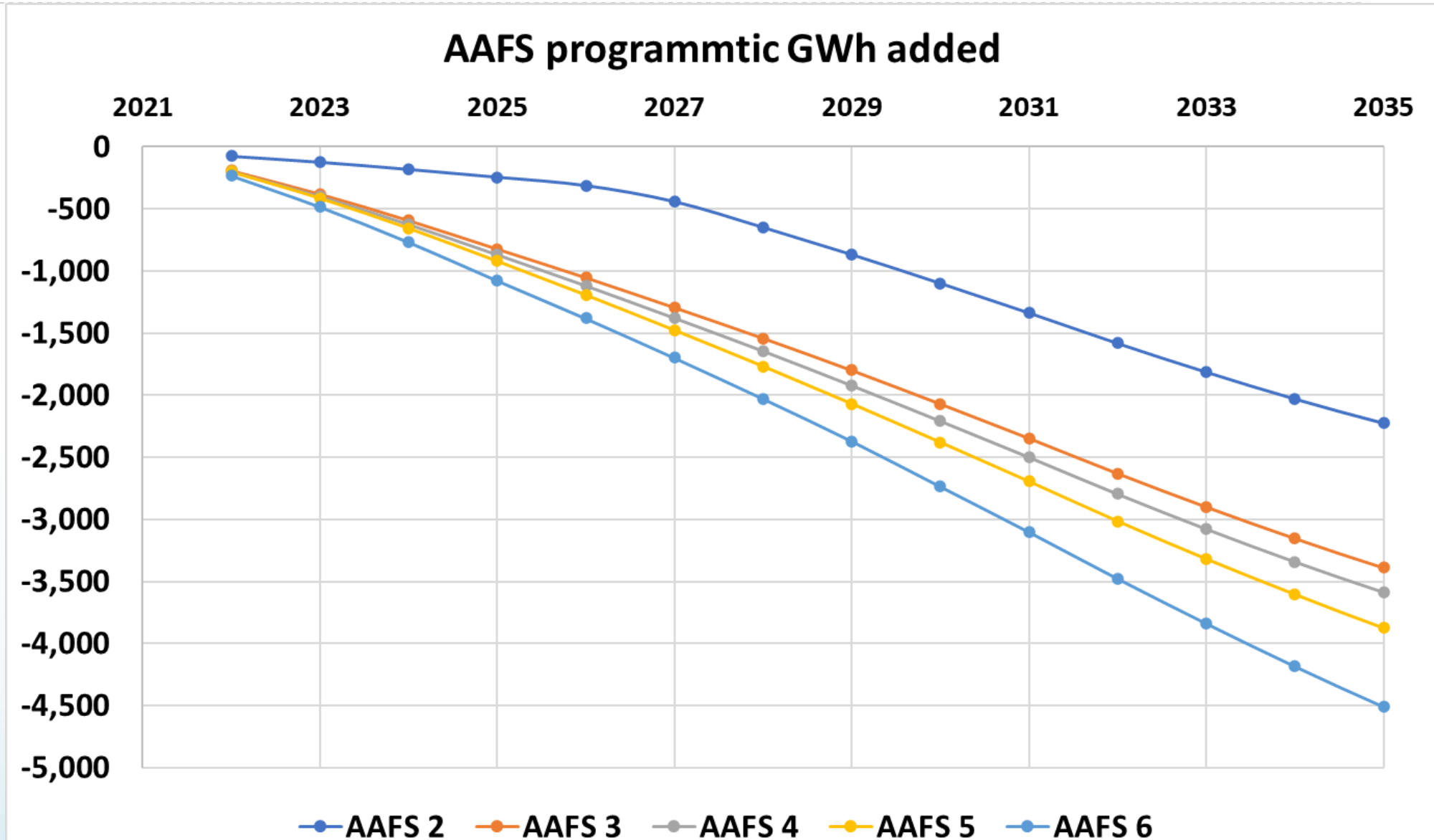
Beyond Utility Program Impacts in 2021 AAFS Scenarios – Gas

Beyond Utility Fuel Substitution (MM Therm)



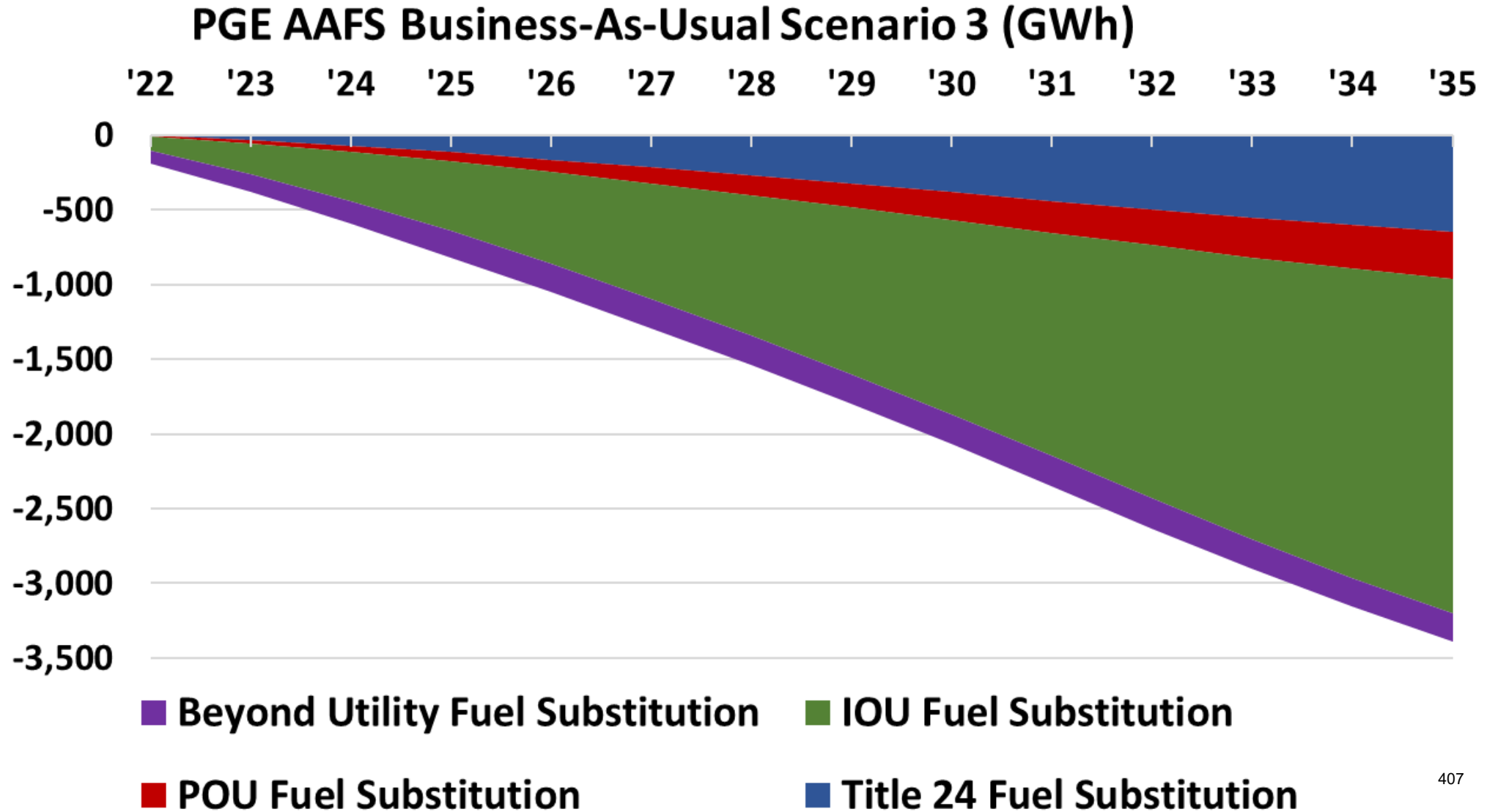


PGE+ territory Electricity added





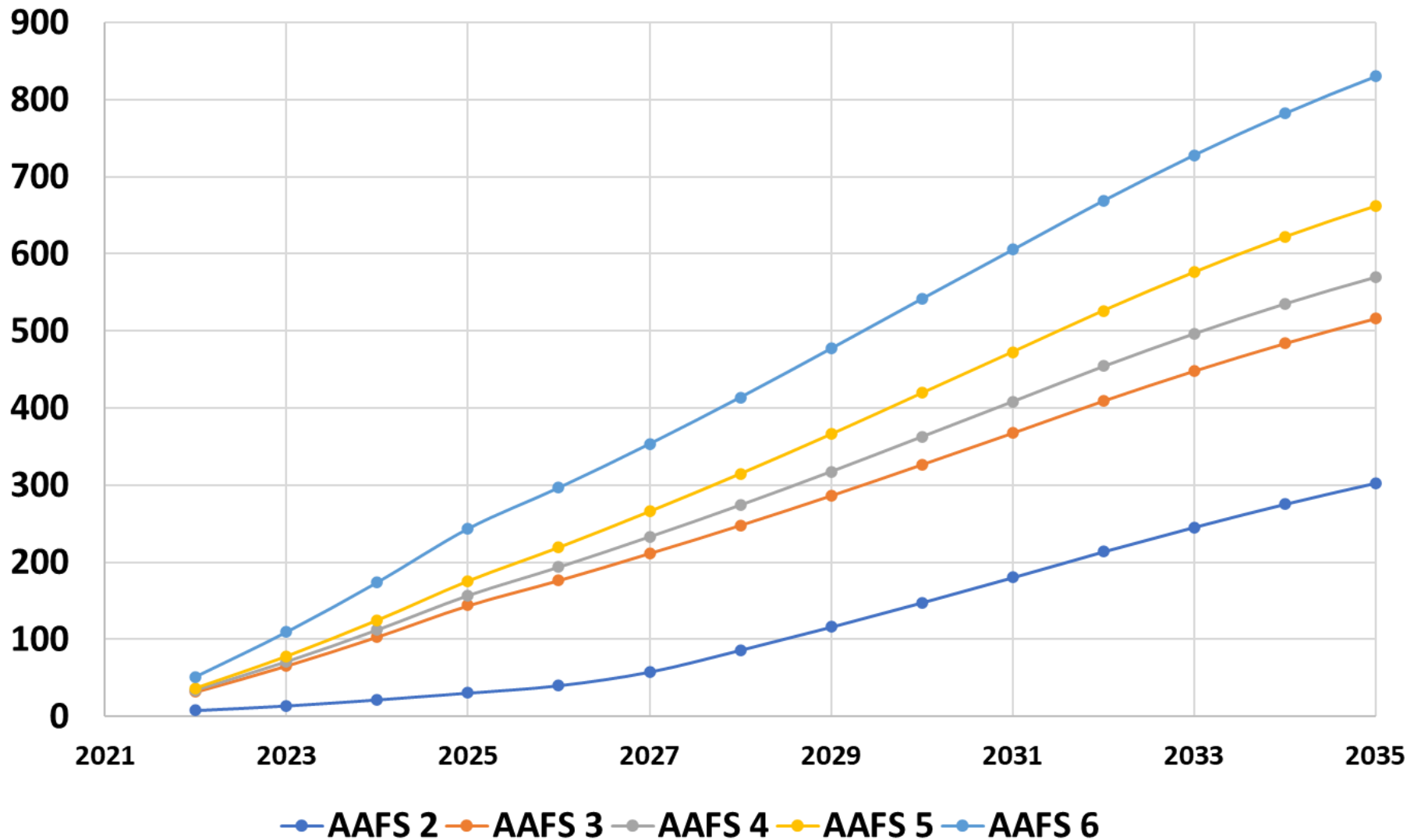
PGE+ territory Electricity added





PGE territory Gas displaced

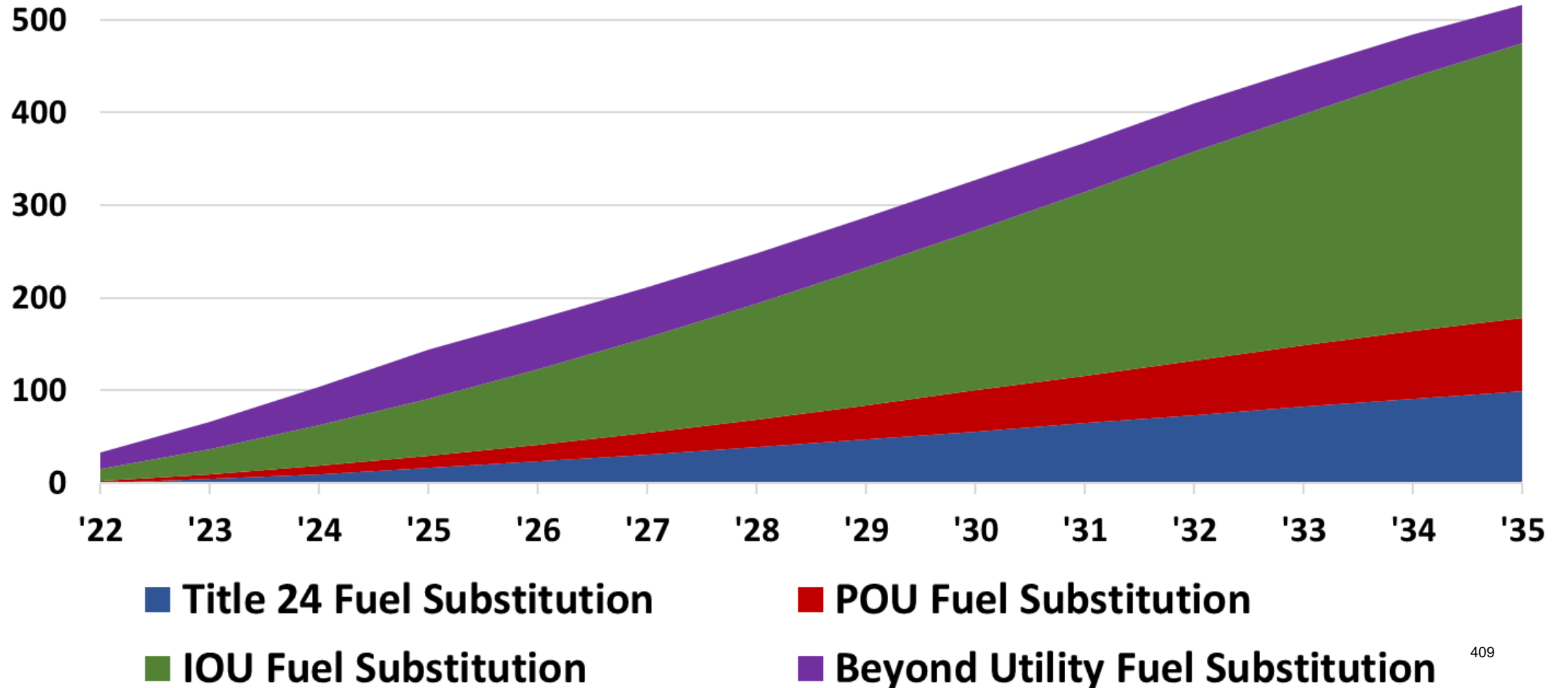
AAFS programmatic MM Therms displaced





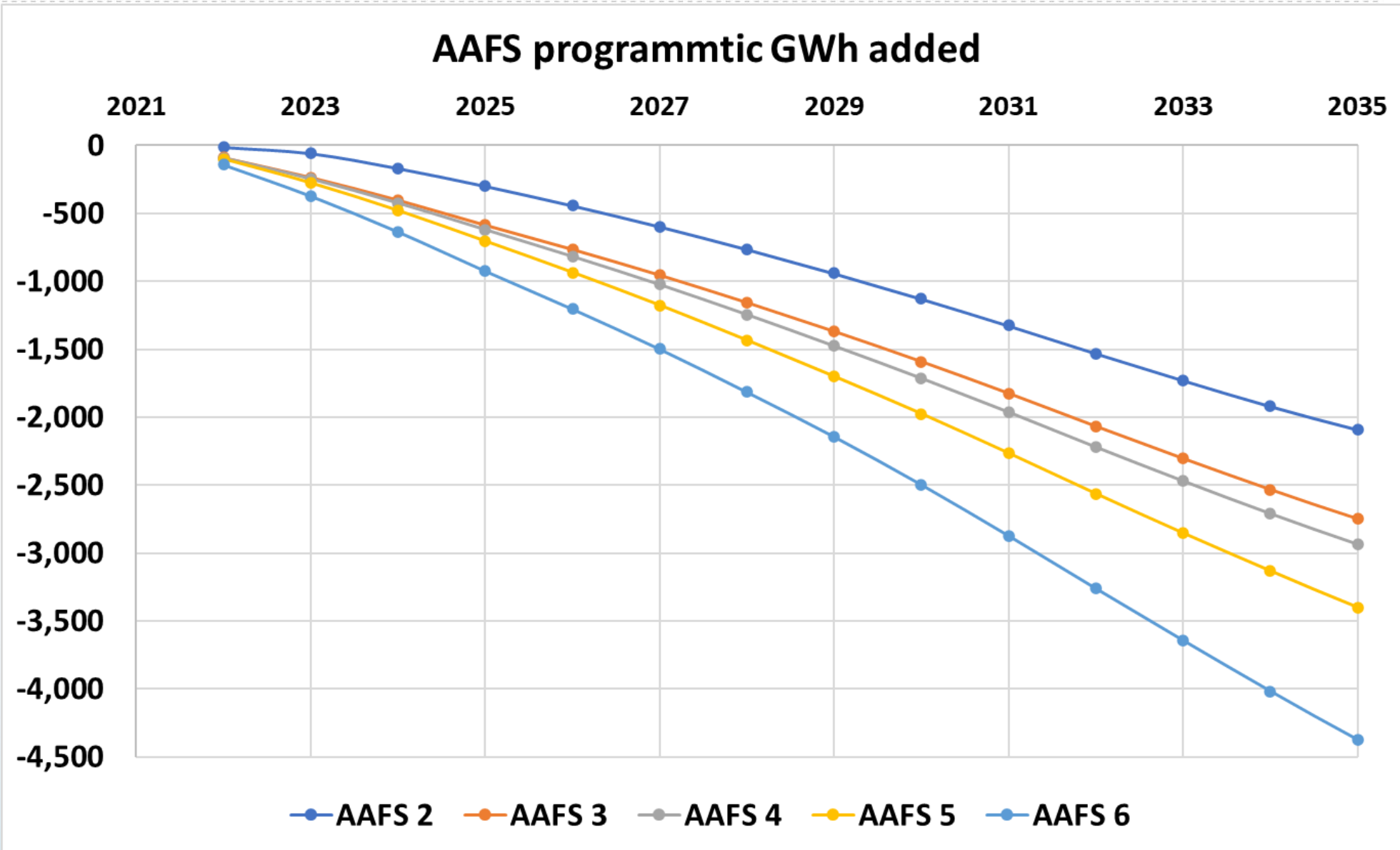
PGE territory Gas displaced

PGE AAFS Business-As-Usual Scenario 3 (MM Therms)



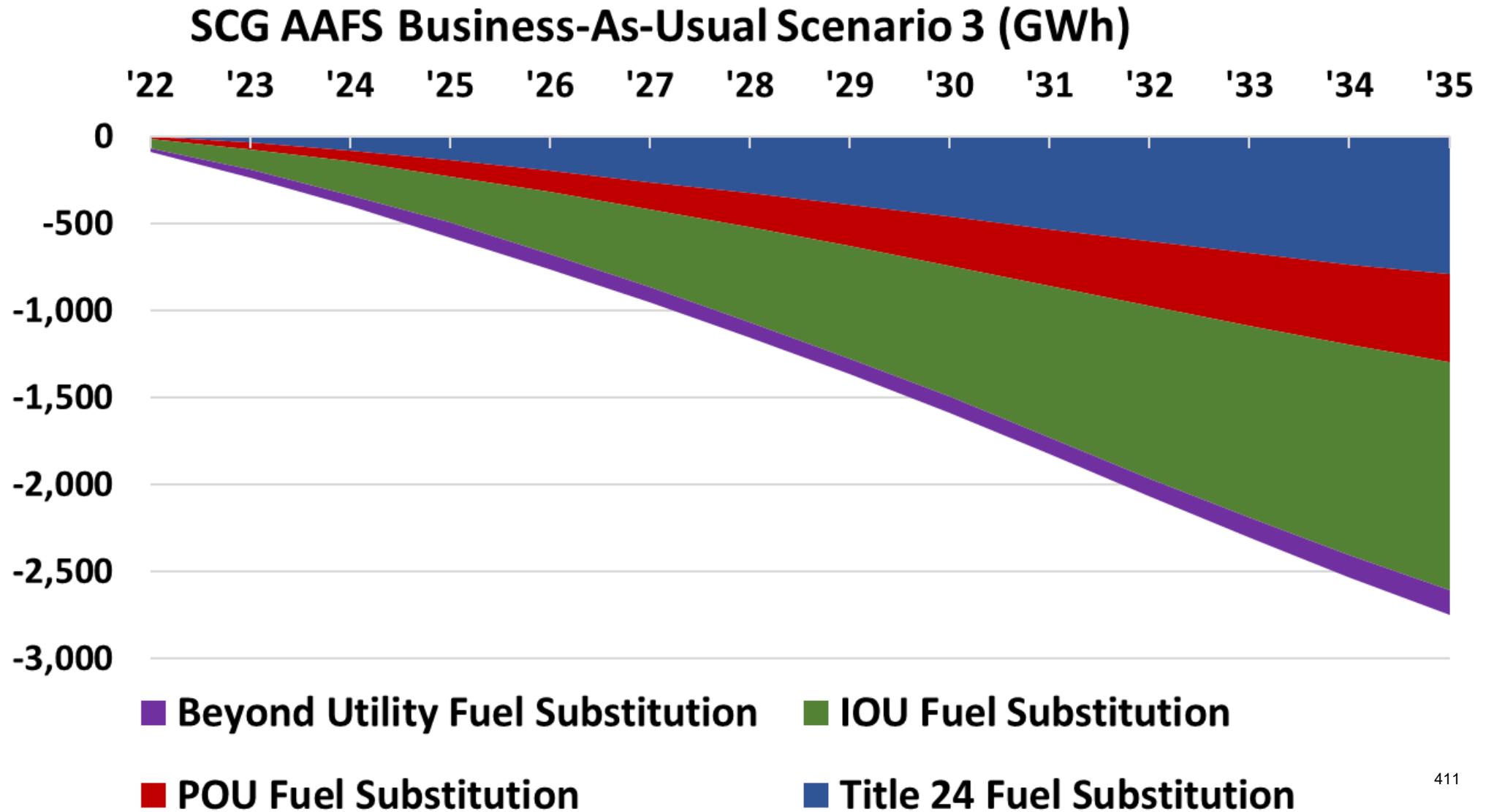


SCG/SCE+ territory Electricity added





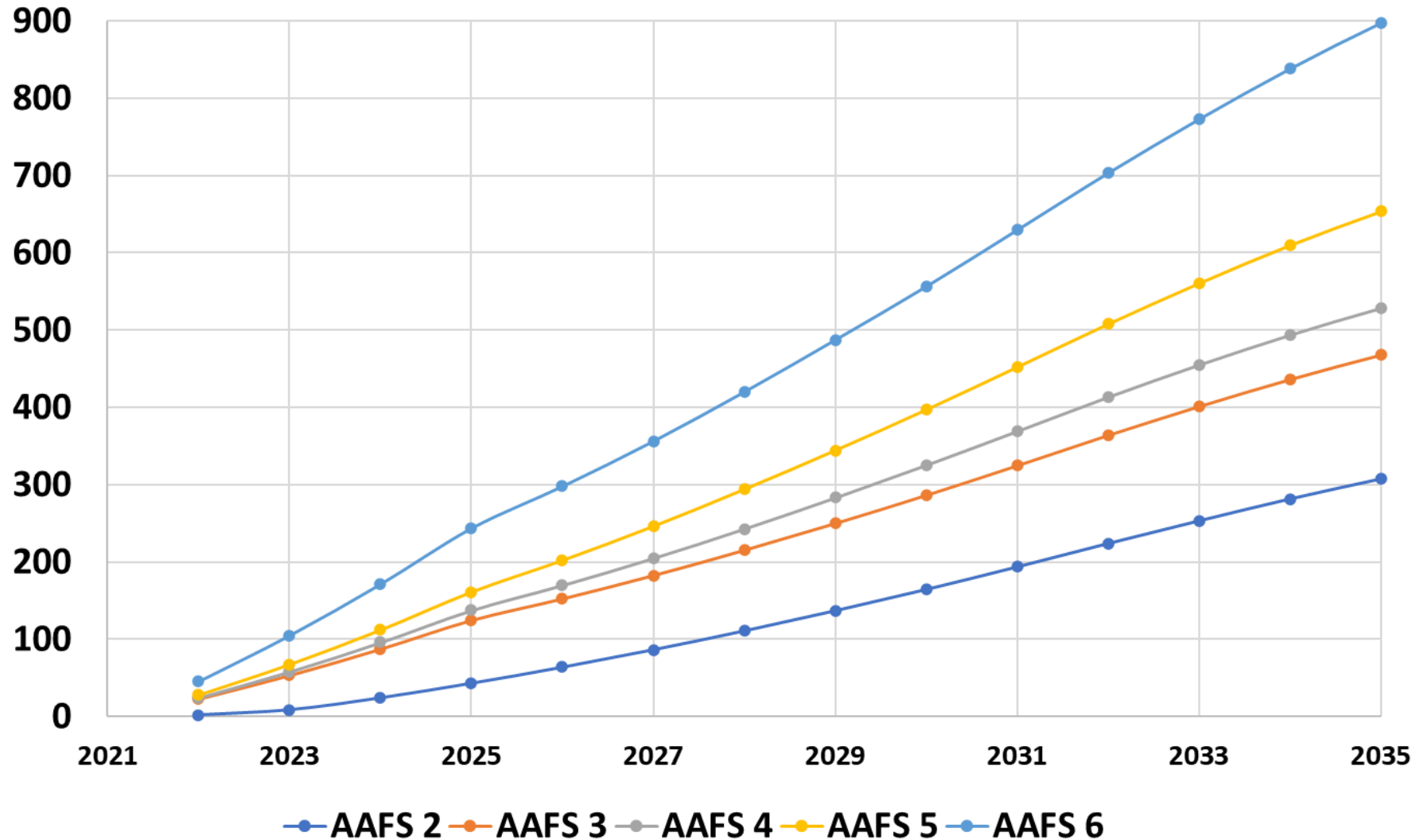
SCG/SCE+ territory Electricity added





SCG/SCE+ territory Gas displaced

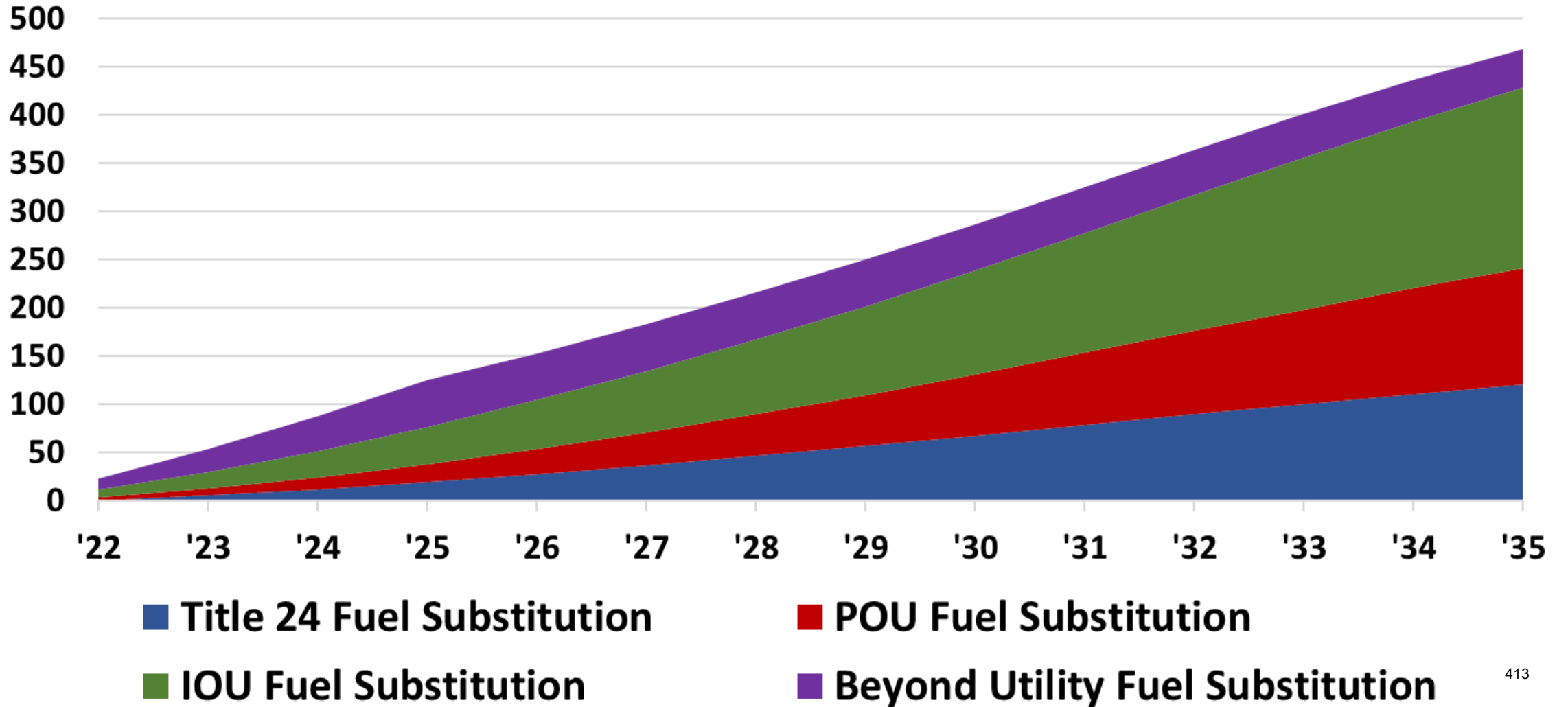
AAFS programmatic MM Therms displaced





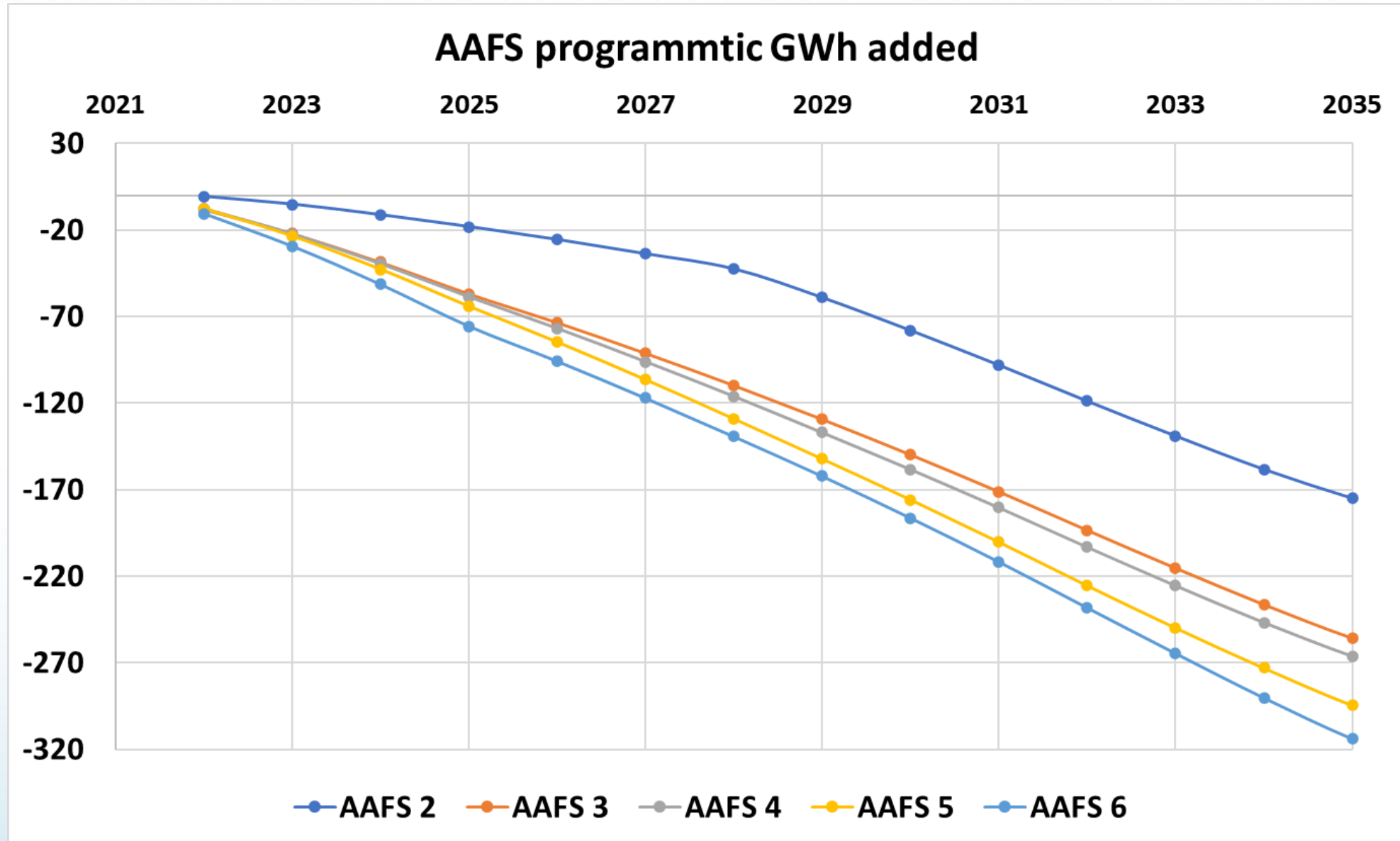
SCG/SCE+ territory Gas displaced

SCG AAFS Business-As-Usual Scenario 3 (MM Therms)



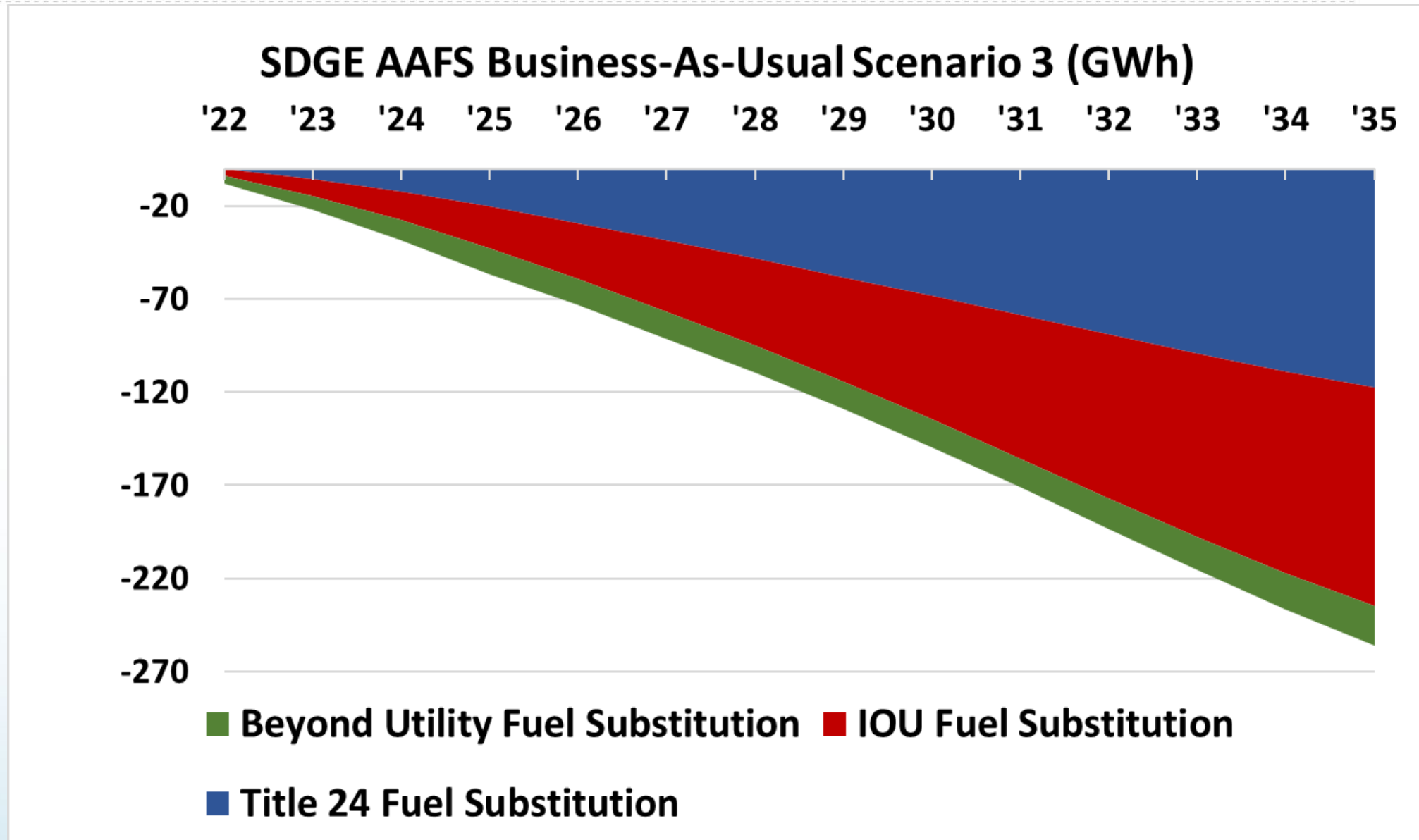


SDGE territory Electricity added





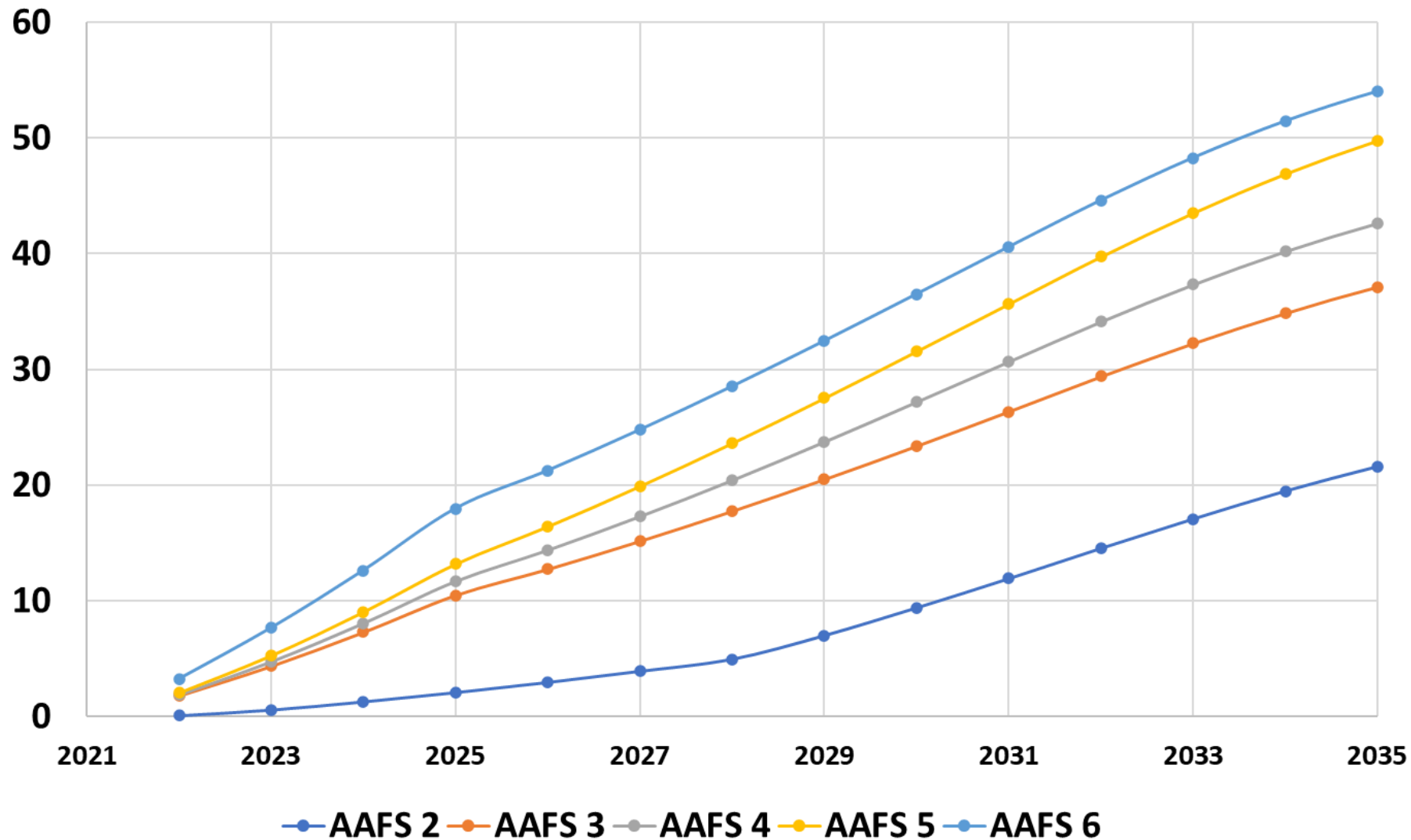
SDGE territory Electricity added





SDGE territory Gas displaced

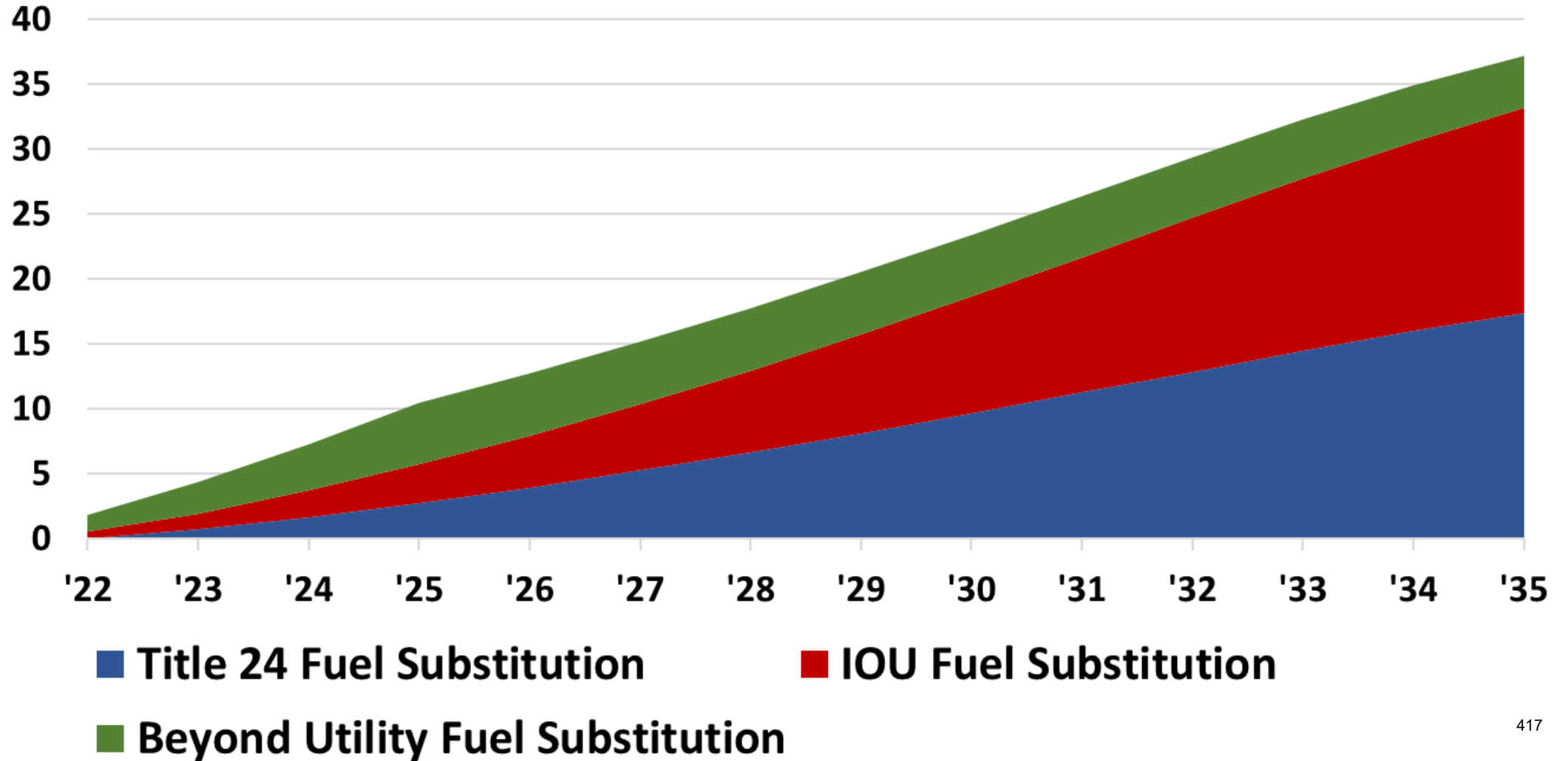
AAFS programmatic MM Therms displaced





SDGE territory Gas displaced

SDGE AAFS Business-As-Usual Scenario 3 (MM Therms)





Thank you!



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