**ORA DATA REQUEST**
**ORA-SDGE-087-GAW**
**SDG&E 2019 GRC – A.17-10-007**
**SDG&E RESPONSE**
**DATE RECEIVED: JANUARY 16, 2018**
**DATE RESPONDED: JANUARY 31, 2018**

**Exhibit Reference:** SDG&E-14, Chapter IV. H, Pages AFC-57 - 67
**SDG&E Witness:** Alan F. Colton
**Subject:** Development of Construction Unit Forecasts and Their Use in the New Business Capital Forecasts

**Please provide the following:**

Beginning on page AFC-57 of Exhibit SDG&E-14, SDG&E discusses the concept of "Construction Units" (CU) and how they are used to derive forecasts for New Business capital projects. As stated on line 15 of page AFC-57, the New Business budgeting process is based on the CU forecast. SDG&E indicates that its use of CUs is unique. SDG&E also states that CUs differ from meter sets. Nevertheless, ORA would expect that there would be a strong correlation between the gross meter set changes in a given year and the number of CUs – the larger the increase in meter sets, the larger the number of CUs that would be needed to perform the work needed to install the meter sets. ORA has taken note of the fact that in the last SCE GRC, all of SCE's Customer Growth capital forecasts were based on gross meter sets. ORA has the following questions regarding the calculation and use of CUs.

1. Please provide quantitative examples of how SDG&E derives its CU forecast. If more than one type of CU forecast is developed by SDG&E for use in its New Business forecasts, please provide quantitative examples showing how each of the various types of CU calculations were derived.

**SDG&E Response 01:**

The derivation of SDG&E's construction unit forecast begins with an input supplied by two national data providers, Moody's and IHS Global Insight. Two series are used, Moody's residential permits and Global Insight residential permits. These two series are averaged to produce a single set of blended residential permits. Then, the blended permit series is input to the residential construction unit forecasting equation to produce a forecast of residential construction units. Lastly, nonresidential construction units are computed by applying a percentage factor to residential construction units to produce a forecast of nonresidential construction units. The percentage factor was derived by analyzing SDG&E's residential and nonresidential historical construction unit data to develop a ratio of nonresidential units to residential units. The total of residential and nonresidential units represents SDG&E's construction unit forecast. See table below.

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## SDG&E Response 01 Continued:

| | SDGE Construction Units | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Actual | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast | Forecast |
| | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Moody's Permits 2/15/2017 | | 9,286 | 10,458 | 11,116 | 10,577 | 10,870 | 11,736 | 12,060 |
| Gilobal Insights Permits 4/3 2017 | | 13,872 | 14,490 | 14,877 | 15,382 | 16,116 | 16,174 | 16,147 |
| Blended Permits 50/50 | 10,001 | 11,579 | 12,474 | 12,997 | 12,980 | 13,493 | 13,955 | 14,103 |
| Residential Construction Units Forecast: | | | | | | | | |
| Residential CU = .666991*Last Yr Permits + .359851*Current Yr Permits - 341.408 | | 10,496 | 11,870 | 12,656 | 12,998 | 13,172 | 13,680 | 14,041 |
| R Square = .899, Std Error = 1,691.285, Last Yr Permits t= 5.350, Current Yr Permits t= 2.719 | | | | | | | | |
| Non-Residential Construction Units = Residential CU*.05 | | 525 | 594 | 633 | 650 | 659 | 684 | 702 |
| Total Construction Units | 9,726 | 11,021 | 12,464 | 13,288 | 13,648 | 13,830 | 14,364 | 14,743 |
| Percent Change From Year-to-Year | | 13% | 13% | 7% | 3% | 1% | 4% | 3% |

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2. In the last SDG&E GRC, SDG&E prepared forecasts of CU levels for 2014 through 2019. (See page JDJ-A-8 in Exhibit SDG&E-09.) On page AFC-E-1 in Exhibit SDG&E-14 of the current GRC, SDG&E shows recorded CU levels for the same period. The following table compares the Test Year (TY) 2016 CU forecasts to the TY 2019 CU numbers:

| Year | TY 2016 GRC | TY 2019 GRC | | TY 2016 GRC Exceeds TY | |
|---|---|---|---|---|---|
| | Forecast # of | Recorded # of | Forecast # of | # of CUs | % |
| 2014 | 10,035 | 6,499 | | 3,536 | 54.41% |
| 2015 | 13,271 | 8,115 | | 5,156 | 63.54% |
| 2016 | 16,039 | 9,726 | | 6,313 | 64.91% |
| 2017 | 16,832 | | 11,023 | 5,809 | 52.70% |
| 2018 | 16,836 | | 12,464 | 4,372 | 35.08% |
| 2019 | 16,983 | | 13,288 | 3,695 | 27.81% |

a. Please explain, both quantitatively and qualitatively, why recorded levels of CUs for the years 2014 through 2016 were so much lower than SDG&E's forecasts.
b. Please describe what procedures SDG&E has undertaken since the last GRC to ensure that CU forecasts in the current GRC are not similarly overstated.
c. Given the fact that SDG&E has uniquely relied on the use of CUs to develop its forecasts for New Business, and given the fact that forecasts for CUs have been difficult to accurately estimate, please explain why SDG&E has not followed SCE's methodology and used gross meter forecast changes to develop its New Business forecasts.

**SDG&E Response 02:**

a. Regarding TY 2016 GRC, for years 2014 through 2016, recorded construction units were less than forecasted construction units. SDG&E believes the reason is that the housing market recovery was not as robust as Global Insight had predicted. For the TY 2016 GRC, only inputs from Global Insight were used. As for TY 2019 GRC, there are no recorded construction units yet to compare to forecast for the years 2017 to 2023.
b. For TY 2019 GRC, residential permits, which is the primary input that drives the construction unit forecast, were derived from housing starts series from two sources rather than one. TY 2016 GRC used only Global Insight, whereas TY 2019 GRC used the average of Global Insight and Moody's. Global Insight portrayed a more robust recovery than did Moody's. The two housing starts series were averaged to produce a 50/50 blended series.
c. SDG&E objects to the incorrect premise stated in this request, that "forecasts for CUs have been difficult to accurately estimate…." Subject to and without waiving this objection, SDG&E responds as follows:

**SDG&E Response 02 Continued:**

SDG&E understands that the Construction Unit Forecast differs from methodologies the other California utilities use to predict their new business work, but there is a reason we use this methodology. SDG&E does not correlate customer growth (meter sets) with construction units (a function of permit applications). For the reasons shown below, permits (a leading indicator) are a more accurate driver to use as an independent variable than meters (a lagging indicator), in forecasting new business.

New business budgets are used to plan for and record capital expenditures associated with work performed to expand in-ground electric distribution system within the SDG&E service territory. Construction units are what is used by SDG&E to plan for, monitor and record completed units of distribution system capital work. Construction units are an integral and necessary element of SDG&E's work order system (aka, the Distribution Planning & Scheduling System—DPSS). Planning for and tracking the installation of electric meters to measure electricity consumed by the customer is not an activity performed by the DPSS. It is completely a different process, one of which is not associated with planning for or monitoring new business capital work. It is important to note that new business capital work must be complete and energized before a meter can be installed; new meter sets occur sometime after New Business construction work, but never before.

The sequence of activities leading to construction units and, finally, on to meters is as follows. First, a developer submits development plans to a local governmental planning authority for review that leads to permitting. Typically, the stages a developer goes through are: plan designation, tentative map, final map, and then permitting. As the developer's project moves through these stages, the developer will contact SDG&E to plan for electric service. SDG&E typically must perform its capital work sometime during the multi-level permitting phase. A developer may be permitted to develop property, but not yet permitted for building construction. Once SDG&E completes its distribution capital work, i.e., a construction unit, the developer can construct a building on the lot, and then SDG&E can place a meter on the building to measure electricity consumption. In short, capital work always precedes the installation of electric meters.

For this reason, permits are a more accurate driver to use as an independent variable for producing a forecast of construction units. Permits appear in the development cycle long before meter sets and, with respect to new business construction, are a leading indicator, whereas meter sets are a lagging indicator. Permits are issued much closer in time to the work that is being planned for, monitored and recorded than are meter sets.

As stated in question 1 above, the model used to forecast construction units uses a forecast of the issuance of residential permits as its independent variable to produce a forecast of construction units. Professional data service providers such as Moody's and Global Insight generate forecasts of permits to be issued nationally, regionally, by state, and

**SDG&E Response 02 Continued:**

locally. These forecasts are used by many in the construction industry and banking. At SDG&E we use the commercially available Global Insight data series.

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3. Page AFC-E-1 of Exhibit SDG&E-14 shows recorded and forecast CU totals. However, in going through the workpapers for Exhibit SDG&E-14, ORA has been unable to find any calculations (or any methodology) where those CU forecasts have appeared in formulas used to derive New Business forecasts. Please provide all workpaper references where the total forecasts for CUs (on page AFC-E-1) are used in formulas to calculate SDG&E's forecasts for New Business.

**SDG&E Response 03:**

The chart of the resultant Construction Unit Forecast included as Appendix E to Exhibit SDG&E-14 (and revised testimony exhibit SDG&E-14-R) is intended to show the Construction Unit values both historic and forecast, and to both numerically and visually convey the comparison of the calculation results used for many years. The calculation detail was not included for brevity in favor of the resultant chart. The Construction Unit Forecast methodology is discussed beginning at page AFC-57. See the accompanying Excel file, "2018-01-25 Calculations of NB Budget Forecasts" for the corresponding calculations.

The CU Forecast provides information on the direction and magnitude of anticipated customer construction/development, up or down and to what degree. When the CU Forecast suggests an increase in customer construction activity, the number of forecasted CU's relative to the recorded number of CU's in the recent past reveals a percentage of anticipated growth. That percentage of growth is used to determine the extent to which the dollar requirements of specific projects should be increased or decreased to meet customer demand. For some projects, particularly those where customer demand trends to be sporadic, an average of the historical spends over the last 5 years is used as a basis to which the growth factors (percentage of change), derived from the CU Forecast, are applied. For other projects, such as UG Residential, customer activity levels are typically more consistent because of the high volume of customer projects that fall into that category. For those cases, the most recent historical spends are used as the basis to which the growth factors derived from the CU Forecast are again applied to better estimate the future funding requirements necessary to meet customer demand. Which approach was applied to each project is identified in the Forecast Methodology provided for each project.

For some projects, the volume of customer requests appears to coincide with an increase or decrease in related residential and non-residential development activity. For those projects only somewhat influenced by new customer development activity, customer demand for that type of work (conversions and relocations) is expected to move in a direction similar to that suggested by the CU Forecast, albeit not necessarily to the same extent. For example, not all new customer developments require accompanying conversion, but some do and that number is expected to increase along with the number of new customer developments. Not all new customer development projects require such related work, projects like conversions and relocations were adjusted upward consistent with the CU Forecast, but not to the same level of growth as anticipated for the new customer developments in total. In anticipation of marked increases in customer construction activity, all New Business projects were subject to some level of increase in anticipated funding requirement.

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4. On pages 268 through 381 of its workpaper exhibit (Exhibit SDG&E-14-CWP), SDG&E shows how it derived its forecasts for its New Business capital projects. However in many instances, ORA was not able to determine how these forecasts were actually derived. In the following questions, page references with the prefix "AFC" refer to pages in SDG&E's testimony (Exhibit SDG&E-14), while page references with the prefix "WP" refer to pages in SDG&E's workpapers (Exhibit SDG&E-14-CWP).

a. Budget Code Project 211 is discussed on page AFC-60. On that page, SDG&E states that it is appropriate to use a 5-year average to develop its forecasts for this project, as it levels out the peaks and valleys in this blanket budget. On page WP-280, SDG&E also states that it developed a 5-year average to derive a base forecast, but it then indicates that it increased that forecast by 10% each year to derive its forecasts for 2017 through 2019.

i. What is SDG&E's actual forecast methodology for Project 211 – a simple 5-year average, or a 5-year average that is escalated by 10% each year?
ii. If SDG&E actually used an escalation factor, please describe how SDG&E developed its 10% yearly escalation and why it believes the 10% yearly increase is reasonable and justified.

**SDG&E Response 04(a):**

a.i SDG&E's actual forecast methodology for Project 211 is a 5-year average that is then escalated by 10% each year.

a.ii Customer requests for OH to UG conversions vary dramatically from year to year, as does the magnitude of the resulting construction orders. Historical spending has also varied dramatically from year to year. This is attributed in part to the amount of work required to accommodate customer requests, as well as the timing of customer payments (which credit in the year received, not the year the work is performed). Given the CU Forecast suggests an increase in customer development activity, it was anticipated both of those factors could very likely contribute to an increase in customer requests for conversions. Also considering the past 5 years represented a period of regrowth for the building industry, relative to the more aggressive outlook suggested by the CU Forecast, it was believed that a 10% year over year increase was appropriate for this project.

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b. Budget Code Project 215 is discussed on pages AFC-60 and 61. On those pages, SDG&E states that its forecast method used a 5-year average based on historical data "incorporating growth factors derived from the construction unit forecast." (See page AFC-61, lines 6 and 7.) SDG&E further states that the underlying cost driver is residential customer growth. On page WP-289, SDG&E again indicates that growth factors are applied to a 5-year average to derive its forecasts.

i. Please provide calculations showing how the "growth factors" were derived from the CU forecast.
ii. Please discuss why SDG&E believes that these "growth factors" are reasonable and why the resulting forecasts are justifiable.
iii. Since SDG&E's testimony states that the underlying cost driver for this capital project is residential customer growth, please explain why SDG&E does not use residential customer growth changes as the basis for deriving its forecasts for this project.
iv. ORA will be deriving its own independent forecasts for residential customer growth. If ORA's forecasts for residential customer growth differ from SDG&E's, how should ORA modify the forecasts for Project 215 reflect these differences?

**SDG&E Response 04(b):**

b.i A simple calculation dividing a specific year's forecasted number of CUs by the CUs for the previous year produces a percentage of increase or decrease, depending on the forecasted number and that of the previous year. The number of forecasted CUs in each year, 2017 through 2019, resulted in a specific percentage of forecasted growth for each respective year. That percentage or "growth factor" was applied to the base forecast costs. See the accompanying file for calculations, "ORA-SDGE-087- Calculations of New Business Calculations," which are calculated based on fully loaded dollars. Please note that the growth factors are based on the accompanying file "ORA-SDGE-087-CU Forecast and Growth Rate Summary 7-22-2016."

b.ii See response to 2(c). The method by which the CU Forecast is developed has been in use at SDG&E for many years and SDG&E believes it to be a reliable indicator of future customer development activity within its service territory.

b.iii See response to 2(c). New Business construction must precede the actual completion and setting of meters (the addition of new customers). SDG&E considers that incorporating the number of filed permit applications is a better leading indicator of expected new business construction activity than the number of new meter sets, a lagging indicator.

b.iv See response to 2(c). SDG&E does not correlate customer growth (meter sets) with construction units (a function of permit applications). SDG&E believes that its use of construction units to forecast New Business is reasonable, and recommends that ORA support adoption of SDG&E's methodology. Should ORA's residential customer growth forecast differ from SDG&E's, the New Business forecast should not be affected.

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c. Budget Code Project 216 is discussed on pages AFC-61 and 62. On those pages, SDG&E states that its forecast method used a 5-year average based on historical data "incorporating growth factors derived from the construction unit forecast." (See page AFC-61, lines 28 and 29.) SDG&E further states that the underlying cost driver is non-residential customer growth. On page WP-298, SDG&E again indicates that growth factors are applied to a 5-year average to derive its forecasts.

i. Please provide calculations showing how the "growth factors" were derived from the CU forecast.
ii. Please discuss why SDG&E believes that these "growth factors" are reasonable and why the resulting forecasts are justifiable.
iii. Since SDG&E's testimony states that the underlying cost driver for this capital project is non-residential customer growth, please explain why SDG&E does not use non-residential customer growth changes as the basis for deriving its forecasts for this project.
iv. ORA will be deriving its own independent forecasts for non-residential customer growth. If ORA's forecasts for non-residential customer growth differ from SDG&E's, how should ORA modify the forecasts for Project 216 to reflect these differences?

**SDG&E Response 04(c):**

c.i See response to 4.b.i

c.ii See response to 4.b.ii

c.iii See response to 4.b.iii

c.iv See response to 4.b.iv

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d. Budget Code Project 217 is discussed on page AFC-62. On that page, SDG&E states that its forecast method uses recorded beginning-of-year 2016 expenditures that are then adjusted by "applying growth factors derived from the construction unit forecast." SDG&E further states that the underlying cost driver is residential customer growth. On page WP-307, SDG&E also indicates that growth factors are used, but it instead states that these factors are applied to year-end 2016 data in order to derive its forecasts.

i. Please explain whether the derivation of SDG&E's forecasts for Project 217 utilizes beginning-of-year or end-of-year 2016 data.
ii. Please provide calculations showing how the "growth factors" were derived from the CU forecast.
iii. Please discuss why SDG&E believes that these "growth factors" are reasonable and why the resulting forecasts are justifiable.
iv. Since SDG&E's testimony states that the underlying cost driver for this capital project is residential customer growth, please explain why SDG&E does not use residential customer growth changes as the basis for deriving its forecasts for this project.
v. ORA will be deriving its own independent forecasts for residential customer growth. If ORA's forecasts for residential customer growth differ from SDG&E's, how should ORA modify the forecasts for Project 217 to reflect these differences?

**SDG&E Response 04 (d):**

d.i End-of year. The Forecast Methodology presented in SDG&E's work papers specifically references the use of 2016 year-end expenditures to which growth factors are applied, rather than beginning-of-year. End of year 2016 data is believed to be that which most accurately represents the activity levels of the building industry at that time.

d.ii See response to 4.b.i

d.iii See response to 4.b.ii

d.iv See response to 4.b.iii

d.v See response to 4.b.iv

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e. Budget Code Project 218 is discussed on pages AFC-62 and 63. On these pages, SDG&E states that its forecast method uses recorded beginning-of-year 2016 expenditures that are then adjusted by "applying growth factors derived from the construction unit forecast." SDG&E further states that the underlying cost driver is non-residential customer growth. On page WP-316, SDG&E also indicates that growth factors are used, but it instead states that these factors are applied to yearend 2016 data in order to derive its forecasts.

i. Please explain whether the derivation of SDG&E's forecasts for Project 218 utilizes beginning-of-year or end-of-year 2016 data.
ii. Please provide calculations showing how the "growth factors" were derived from the CU forecast.
iii. Please discuss why SDG&E believes that these "growth factors" are reasonable and why the resulting forecasts are justifiable.
iv. Since SDG&E's testimony states that the underlying cost driver for this capital project is non-residential customer growth, please explain why SDG&E does not use non-residential customer growth changes as the basis for deriving its forecasts for this project.
v. ORA will be deriving its own independent forecasts for non-residential customer growth. If ORA's forecasts for non-residential customer growth differ from SDG&E's, how should ORA modify the forecasts for Project 218 to reflect these differences?

**SDG&E Response 04 (e):**

e.i See response to 4.d.i

e.ii See response to 4.b.i

e.iii See response to 4.b.ii

e.iv See response to 4.b.iii

e.v See response to 4.b.iv

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f. Budget Code Project 219 is discussed on pages AFC-63 and 64. On those pages, SDG&E states that its forecast method used a 5-year average based on historical data "incorporating growth factors derived from the construction unit forecast." (See page AFC-64, lines 2 and 3.) SDG&E further states that the underlying cost driver is new business customer growth. On page WP-325, SDG&E again indicates that growth factors are applied to a 5-year average to derive its forecasts.

i. Please provide calculations showing how the "growth factors" were derived from the CU forecast.
ii. Please discuss why SDG&E believes that these "growth factors" are reasonable and why the resulting forecasts are justifiable.
iii. Since SDG&E's testimony states that the underlying cost driver for this capital project is new business customer growth, please explain why SDG&E does not use new business customer growth changes as the basis for deriving its forecasts for this project.
iv. ORA will be deriving its own independent forecasts for new business customer growth. If ORA's forecasts for new business customer growth differ from SDG&E's, how should ORA modify the forecasts for Project 219 to reflect these differences?

**SDG&E Response 04(f):**

f.i See response to 4.b.i

f.ii See response to 4.b.ii

f.iii See response to 4.b.iii

f.iv See response to 4.b.iv

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g. Budget Code Project 224 is discussed on pages AFC-64. On that page, SDG&E states that its forecast method uses recorded beginning-of-year 2016 expenditures that are then adjusted by "applying growth factors derived from the construction unit forecast." SDG&E further states that the underlying cost driver is customer growth. On page WP-334, SDG&E also indicates that growth factors are used, but it instead states that these factors are applied to year-end 2016 data in order to derive its forecasts.

i. Please explain whether the derivation of SDG&E's forecasts for Project 224 utilizes beginning-of-year or end-of-year 2016 data.
ii. Please provide calculations showing how the "growth factors" were derived from the CU forecast.
iii. Please discuss why SDG&E believes that these "growth factors" are reasonable and why the resulting forecasts are justifiable.
iv. Since SDG&E's testimony states that the underlying cost driver for this capital project is customer growth, please explain why SDG&E does not use customer growth changes as the basis for deriving its forecasts for this project.
v. ORA will be deriving its own independent forecasts for customer growth. If ORA's forecasts for customer growth differ from SDG&E's, how should ORA modify the forecasts for Project 224 to reflect these differences?

**SDG&E Response 04 (g):**

g.i See response to 4.d.i

g.ii See response to 4.b.i

g.iii See response to 4.b.ii

g.iv See response to 4.b.iii

g.v See response to 4.b.iv

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h. Budget Code Project 225 is discussed on page AFC-65. On that page, SDG&E states that it is appropriate to use a 5-year average to develop its forecasts for this project, as it levels out the peaks and valleys in this blanket budget. On page WP-343, SDG&E also states that it developed a 5-year average to derive a base forecast, but it then indicates that it increased that forecast by 10% each year to derive its forecasts for 2017 through 2019.

i. What is SDG&E's actual forecast methodology for Project 225 – a simple 5-year average, or a 5-year average that is escalated by 10% each year?

vi. If SDG&E actually used an escalation factor, please describe how SDG&E developed its 10% yearly escalation and why it believes the 10% yearly increase is reasonable and justified.

**SDG&E Response 04 (h):**

h.i SDG&E's actual forecast methodology for Project 225 is a 5-year average that is then escalated by 10% each year.

h.ii Customer requests for relocation, rearrangement, and removal of both existing distribution and service facilities vary from year to year. The expenditures necessary to meet customer demand for such work vary from year-to-year. This is attributed in part to the amount of work required to accommodate customer requests, as well as the timing of customer payments (which credit in the year received, not the year the work is performed). Given the CU Forecast suggests increased customer development activity, it was anticipated both of those factors could very likely contribute to an increase in customer requests for the relocation, rearrangement or removal of existing distribution and service facilities. Also considering the past 5 years represented a period of regrowth for the building industry, relative to the more aggressive outlook suggested by the CU Forecast, it was believed that a 10% year over year increase was appropriate for this project.

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i. Budget Code Project 235 is discussed on pages AFC-65 and 66. On those pages, SDG&E states that it is appropriate to use a 4-year average to develop its forecasts for this project, as it levels out the peaks and valleys in this blanket budget. On page WP-352, SDG&E also states that it developed a 4-year average to derive a base forecast, but it then indicates that it increased that forecast by $1 million to derive its forecasts for 2017 through 2019.

i. What is SDG&E's actual forecast methodology for Project 235 – a simple 4-year average, or a 4-year average that is increased by $1 million?
ii. If SDG&E actually uses an increase of $1 million, please describe how SDG&E developed this increase and why it believes that it is reasonable and justified.
iii. On page WP-351, SDG&E shows recorded data for Project 235. A simple 4-year average of the recorded years 2013 through 2016 appears to equal $4.114 million. After reflecting the adjustments shown on page WP-353, the adjusted forecasts for 2017 through 2019 appear to be $3.504 million, which is the amount shown in the testimony. However, ORA has not been able to understand how the $1 million adjustment has been incorporated into this total. Please provide calculations showing how SDG&E actually derived its final forecasts for Project 235.

**SDG&E Response 04 (i):**

i.i: A 4-year average that is increased by $1 million, as described in the Forecast Methodology.

i.ii: As described in the Forecast Methodology, SDG&E ceased the practice of refurbishing and redeploying existing transformers. That change altered the capitalization practices for transformer labor, resulting in an estimated increase in capital transformer labor costs of about $1 million per year.

i.iii Forecasts for Project 235 were calculated using fully-loaded historical costs as a basis. Those historical costs were normalized to 2016 dollar equivalents from which an average was calculated for the years 2013 through 2016. It was to that average the $1 million increase was applied. A fully-loaded requirement of $15,550,000 was derived from the calculation:

($14,428,000 + $14,792,000 + $14,734,000 + $14,250,000) / 4 = $14,550,000

$14,550,000 + $1,000,000 = $15,550,000 (fully-loaded)

The resulting total is reduced to direct-dollars in the work papers and then base forecast was adjusted.

**ORA DATA REQUEST**
**ORA-SDGE-087-GAW**
**SDG&E 2019 GRC – A.17-10-007**
**SDG&E RESPONSE**
**DATE RECEIVED: JANUARY 16, 2018**
**DATE RESPONDED: JANUARY 31, 2018**

5. ORA does not have a witness who will independently develop forecasts for CUs. ORA does have a witness who will independently develop forecasts for customer growth. Please provide a quantitative mechanism whereby forecasts for electric customer growth can be translated into forecasts for CUs.

**SDG&E Response 05:**

SDG&E does not use a calculation that equates or compares these two separate variables and thus is unable to provide one.

**ORA DATA REQUEST**
**ORA-SDGE-087-GAW**
**SDG&E 2019 GRC – A.17-10-007**
**SDG&E RESPONSE**
**DATE RECEIVED: JANUARY 16, 2018**
**DATE RESPONDED: JANUARY 31, 2018**

6. Similar to the previous question, please provide a quantitative mechanism whereby capital forecasts for each of the Budget Codes contained in the New Business category can be adjusted to reflect differences ORA may have with SDG&E's estimates for electric customer growth.

**SDG&E Response 06:**

Please see the accompanying file, "ORA-SDGE-087-New Business Calculations.xlsx", which are calculated based on fully loaded dollars. Please note that the growth factors are based on the accompanying file, "ORA-SDGE-087-CU Forecast and Growth Rate Summary 7-22-2016"). Please note that SDG&E does not correlate customer growth (meter sets) with construction units (a function of permit applications). The former is considered a lagging indicator while the latter is considered a leading indicator, both of which do not represent activity levels occurring at the same chronological time.