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Witness: Swartz

PREPARED DIRECT TESTIMONY OF

CHRISTOPHER SWARTZ

ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

CHAPTER 5

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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PREPARED DIRECT TESTIMONY OF

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CHAPTER 5

I. INTRODUCTION

The purpose of my direct testimony is to discuss the implementation of the new SAP Customer Relationship & Billing ("SAP CR&B") system and, more specifically, the impacts to San Diego Gas & Electric Company's ("SDG&E's") Customer Service Operations and Information organization. My testimony will include: (1) a brief overview of which business units within the Customer Service Operations and Information organization will be impacted by SAP CR&B and its new capabilities; (2) the costs and timeline for the impacted business units to successfully transition to SAP CR&B; (3) the costs and timeline for the post-implementation stabilization period; and (4) a detailed description of SDG&E's operational change management strategy and the corresponding costs and timeline. Whereas my testimony focuses on impacts, timelines, costs and resourcing as they relate to the Customer Service Operations and Information business units, the direct testimony of Witness Linder (Chapter 6) discusses the timelines and resourcing for Information Technology ("IT").

A summary of the implementation costs discussed in my direct testimony are presented in Table CDS-1 below. This table includes business costs and timelines related to the transition period, the post-implementation stabilization period and the change management process. The costs are broken up between labor and non-labor, where labor captures the staff augmentation costs related to incremental SDG&E employees and non-labor captures the costs associated with incremental third-party staffing support.

Table CDS-1: Summary of Transition, Stabilization and Operational Change Management Costs and Duration

	O&M[1] Labor (millions)	O&M Non-Labor (millions)	Total Duration (months)
Transition and Stabilization	$1.4	$18.0	17
Operational Change Management	$2.8	$5.0	36

II. INTERACTION WITH THE LEGACY CIS AND SAP CR&B

A. Background

SDG&E implemented its existing legacy Customer Information System ("CIS") in 1997. At the time, the primary interaction with the customer was a once-a-month manual metering reading process that was used for billing. As the energy industry has evolved over the last two decades, the need for more real-time granular energy usage data to support and encourage customer engagement has grown dramatically. To support this pace of change, SDG&E's Customer Service Operations and Information organization has sought to evolve from the reactive organization it was in 1997 to a more proactive organization capable of providing services and real time information to customers through multiple channels. For example, in 1997, if a residential customer had a question regarding their energy usage or rate schedule, the primary channel available to them was SDG&E's Customer Contact Center ("CCC"), which would present service options based upon their monthly meter readings. In today's world, a customer with the same inquiry now has a choice whether to contact the CCC or to instead access SDG&E's online MyAccount system, using any number of devices, to view not only their energy usage at the hourly level, but also their customer-specific bill impacts under different rate options. While these specialized

[1] O&M refers to Operations and Maintenance.

capabilities help customers to better understand and manage their energy, they also require complex and flexible technical solutions.

B. The Transformational Capabilities and Benefits of SAP CR&B

As presented in the direct testimony of Witness Atkinson (Chapter 4), SDG&E has identified 45 unique financial and operational benefits equating to over $575 million that SDG&E will begin to realize upon the completion of its implementation of SAP CR&B. While these benefits represent a significant dollar savings over the life of the product, the transformational capabilities that the new SAP CR&B system will provide SDG&E and its customers are also compelling. These additional "soft" benefits will allow SDG&E to achieve its goal of providing exceptional customer service.

(i) A Customer-Centric Model

SDG&E's legacy CIS applies a premise-centric approach, meaning that data is tracked on the basis of a particular location or address, rather than on a customer-specific basis. As part of SDG&E's SAP CR&B implementation, the existing data in SDG&E's legacy CIS and its supporting subsystems will be merged into a consolidated data source, leveraging a customer-centric model that tracks all data related to each customer on an individual basis. This customer-centric approach will transform the customer experience, providing a near real-time view of each customer's interactions with the utility that enables a higher level of customer relationship management. Customer benefits realized under this customer-centric approach are many, and range from access to more flexible appointment windows that align with customer availability to allowing customers the capability to view and make real time decisions regarding their energy usage. SAP CR&B makes all of this possible by having all customer data in one consolidated location that can be accessed across the system.

Implementation of a customer-centric model ensures that customers will have a consistent and seamless experience, regardless of the channel (*e.g.*, web, e-mail, phone, social media, etc.). It will also allow SDG&E to implement tailored, "omni-channel" communications – personalized communications based on detailed segmentation modeling delivered to any/all of a customer's preferred devices. With SAP CR&B, the practice of sending out generic blast communications to all residential customers regarding a new offering will give way to development of customized communications that are more timely and relevant based upon recent interactions or purchases by the customer. Customers will also benefit from having a consolidated and up-to-date repository for all contact data by giving them the ability to easily update contact preferences across multiple subscriptions and accounts.

The customer-centric model also allows internal employees to better understand the customer and to anticipate the services they require. In today's world, an Energy Service Specialist ("ESS") in the CCC or an Account Executive ("AE") in Commercial and Industrial Services must access data from several different systems while taking a customer call, as a customer's questions may range from their current rate options to an energy rebate letter they received for an appliance. With SAP CR&B, that same ESS or AE will have the ability to obtain all of the information they need from one system, making the customer support process far more efficient and consistent. For example, responding to a high bill inquiry currently requires multiple steps and handoffs across multiple SDG&E business units; this process will be streamlined with SAP CR&B, leading to quicker resolution and higher customer satisfaction.

The approach of leveraging previous interactions with the customer and applying predictive analytics is critical as it creates a more efficient path to meeting customer needs. For customers who contact SDG&E regarding a particular service need, it will no longer be necessary to start from the beginning each time they interact with SDG&E regarding that need. Instead, customers will be able to seamlessly continue the interaction where they previously left off. For instance, if a customer calls in to discuss the energy usage for their new pool and then decides two weeks later to go online for additional information, SAP CR&B will allow SDG&E to immediately pick up and continue the previous interaction, thereby increasing efficiency and improving the customer experience. In addition, the data analytics capabilities of SAP CR&B will allow SDG&E to proactively recommend relevant options to the customer – in the example of the pool owner, a new rate option based on their increased usage and/or information regarding rebates on energy efficient pool pumps. Having the customer's information at the ESS's or AE's fingertips will allow for a more efficient, productive, and personal interaction, leading to a higher level of overall customer satisfaction.

(ii) New Configuration Capabilities

Perhaps the most significant benefit that SDG&E will realize from SAP CR&B is its configurability. As referenced throughout this Application, SDG&E's legacy CIS requires a significant amount of additional IT coding to implement any changes in functionality. Even if the changes are small, such as adding a new line item to the bill, a significant amount of coding is required. When factored with the current complexities in SDG&E's legacy CIS, these small changes can often take months to fully code, test and implement. With SAP CR&B, the time required to implement changes will be greatly reduced, as a significant number of the changes will no longer require IT coding and can be easily configured in the

SAP CR&B system. The same new line item for the bill, which previously required coding, will now only require a business user to type in the name of the line item on a configuration screen, input the specific calculation formula, identify the customer set that it applies to, and then click a couple boxes to finalize the changes. This is just a small example of the power of the new configuration capability.

This new configuration capability will provide benefits for all internal users of the new CIS system when it comes to making changes or introducing new information for customers, such as with customer-specific communication content and online energy management tool configuration. SDG&E expects to fully leverage this capability to help keep pace with changes in the California energy industry, especially when it comes to mandated changes to rate structures and rate options. Based upon its analysis, SDG&E is forecasting that it will be able to save approximately $240 million over the lifetime of the new CIS system ($16 million per year)[2] related to changes required by future regulatory implementations by using SAP CR&B, instead of trying to make do with its existing legacy CIS. While certain changes will still require some level of coding, a key driver behind the projected savings is that a significant number of changes required for billing and rate comparison functionality will now be configurable, requiring no IT coding. Some examples of this include changes to: (1) Time-Of-Use periods ("TOU"); (2) renewable program calculations such as those in Net Energy Metering and Virtual Net Metering (*e.g.*, nonbypassable charges); (3) new electric vehicle rate options; (4) new or changing demand response program calculations; (5) bill protection calculations; (6) new hourly pricing rate options; and (7) performing complex bill calculations on third-party provided data. This

[2] Direct testimony of Witness Atkinson (Chapter 4), Figure LDA-2.

new capability will also allow SDG&E to more effectively support changes such as those required under Community Choice Aggregation and the expected incremental growth related to distributed energy resources.

In addition to supporting the rate structures that are currently known, the configuration capability of SAP CR&B will allow SDG&E to also support new rate designs, which do not exist today. The configuration screens in SAP CR&B allow employees to create unique calculation formulas, providing similar functionality to what is currently found in Microsoft Excel. The system provides numerous functions (*e.g.*, addition, subtraction, multiplication, division, average, maximum, etc.) and allows employees the ability to apply these functions in any combination to create rate calculations for a customer's 15-minute or hourly interval data. This functionality also supports multiple meter aggregation and deduction, allowing for complex calculations, such as those currently required under Electric Vehicle Submetering, Conjunctive Billing,[3] Virtual Net Metering and Net Energy Metering Aggregation. The configurability of SAP CR&B also will be able to accommodate future rate designs that require different calculations across multiple meters.

(iii) Data Analytics Capabilities

Another benefit that SDG&E will realize with SAP CR&B is improvement to its existing data analytics capabilities. As the data model in SDG&E's current Customer Services application portfolio is split between SDG&E's legacy CIS and numerous subsystems, performing any detailed analytics on customer data, such as understanding the number of customers who have elected a new rate option as a result of a new marketing campaign, is a challenge. Information such as this is critical as it allows SDG&E to better

[3] *See*, SDG&E's Schedule AL-TOU, Special Condition 16.

understand customer preferences and reaction to specific education and marketing campaigns. Currently, SDG&E must manually combine data from various systems to generate one consolidated report. This process is time consuming, inefficient and has significant risk for error.

As described above, the SAP CR&B customer-centric data model is much different from the current structure, as it is based upon a consolidated source for all customer data. Having consolidated customer data makes it much easier to access and eliminates the need for any manual reconciliation. It also eliminates the need for supporting redundant databases that contain copies of the data and creates "one source of truth" that can be used by all employees to improve analysis of customer trends and market needs. Having this "one-stop shop" for all data makes the overall analytics process more efficient and more accurate, and reduces the amount of time required for making key internal decisions.

In addition to the improved customer analytics, SAP CR&B will also provide improved operational analytics capabilities for its business processes, such as billing. These analytics will allow SDG&E to monitor the health of its SAP CR&B system and quickly identify potential issues and improve mitigation turnaround time. As an example, SDG&E will be using SAP CR&B operational analytics capabilities to monitor and evaluate its billing processes. These analytics will be used to create real time online reports that capture the current number of delayed bills and the root causes behind each to allow for quicker resolution. The reports will also monitor the number of exceptions that are being generated during the billing process to help identify trends. Coupling these improved analytics with the configuration capabilities discussed above will give SDG&E the ability to not only

identify issues quickly, but also configure quick solutions in the system to resolve the issues, minimizing delays and impacts to its customers.

(iv) Product Updates and Future Capabilities

A key benefit of selecting a "productized" solution like SAP CR&B is that the system can evolve as the industry evolves. Similar to how Apple supports the iPhone, every few years, SAP will provide upgrades to its SAP CR&B product, enabling new capabilities that reflect trends that are currently emerging in the energy industry. The upgrades will be based upon the needs and feedback of more than 100 utilities that use the product and will help to standardize new processes across the utilities. For instance, if a new technology enters the market, SDG&E will work alongside other impacted utilities and SAP to develop new technical capabilities to support the new business processes. Once the new capability is implemented, it will then become part of SAP CR&B's base product. This approach helps to lower long-term risk associated with an implementation of this size as it allows utilities like SDG&E to leverage SAP to help adjust to changing trends in a more meaningful way and continue to apply utility best practices as the industry evolves. Instead of the countless hours and resources that SDG&E spends on the customization of its existing legacy CIS and related subsystems to enable changes, SDG&E will leverage the configuration capabilities of SAP CR&B to better handle the short-term changes to business processes and then work with SAP and other utilities to enable a standardized approach for SAP CR&B to support the long-term needs.

C. Customer Service Operations and Information and SAP CR&B

SDG&E's legacy CIS is currently used by over 1,600 employees across SDG&E, ranging from employees in back offices to employees in the field to employees working with customer programs and rate options. Interaction levels vary from once-a-day basic

customer account inquiries to nonstop interaction throughout the day, such as in the back offices and CCC. While basic levels of interaction occur in other organizations, the majority of the interaction comes from the Customer Service Operations and Information organization, where there are eight business units that have moderate to high levels of interaction with SDG&E's legacy CIS and related subsystems. These include: (1) Advanced Metering Operations, (2) Residential Services and the CCC, (3) Billing Operations, (4) Credit and Collections, (5) Commercial and Industrial Services, (6) Branch Offices, (7) Marketing, Research and Analytics, and (8) Customer Programs and Projects. Activities in these business units are varied and include, among other things, an ESS in the CCC taking a new service turn-on request from a customer, an employee in Billing Operations completing a customer request to change their rate schedule, and an analyst in SDG&E's Commercial and Industrial Services department reviewing a commercial customer's energy usage pattern over the last year to identify areas of potential energy efficiency savings.

(i) Advanced Metering Operations ("AMO")

AMO supports the delivery of customer services on premises, responds to customer inquiries, resolves customer problems, and ensures safe, accurate and reliable metering for all of SDG&E's customers.[4] A critical function within AMO is the collection and the validation, estimation and editing of daily reads and interval data for both gas and electric meters within SDG&E's service territory. These reads and interval data are processed in SDG&E's Meter Data Management System ("MDMS") and then sent to SDG&E's CIS to be stored for both billing and online customer presentment. The business unit responsible for these AMO processes is Smart Meter Data Operations. This business unit currently

[4] A.14-11-003, Exh. 101 at BMB-10:7-9 (Direct Testimony of Bradley M. Baugh).

interacts moderately with SDG&E's legacy CIS, primarily resolving issues with missing and/or estimated interval data and meter configuration changes, such as remotely changing the meter to record 15-minute interval data instead of hourly interval data. Other areas in the AMO business unit have minimal interaction with the current CIS, through basic transactions such as looking up customer account information for field visits or meter testing.

With SAP CR&B, the AMO business unit will have increased visibility into customer energy usage, allowing for faster resolution and fewer internal hand offs related to metering or interval data quality issues. In addition, the centralized data structure of SAP CR&B will allow AMO to perform detailed ad hoc analytics and will provide additional capabilities and information for field personnel working at a specific site.

(ii) Residential Customer Services and the CCC

The Residential Customer Services ("RCS") business unit supports residential customers and is focused on delivering and enhancing the overall customer experience for these customers. The key groups within the business unit are the CCC, Residential Products and Services, Customer Experience and Engagement, Residential Support Services, and Customer Assistance. The overall mission of these groups is to ensure consistent, timely, efficient, and responsive service to residential customers and to anticipate customer needs to proactively assist them with energy decisions.[5]

SDG&E has two facilities for the CCC, where ESS's are responsible for: (1) answering customer telephone calls; (2) responding to incoming inquires through email, written correspondence and online chat; (3) following up on all CPUC telephone referrals

[5] *Id*. at BMB-60:11 – BMB-61:6.

and informal/formal CPUC complaints; and (4) responding to other customer account related inquiries. ESS's cover a range of topics such as billing and payment, customer assistance program information, customer rate options, energy conservation solutions, and other miscellaneous topics raised by the customer.[6] The CCC has a high level of interaction with the legacy CIS, which is the primary system used to resolve inquires; however, several other supporting systems are utilized as well, including SDG&E's MyAccount, which is the online customer portal. In addition to the CCC, the Customer Assistance group within RCS has moderate interaction with the legacy CIS related to the management of the special needs programs such as, but not limited to, Energy Savings Assistance, California Alternate Rates for Energy, and Medical Baseline. The other groups within RCS have minimal interaction with the legacy CIS.

SAP CR&B will provide the RCS business unit with the capability to proactively interact with customers, as it will consolidate the information needed by ESS's from various CIS supporting systems into one location, making it easier to provide customers with the information they need. It will also allow for predictive analytics that can help to predict why a customer is calling into the CCC before the ESS begins the call, making the call itself more efficient and productive. By providing a 360-degree customer-centric view – *i.e.*, having all data related to a customer accessible to the ESS in one consolidated location – SAP CR&B will allow ESS's to ably resolve customer inquiries. In addition, the predictive analytics functionality provided by SAP CR&B will enable ESS's to proactively recommend rate options and other offers that will help customers to reduce or shift their energy usage to lower their bills.

[6] *Id*. at BMB-49:19 – BMB-50:5.

(iii) Billing Operations

Billing Operations is SDG&E's back office organization responsible for calculating customer bills and maintaining accurate customer account information.[7] This includes: (1) exception processing related to automated system validations, which ensures overall accuracy of customer energy usage and charges, and (2) complex billing, which requires manual account set-up and/or monthly intervention for bill calculation processing. Billing Operations has three distinct areas – Customer Billing, Billing Operations Support, and Customer Billing Resources – all of which have a high level of interaction with the legacy CIS, using it for nearly 100% of their business processes.

The Billing Operations business unit will benefit significantly from the new capabilities being provided by SAP CR&B. As described above, the new configuration and improved data analytics capabilities will allow for more cost effective and timely changes to rates and rate options, and will enable quick identification and resolution of any delayed billing issues. These capabilities will give the Billing Operations business unit the ability to transition to a more proactive and efficient state.

In addition, SDG&E expects to significantly increase the speed at which the read and interval data is available for billing and online presentment. Having this data more readily available will reduce the likelihood of a delayed or estimated bill and allows for the data to be presented sooner to customers through SDG&E's online energy management tools. Also, this is a primary area where SAP CR&B, which is designed specifically to handle hourly and 15-minute interval data, can dramatically improve processing times for bills by reducing the number of exceptions and bills that require manual intervention. When researching

[7] *Id*. at BMB-19:6-7.

billing inquiries and exceptions, SDG&E employees will also see increases in productivity and decreases in transaction time related to the consolidated CIS structure, which will provide a more comprehensive view of the customer's services and energy usage.

(iv) Credit and Collections

The Credit and Collections business unit consists of Credit and Collections, Customer Payment Services, and Meter Revenue Protection ("MRP"). Activities encompass all traditional credit office functions: (1) credit policy and procedure development and review; (2) management reporting and analysis; (3) management of outside collection agencies; (4) skip tracing (the process of tracking down customers who have outstanding bad debt) and final bill collection; (5) collection of delinquent residential and commercial accounts; (6) bankruptcy processing; (7) handling of exception payments and performing daily reconciliation and general ledger posting of payments from all sources; and (8) investigation by MRP of leads associated with potential customer energy theft and, if appropriate, remediation of any safety issues.[8] The Credit and Collections organization has a high level of interaction with the legacy CIS, using it for approximately 65% of its business processes.

With SAP CR&B, SDG&E expects improvements in credit transaction selection and in risk assessment that will ameliorate revenue recovery and cash flow management. Also, expected improvements in electronic processing and 'self-service' availability will enhance the customer experience and create operational efficiencies by reducing the number of exceptions and transactions requiring manual intervention. As identified in the direct

[8] *Id*. at BMB-26:10-20.

testimony of Witness Atkinson (Chapter 4), SAP CR&B will not only improve these areas, but also provide operational cash flow benefits.

(v) Branch Offices

SDG&E's network of Branch Offices and Authorized Payment Locations ("APLs") offer local, face-to-face customer payment services. SDG&E operates five dedicated Branch Office facilities and two shared Branch Office facilities. SDG&E contracts with a third-party vendor that provides a network of approximately 75 APL's with similar payment capabilities.[9] As part of the face-to-face customer interaction, the Branch Office employees have a high level of interaction with the legacy CIS, using it in a manner similar to the ESS's in the CCC – *i.e.*, interacting with the CIS for nearly all of their transactions.

SAP CR&B will provide Branch Office employees with a 360-degree view of the customer (similar to the view provided to the CCC), which allows them to better understand and meet the needs of customers who visit SDG&E's Branch Offices. In addition, the same predictive analytics capabilities that are described above also will be leveraged in the SDG&E Branch Offices to proactively recommend options for customers to help save on their energy bills.

(vi) Commercial and Industrial Services

The Commercial and Industrial ("C&I") Services business unit supports business customers through education and communication materials on energy rates, tariff services, safety, and regulatory information, and manages the planned outage communication business processes. The C&I Services unit uses research and a collaborative process to identify and provide value to its customers and to effectively meet the wide and growing

[9] *Id*. at BMB-26:11-15.

array of business customers' complex energy needs.[10] SDG&E employees in C&I Services have a high level of interaction with the legacy CIS, using it to research and analyze customer accounts to provide business customers with ways to improve their energy efficiency and reduce their energy costs. Due to the complexity of these services and existing CIS limitations, the C&I Services team also uses a supporting subsystem to track specific customer information, such as detailed contact information and customer preferences.[11]

The C&I Services business unit will also benefit from the 360-degree customer-centric view that SAP CR&B will provide. As business customers often times have multiple points of contact for their businesses (*e.g.* facility manager, accounts payable manger, etc.), it can be challenging to manage all of the different customer interactions and touchpoints. SAP CR&B will provide this capability as it will consolidate the customer-specific contact information currently being stored in the supporting systems into one, easy to access location, improving how SDG&E provides information and the overall customer experience. The consolidated system will allow for more efficient and productive conversations with business customers.

(vii) Marketing, Research and Analytics[12]

The Marketing, Research and Analytics business unit manages seven primary SDG&E activities including: (1) market and communications planning; (2) mass proactive customer communications; (3) website management of SDG&E.com and MyAccount,

[10] *Id*. at BMB-73:9-20.

[11] The information is currently stored in SDG&E's iAvenue system, as defined in Chapter 6, Table DL-1.

[12] In SDG&E's 2016 GRC (A.14-11-003), this organization is referred to as Customer Communications, Research and Web.

including e-services; (4) creative services, such as the production of customer outreach materials; (5) customer research and analytics; (6) social media engagement; and (7) mobile applications.[13] Due to existing system limitations, this business unit has a low level of interaction with the legacy CIS, as these critical points of customer data are all managed in supporting systems outside of the legacy CIS.[14] This decentralized system architecture is extremely complex and makes it difficult to develop a complete picture of a customer's needs and preferences.

SAP CR&B will consolidate customer data, thereby improving overall effectiveness of data analytics and corresponding communication, so that SDG&E can easily retrieve customer attributes to precisely target the right audience based on customer preferences and demographics. SAP CR&B also will be pivotal in supporting the online customer experience, leveraging the predictive analytic capabilities described above as well as providing a more consistent feel for customers viewing their energy usage, rate options or paying their bill.

(viii) Customer Programs & Projects

Customer Programs & Projects ("CP&P") is responsible for administering and maintaining the CPUC-approved Demand Response Reliability programs and Energy Efficiency programs. CP&P also supports gathering customer information for databases, demographics, and cost studies, provides analytical and technical support for various regulatory filings, and sponsors events within the new construction industry to encourage safe, efficient, and economical use of the utility's service. In addition, the CP&P business

[13] A.14-11-003, Exh. 101 at BMB-82 – BMB-85 (Direct Testimony of Bradley M. Baugh).

[14] Such as SDG&E's Customer Relationship Management ("CRM") and Customer Data Warehouse systems.

unit includes the Office of Customer Privacy, the Project Management Office for Customer Service Operations and Information, and a Business Integration group.[15] As part of administering the Demand Response and Energy Efficiency programs, employees in the CP&P business unit interact moderately with the legacy CIS, primarily when researching customer data or identifying demand response event dates and time periods for billing processes. The majority of CP&P's business transactions are currently handled in numerous supporting subsystems, which are not fully integrated with the legacy CIS.

SAP CR&B will help to create efficiencies and improve overall effectiveness as the functionality currently requiring these supporting subsystems will now either be fully supported by or integrated with SAP CR&B to create the 360-degree view of the customer.

III. SAP CR&B TRANSITION, STABILIZATION AND OPERATIONAL CHANGE MANAGEMENT

A. SAP CR&B Transition and Stabilization Strategy

Each of the business units described above will be impacted by the implementation of the new SAP CR&B. Along with changing the concrete steps in completing specific transactions, high-level business processes will also change to become more efficient and customer-friendly. Changes made possible by SAP CR&B will not only improve how information is stored and processed, but will also enhance the way in which SDG&E interacts with its customers. Several units, such as the CCC, Billing Operations, and Credit and Collections, will see the majority of their business processes impacted, while units such as Marketing, Research and Analytics and CP&P will see a smaller percentage of their processes impacted.

[15] A.14-11-003, Exh. 101 at BMB-102:11-19 (Direct Testimony of Bradley M. Baugh).

While each of these business units will need to have their identified business processes transitioned to SAP CR&B, it is imperative that the transition occurs in an organized and thoughtful manner. It is not realistic to think that the current 1,600 users of SDG&E's legacy CIS can effectively move to SAP CR&B without significant training and hands-on experience before the transition. Without dedicated time to provide training on SAP CR&B, employees will struggle considerably as the SAP CR&B system stabilizes, which would adversely impact customers.

(i) SAP CR&B Transition Period Strategy (Pre-Implementation)

To ensure that the transition is handled in a cohesive, orderly manner, SDG&E has prepared a detailed transition timeline and cost estimate based upon each business unit's respective processes and the expected future state. The transition strategy that SDG&E intends to apply has been co-developed by SDG&E and its third-party vendor specializing in this area, HCL America, Inc. ("HCL"). The strategy employs a foundation of HCL's recommended industry best practices, customized for SDG&E based upon its number of customers, organizational structure, and employee experience levels. The strategy also takes into account recent utility CIS implementations and identifies key challenges and roadblocks that other utilities experienced and that SDG&E can consciously avoid. Working with its vendor, SDG&E has documented the current "As-Is" business processes and created high level blueprints for the future "To-Be" business processes for the transition, as discussed further in the direct testimony of Witness Linder (Chapter 6). This mapping has helped to delineate the specific timeline and O&M costs needed for each business unit to successfully transition to SAP CR&B.

As part of the implementation strategy, an identified best practice is to use a staff augmentation approach, where temporary resources are brought in before the

implementation to allow the existing staff sufficient time to train on the new system. The temporary resources are first trained to support the legacy CIS throughout the transition and then are gradually phased out during the post-implementation stabilization period. This approach allows adequate time for training of permanent resources, while simultaneously mitigating any stabilization issues after SAP CR&B is implemented. It is critical that the temporary resources are onboarded with enough lead time to prevent any significant issues with SAP CR&B at the time of implementation. SDG&E's vendor, HCL, has previously applied this strategy when implementing CIS's at other utilities, where the approach helped to dramatically minimize potential issues and reduce costs related to rework and implementation delays.

(ii) SAP CR&B Stabilization Period Strategy (Post-Implementation)

The time period after SAP CR&B goes live is a critical phase identified as the post-implementation stabilization timeframe. Despite extensive preparation, planning and testing, it is reasonable to expect that challenges will arise once SDG&E's SAP CR&B is implemented. These challenges may range from new users adjusting to significant changes to business processes, for example, to technical "bugs" or defects that require additional configuration or IT attention for resolution.

As part of any implementation of this size, it is also to be expected that business processes will initially take longer than they currently do until employees become more familiar and comfortable with them. Depending upon the job function's complexity and frequency, this initial "learning curve" may span from just a few hours to several months. Either way, this phenomenon must be effectively addressed, so that customers are not negatively impacted while SDG&E employees get up to speed on the new system.

Similar to the pre-implementation transition phase described above, SDG&E has worked with its vendor HCL to identify a post-implementation stabilization timeline and costs for each of the nine impacted business units in the Customer Service Operations and Information organization. The timeline and costs were based upon HCL's recommended industry best practices for stabilizing a CIS after implementation. This best practices analysis factored in the estimated learning curve timeframe for each business unit as well as the estimated resourcing needed post implementation. These numbers were then adjusted to account for SDG&E's number of customers, organizational structure and employee experience levels. SDG&E also reviewed the post-implementation schedules and results from several recent implementations by similar utilities to identify which approaches were successful.

A key component of SDG&E's implementation is keeping the temporary staff augmentation resources onboard for a period of time after the permanent resources have been trained on the new CIS. The intent is to train the temporary staff on the new system (once the permanent staff have been trained on it), so that these temporary employees can provide additional support in the post-implementation period to assist with standard transactions or other day-to-day tasks while the various business units get through the learning curve.

(iii) Transition and Stabilization Costs and Duration

As the transition period and stabilization needs for each business unit are different, a separate cost and timeline was identified for each business unit. Based upon SDG&E's analysis, due to the high level of interaction with the legacy CIS and the expected level of interaction with SAP CR&B, incremental staffing or services will be required to facilitate

the transition and stabilization in five of SDG&E's business units (1) the CCC[16]; (2) Branch Offices; (3) Billing; (4) Credit and Collections; and (5) C&I Services. The expenses incurred in 2020 and 2021 are expected to be a one-time cost.

Due to the similarity in required staffing skills and training time, SDG&E has combined the CCC and Branch Offices staffing augmentation into one consolidated plan. For SDG&E's CCC and Branch Offices, SDG&E forecasts a need for an 8-month staffing ramp-up period before implementation to accommodate the necessary training and transitioning and a 9-month ramp-down period as SAP CR&B is stabilized. During this 17-month period, SDG&E forecasts the need for an average staffing increase of 95 full-time employees ("FTEs"), peaking at 187 incremental FTEs at the time of implementation. SDG&E will incur incremental labor costs for 17 FTEs and use non-labor third-party contract services for the remaining 170 FTEs. At the time of implementation, SDG&E is forecasting a 20% increase in call volume and handling time and a 90% efficiency deficit as CCC employees adjust to the new processes within SAP CR&B. As employees become more comfortable with SAP CR&B and as identified system bugs are resolved, the staffing levels will be correspondingly reduced with an expected "steady state" achieved at the end of 9-months post-implementation. For the 17-month period, SDG&E forecasts incremental labor O&M costs of $1.2 million and $7.8 million in non-labor O&M costs consisting of contract resources and expenses.[17]

For SDG&E's Billing business unit, SDG&E forecasts a need for an 8-month staffing ramp-up period before implementation to accommodate the necessary training and

[16] The CCC is part of the RCS business unit.

[17] *See* work paper, "CDS-CCC Storm Model SDG&E."

transitioning and a 9-month ramp-down period as SAP CR&B is stabilized. During these 17-months, SDG&E forecasts the need for an average staffing increase of 56 FTEs, peaking at 83 incremental FTEs at the time of implementation. Due to the complexities of the billing processes in the legacy CIS and the corresponding time required to train employees, SDG&E will leverage third-party contract services familiar with SDG&E's legacy CIS for the entire billing staff augmentation. The contract services resources will be trained in two phases over the first four months to handle the legacy CIS billing processes and then will be trained on SAP CR&B before implementation. For implementation, SDG&E is forecasting a 50% increase in the number of billing exceptions and a 60% efficiency deficit as employees adjust to the new processes within the system. As employees become more comfortable with SAP CR&B and as identified system bugs are resolved, the staffing levels will be correspondingly reduced with an expected "steady state" achieved at the end of 9-months post-implementation. SDG&E forecasts that the contract resources will cost $6.8 million, with related expenses and incremental training[18] costing $1.8 million, totaling $8.7 million in non-labor O&M.[19]

For SDG&E's Credit and Collections business unit, SDG&E forecasts a need for a 3-month ramp-up period before implementation to accommodate the necessary training and transitioning and a 6-month ramp-down period as SAP CR&B is stabilized. At the time of implementation, SDG&E forecasts the need to handle an expected 40% increase in Credit and Collections back office workload and an efficiency deficit of 35%. To minimize the costs associated with the transition and stabilization periods, SDG&E will rely on resource

[18] Required incremental training goes beyond the standard SAP CR&B training being provided as referenced under Section B below – "Organizational Change Management Costs and Timeline."

[19] *See* workpaper, "CDS-Billing Storm Model SDG&E."

reassignments and increased utilization of its third-party collections agencies to address the expected increases. The third-party collection agencies are already familiar with SDG&E collection processes and will not require additional training; however, their liquidation rates are below those of SDG&E resources, resulting in increased uncollectible expense for an additional four months following the transition. Over the 13-month period, SDG&E forecasts incremental non-labor O&M costs of $0.9 million consisting of third-party collection agency fees and uncollectible debt.[20]

For SDG&E's C&I Services business unit, SDG&E forecasts a need for a 5-month staffing ramp up period before implementation to accommodate the necessary training and transitioning and a 4-month ramp-down period as SAP CR&B is stabilized. During the 9-months, SDG&E forecasts the need for an average staffing increase of 13 FTEs, peaking at 24 incremental FTEs at the time of implementation. SDG&E will incur incremental labor costs for 5 FTEs and use non-labor third-party contract services for the remaining 19 FTEs. For implementation, SDG&E is forecasting a 40% increase in the number of back office workload and a 35% efficiency deficit as C&I Services employees adjust to the new processes within SAP CR&B. As employees become more comfortable with SAP CR&B and as identified system bugs are resolved, the staffing levels will be correspondingly reduced with an expected "steady state" achieved at the end of 4-months post-implementation. For the 9-month period, SDG&E forecasts incremental labor O&M costs of $0.2 million and $0.6 million in non-labor O&M costs consisting of contract resources and expenses.[21]

[20] *See* workpaper, "CDS-Credit Storm Model SDG&E."

[21] *See* workpaper, "CDS-C&I Services Storm Model SDG&E."

The labor and non-labor O&M cost breakdown and corresponding duration by business unit for the transition (pre-implementation) and stabilization (post-implementation) periods are presented in Table CDS-2 below.

Table CDS-2: Summary of Transition and Stabilization Costs and Duration

Business Unit	O&M Labor (millions)	O&M Non-Labor (millions)	Transition Period Duration (months)	Stabilization Period Duration (months)	Total Duration (months)
CCC and Branch Offices	$1.2	$7.8	8	9	17
Billing	$0.0	$8.7	8	9	17
Credit and Collections	$0.0	$0.9	3	6	9
C&I Services	$0.2	$0.6	5	4	9
Total Costs and Max. Duration	$1.4	$18.0	8	9	17

Staff augmentation will not be required in the other business units in Customer Service Operations and Information due to their lower level of current interaction with the legacy CIS and expected interaction with SAP CR&B. Instead, the SDG&E employees in these business units will receive training on SAP CR&B as part of the training and change management costs covered in Section III.B below.

B. Organizational Change Management Costs and Timeline

An important factor in determining successful implementation is how well the change is managed for the people (employees and customers) affected by it. With an implementation of this size, one could easily focus on just the system implementation without putting much emphasis on how it will impact both internal employees and customers. However, ignoring change management will ultimately cause significant delays and rework, resulting in a poor customer experience. Organizational Change Management

("OCM") is "the process, tools and techniques to manage the people side of change to achieve the required business outcome. [OCM] incorporates the organizational tools that can be utilized to help individuals make successful personal transitions resulting in the adoption and realization of change."[22] Thus, OCM is a critical piece to any new system implementation, but especially for one of this size and impact.

Based upon the co-development work that SDG&E has performed with its industry specialist vendor, HCL, SDG&E has constructed a detailed OCM strategy for the SAP CR&B implementation. The strategy initially identified the potential challenges that SDG&E could experience during this implementation. These were identified by HCL through discussions with other utilities that recently completed, or are going through, a new CIS implementation. Some specific challenges identified by utilities were:

- Large mature workforce that is resistant to change;
- Workforce that has an attachment to the legacy system that can lead to low adoption of SAP CR&B;
- The changes may impact processes which ultimately impact customers;
- The large scope of what is being changed makes it difficult to manage; and
- The long transition timeline for implementation makes it difficult to manage.

SDG&E worked with HCL to review the utility industry's best practices for mitigating these identified challenges, and to assess recent CIS implementations to identify

[22] https://www.prosci.com/change-management/thought-leadership-library/change-management-definition.

the most effective OCM strategies. Based upon this analysis, SDG&E developed an OCM strategy that is comprised of three key components: (1) creating "SAP CR&B champions"; (2) communicating frequently and often with employees; and (3) providing extensive employee training.

In reviewing the best practices results with HCL, SDG&E found that creating "SAP CR&B champions" in each of the impacted business units was an effective OCM approach. The SAP CR&B champions are exposed to SAP CR&B in the development phase to (1) gain more familiarity with the changing business processes; (2) identify any potential issues or challenges with the processes before they are fully developed; and (3) become strong advocates and subject matter experts for the changed processes when the system goes live. With a project of this size and duration, a typical challenge is balancing having employees interact with SAP CR&B as it is being developed and minimizing disruption to employees' day-to-day business. While eventually all employees will be trained on SAP CR&B, bringing in a small number of SAP CR&B champions from each business unit early can strike an appropriate balance and provide significant benefits in the adoption of the new processes.

Another OCM best practice found in successful CIS implementations is effective, consistent communication. Establishing a formal process and timeline for communicating with the impacted business units regarding schedule and updates is imperative because it allows the business units to feel that they are part of the process. With this best practice in mind, SDG&E will staff an SAP CR&B project communication lead, who will be responsible for managing all communication with the business units. The lead will work with the SAP CR&B champions, vendor partners, and business unit leaders to identify the

most effective communication channels and content for their teams. The focus will be on providing meaningful and relevant updates as well as soliciting feedback regarding the new SAP CR&B. Taking this approach of communicating with employees early and often will help to alleviate anxiety regarding the unfamiliar SAP CR&B and will lead to a quicker adoption period.

Another best practice that SDG&E will incorporate into its OCM strategy is a formal training program. SDG&E will provide extensive training to all employees so that they are prepared once SAP CR&B goes live. This will include business process overview trainings, as well as hands-on and refresher trainings. During these sessions, employees will be encouraged and incented to provide feedback on the business processes with the goal of making all processes as efficient as possible.

To align with the utility best practices above, SDG&E will begin OCM activities in the 3rd month of the Project Preparation period and will complete them after the 8th month in the Stabilization period, totaling a 36-month duration. This level of commitment to OCM will ensure that employees are thoroughly trained and transitioned to SAP CR&B, which will ultimately minimize impacts to customers. SDG&E will incur incremental labor costs for 12 FTE's and will use non-labor System Integrator ("SI") contract services for an additional 12 FTE's. As employees become more comfortable with SAP CR&B, the staffing levels will be correspondingly reduced. For the 36-month period, SDG&E forecasts incremental labor O&M costs of $2.8 million[23] and $5.0 million in non-labor O&M costs consisting of contract resources.[24]

[23] *See* workpaper, "CDS-OCM."

[24] *Id.*

The O&M labor and non-labor cost breakdown and duration for the OCM is presented in Table CDS-3 below.

Table CDS-3: Organizational Change Management Costs and Duration

	O&M Labor (millions)	O&M Non-Labor (millions)	Total Duration (months)
Operational Change Management	$2.8	$5.0	36

IV. CONCLUSION

My direct testimony discusses the implementation costs and timelines of the new SAP CR&B as they correspond to SDG&E's Customer Service Operations and Information organization. My testimony specifically includes the costs and timelines related to the operational transition period, the stabilization period and OCM. SDG&E respectfully requests that the Commission adopt the implementation costs and timelines presented herein and incorporated into the total program costs and benefits provided in the direct testimony of Laura Atkinson (Chapter 4). These proposals include:

- Total transition and stabilization labor costs of $1.4 million and non-labor costs of $18.0 million; and
- Total OCM labor costs of $2.8 million and non-labor costs of $5.0 million.

This concludes my prepared direct testimony.

V. STATEMENT OF QUALIFICATIONS

My name is Christopher Swartz and my business address is 8330 Century Park Court, San Diego, California 92123. I am currently a member of the Customer Information System replacement team at San Diego Gas and Electric Company ("SDG&E"). I began work at SDG&E in September 2001 as a Billing Analyst and have held positions of increasing responsibility in the Customer Service Operations and Information division, including the manager of SDG&E's Billing Operations as well as the manager of SDG&E's Customer Operations Support department. Prior to my current position, I managed the Electric Rates team in the Customer Pricing Department for SDG&E where my primary responsibilities included the determination of electric rate design methods, and preparation of various regulatory filings.

In 1999, I graduated from the University of California at San Diego with a Bachelor of Science in Management Science. I also attended San Diego State University where I completed all coursework required for a Master's in Business Administration.

I have previously testified before the California Public Utilities Commission.