

Application: A.17-04-XXX

Exhibit No.: \_\_\_\_\_

Witness: Crider

**PREPARED DIRECT TESTIMONY OF**  
**SCOTT CRIDER**  
**ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY**  
**CHAPTER 1**



**BEFORE THE PUBLIC UTILITIES COMMISSION**  
**OF THE STATE OF CALIFORNIA**

**April 28, 2017**

**TABLE OF CONTENTS**

1

2 I. INTRODUCTION AND OVERVIEW ..... 1

3 II. SDG&E’S COMMITMENT TO EXCELLENCE IN CUSTOMER EXPERIENCE..... 3

4 III. ROLE OF THE CIS IN SUPPORTING THE IMPLEMENTATION OF STATE

5 POLICY ..... 5

6 IV. REVIEW AND EVALUATION OF THE LEGACY CIS ..... 7

7 V. PROPOSAL FOR CIS REPLACEMENT PROGRAM..... 12

8 VI. TIMING OF CIS REPLACEMENT ..... 14

9 VII. CONCLUSION ..... 16

10 VIII. STATEMENT OF QUALIFICATIONS..... 17

11

1 **PREPARED DIRECT TESTIMONY OF**

2 **SCOTT CRIDER**

3 **CHAPTER 1**

4 **I. INTRODUCTION AND OVERVIEW**

5 The purpose of my direct testimony is to provide an overview of San Diego Gas &  
6 Electric Company's ("SDG&E's") proposal to replace its legacy Customer Information System  
7 ("CIS") and related subsystems. SDG&E's legacy CIS system was implemented two decades  
8 ago and is quickly approaching obsolescence. The rationale for and details of SDG&E's  
9 proposal to replace its CIS and related subsystems ("CIS Replacement Program") are discussed  
10 in more detail below and in the accompanying direct testimony.

11 The complexity of today's programs, technology and rate design, as well as evolving  
12 customer expectations regarding the service experience, demand a significantly enhanced  
13 technology platform – *i.e.*, one that is designed to meet the information needs of customers in the  
14 current (and future) environment and one that will support California's policy goals related to  
15 improved customer choice, deployment of advanced technologies and increased reliance on  
16 distributed energy resources. Replacement of key business and billing processes with the  
17 proposed CIS solution will provide a multitude of benefits, including enabling SDG&E to more  
18 effectively implement new customer programs and rate options, and providing customers with a  
19 significantly improved, customer-centric service experience. Modernization of SDG&E's legacy  
20 CIS will transform the way SDG&E does business and elevate the service and support customers  
21 receive in this changing environment for decades to come.

22 Initiating the transition to a modern CIS platform must begin immediately given the  
23 current state of the legacy CIS and the schedule required for the replacement. SDG&E's legacy

1 CIS has become less stable and less reliable due, in part, to technology obsolescence, a rapid  
2 deployment of increasingly complex rates and other regulatory requirements, and an exponential  
3 increase in the amount of data processing required by the system since the legacy CIS was  
4 deployed in 1997. Also contributing to the instability is the number and complexity of  
5 integrations between the legacy CIS and subsystems that have been added over two decades as  
6 the energy market, regulatory requirements and customer-utility relationship have transformed.

7 While SDG&E is confident that the customer bills issued to date are accurate, these  
8 stresses on the legacy CIS have negatively impacted the service quality experienced by  
9 SDG&E's customers while increasing costs for ratepayers. For instance, in 2016, SDG&E began  
10 experiencing challenges with the legacy CIS billing system following the deployment of several  
11 billing changes over a short period. Some customer bills could not be processed in a timely  
12 manner due to system problems, as discussed in Chapter 2, resulting in an increase in the number  
13 of delayed bills from an average of about 3,000 to approximately 40,000 at peak. Contributing  
14 to this challenge, mainframe processing issues requiring manual Information Technology ("IT")  
15 resolution have increased 600% since the end of 2015. Further, as outlined in Chapter 2,  
16 SDG&E's MyAccount online customer portal, which is also proposed to be replaced as part of  
17 this Application, has been partially or completely unavailable for approximately 600 hours in  
18 2016 and 2017 alone. This lack of system reliability and the subsequent impact on customers  
19 clearly demonstrates the need to move expeditiously on replacement of the legacy CIS and  
20 related subsystems. Delay only further increases operational risk and a negative experience for  
21 SDG&E customers who rightfully demand a higher level of service.

22 SDG&E forecasts that implementation of its proposed CIS Replacement Program will  
23 require a one-time expenditure of \$253.6 million to implement. The total cost of ownership,

1 including implementation costs, ongoing support costs for the 15-year asset life, loaders and  
2 escalation equate to a total revenue requirement of \$996.6 million. As discussed below and in  
3 the Chapter 2 direct testimony, the need to move forward with the implementation of SDG&E’s  
4 proposed CIS replacement is urgent. Accordingly, SDG&E respectfully requests California  
5 Public Utilities Commission (“Commission”) approval of its Application no later than March  
6 2018 in order for the necessary work to begin, with target completion of implementing the  
7 replacement CIS by Q1 2021.

8 **II. SDG&E’S COMMITMENT TO EXCELLENCE IN CUSTOMER**  
9 **EXPERIENCE**

10 Dedication to consistently providing exceptional customer service is a core value for  
11 SDG&E and an important part of SDG&E’s corporate culture. Indeed, SDG&E has been  
12 recognized on the national level for its commitment to excellence in customer service. For  
13 example, SDG&E was awarded the 2014 Outstanding Customer Engagement Award by  
14 international consulting firm PA Consulting, which acknowledged SDG&E for embracing the  
15 use of its multi-channel communication to share information with its customers.<sup>1</sup> SDG&E has  
16 also received the Balanced Scorecard Achievement award, which recognizes companies that  
17 provide outstanding performance within areas of customer service and demonstrate best practices  
18 and excellence in operations.<sup>2</sup>

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<sup>1</sup> Press release, *PA Consulting Group Recognises North American Utilities for Excellence in Reliability at the 2014 ReliabilityOne™ Awards*, November 19, 2014 (noting that SDG&E was presented with both the National ReliabilityOne™ Excellence Award and the **Outstanding Customer Engagement Award**), <http://www.prnewswire.com/news-releases/pa-consulting-group-recognizes-north-american-utilities-for-excellence-in-reliability-at-the-2014-reliabilityone-awards-283184191.html>.

<sup>2</sup> <http://www.sdge.com/newsroom/press-releases/2011-11-16/sdge-receives-awards-service-reliability-and-customer-service>.

1           SDG&E’s focus on its customers’ experience takes into account the evolution in the  
2 customer care model applied in other service industries, which have invested heavily in  
3 improving customer service to make it simpler, faster and more convenient to do business with  
4 them. SDG&E believes that its customers compare the level of service provided by other  
5 industries to that provided by SDG&E and have similar expectations.

6           A key component of SDG&E’s strategic vision is providing a customer service  
7 experience with communication that is tailored to its customers through various outreach  
8 channels. To achieve this objective, SDG&E has provided its customers with various self-  
9 service options through its online platform (*e.g.*, service turn-on and bill payment), mobile access  
10 to key transactions and information, relevant and personalized messaging that caters to their  
11 preferences, and new and innovative solutions to assist with their energy needs. For example,  
12 SDG&E recently provided customers with a personalized video bill – an innovative, creative and  
13 easy to understand presentation of their monthly energy bill. SDG&E understands that  
14 customers today use various technology sources to stay engaged. Whether it is outage  
15 information, account details or just a general inquiry, SDG&E provides customers with a  
16 multitude of options for staying informed and connected.

17           Along with greater customer demand for communication options, the availability within  
18 the last decade of new resources and technologies that further the State’s environmental goals  
19 have created customer demand for energy management tools, including the ability to utilize  
20 distributed generation, demand response, electric vehicles, battery storage and energy efficiency  
21 measures. SDG&E’s online customer portal, MyAccount, offers customers the ability to not  
22 only view and pay their bills online, but also to compare eligible rate options and see their  
23 current and projected energy usage, which helps them better manage their energy bill.

1 While SDG&E is proud of its past success in providing an exceptional customer service  
2 experience, doing so has been a challenge given the age and limited capabilities of its current  
3 CIS system. As discussed below and in more detail in Chapter 2, the enhanced functionalities  
4 provided to customers have been achieved through the addition of various subsystems to the  
5 legacy CIS. These subsystems greatly increase the complexity of the customer services  
6 application portfolio, adding functional redundancy and creating various back-end utility  
7 databases and systems where customer information resides. The lack of a consolidated system  
8 that provides a 360-degree view of the customer creates obstacles to providing a consistent and  
9 positive customer experience. In addition, “layering” on of customized programming necessary  
10 to implement new or changed rates over the years has resulted in a highly complicated system in  
11 which each new, approved regulatory change requires inordinate time and resources to  
12 implement.

### 13 **III. ROLE OF THE CIS IN SUPPORTING THE IMPLEMENTATION OF** 14 **STATE POLICY**

15 In addition to the clear relationship between SDG&E’s CIS and its ability to provide  
16 excellent customer service, a CIS capable of delivering needed functionality provides critical  
17 support for public policy objectives. Effective implementation of Commission mandates hinges  
18 on the ability of the utility to make CIS-related changes. For instance, within the past ten years,  
19 SDG&E has made significant customizations to its legacy CIS system to support state policies  
20 such as the implementation of Advanced Metering Infrastructure (“AMI”), Net Energy Metering  
21 (“NEM”) and successor tariffs, Dynamic Pricing and Residential Rate Reform. As the energy  
22 market continues to evolve, SDG&E anticipates that the number of new programs and offerings  
23 required to support California’s public policy objectives will continue to increase at a rapid pace.

1           Looking forward, SDG&E has already begun the necessary work to support the  
2 implementation of its 2016 General Rate Case (“GRC”) Phase 2,<sup>3</sup> as well as the mandatory  
3 defaulting of residential customers to Time-Of-Use (“TOU”) rates.<sup>4</sup> In addition, implementation  
4 of state-mandated credit and rebate programs such as carbon credits and low carbon fuel standard  
5 rebates depends on the ability of the legacy CIS system and related subsystems to ensure that  
6 credits and rebates are accurately reflected on customers’ bills. A comprehensive listing of  
7 recent and upcoming regulatory rate implementations is set forth in Chapter 2.

8           The regulatory landscape has become more complex over the years. Having a thorough  
9 understanding of how a specific Decision or Resolution will interact with existing programs and  
10 rate options is crucial to ensuring that customers are receiving accurate bills on time. This is a  
11 complex process that requires extensive planning and foresight. Often times, new programs or  
12 changes to existing programs authorized by a Decision may by themselves seem straightforward  
13 to implement. However, when they are coupled with simultaneous changes or changes that may  
14 impact the same rates and programs, the implementation becomes far more complex.

15           For instance, if a Decision requires implementation of a new residential charge, it is  
16 necessary for the CIS to comprehend not only how the charge is to be implemented for  
17 customers receiving basic residential services, but also how that implementation will interact  
18 with customers on other programs or combination of programs such as California Alternate  
19 Rates for Energy (“CARE”) or TOU pricing. In addition, the location of the residential service  
20 that derives the amount of baseline and/or related franchise fees and taxes must be accounted for  
21 to identify any potential impacts. Introduction of a new charge would also need to be aligned

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<sup>3</sup> Application (“A.”) 15-04-012. As discussed in more detail in Chapter 2, SDG&E has proposed a delayed timeline for implementation of its GRC Phase 2 rates.

<sup>4</sup> Decision (“D.”) 15-07-001.



1 with other subsystems, as mentioned above. In this example, the billing change would need to  
2 be reflected in the online customer-facing tools, such as bill forecasts and rate comparisons, to  
3 ensure that customers are receiving accurate calculations when they are making decisions  
4 regarding their energy costs.

5 Thus, a seemingly simple change – implementation of a new residential charge – is a  
6 highly complex undertaking in the context of the legacy CIS system and its supporting  
7 subsystems. Having in place a modernized CIS with the necessary functionality to carry out  
8 required tasks is an integral piece of SDG&E’s ability to implement new regulatory  
9 requirements. Chapter 2 provides a more comprehensive discussion regarding how the increased  
10 frequency and level of complexity in regulatory changes have strained the legacy CIS and how  
11 this poses a growing risk to SDG&E’s ability to continue to implement State policy in a timely  
12 and cost effective manner.

#### 13 **IV. REVIEW AND EVALUATION OF THE LEGACY CIS**

14 SDG&E’s legacy CIS system was implemented 20 years ago in 1997. It is a core system  
15 that supports business functions such as metering, billing, credit, service orders, finance and  
16 revenue reporting. The legacy CIS system interacts with other key subsystems, including: (i) the  
17 Customer Relationship Management (“CRM”) system used to support business processes for  
18 energy efficiency, demand response and customer communications; (ii) the Meter Data  
19 Management System (“MDMS”) used to validate and process register reads and interval data  
20 coming from SDG&E’s AMI network; (iii) the Service Order Routing Technology (“SORT”)  
21 system used to manage field orders and dispatch; and (iv) the MyAccount system used for online  
22 interactions with the customer, such as bill presentment and payment, online energy management  
23 and other self-service applications.

1           It is beyond dispute that the technological landscape and customers’ expectations  
2 regarding customer service have changed dramatically in the two decades since the legacy CIS  
3 was implemented. Twenty years ago, dial-up modems were common – cable modems and  
4 digital subscriber line (“DSL”) services were considered “new” technologies then – and online  
5 services were limited.<sup>5</sup> An estimated 16 million computers were connected to the Internet in  
6 1997,<sup>6</sup> as compared with an estimated 3.7 billion computers and devices connected worldwide  
7 today.<sup>7</sup> Needless to say, the concept of using online interactivity for utility services and billing  
8 was not yet anywhere near the mainstream when SDG&E’s legacy CIS system was first  
9 implemented. Customer interactions at that time were mainly conducted through calls into  
10 SDG&E’s Customer Contact Center (“CCC”). Customers in 1997 did not expect, as they do  
11 today, multi-channel customer engagement, personalized information and interaction based on  
12 their individual communication preferences, or real-time digital and self-service options. Today,  
13 about 60%, or approximately 918,000, of all bill accounts are registered on MyAccount, the  
14 SDG&E online customer portal. In March 2017 alone, MyAccount had over 335,000 unique  
15 visitors. Furthermore, the SDG&E mobile application has been downloaded over 250,000 times  
16 with an average of 30,000 active users per month.

17           Similarly, the billing environment and utility rate design were far less complex in 1997  
18 than they are today. At the time the legacy CIS system was implemented, billing customers for  
19 utility service was a more straight-forward undertaking that involved just a handful of different  
20 rate options. A meter reader manually read energy usage at a meter located at a particular

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<sup>5</sup> See, <https://www.britannica.com/technology/computer-Year-In-Review-1997>.

<sup>6</sup> *Id.*

<sup>7</sup> See, <http://www.internetworldstats.com/stats.htm>; Internet usage information comes from data published by Nielsen Online, by ITU, the International Telecommunications Union, by GfK, by local ICT Regulators and other reliable sources.

1 premise on a monthly basis and a comparatively simple rate calculation was applied to calculate  
2 each customer's bill. Programs and options related to renewables, AMI, and demand response  
3 were either in their infancy stage or had not yet been authorized. In 1997, and until smart meters  
4 were implemented, small business and residential customers had one data point per month for  
5 billing purposes. As discussed in detail in Chapter 2, with today's more complex rates requiring  
6 interval data, a residential customer has over 720 data points per month and a business customer  
7 has over 2,880 data points per month.

8 In short, since the implementation of SDG&E's legacy CIS in 1997, customer demand,  
9 industry changes and regulatory initiatives have resulted in significant growth in new and  
10 technologically-advanced programs and services. Customers now have a large number of  
11 programs and rate options from which to choose and their expectations in terms of available  
12 communication channels (*e.g.*, online, chat, mobile, social media) and tools for understanding  
13 energy usage and costs have evolved significantly. The need to support new functionalities and  
14 features has required constant customizations and addition of subsystems to the legacy CIS. As  
15 discussed in Chapter 2, every customization requires extensive coding and resources with  
16 expertise in how SDG&E's legacy CIS is programmed. The declining availability of skills and  
17 resources who have knowledge of SDG&E's legacy CIS makes it increasingly difficult to  
18 implement future solutions.

19 Retrofitting new functionality on a system that was never designed to handle these types  
20 of demands further complicates the enhancement requests, requiring a significant amount of  
21 capital and operations and maintenance ("O&M") resources. While SDG&E has been able to  
22 enhance its legacy CIS system and related subsystems over the past 20 years to process the  
23 increasing number of data points and rate options, the technology that supports its legacy CIS

1 system and related subsystems is fast approaching the end of its useful life. The deficiencies of  
2 the current systems are becoming increasingly apparent.

3 Recognizing the limitations of its legacy CIS and related subsystems, SDG&E identified  
4 the need to initiate a formal evaluation of its CIS system in testimony submitted in 2015 in  
5 support of its 2016 GRC Application (“A.”) 14-11-003. Noting that the legacy CIS and key  
6 supporting subsystems that had been implemented to augment the legacy CIS were approaching  
7 a point where either a significant overhaul or replacement would likely be required, SDG&E  
8 proposed to undertake initial strategy work to identify a future CIS solution.<sup>8</sup>

9 To that end, SDG&E retained Ernst & Young (“EY”) in 2015 to evaluate the current state  
10 of the legacy CIS and provide a recommended strategy for either maintaining, extending or  
11 replacing the legacy CIS. As discussed in the direct testimony of Witness Snyder (Chapter 3),  
12 EY undertook a nine-month study with the objective of developing a comprehensive assessment  
13 for a future-state CIS, along with related applications, that would enable SDG&E to keep pace  
14 with the current and future business and technology needs. A more detailed discussion of the EY  
15 evaluation and SDG&E’s analysis is set forth in the direct testimony of Witness Snyder (Chapter  
16 3), but below are several key drivers that were identified as supporting the need to replace  
17 SDG&E’s legacy CIS system:

- 18 • Improved abilities to serve customer needs and expectations
- 19 • Increasing customer participation in complex rates, programs, and technology
- 20 • Growing customer sophistication and expectations
- 21 • New products and services and support for associated billing/rate models
- 22 • Customer and business process analytics

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<sup>8</sup> A.14-11-003, Exh. 153 at SJM-13: 1-13 (Amended Revised Direct Testimony of S. Mikovits).

- 1 • Technical obsolescence
- 2 • Workforce skill risks
- 3 • Reduce and simplify systems dependencies

4 As the direct testimony of Witness Snyder (Chapter 3) discusses, if the EY study was  
5 performed today, the results would indicate an even more urgent need to replace the legacy CIS  
6 and related subsystems due to the myriad challenges and system instability faced in the last 18  
7 months. Recent challenges faced by SDG&E in meeting deadlines for implementation of  
8 mandated rate changes and delays in issuance of customer bills – both the result of simultaneous  
9 implementation of an unprecedented number of mandated CIS changes, as discussed in Chapter  
10 2 – highlight the risk created by continued reliance on SDG&E’s outdated legacy CIS system.

11 It is worth noting that SDG&E is not alone among North American utilities in concluding  
12 that CIS replacement is necessary to meet current and future customer and regulatory demands.  
13 As early as 2011, Chartwell released the *CIS Trends and Implementations* report, which covered  
14 the then-current state of the CIS market and measured the pulse of the industry concerning  
15 utilities’ CIS needs and experiences with implementation. The report showed that, among other  
16 findings, the market for new utility CIS should be healthy for vendors in the coming years as  
17 utilities move away from antiquated legacy systems. Nineteen of 31 utilities in the survey  
18 reported they were in the implementation stage or are considering moving to a new CIS in the  
19 near future. The utilities taking part in the study were in various phases of implementation or  
20 consideration, but of the sample group, only four utilities reported implementing a CIS prior to

1 2000 and not looking to make a change at present time.<sup>9</sup> As of 2015, 48 percent of utilities  
2 nationwide anticipated the replacement of their legacy CIS within the next four years.<sup>10</sup>

3 Utilities across the country find themselves in a situation similar to that faced by  
4 SDG&E, where the complexity of rates and programs, and the pace of change, were not  
5 anticipated when their CIS systems were implemented in the 1980s and 1990s. Examples  
6 include Detroit Edison, which filed for approval to replace its CIS system in 2014<sup>11</sup> and is set to  
7 put it into production this year, and Southern California Edison (“SCE”), which recently filed for  
8 approval to replace its CIS system.<sup>12</sup>

## 9 **V. PROPOSAL FOR CIS REPLACEMENT PROGRAM**

10 As described in more detail in the direct testimony of Witness Snyder (Chapter 3),  
11 SDG&E proposes the SAP Customer Relationship and Billing (“CR&B”) system to replace its  
12 legacy CIS system and related subsystems. SDG&E has utilized the SAP platform for its core  
13 financial systems since 1998.<sup>13</sup> SAP CR&B will modernize critical business processes, while  
14 reducing cost and decreasing risk of system failure. It will also enable the enhancement and  
15 expansion of customer engagement functionality and facilitate continued support of the State’s  
16 policy initiatives. As detailed in Witness Linder’s direct testimony (Chapter 6), when the new  
17 SAP CR&B is fully implemented in Q1 of 2021, approximately 75% of SDG&E’s existing

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<sup>9</sup> See, <https://www.chartwellinc.com/more-utilities-look-to-replace-cis-as-system-demands-increase-market-evolves-into-competitive-landscape-for-vendors-chartwell-reports/>.

<sup>10</sup> See, Direct Testimony of Witness Snyder (Chapter 3), “Attachment C – TMG\_A CIS Survey April 2015,” slide 17.

<sup>11</sup> Order Issued in Case No. U-17666, Michigan Public Service Commission, September 26, 2014, <http://efile.mpsec.state.mi.us/efile/docs/17666/0004.pdf>.

<sup>12</sup> SCE’s 2018 GRC, A. 16-09-001, Exh. SCE-04, Volume 3.

<sup>13</sup> Southern California Gas Company (“SoCalGas”) also utilizes the SAP platform for its core financial systems.

1 customer services application portfolio will be replaced, resulting in a more streamlined and  
2 efficient system. Replacing the legacy CIS with the proposed SAP CR&B will close the existing  
3 capabilities gaps in areas such as customer-centric representation, support for internal data  
4 billing, and the ability to implement complex rate structures in the coming years. The major  
5 benefits of SAP CR&B will include:

- 6 • Quality and efficiency of customer interactions
- 7 • Relevance of offerings and delivery of better customer experiences
- 8 • More flexible service options
- 9 • Customer access to data, information, and analysis for decision making
- 10 • Timely and accurate billing
- 11 • Improved system reliability
- 12 • Increased speed to market
- 13 • Single, 360-degree view of the customer
- 14 • Standardization and optimization of future business practices and processes
- 15 • Ability to effectively incorporate new customer- and grid-side technologies

16 In addition to ensuring SDG&E's ability to perform basic key functions (*e.g.* billing  
17 services), SAP CR&B will allow SDG&E to meet customer expectations for online self-service  
18 capabilities, personalized customer service and ease of doing business. From a technical  
19 perspective, as further discussed in the direct testimony of Witness Linder (Chapter 6), SAP  
20 CR&B will also simplify the SDG&E system architecture, aiding more stability, automation and  
21 efficiency. In short, the new SAP CR&B will lay the foundation for enhancing the customer  
22 experience and transform the way SDG&E does business. For example, it will facilitate a more  
23 customer-centric way of doing business by consolidating all customer data to one repository,

1 thereby improving the ability of various business units to efficiently assist customers through  
2 different channels of communication. Having data readily available in one system also improves  
3 data analytics and reporting, making it easier to not only understand customers' needs and  
4 industry trends, but also to monitor key operations and system health.

5 Another transformational capability is the highly configurable nature of SAP CR&B,  
6 which makes many system changes possible without the need for IT programming. This makes  
7 implementing mandated changes quicker and more cost-effective. Furthermore, taking a product  
8 that is configurable instead of customized means that SAP will provide the necessary upgrades  
9 and feature enhancements to ensure that SDG&E is receiving all the capabilities currently  
10 available to the energy industry at large. The direct testimony of Witness Swartz (Chapter 5)  
11 elaborates more on the core transformational capabilities and how these soft benefits impact and  
12 improve the way SDG&E serves its customers and implements regulatory mandates and State  
13 policies.

14 Benefits of the CIS Replacement Program, including potential financial savings achieved  
15 once the new system is operational, are addressed in more detail in the direct testimony of  
16 Witness Atkinson (Chapter 4). In addition to describing the transformational capabilities that  
17 SDG&E will gain with the implementation of SAP CR&B, Witness Swartz's direct testimony  
18 (Chapter 5) will also discuss the Customer Service Operations implementation and timeframes.  
19 Witness Linder's direct testimony (Chapter 6) details the IT systems integration and IT specific  
20 timelines.

## 21 **VI. TIMING OF CIS REPLACEMENT**

22 Given the deficiencies of SDG&E's current legacy CIS system and related subsystems, it  
23 is clear that the need for replacement of the legacy CIS system and certain subsystems is urgent.  
24 Replacement is necessary to allow SDG&E to keep pace with public policy changes, industry



1 advances and evolving customer expectations. The timetable for such replacement has evolved  
2 from in-the-near-term to as-soon-as-possible as the result of challenges experienced over the past  
3 12-18 months with implementation of numerous CIS changes required to meet statutory  
4 requirements, as discussed in more detail in Chapter 2. It was not implementation of any one  
5 statutory requirement that exposed the weaknesses of SDG&E's current CIS system; rather, it  
6 was the cumulative effect of implementing multiple, complex system changes simultaneously.

7         Implementation of SAP CR&B is directly tied to implementation of the various statutory  
8 requirements detailed in Chapter 2 – it is essentially the “next step” of the Commission’s  
9 implementation of the relevant statutory provisions. While SDG&E will continue to address and  
10 seek to mitigate any issues that may arise from retrofitting complex changes on its antiquated  
11 legacy CIS system, the risk of system instability and unreliability will remain until the legacy  
12 CIS is replaced. Thus, any delay in implementing the new SAP CR&B system will extend this  
13 significant risk.

14         Additional practical concerns lead to the conclusion that implementation of SDG&E’s  
15 CIS Replacement Program must commence in the immediate future. The technical expertise  
16 necessary to implement changes to the CIS and develop work-arounds for system failures resides  
17 in senior professionals, many of whom have now retired or are approaching retirement. Thus,  
18 the longer the implementation of SAP CR&B is delayed, the greater the risk that critical  
19 expertise will not be available. Moreover, as noted above, a number of North American utilities  
20 are in the pipeline for major CIS replacements. This could result in a situation where utilities are  
21 in competition for limited resources to assist with these major projects. The system integrators  
22 typically leveraged by the utilities can only take on so many projects at once; the resources

1 needed to help the utilities through this process are a finite group.<sup>14</sup> Thus, it is vital that SDG&E  
2 positions itself in the pipeline so that it is able to meet its goal of a 2021 implementation.

3       Accordingly, SDG&E is proposing an implementation, based upon its work with its  
4 vendor partners, that balances the criticality of today's environment with a thorough  
5 implementation plan. Most CIS replacements follow a waterfall approach, concluding with a  
6 single implementation of a new CIS. SDG&E's proposed CIS implementation strategy follows  
7 this same approach, but will look for opportunities throughout the program to reduce risk in the  
8 final implementation. Based on this modified approach, SDG&E anticipates that the  
9 replacement CIS initiative will take 30 months to complete. The business case to replace the  
10 legacy CIS, including the proposed timeline and the risks posed by maintaining the legacy CIS,  
11 is presented and explained in more detail in Witness Snyder's direct testimony (Chapter 3).

## 12 **VII. CONCLUSION**

13       SDG&E respectfully requests that the Commission approve SDGE's proposed  
14 replacement of its legacy CIS and related subsystems with SAP CR&B.

15       This concludes my prepared direct testimony.  
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<sup>14</sup> See, Direct Testimony of Witness Snyder (Chapter 3), "Attachment C – TMG\_A CIS Survey April 2015," slide 17.

1 **VIII. STATEMENT OF QUALIFICATIONS**

2 My name is Scott Crider and my business address is 8330 Century Park Ct, San Diego,  
3 California 92123. I am currently vice president of customer services for San Diego Gas &  
4 Electric Company and the executive sponsor the company's CIS Replacement Project. I am also  
5 responsible for all customer services including: customer contact centers, customer programs,  
6 meter-to-cash operations, customer service field and smart meter operations, customer  
7 communications and marketing, business services, and rates. For the past 15 years, I have  
8 worked for SDG&E or its parent company, Sempra Energy, in a variety of managerial and  
9 executive roles. I have a Bachelor of Arts in Law and Society from the University of California,  
10 Santa Barbara and a certificate in budget and finance from Georgetown University.

11 I have not previously testified before the California Public Utilities Commission.