

Application: A.17-04-027
Exhibit No.: _____
Witness: Snyder / Swartz

**SUPPLEMENTAL PREPARED DIRECT TESTIMONY OF
CHARLIE SNYDER AND CHRISTOPHER SWARTZ
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY
CHAPTER 10**



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

August 7, 2017

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1 **SUPPLEMENTAL PREPARED DIRECT TESTIMONY OF**
2 **CHARLIE SNYDER AND CHRISTOPHER SWARTZ**

3 **CHAPTER 10**

4 **I. PURPOSE**

5 This supplemental testimony is offered in support of Application (“A.”) 17-04-027
6 requesting approval of San Diego Gas & Electric Company’s (“SDG&E”) Customer
7 Information System (“CIS”) Replacement Program, and in response to Administrative Law
8 Judge (“ALJ”) Lirag’s July 17, 2017 oral ruling at the Prehearing Conference requesting
9 supplemental information regarding past management of the legacy CIS system.¹ This
10 testimony (1) explains in greater detail the customization that SDG&E has made to its
11 legacy CIS and supporting subsystems, (2) discusses the authorized and actual spending of
12 historic capital costs from 2004 thru 2016, and (3) provides additional discussion regarding
13 when SDG&E began its legacy CIS and subsystem replacement evaluation.

14 **II. SDG&E’S HISTORIC LEGACY CIS AND SUBSYSTEM COSTS**

15 **A. Overview (Swartz)**

16 As discussed in the Direct Testimony of Witnesses Snyder and Swartz (Chapter 2),
17 SDG&E’s current Customer Services Application portfolio is a grouping of 56 systems that
18 are used to support business functions and technical capabilities for SDG&E’s customer
19 services activities. At the core of the current technical architecture is SDG&E’s legacy CIS,
20 which was implemented in 1997. The legacy CIS is a mainframe based system for which
21 SDG&E is responsible for maintaining the actual software, which is coded using the
22 Common Business-Oriented Language (“COBOL”). Mainframe systems, such as SDG&E’s

¹ Prehearing Conference Transcript at p. 32:13-20.

1 legacy CIS, require Information Technology (“IT”) coding for modifications that consist of
2 either adding, changing, or removing actual lines of COBOL code within the software. The
3 adding, changing or removing of COBOL code is termed a “customization,” as it reflects an
4 alteration to the code that differs from the original software.

5 Unlike the newer technology of today, such as the SAP Customer Relationship
6 Billing (“CR&B”) proposed as part of this Application, systems such as SDG&E’s legacy
7 CIS do not receive product updates from the solution provider that would add features or
8 functionality. There is no periodic update cycle for issuance of newer versions of the
9 original software that can easily be applied to a utility’s customized version. Instead, these
10 systems require continual customization to ensure that they continue to meet evolving
11 functional requirements to address policy goals and market expectations.

12 When SDG&E implemented its legacy CIS in 1997, mainframe technology with
13 COBOL programming was the leading technology available to utilities. The customization
14 offered by these systems allowed utilities the flexibility to keep up with the pace of change
15 in the energy industry at that time. During this time, at least 45 other utilities in North
16 America alone were leveraging mainframe technology and subsequently used customization
17 as the primary way to implement needed changes.² In instances where customizing a legacy
18 CIS was not a cost-effective or viable option, utilities such as SDG&E leveraged the use of
19 subsystems to augment the core functionality and meet new requirements.³

20 Due to the increasing rate of change in the energy industry and the resulting
21 complexity of the evolving regulatory and market landscape, the customization required to

² Vendor partner Accenture research regarding mainframe based systems and Customer One implementations.

³ See, Direct Testimony of Charlie Snyder and Christopher Swartz (Chapter 2) at 9:13-22.

1 implement changes and additions to SDG&E’s legacy mainframe CIS has grown to a level
2 that is unwieldy, technically challenging, and costly. Most utilities that are still using a
3 legacy CIS, with similar technology, have experienced difficulties and are either already
4 beginning, or will soon begin, to transition from the outdated technology to the newer
5 technology available in the market (SAP and Oracle). The newer technology will
6 significantly reduce the need for customization and ensure the systems are up to date
7 through periodic product updates. As referenced in Attachment C to Witness Snyder’s
8 testimony (Chapter 3, Attachment C – “TMG Consulting – A CIS Survey and Industry
9 Perspective,” April 29, 2015), more than 73 percent of the utilities surveyed by TMG
10 Consulting have either already replaced their legacy CIS within the past six years (25
11 percent) or will complete replacement of their legacy CIS within the next four years (48
12 percent).⁴ It is important to note that most of these replacements are utilities transitioning
13 from legacy mainframe based systems like SDG&E’s to the newest CIS technology.

14 **B. Historical Changes to SDG&E’s Legacy CIS and Subsystems (Swartz)**

15 Since 1997, SDG&E has either customized its legacy CIS or utilized subsystems to
16 ensure compliance with Commission directives and to meet other regulatory, customer and
17 business needs. The customization of the legacy CIS and subsystems has often required
18 incremental capital funding to support the necessary IT coding and testing to implement the
19 changes. However, as illustrated in Table CS-S-2 below, significant capital cost increases
20 associated with the CIS customization did not begin occurring until the 2012 timeframe.

21 The incremental capital funding used for the customization has historically been
22 requested and ultimately authorized as part of SDG&E’s General Rate Cases (“GRC”), Cost

⁴ Direct Testimony of Charlie Snyder and Christopher Swartz (Chapter 2) at 3, n. 2.

1 of Service (“COS”), or separate Application proceedings, such as with Advanced Metering
 2 Infrastructure (“AMI”)⁵ and Dynamic Pricing.⁶ This incremental capital funding is the
 3 primary source of funding that allows SDG&E to make CIS customizations and is separate
 4 from the standard operating and maintenance (“O&M”) costs that are also requested and
 5 authorized as part of these proceedings.

6 Table CS-S-1 summarizes SDG&E’s historical GRC and COS applications, test
 7 years, and authorized dates since 2004.

8 **Table CS-S-1: SDG&E Historical GRC and Cost of Service Since 2004**

COS / “GRC” (Test Year)	Application	Authorized Date Range
2004 Cost of Service	A.02-12-028	2004 - 2007
TY 2008 GRC	A.06-12-009	2008 - 2011
TY 2012 GRC	A.10-12-005	2012 - 2015
TY 2016 GRC	A.14-11-003	2016 - 2018

9 As part of each of these proceedings, the Commission authorized capital funding to
 10 implement changes to SDG&E’s legacy CIS and subsystems. These changes were
 11 necessary to allow SDG&E to comply with Commission directives, to keep up with
 12 customer needs, and to continue providing high quality customer service.

13 Given the criticality of these capital funds, SDG&E continually focused on ensuring
 14 that the capital funds authorized as part of the COS and GRCs were spent in a prudent
 15 manner. Prior to project implementations, SDG&E continually reviewed and refined cost
 16 estimates and proposed technical solutions to ensure that they not only met system

⁵ See, D.07-04-043.

⁶ See, D.12-12-004.

1 requirements at the time, but also accounted for future potential system needs. As described
2 in SDG&E's 2016 GRC, all capital projects go through a rigorous internal capital project
3 approval process before they are funded and moved into development.⁷ This stringent
4 process has numerous steps including: (1) IT division capital plan development; (2) concept
5 documents development; (3) project prioritization and approval; (4) business case
6 development; and (5) identification of any cost sharing mechanisms. These steps all serve to
7 refine costs, benefits, and project schedules, and confirm that the proposed technical solution
8 meets the business objectives. In addition, during this process, technical options such as
9 customization and adding incremental subsystems are thoroughly explored, as well as the
10 long-term impacts and risks. Overall, this review process helps to ensure that the
11 technological decisions being made are fully vetted and that future issues and costs are
12 minimized.

13 For the period spanning the 2004 COS and the 2008, 2012 and 2016 GRCs (2004-
14 2016), SDG&E was authorized \$76M in capital funds to make necessary changes to its CIS
15 and subsystems. Over this same period, SDG&E spent \$103M incorporating these changes,
16 with the primary drivers behind the additional spend occurring in 2012 (\$10M) and 2016
17 (\$16M).

18 In 2012, the primary driver that required SDG&E to use incremental capital funds
19 was the much-needed implementation of an enterprise customer contact database and
20 campaign management system, which enabled customer self-service for managing customer
21 communication preferences on-line through SDG&E's MyAccount system.

⁷ For a detailed breakdown of the process, see SDG&E 2016 GRC, A.14-11-003, Exh. 153 at SJM-22:10 thru SJM-24:8 (Amended Revised Direct Testimony of Stephen J. Mikovits).

1 In 2016, SDG&E implemented an unprecedented number of new rates and changes
2 to existing rate structures, as discussed in detail in Chapter 2.⁸ These new rates and changes
3 required (and continue to require) heavy customization and have placed significant demands
4 upon SDG&E's legacy CIS. This ultimately resulted in implementation challenges, causing
5 the need for additional resources as well as project implementation delays, all of which led
6 to the need for incremental capital funding for the year beyond the amount authorized.

7 Table CS-S-2 below, provides a comparison of the capital funds authorized in these
8 proceedings and the corresponding actual capital spend that SDG&E incurred in these years
9 to make the necessary changes to its legacy CIS and subsystems. As technology, regulatory
10 requirements, and customer needs have dramatically changed over this period, to ensure
11 overall comparability, the costs in the table below comprise only those costs associated with
12 the functionality that SDG&E is proposing to replace as part of this Application.
13

⁸ See, Direct Testimony of Charlie Snyder and Christopher Swartz (Chapter 2) at 12-17.

1

Table CS-S-2: Comparison of Historical CIS GRC and COS Capital Costs (000s)⁹

Year	Authorized	Actual Spend	Difference	Proceeding ¹⁰
2004	\$1,100	\$3,259	\$2,159	2004 COS
2005 (Base Year) ¹¹	-	-	-	
2006	\$2,782	\$1,124	(\$1,658)	TY 2008 GRC
2007	\$2,297	\$3,611	\$1,313	TY 2008 GRC
2008	\$5,113	\$2,501	(\$2,613)	TY 2008 GRC
2009 (Base Year) ¹¹	-	-	-	
2010	\$2,230	\$1,949	(\$281)	TY 2012 GRC
2011	\$8,955	\$7,269	(\$1,686)	TY 2012 GRC
2012	\$4,624	\$15,011	\$10,387	TY 2012 GRC
2013 (Base Year) ¹¹	-	-	-	
2014	\$15,502	\$19,230	\$3,728	TY 2016 GRC
2015	\$20,422	\$19,976	(\$446)	TY 2016 GRC
2016	\$12,877	\$28,713	\$15,836	TY 2016 GRC
Total	\$75,903	\$102,642	\$26,739	

2

As referenced in Table CS-S-2 above, SDG&E has spent just under \$103M between

3

2004 and 2016 making changes to its systems, consisting of either customizing its legacy

4

CIS or adding new subsystems to ensure overall regulatory compliance as well as to meet

⁹ Costs reflect capital work associated with the changes to/customizations of SDG&E's legacy CIS and associated subsystems. Typically, larger changes/customizations, such as the implementation of Smart Meter (AMI) and Dynamic Pricing, were funded through other regulatory applications outside of the General Rate Cases and are not reflected in the above costs. Authorized dollars are presented in base year dollars as reflected in final CPUC decisions for each GRC and COS. No adjustments have been made for escalation or post-test year factors. In addition, SDG&E imputed the authorized capital expenses as project forecasts that were not disallowed in the final CPUC decisions. SDG&E used professional judgment to identify individual capital projects that most aligned with the legacy CIS and subsystems that SDG&E proposes to replace as part of this Application. Costs associated with system integrations are included where appropriate. The annual numbers have not been adjusted as would normally be done during the GRC process and as shown in GRC workpapers. Sums may not equal due to rounding.

¹⁰ Includes SDG&E applications A.02-12-028 (2004 COS); A.06-12-009 (TY 2008 GRC); A.10-12-005 (TY 2012 GRC); and A.14-11-003 (TY 2016 GRC).

¹¹ Authorized dollars are not available for 2005, 2009, and 2013 because those years were the base years for the 2008, 2012, and 2016 GRCs, respectively. The base year (actual recorded data) is the starting point that SDG&E uses to layer on the forecast years to get to the test year revenue requirement. Actual capital spend in 2005, 2009 and 2013 was \$636k, \$1,594k, and \$18,929k, respectively.

1 customer needs. Some of the more significant functionality and benefits for customers that
2 was provided during this period included:

3 Regulatory Mandates

- 4 • Enhancements to the legacy CIS to support the AMI billing of complex
5 commercial and industrial (“C&I”) accounts¹²;
- 6 • Implementation and improvement of legacy CIS business processes for Net
7 Energy Metering 1.0¹³;
- 8 • Expansion of billing and service order functionality to support Direct
9 Access¹⁴ and Community Choice Aggregation (“CCA”)¹⁵;
- 10 • Implementation of required changes into the legacy CIS and subsystems
11 needed to comply with the regulatory requirement for customer engagement
12 functionality¹⁶;
- 13 • Implementation of the legacy CIS and subsystems changes in support of the
14 electric rates adopted in D.14-01-002¹⁷;
- 15 • Implementation and support of the required legacy CIS and subsystem
16 changes for the roll-out and ongoing management of the Critical Peak Pricing
17 (“CPP”) rate for mid-sized business¹⁸;

¹² SDG&E 2016 GRC, A.14-11-003, Exh. 101 at BMB-134:13-31 (Direct Testimony of Bradley M. Baugh).

¹³ *Id.* at BMB-136: 6-24.

¹⁴ *Id.* at BMB-132:20 – 133:14.

¹⁵ *Id.* at BMB-133:15 – 134:12.

¹⁶ *Id.* at BMB-129:16 – 130:9.

¹⁷ *Id.* at BMB-130:10-20.

¹⁸ *Id.* at BMB-130:21 – 131:20.

- 1 • Implementation of the Peak Time Rebate (“PTR”) changes adopted in D.13-
2 07-003¹⁹;
- 3 • Expansion of SDG&E’s legacy CIS to (1) enable functionality for 7,000 to
4 8,000 interval data meters to comply with the dynamic pricing tariffs at the
5 time, (2) support the growth of Net Energy Metering and (3) provide
6 additional capabilities for the billing of SDG&E’s large commercial and
7 industrial customers²⁰;

8 Billing and Payment

- 9 • Continual improvements to SDG&E’s customer bill as part of the 2004 GRC
10 Customer Bill Redesign²¹, 2008 GRC Bill Redesign²², 2012 GRC Bill
11 Redesign²³ and 2016 GRC Bill Redesign²⁴;
- 12 • Development and continued capability enhancement enabling SDG&E
13 customers to pay their bills through the SDG&E website and many
14 consolidator sites, such as banking websites, as part of the 2004 Electronic
15 Bill Presentation and Payment (“EBPP”) initiative²⁵;

¹⁹ *Id.* at BMB-131:21 – 132:5.

²⁰ SDG&E 2004 COS, A.02-12-068, Exh. 30 at EF-135:17 – 136:9 (Direct Testimony of Ed Fong).

²¹ *Id.* at EF-134: 2-17.

²² SDG&E 2008 GRC, A.06-12-009, Exh. 9 at EF-75:18-31 (Direct Testimony of Edward Fong).

²³ SDG&E 2012 GRC, A.10-12-005, Exh. 14 at JSR-47:2-17 (Revised Direct Testimony of J. Steve Rahon).

²⁴ SDG&E 2016 GRC, A.14-11-003, Exh. 101 at BMB-128:22 – 129:10 (Direct Testimony of Bradley M. Baugh).

²⁵ SDG&E 2004 COS, A.02-12-068, Exh. 30 at EF-134:19 – 135:2 (Direct Testimony of Edward Fong).

- 1 • Replacement of SDG&E’s Automated Bill Collection (“ABC”) and
2 Streetlight Inventory Systems and centralization of the business processes
3 within the legacy CIS²⁶;
- 4 • Improvements to SDG&E’s test bill process to ensure and test overall bill
5 accuracy²⁷;
- 6 • Implementation and continual improvement of Branch Offices including
7 automated paystations and software allowing customers more flexible
8 payment options as part of the 2004 COS Paystation/Next Generation
9 Branches initiative²⁸, 2008 GRC Pay Station Technology improvements²⁹ and
10 2016 GRC Branch Office Technical and Security improvements³⁰;
- 11 • Improvements to the legacy CIS’s internal financial and revenue process
12 controls supporting receivables and payments³¹;
- 13 • Improvements to system testing in the legacy CIS to ensure continued overall
14 accuracy³²;
- 15 • Improvements to the legacy CIS rate/billing engine data structure³³;
- 16 • Expansion of the legacy CIS’s revenue reporting functionality³⁴;

²⁶ *Id.* at EF-136:11-19.

²⁷ *Id.* at EF-136:21 – 137:10.

²⁸ *Id.* at EF-142:3-8.

²⁹ SDG&E 2008 GRC, A.06-12-009, Exh. 9 at EF-76:26 – EF-77:2 (Direct Testimony of Edward Fong).

³⁰ SDG&E 2016 GRC, A.14-11-003, Exh. 101 at BMB-122: 6-24 (Direct Testimony of Bradley M. Baugh).

³¹ SDG&E 2008 GRC, A.06-12-009, Exh. 9 at EF-77:11-22 (Direct Testimony of Edward Fong).

³² *Id.* at EF-77:23-33.

³³ *Id.* at EF-80:6-13.

³⁴ *Id.* at EF-80:14-19.

1 events, etc., as well as allowing customers the ability to select any disability
2 accommodations provided within those channels⁴⁰;

- 3 • Implementation and enhancement of capabilities related to outbound
4 customer communication, including segmentation and tracking for campaign
5 effectiveness and efficiency⁴¹;
- 6 • Implementation of an on-line self-service portal for medium and large C&I
7 customers supporting energy analysis from a cost and consumption level,
8 event management, rate eligibility and enrollment, bill payment,
9 benchmarking and energy efficiency⁴²;
- 10 • Implementation of a unified, process centric user interface for the Customer
11 Contact Center, as part of the Smart Energy Advisor improvements phases I⁴³
12 and II⁴⁴;

13 Customer Data Analytics

- 14 • Expansion of the customer data warehouse for improved reporting and
15 strategic data analysis⁴⁵;
- 16 • Implementation of an analytics system to store and analyze customer data⁴⁶

⁴⁰ SDG&E 2012 GRC, A.10-12-005, Exh. 15-R at KHC-89:9-27 (Revised Direct Testimony of Kathleen Cordova).

⁴¹ *Id.* at KHC-90:1-18 (Revised Direct Testimony of Kathleen Cordova).

⁴² SDG&E 2016 GRC, A.14-11-003, Exh. 101 at BMB-127:1-21 (Direct Testimony of Bradley M. Baugh).

⁴³ SDG&E 2016 GRC, A.14-11-003, Exh. 101 at BMB-135:6 – 136:5 (Direct Testimony of Bradley M. Baugh).

⁴⁴ *Id.* at BMB-138:25 – 139:5 (Direct Testimony of Bradley M. Baugh).

⁴⁵ SDG&E 2004 COS, A.02-12-068, Exh. 30 at EF-137:13-23 (Direct Testimony of Ed Fong).

⁴⁶ SDG&E 2016 GRC, A.14-11-003, Exh. 101 at BMB-139:12 – 141:4 (Direct Testimony of Bradley M. Baugh).

1 As summarized above, since 2004, SDG&E has made significant changes to its
2 legacy CIS and subsystems to implement new and improved functionality to comply with
3 regulatory demands and to meet customer needs. However, as with all software, there
4 comes a point when it is no longer cost-effective to customize. SDG&E's legacy CIS and
5 subsystems are at this point: it has become a greater financial burden to continually
6 customize them than it is to replace them with the latest technology to meet current and
7 anticipated future needs. As shown in Table CS-S-2, based upon actual spending in just the
8 last few years, SDG&E has seen the capital costs for making routine changes to its systems
9 increase by nearly 400 percent. Although SDG&E cannot predict the number of future
10 changes that will be needed for its CIS and subsystems, given what SDG&E experienced in
11 2016, it is likely that the current exponential trend for increasing capital spending will
12 continue until SDG&E has replaced its legacy CIS and subsystems with SAP CR&B. While
13 SDG&E prudently spent capital funding on customization of the legacy CIS and subsystems
14 throughout the recent COS and GRCs, the system now needs to be replaced. To do
15 otherwise would be imprudent, as replacement is necessary to implement future regulatory
16 requirements and meet future customer needs in the most cost effective manner.

17 **C. SDG&E's Transparency Regarding its Legacy CIS and Subsystems**
18 **(Snyder)**

19 Throughout the recent COS and GRCs, SDG&E has been transparent regarding the
20 state of its legacy CIS and subsystems. SDG&E closely monitored the costs for its
21 regulatory implementations and increased system complexities as it continued to customize
22 the legacy CIS and integrate with new subsystems. As illustrated in Table CS-S-2 above,
23 significant cost increases associated with CIS customization began occurring in the 2012
24 timeframe. Accordingly, in testimony prepared in 2014 to support its next GRC (TY 2016),

1 SDG&E raised the issue of its legacy CIS and pointed out the need to evaluate whether the
2 legacy CIS should be overhauled or replaced.⁴⁷ Specifically, Witness Mikovits stated:

3 Originally implemented in May 1998⁴⁸, CISCO has been constantly
4 enhanced over the past 16 years to meet changing business
5 requirements during that period of time and is approaching a point in
6 time where it will need to be either significantly overhauled or
7 replaced. The initial strategy work that needs to be done in order to
8 make that decision will require a combination of labor and non-labor
9 resources. More specifically, the forecast for this effort is \$2,000k.⁴⁹

10 The Commission approved SDG&E's request for an incremental \$2 million in O&M
11 funds to perform the initial strategy work to determine the optimal future state of its legacy
12 CIS and subsystems. As discussed in Chapter 3, SDG&E used this funding in 2015 to retain
13 Ernst and Young ("EY") to comprehensively assess SDG&E's legacy CIS and create a
14 future-state roadmap that would serve not only SDG&E's current business and technology
15 needs, but also provide a solid foundation to meet future needs (the "CIS Strategy"). EY
16 undertook a nine-month study with the primary goal of determining whether the legacy CIS
17 and subsystems should be (i) maintained (no change), (ii) significantly enhanced, or (iii)
18 replaced.⁵⁰ Based upon this assessment, EY determined, in conjunction with SDG&E, that
19 the best approach was to replace the legacy CIS and identified subsystems.

20 In May 2016, SDG&E performed a risk assessment on its legacy CIS as a follow up
21 to the EY study, where its CIS represented the 19th highest risk in SDG&E's risk registry.
22 The 2016 risk assessment is discussed in detail in Chapter 3. In 2016, SDG&E experienced
23 the significant challenges with the legacy CIS and related subsystems described in Chapter 2

⁴⁷ Filed in November 2014.

⁴⁸ Date should reflect May 1997.

⁴⁹ SDG&E 2016 GRC, A.14-11-003, Exh. 153 at SJM-13:1-13 (Amended Revised Direct Testimony of Stephen J. Mikovits).

⁵⁰ See, Direct Testimony of Charlie Snyder (Chapter 3) at 2:1-10.

1 (*i.e.*, delayed customer bills and delays in implementing mandated rates). These challenges
2 resulted from the implementation of an unprecedented number of billing system changes to
3 comply with regulatory requirements. Table Ch2-2 in Chapter 2 highlights the significant
4 increase in legacy CIS projects that SDG&E implemented in 2015 and 2016. The major
5 deficiencies of the legacy CIS became evident with the default of small and medium
6 businesses to new rates in 2016. However, it was not implementation of any one system
7 change that led to the challenges with SDG&E's legacy CIS; rather, it was the cumulative
8 effect of implementing multiple, complex system changes simultaneously.

9 Given the challenges experienced in 2016 (which continue today), the timetable for
10 replacement of the legacy CIS and subsystems evolved from in-the-near-term to as-soon-as-
11 possible.

12 Leveraging the information from the 2015 EY assessment and the results of the 2016
13 Risk Assessment, SDG&E moved forward as expeditiously as possible with development of
14 its proposal for replacement of its legacy CIS. Replacement of the CIS is a complex
15 proposition that must be undertaken with a commitment not just to optimizing functionality,
16 but also to ensuring cost-effectiveness. While SDG&E proceeded with a sense of urgency,
17 it was committed to thoughtfully developing its proposal for CIS replacement—this was not
18 a task it took lightly. SDG&E filed its CIS Replacement Program Application in April
19 2017.

20 SDG&E has been and will continue to be prudent in its management of, and
21 transparent in describing the state of, the legacy CIS and subsystems.

22 This concludes our joint supplemental direct testimony.
23

1 **III. STATEMENT OF QUALIFICATIONS**

2 **WITNESS QUALIFICATIONS FOR CHARLIE SNYDER**

3 My name is Charles (Charlie) Snyder. I am employed by San Diego Gas & Electric
4 Company. My business address is 8330 Century Park Court, San Diego, California 92123.

5 I am currently a member of the Customer Information System replacement team. I
6 began work at SDG&E in January 1996 as a member of the SORT system implementation
7 team. I have held positions of increasing responsibility in the Customer Services
8 organization, including managing the Smart Meter Program where my primary
9 responsibilities included overall program management, customer communications, vendor
10 management, deployment, regulatory affairs, and financial management. Most recently, I
11 was the manager for the Customer Services Program Management Office responsible for
12 implementing key Customer Services system improvements and the introduction of new
13 solutions. I have a Bachelors of Business Administration from National University in San
14 Diego, CA.

15 I have previously submitted testimony and testified before the California Public
16 Utilities Commission.

17

1 **WITNESS QUALIFICATIONS FOR CHRISTOPHER SWARTZ**

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

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

15 I have previously submitted testimony and testified before the California Public
16 Utilities Commission in other regulatory proceedings.