

Application No.: A.16-03-004  
Exhibit No.: SDGE-06  
Witnesses: Sue E. Garcia  
Adam H. Levin

**PREPARED SUPPLEMENTAL TESTIMONY**

**ON BEHALF OF**

**SAN DIEGO GAS & ELECTRIC COMPANY**

**(Reasonableness of SONGS 2&3 Decommissioning Activities and Costs Incurred by  
SDG&E in 2015)**

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

**February 17, 2017**

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1 **I. INTRODUCTION (S. GARCIA)**

2 In this document, San Diego Gas & Electric Company (“SDG&E”) is providing  
3 testimony in support of its requests that the California Public Utilities Commission (“CPUC” or  
4 “Commission”):

- 5 1) Approve as reasonable the \$34.3 million (SDG&E share, 2014\$) for SONGS  
6 Units 2&3 decommissioning expenses invoiced to SDG&E by Southern  
7 California Edison Company (“SCE”) between January 1, 2015 and December 31,  
8 2015 for completed “distributed” and “undistributed”<sup>1</sup> costs; and  
9 2) Approve as reasonable the \$2.6 million<sup>2</sup> (2014\$) in SDG&E-only costs for  
10 SONGS incurred January 1, 2015 through December 31, 2015.

11 This volume of testimony is organized as follows: Chapter II provides a brief overview of  
12 SDG&E’s request. Chapter III discusses the reasonableness review standard applicable to  
13 SDG&E’s requests, and how the standard should be applied considering SDG&E’s oversight  
14 role in 2015. Chapter IV provides a review of SDG&E’s 2015 costs incurred, as billed by SCE.  
15 Chapter V provides a review by SDG&E’s nuclear industry expert of the completed distributed  
16 and undistributed decommissioning activities undertaken by SCE in 2015. Chapter VI provides  
17 a review of the SDG&E-only costs incurred in 2015.

18 **II. OVERVIEW (S. GARCIA)**

19 The purpose of this testimony is to demonstrate the reasonableness of San Onofre  
20 Nuclear Generating Station Unit Nos. 2&3 (“SONGS Units 2&3”) decommissioning expenses  
21 recorded by SDG&E in 2015. SDG&E’s 2015 decommissioning costs discussed in this  
22 testimony falls into several categories.

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<sup>1</sup> Distributed costs are activity specific and include planning and preparation costs as well as costs for decontamination, packaging, disposal, and removal of major components and systems. Undistributed costs are typically time dependent, recurring, unavoidable costs. Insurance, NRC fees, utility staff, security, and energy costs are examples undistributed costs. *See* SCE A.16-03-004, Exhibit SCE-08, Section I, footnotes 1 and 3 for distributed and undistributed cost explanation.

<sup>2</sup> All internal costs referenced in this document are included in the SDG&E’s 2015 Recorded Costs Advice Letter 2904-E, approved by the Commission with an effective date of July 18, 2016. These internal costs include adjustments of approximately \$9,000 relating to SDG&E’s 2014 Recorded Costs Advice Letter 2806-E, approved by the Commission with an effective date of November 22, 2015.

1 First, SDG&E recorded \$10.6 million (SDG&E share, 2014\$) of distributed costs billed  
 2 by SCE for completed decommissioning projects in 2015.<sup>3</sup>

3 Second, SDG&E recorded \$23.7 million (SDG&E share, 2014\$) of undistributed costs  
 4 billed by SCE in 2015.

5 Third, SDG&E recorded \$2.6 million (2014\$) of “SDG&E-only” costs in 2015.

6 Lastly, SDG&E recorded \$24.3 million (SDG&E share, 2014\$) for distributed activities  
 7 that were still in progress as of December 31, 2015. SDG&E refers to these expenses as the  
 8 2015 “In-Progress” Expenditures. As SCE intends to request a reasonableness review when  
 9 these distributed projects are completed, SDG&E is not asking for a reasonableness review of  
 10 these costs now.

11 Table 1 summarizes these expenses compared to SDG&E’s 20% share of the SONGS  
 12 2&3 Decommissioning Cost Estimate (SONGS 2&3 DCE) approved in Decision (D.) 16-04-019:

13 **Table 1**  
 14 **Summary of 2015 SDG&E Costs**  
 15 **(2014\$ Constant Dollars in Millions, 20% Level)**

	Category	DCE	Recorded	Variance
1	Distributed Costs for Projects Completed in 2014 but billed to SDG&E in 2015	0.0	0.0	0.0
2	Distributed Costs for Projects Completed in 2015 and billed to SDG&E in 2015	0.5	10.6	(10.1)
3	Undistributed Costs billed to SDG&E in 2015	29.0	23.7	5.3
4	SDG&E Only Costs	1.9	2.6	(0.7)
5	<b>Review Period Expenditures Total</b>	<b>31.4</b>	<b>36.9</b>	<b>(5.5)</b>
6				
7	<b>In-Progress Expenditures Total</b>	<b>45.8</b>	<b>24.3</b>	<b>21.5</b>
8				
9	<b>Total</b>	<b>77.2</b>	<b>61.2</b>	<b>16.0</b>

16  
 17 **III. STANDARD OF REASONABLENESS REVIEW OF SDG&E’S 2015 SONGS**  
 18 **COSTS (S. GARCIA)**

19 **A. Reasonableness Standard of Review**

20 SDG&E respectfully requests that the Commission continue to apply its “reasonable  
 21 manager standard” when completing its SONGS 2&3 decommissioning reasonableness reviews.

<sup>3</sup> This amount includes costs incurred for both distributed projects completed in 2014 and 2015, but that were not billed to (and recorded by) SDG&E until 2015.

1           The Commission’s reasonable manager standard reviews a utility’s actions based upon  
2 what the utility knew or should have known at the time the utility takes the action, not just the  
3 ultimate results or costs based on hindsight. The review standard also expressly provides that a  
4 utility’s actions “may be found to be reasonable and prudent if the utility shows that its decision  
5 making process was sound...., *even if it turns out not to have led to the best possible outcome.*”<sup>4</sup>  
6 The Commission’s reasonable manager standard does not hold the utilities to unachievable  
7 perfect hindsight. It is therefore appropriate for the Commission to determine that SONGS 2&3  
8 decommissioning activities and expenses are reasonable based on the information provided by  
9 SCE and SDG&E in support of this Application.

10           **B.       In 2015, SDG&E Held an Oversight Position at SONGS**

11           The San Onofre Nuclear Generating Station (“SONGS”) is licensed under the Nuclear  
12 Regulatory Commission (“NRC”) as three units. SDG&E has a 20% minority ownership stake  
13 in each of the three nuclear units and, as such, is contractually obligated to pay its 20%  
14 ownership share of all costs including decommissioning costs.<sup>5</sup> As recognized by the NRC, SCE  
15 is the licensee as well as the operating agent. In 2015, SCE was the decommissioning agent.  
16 Throughout most of 2015, the SONGS Co-Participants were governed by the 2015 SONGS  
17 Decommissioning Agreement.<sup>6</sup>

18           As a minority owner, SDG&E has a fiscal responsibility to fund operations and  
19 decommissioning at SONGS. In 2015, as a minority owner, SDG&E also had an oversight role  
20 at SONGS (as it still does today). In 2015, SDG&E fulfilled its oversight obligations and fiscal  
21 management roles in several different ways, as summarized in Ex. SDGE-02 by SDG&E witness  
22 Sue Garcia. For example, in 2015 SCE was the decommissioning agent, which means that it was

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<sup>4</sup> D.05-08-037, at 10-11 (emphasis added).

<sup>5</sup> SCE holds an approximately 75.74% interest, SDG&E holds a 20% interest, the City of Anaheim holds an approximately 2.47% interest, and the City of Riverside holds a 1.79% interest in SONGS 2&3 decommissioning liability.

<sup>6</sup> In April 2015, SDG&E executed a decommissioning agreement (“Decommissioning Agreement”) with the other three co-participants that governs SDG&E co-owner participation. The Decommissioning Agreement governs the decommissioning of all three units. The Decommissioning Agreement establishes a decommissioning agent, participant funding responsibilities and participant involvement in the governance of the decommissioning agent. Pursuant to the Decommissioning Agreement, Executive, Budget, Fiscal, and Legal committees were established. The Budget and Executive committees approve major monetary commitments. In addition, an independent nuclear expert (*i.e.* Decommissioning Advisor) assists the Executive Committee on an as-needed basis.

1 making decisions about decommissioning activities at SONGS, and often performing those  
2 activities itself. To ensure that it stayed informed of the decommissioning activities at SONGS,  
3 SDG&E stationed a dedicated employee at the plant to follow major activities at the site and to  
4 report to SDG&E management plant status relative to budget. SDG&E also reviewed annual  
5 budgets as well as budgets for specific decommissioning projects and then tracked progress  
6 monthly. SDG&E also sought confirmation from its retained nuclear expert, Mr. Levin, that  
7 SCE's activities or plans for SONGS comported with industry practices.

8 **C. The Commission Should Consider SDG&E's Unique Oversight Role at**  
9 **SONGS When Conducting its Reasonableness Review of SDG&E's Costs**

10 As the Commission commences reviewing SONGS 2&3 decommissioning expenses, it  
11 will be important for the Commission to adopt an articulable framework for completing  
12 predictable reasonableness reviews. SDG&E respectfully recommends that the Commission  
13 keep SDG&E's unique oversight and fiscal management role as of 2015 in mind when it  
14 determines the reasonableness of SDG&E's 2015 decommissioning costs.<sup>7</sup>

15 **IV. SDG&E'S REVIEW OF ITS 2015 RECORDED COSTS BILLED BY SCE**  
16 **(S. GARCIA)**

17 In this instant filing, SDG&E reports \$58.6 million (SDG&E share, 2014\$) total Units  
18 2&3 decommissioning 2015 expenditures billed by SCE for its SONGS obligation, \$34.3 million  
19 (2014\$) of which are for costs billed by SCE for completed distributed projects and undistributed  
20 costs in 2015. It also reports incurred costs of \$24.3 million (2014\$) in 2015 for distributed  
21 projects that are still in-progress. The Table 2 presents these 2015 costs billed by SCE at a  
22 summary level.  
23

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<sup>7</sup> SDG&E's oversight and fiscal management roles and processes are described in detail in Ex. SDGE-02.

**Table 2**  
**Summary of 2015 SDG&E Costs Billed by SCE**  
**(2014\$ Constant Dollars in Millions, 20% Level)**

	Category	DCE	Recorded	Variance
1	Distributed Costs for Projects Completed in 2014 but billed to SDG&E in 2015	0.0	0.0	0.0
2	Distributed Costs for Projects Completed in 2015 and billed to SDG&E in 2015	0.5	10.6	(10.1)
3	Undistributed Costs billed to SDG&E in 2015	29.0	23.7	5.3
5	<b>Review Period Expenditures Total</b>	<b>29.5</b>	<b>34.3</b>	<b>(4.8)</b>
6				
7	<b>In-Progress Expenditures Total</b>	<b>45.8</b>	<b>24.3</b>	<b>21.5</b>
8				
9	<b>Total Billed by SCE in 2015</b>	<b>75.3</b>	<b>58.6</b>	<b>16.7</b>

SDG&E seeks a Commission finding that the \$34.3 million SDG&E incurred in 2015 for completed distributed projects and undistributed is reasonable. As described below, in its oversight role, SDG&E conducted its own review of these costs and underlying activities through its staff at SONGS, as well as through its accounting departments. SDG&E also reviewed the 2015 costs against the 2014 DCE. SDG&E has concluded that the completed distributed and undistributed costs it recorded in 2015 were reasonable and appropriate. Therefore, SDG&E respectfully requests the Commission to find its recorded costs for completed distributed projects and undistributed costs as reasonable.

**A. SDG&E's On Site and Accounting Review of 2015 Activities and Underlying Costs**

In 2015, SDG&E participated in meetings with SCE regarding completed and on-going decommissioning activities. Based upon SDG&E's on-site representation, SDG&E concurs that these efforts were appropriate and necessary. To understand the activities occurring at the plant, SDG&E employees attended daily plant meetings, weekly project status meetings, monthly project update meetings, and monthly SONGS Co-Participants Executive and Budget meetings. SDG&E understands the issues and concurs that SCE has taken the appropriate actions necessary to decommission Units 2&3.

SDG&E also conducted an accounting review of the costs presented by SCE in support of this Joint Application. SCE witness Bosch presents costs for completed distributed projects and

1 undistributed categories for the 2013 through 2015 years at the 100% level.<sup>8</sup> Utilizing the  
2 accounting categories established in 2015, SDG&E was able to aggregate 2015 invoiced costs to  
3 the same categories presented by Mr. Bosch. Due to the billing time lag for some completed  
4 projects, SDG&E's recorded costs include both 2014 and 2015 completed projects.

5 Attachment A, which is for projects completed in 2014 but billed to SDG&E in 2015,  
6 shows the costs by line item, and compares the DCE for that line item to SDG&E's accounting  
7 of costs based upon the back-up it receives from SCE to support monthly invoices. Although  
8 Attachment A's total amount is less than \$0.1 million, SDG&E views it appropriate to include  
9 these costs in the 2015 reasonableness review as they were recorded by SDG&E in 2015.

10 Attachment B, which is for projects completed in 2015 and undistributed costs billed to  
11 SDG&E in 2015, shows the costs by line item, and compares the DCE for that line item to  
12 SDG&E's accounting of costs based upon the back-up it receives from SCE to support monthly  
13 invoices.

14 Attachments A and B are summarized in Table 3, which shows SDG&E aggregated 2015  
15 recorded costs for completed projects. Table 4 shows SDG&E aggregated 2015 recorded  
16 undistributed costs (which appear in detail in Attachment B).

17 //  
18 //  
19 //

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<sup>8</sup> Ex. SCE-08 at Sections VI and VII.



**Table 3**  
**Comparison of SDG&E 2015 Recorded Costs for Completed Projects to the DCE**  
**(20% level, 2014\$ in millions)**

	Category	DCE	Recorded	Variance
1	<b>Distributed Costs for Projects Completed in 2014 but billed to SDG&amp;E in 2015</b>			
2	Regulatory Submittals	0.0	0.0	0.0
3	<b>Subtotal</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
4				
5	<b>Distributed Costs for Projects Completed in 2015 and billed to SDG&amp;E in 2015</b>			
6	Nuclear Fuel Contract Cancellation	0.0	7.6	(7.6)
7	Legacy Radwaste Disposal	0.0	1.4	(1.4)
8	Security Programs – Security Shutdown Strategy	0.0	0.1	(0.1)
9	Regulatory Submittals	0.5	0.2	0.3
10	Historical Site Assessment/Site Characterization	0.0	1.1	(1.1)
11	Transition Project Modifications	0.0	0.2	(0.2)
12	<b>Subtotal</b>	<b>0.5</b>	<b>10.6</b>	<b>(10.1)</b>
13				
14	<b>Total Distributed Completed Projects</b>	<b>0.5</b>	<b>10.6</b>	<b>(10.1)</b>

**Table 4**  
**Comparison of SDG&E 2015 Recorded Undistributed Costs to the DCE**  
**(20% level, 2014\$ in millions)**

	Category	DCE	Recorded	Variance
1	<b>Undistributed</b>			
2	<b>Labor-Staffing</b>			
3	Utility Staff	11.6	11.0	0.6
4	Security Force	5.5	4.5	1.0
5	<b>Subtotal</b>	<b>17.1</b>	<b>15.5</b>	<b>1.6</b>
6				
7	<b>Decommissioning General Contractor Staff</b>	<b>2.3</b>	<b>0.0</b>	<b>2.3</b>
8				
9	<b>Non-Labor</b>			
10	Fees, Permits, and Leases	2.6	0.6	2.0
11	Plant Operations	2.0	3.6	(1.6)
12	Other Non-Labor Costs	5.0	4.0	1.0
13	<b>Subtotal</b>	<b>9.6</b>	<b>8.2</b>	<b>1.4</b>
14				
15	<b>Total Undistributed Costs</b>	<b>29.0</b>	<b>23.7</b>	<b>5.3</b>

**B. SDG&E's Recorded 2015 Costs Billed by SCE are Reasonable when Compared to the DCE**

SDG&E's recorded 2015 costs billed by SCE are reasonable when compared to the DCE. In A.16-03-004, SCE witness Mr. Lou Bosch offers testimony that provides this comparison at the 100% cost level for which SDG&E's obligation is 20%.<sup>9</sup> Table 5 below provides a summary comparing the costs billed to SDG&E to the DCE.

**Table 5  
Summary Comparison of 2015 Review Period Expenditure Total to the DCE  
(20% level, \$2014 in millions)**

	Category	DCE	Recorded	Variance
1	<b>Distributed Projects</b>			
2	License Termination	0.5	2.9	(2.4)
3	Spent Fuel Management	0.0	0.1	(0.1)
4	Site Restoration	0.0	7.6	(7.6)
5	<b>Subtotal</b>	<b>0.5</b>	<b>10.6</b>	<b>(10.1)</b>
6				
7	<b>Undistributed Costs</b>			
8	License Termination	14.3	11.6	2.7
9	Spent Fuel Management	11.7	10.1	1.6
10	Site Restoration	3.0	2.0	1.0
11	<b>Subtotal</b>	<b>29.0</b>	<b>23.7</b>	<b>5.3</b>
12				
13	<b>Total</b>	<b>29.5</b>	<b>34.3</b>	<b>(4.8)</b>

Mr. Bosch identified that the primary variances to the DCE for completed distributed projects were higher nuclear fuel contract cancellation expenses and lower legacy radwaste disposal than estimated. Mr. Bosch identified that the primary variances to the DCE for undistributed costs were lower utility and security staff costs and higher plant operations contracted services than estimated. SDG&E has reviewed Ex. SCE-08 and agrees with SCE's conclusions.

In addition, as SDG&E receives SCE's monthly invoices, it compares the actual costs to the annual budget as well as to the DCE. SDG&E's 2015 recorded decommissioning costs Advice Letter 2904-E contained a detail comparison of the actual costs to the DCE and reconciled the costs to SCE's similar Advice Letter filing for 2015 recorded decommissioning costs.

<sup>9</sup> Ex. SCE-08 at Section V.

1 SDG&E concurs that SCE's SONGS Units 2&3 activities during 2015 were appropriate  
2 and necessary and that the variances with the 2014 DCE are understandable.

3 **V. REASONABLENESS REVIEW OF 2015 DECOMMISSIONING ACTIVITIES AT**  
4 **SONGS (A. LEVIN)**

5 During 2015, SDG&E recorded a total of \$10.6 million (SDG&E share, 2014\$) for  
6 completed distributed costs and \$23.7 million (SDG&E share, 2014\$) for undistributed costs  
7 billed by SCE for SONGS 2&3 decommissioning. SDG&E is asking the Commission to find  
8 these costs, as well as the activities underlying the costs, reasonable.

9 In addition to the review that SDG&E itself did of the distributed and undistributed costs  
10 billed by SCE in 2015, described above in Section IV, SDG&E also retained me as a  
11 decommissioning industry expert to conduct a review of the reasonableness of the underlying  
12 2015 activities. Part of my role is to continually review and provide my expert opinion on the  
13 reasonableness of decommissioning activities undertaken at SONGS in the context of the broader  
14 nuclear decommissioning industry.<sup>10</sup> The purpose of my testimony here is to provide my expert  
15 opinion regarding the decommissioning activities undertaken at SONGS during the period  
16 January 1, 2015, and December 31, 2015, and whether they were reasonable in light of nuclear  
17 decommissioning industry best practices.

18 During my nearly 40-year career in the commercial nuclear industry, I have participated in  
19 12 major decommissioning projects.<sup>11</sup> I have performed or participated in radiological  
20 characterizations of reactor pressure vessels and internals, historical site assessments, design and  
21 installation of dry cask storage technology, development of radiological release standards,  
22 selection of and contract negotiations with decommissioning operations contractors, and general  
23 oversight of decommissioning projects. While at Exelon Generation Company ("EGC"), my  
24 responsibilities included the safe management of 12,600 metric tonnes of spent nuclear fuel, the

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<sup>10</sup> I have previously provided written and oral testimony to the Commission regarding nuclear decommissioning. See A.14-12-007; A.15-01-014/15-02-006 (currently pending).

<sup>11</sup> Specifically, Cintichem, Inc., Saxton Nuclear Power Plant, Trojan Nuclear Plant, Big Rock Point Plant, Dresden Nuclear Power Station Unit 1, Pathfinder Generating Plant, Shippingport Atomic Power Station, Rancho Seco Nuclear Generating Station, Crystal River Unit 3, Zion Nuclear Power Station, Vermont Yankee Nuclear Power Plant and San Onofre Nuclear Generating Station.

1 implementation and oversight of dry cask storage for spent nuclear fuel at eight sites,<sup>12</sup> the  
2 development of strategic initiatives to meet EGC’s long-term decommissioning and spent fuel  
3 management needs, and oversight of decommissioning cost estimates and EGC’s \$12 billion  
4 decommissioning liability.<sup>13</sup>

5 The decommissioning of SONGS Units 2&3 continues to proceed in a manner I would  
6 expect based upon my prior and current industry experience. As discussed in further detail  
7 below, I find the activities performed at SONGS 2&3 in 2015 are reasonable in my professional  
8 opinion, and also when compared to the conduct of operations at similar, contemporary industry  
9 decommissioning projects.

10 **A. Benchmarking 2015 Decommissioning Activities at SONGS Against Recent**  
11 **Industry Decommissioning Projects**

12 SCE has chosen to immediately dismantle and decontaminate the SONGS site. This  
13 approach to decommissioning is known as “DECON.” The decommissioning process at SONGS  
14 began in 2013. The activities commenced or continued in 2015 at SONGS 2&3 are those  
15 typically expected early in the nuclear plant decommissioning process. Based upon the  
16 information I have reviewed, it is my opinion that SCE continues to execute DECON  
17 decommissioning activities appropriately and in concert with best industry practices. As  
18 discussed in detail below, based upon my observations and experience, I agree with the choice of  
19 work that has been completed at this stage of the project. I believe the 2015 decommissioning  
20 activities at SONGS 2&3 represent what I would expect based upon my prior and current  
21 industry experience. I have recently personally observed similar approaches at other plants  
22 transitioning into and performing early stages of their decommissioning projects. It is my  
23 understanding that SCE personnel selected these activities through industry benchmarking as  
24 being the best practices with respect to occupational and public health and safety, and  
25 minimizing total project cost.

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<sup>12</sup> Peach Bottom Atomic Power Station, Limerick Generating Station, Oyster Creek Nuclear Generating Station, Byron Station, Braidwood Station, LaSalle County Station, Quad Cities Nuclear Power Station and Dresden Nuclear Power Station.

<sup>13</sup> In addition, in my roles as Technical Advisor for TLG Services, Inc. (decommissioning cost estimators) and Director, Spent Fuel and Decommissioning, for EGC, I had the opportunity to develop and review decommissioning cost estimates for more than 40 nuclear units. During my tenure at EGC, EGC owned and operated 17 operating and four retired nuclear units.

1 To benchmark the 2015 SONGS decommissioning activities for SONGS 2&3, I made  
2 comparisons to contemporary activities underway at other recently retired commercial nuclear  
3 plants in the U.S., specifically, Kewaunee Power Station (“Kewaunee”), Crystal River Unit 3  
4 Nuclear Generating Plant (“CR3”), Vermont Yankee Nuclear Power Station (“VY”), and Zion  
5 Nuclear Power Station (“Zion”). Kewaunee and CR3 were retired in 2013, and VY was retired  
6 in 2014. Zion was retired in 1998, and after a short period of safe storage, moved into active  
7 decommissioning in 2010.

8 Of the five (including SONGS) recently-retired nuclear plants, SONGS and Zion are  
9 executing the DECON immediate dismantlement decommissioning scenario (with Zion waiting  
10 12 years to start). Kewaunee, CR3 and VY have all chosen to enter a SAFSTOR<sup>14</sup>  
11 decommissioning scenario. In late 2016, Entergy Nuclear Vermont Yankee, LLC (“ENVY”),  
12 the current licensee at VY, announced its intent to sell VY to NorthStar Group Services, Inc.  
13 (“NorthStar”). NorthStar intends to move VY from SAFSTOR to DECON, and begin major  
14 decommissioning activities in late 2018 after ENVY moves all spent nuclear fuel into dry storage  
15 on site. The transaction requires approval by NRC and until that time, VY will remain in  
16 SAFSTOR.

17 Although Kewaunee, CR3 and VY have chosen to enter SAFSTOR, all three have begun  
18 certain major decommissioning activities similar to those in flight at SONGS, and already  
19 completed at Zion.<sup>15</sup> For commercial nuclear plant decommissioning, both DECON and  
20 SAFSTOR decommissioning have analogous initial activities that must be performed. These  
21 activities include filing all required regulatory documents and studies, moving plant systems,  
22 structures and components into “Cold and Dark” configurations, isolating the spent fuel pool

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<sup>14</sup> The SAFSTOR decommissioning scenario is defined by the NRC as having placed the facility “in a safe, stable condition and maintained in that state (safe storage). The facility is decontaminated and dismantled at the end of the storage period to levels that permit license termination.” NRC, Regulatory Guide 1.202: STANDARD FORMAT AND CONTENT OF DECOMMISSIONING COST ESTIMATES FOR NUCLEAR POWER REACTORS, February 2005, at 3.

<sup>15</sup> Since September 2010, decommissioning at Zion Station has made enormous progress. By the end of 2016, all spent nuclear fuel will have been placed into dry cask storage, and all major components – including the reactor vessels, their internals, the steam generators, the pressurizer and the reactor coolant pumps – will have been removed and disposed of. The work remaining at Zion is disposal of the balance of the plant systems and buildings, followed by license termination and site restoration – possibly as early as 2018.

1 from the original plant cooling and filtration systems, obtaining a site historical assessment, and  
2 moving spent fuel into dry storage.

3 It is my opinion the activities that have been performed at SONGS 2&3 in 2015 should  
4 be performed early in decommissioning, and are the most cost-effective way to manage  
5 decommissioning trust fund assets.

6 **B. Review of Specific SONGS Units 2&3 Decommissioning Activities**  
7 **Undertaken in 2015**

8 During 2015, SCE performed several activities scheduled in the 2014 SONGS Units 2&3  
9 DCE's DECON Periods 1 & 2, Spent Nuclear Fuel Period 2 ("SNF Period 2") and Site  
10 Restoration Period 1 ("SR Period 1").<sup>16</sup> DECON Period 1 is described in the 2014 DCE as  
11 "Transition to Decommissioning"<sup>17</sup> and DECON Period 2 is described as "Decommissioning  
12 Planning and Site Modifications." SNF Period 2 is described in the 2014 DCE as "Spent Fuel  
13 Transfer to Dry Storage." SR Period 1 is described in the 2014 DCE as "Transition to Site  
14 Restoration." These activities during these periods reflect the work I would reasonably expect to  
15 be performed at this early stage in the decommissioning process.

16 **C. Decommissioning Activities Completed During 2014 and 2015 and Recorded**  
17 **by SDG&E in 2015 (Distributed)**

18 I have reviewed and found all of the projects listed below to be reasonable for SCE to be  
19 undertaking (and completing) at the DECON Periods 1 & 2, SNF Period 2 and SR Period 1.  
20 These activities have been performed at the other shutdown sites and are reasonably incurred in  
21 the course of decommissioning a nuclear power plant.

22 **1. Regulatory Submittals (DECON Period 2)<sup>18</sup>**

23 SCE submitted several documents required by the NRC during 2014.<sup>19</sup> These regulatory  
24 filings required ongoing SCE support until NRC accepted and/or approved them in 2015. Once

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<sup>16</sup> Further details regarding activities performed at SONGS in 2015 may be found in Ex. SCE-08.

<sup>17</sup> The DCE was submitted to the Commission in a separate SONGS application proceeding, A.14-12-007 in the testimony of SCE at Ex. SCE-01 at Appendix A-1. Martin, J.J., *et. al.*, "2014 Decommissioning Cost Analysis of the San Onofre Nuclear Generating Station Units 2 & 3," Document No. 164001-DCE-001, July 31, 2014, page 32 of 37.

<sup>18</sup> Ex. SCE-09 at 49-50.

<sup>19</sup> Mr. Levin's review of the regulatory submittals to the NRC by SCE in 2014, which were also billed to and recorded by SDG&E in 2014, is provided in Ex. SDGE-02 in A.15-01-014/A.15-02-006.

1 filed with the NRC, these submittals encounter questions from the regulator, which are called  
2 requests for additional information (“RAIs”) or requests for supplemental information (RSIs).  
3 These questions require additional formal responses. Typically, at least one round (and  
4 sometimes three or more rounds) of RAIs or RSIs are issued by NRC, which explains why these  
5 submissions normally take between six and 18 months to be approved by NRC. The regulatory  
6 submittals file by SCE in 2014 included:

- 7 a. Permanently Defueled Technical Specifications
- 8 b. Emergency Plan
- 9 c. Decommissioning Cost Estimate
- 10 d. Post-Shutdown Decommissioning Activities Report (PSDAR)
- 11 e. Post-Shutdown Security Plan
- 12 f. Post-Shutdown Quality Assurance Plan
- 13 g. Irradiated Fuel Management Plan

14  
15 Similar NRC regulatory submissions were made by Zion in the 2010 through 2012  
16 timeframe, shortly after *ZionSolutions* acquired the plant (in September 2010) and began  
17 DECON decommissioning. VY made these submissions shortly after its shutdown in December  
18 2014, even though its plans at that time were to move into SAFSTOR decommissioning.  
19 Kewaunee and CR3 made the same submissions in a similar timeframe, shortly after shutdown.

20 Based on information from SCE, it is my understanding that all of the regulatory  
21 submittals were accepted and/or approved by the NRC. Therefore, based upon similar activities  
22 in a similar timeframe at other recently retired nuclear plants, and NRC’s acceptance of these  
23 submissions, I believe these activities were reasonable.

- 24 1. **Nuclear Fuel Contract Cancellation (SR Period 1)**<sup>20</sup> – cancellation of uranium  
25 procurement, enrichment and fuel fabrication of new fuel assemblies for fuel  
26 cycles beyond the closure date.

27 Services for the procurement, enrichment and fuel fabrication of new fuel assemblies  
28 have long lead times associated with them. SCE’s decision to retire SONGS Units 2&3 early did  
29 not allow the opportunity to terminate these contracts without financial risk. Zion and CR3 also  
30 retired prematurely, and both sites had fresh nuclear fuel in the spent fuel pool awaiting insertion  
31 into the reactor core at the next refueling outage. Shortly after shutdown (Zion in 1998 and CR3

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<sup>20</sup> The reasonableness of the nuclear fuel contract cancellation costs that SDG&E recorded in 2015 is the subject of Ex. SDGE-07. See Ex. SCE-09 at 46.

1 in 2013), both plant owners moved quickly to sell their new fuel on site and cancel all nuclear  
2 fuel related contracts.

3 Therefore, in my professional opinion, it was reasonable for SCE to attempt to cancel the  
4 nuclear fuel contracts to mitigate costs associated with unneeded services.

- 5 **2. Legacy Radwaste Disposal (DECON Periods 1 and 2)** – disposition of any Low  
6 Level Radioactive Waste (LLRW) created during the operating lifetime of the  
7 units.<sup>21</sup>

8 The transition-to-decommissioning activities completed in 2015 include Legacy  
9 Radwaste Disposal. Legacy radwaste disposal is an activity which has been typically performed  
10 early in the decommissioning process at other decommissioning sites. For example, CR3’s  
11 aggressive disposal of legacy radwaste included retired steam generators, a reactor vessel closure  
12 head and hot leg piping. While the scope of such a project is subject to site conditions and other  
13 considerations, it is characteristic for decommissioning sites to perform at least some level of  
14 legacy radwaste disposal. This activity is considered a reasonable task in the decommissioning  
15 process.

- 16 **3. Security Program Shutdown Strategy** – modifications required to the physical  
17 security and cyber security programs reflecting the shutdown condition of the  
18 plant.<sup>22</sup>

19 NRC allows licensees to make changes – without prior NRC approval – to the physical  
20 and cyber security programs if the changes do not decrease the effectiveness of a physical  
21 security plan, security force training and qualification plan, or safeguards contingency plan. SCE  
22 submitted the site security changes to NRC in 2014.

23 With nuclear fuel no longer in the reactor and certain plant systems considered “safety-  
24 related” no longer requiring physical protection, the security strategy changes at a retired plant  
25 site. The updated plans also allow for removal of temporary physical facilities. However, they  
26 also require physical modifications (such as vehicle barriers) to remain on site to provide  
27 effective security, but allows them to be moved such that the footprint of the protected area may

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<sup>21</sup> Ex. SCE-09 at 44-46.

<sup>22</sup> *Id.* at 49-50.



1 be reduced. In 2015, the NRC determined the changes made at SONGS to the physical  
2 protection plans supported security staff reductions.

3 Overall, implementing these security changes lowers annual operation and maintenance  
4 costs at a retired plant site. Zion, VY, CR3 and Kewaunee have all taken advantage of the NRC-  
5 allowable security plan changes to help reduce expenses. As with other retired plants, this  
6 activity for SONGS is considered a reasonable activity.

7  
8 **4. Historical Site Assessment and Site Characterization (DECON Period 2 and**  
9 **SR Period 4)** – a study to assess and document radiological and hazardous  
10 material contamination and spills which occurred during the operating lifetime,  
11 and to demonstrate areas of the site assumed to be unaffected by operations,  
12 remain uncontaminated.<sup>23</sup>

13 The Historical Site Assessment (“HSA”) is required to obtain the data necessary for SCE  
14 to demonstrate compliance now and in the future, with NRC site release criteria. For Zion, CR3  
15 and VY, the HSA was commissioned within the first year after shutdown (at VY, work on the  
16 HSA began prior to shutdown). These sites recognized the necessity of and benefits to be  
17 derived from performing a HSA, and performing it while personnel familiar with the operating  
18 history of the site are readily accessible. SCE has opted to do this activity for SONGS close to  
19 the plant’s retirement. I consider this to be a reasonable activity.

20 **5. Special Purpose Vehicle (“SPV”) Feasibility Study (DECON Period 1)** – SCE  
21 commissioned a study by PricewaterhouseCoopers to determine the feasibility of  
22 creating a Successor Decommissioning Agent to oversee the decommissioning  
23 activities at SONGS. The study concluded there were more disadvantages to  
24 creating the SPV than there were advantages. This study was not identified in the  
25 2014 DCE. However, this activity was considered a transition activity and  
26 accounted for in DECON Period 1.<sup>24</sup>

27 The SPV study is an activity unique to SONGS. However, I find that the merit of  
28 performing such a study is reasonable. While the study itself was unique among contemporary  
29 decommissioning sites, many other nuclear sites that either are already decommissioning (like

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<sup>23</sup> *Id.* at 46-47.

<sup>24</sup> SCE-08. at 37-39.

1 Zion), or have recently announced their impending closures (like Entergy’s Vermont Yankee,  
2 Pilgrim and Palisades plants) have explored alternative decommissioning structures. None of the  
3 other contemporary decommissioning sites has multiple owners and therefore did not face the  
4 same issues as SONGS. The SPV study help SONGS identify the best oversight structure for the  
5 project, potentially mitigating delays in project performance as the multiple owners debated  
6 decommissioning concerns.

7 **D. Support and Overhead Activities During 2015 (Undistributed)**<sup>25</sup>

8 I have also reviewed the Support and Overhead (Undistributed) activities that occurred at  
9 SONGS 2&3 in 2015.

- 10 1. **Staffing** – the SONGS utility staff and security force.
- 11 2. **Fees, Permits and Leases** – various recurring and unavoidable fees and other  
12 payments required to meet various regulatory, operational, permitting and  
13 contractual requirements.
- 14 3. **Plant Operations** – supplies and services required to maintain the physical  
15 facilities including contracted services, health physics supplies, spent fuel  
16 maintenance, security-related expenses, certain low-level radioactive waste  
17 disposal, tools and equipment, and decommissioning advisory services.
- 18 4. **Other Non-Labor** – information technology, legal, energy, severance, property  
19 taxes, the Community Engagement Panel, insurances and utilities.

20 These activities generally represent those necessary to maintain a NRC-licensed nuclear  
21 power plant, to meet all NRC license conditions, and to meet locally-imposed requirements of  
22 plant ownership. Additionally, external support in the form of legal, consulting and other  
23 expertise is necessary to develop effective plans for decommissioning. I find all of the  
24 Undistributed activities to be similar to those occurring at other decommissioning nuclear plants,  
25 and thus reasonable at SONGS.

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<sup>25</sup> SCE-09 at Section VII.

1           **E.       Decommissioning Activities in Progress During 2015**

2           There were several activities in progress during 2015.<sup>26</sup> As SCE intends to request a  
3 reasonableness review when these activities are completed, no further evaluation of the  
4 reasonableness of these activities will be addressed here.

5           **VI.     SDG&E-ONLY COSTS INCURRED IN 2015 ARE REASONABLE (S. GARCIA)**

6           In 2015, SDG&E incurred SDG&E-only costs of \$2.6 million (2014\$) specifically  
7 related to decommissioning SONGS Units 2&3. SDG&E was responsible for and paid 100% of  
8 these costs and they were not billed to SDG&E by SCE nor were they shared by SCE.

9           These costs are organized into two high-level categories: labor and non-labor. Labor  
10 refers to SDG&E internal labor. Non-labor has several components including consulting, outside  
11 legal, property taxes, and other “non-labor” expenses. Shown below in Table 6 are SDG&E’s  
12 actual internal costs for 2015, in 2014\$, compared to the DCE estimate, in 2014\$, of SDG&E’s  
13 internal costs.

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<sup>26</sup> The in-progress projects included, but were not limited to:

1. ISFSI – Dry Cask Storage
2. “Cold and Dark”
3. Selection of a Decommissioning General Contractor
4. Security Program Modifications
5. Mesa Remediation
6. Historical Site Assessment / Characterization
7. Regulatory Submittal Support
8. Transition Modifications

**Table 6**  
**Comparison of SDG&E 2015 Recorded SDG&E Only Costs to the DCE**  
**(100% SDG&E Share, 2014\$ in millions)**

	Category	DCE <sup>27</sup>	Recorded <sup>28</sup>	Variance
1	<b>Labor<sup>29</sup></b>	<b>0.9</b>	<b>0.7</b>	<b>0.2</b>
8				
9	<b>Non-Labor</b>			
10	Consultant and Outside Legal	0.7	0.3	0.4
11	Property Tax	0.4	1.6	(1.2)
12	Other Non-Labor Costs <sup>30</sup>	0.0	0.0	0.0
13	<b>Non-Labor Subtotal</b>	<b>1.1</b>	<b>1.9</b>	<b>(0.8)</b>
14				
15	<b>Total SDG&amp;E Only Costs</b>	<b>1.9</b>	<b>2.6</b>	<b>(0.6)</b>

SDG&E respectfully requests that the Commission find that SDG&E’s total for SDG&E-only SONGS decommissioning costs of \$2.6 million (2014\$) for 2015 is reasonable.

**A. SDG&E Labor Costs**

In 2015, SDG&E incurred labor costs of \$0.7 million (2014\$) for its role in overseeing activities at the plant and reviewing the costs. SDG&E had three employees, a manager (who worked on SONGS issues on a part-time basis), an on-site representative and a budget analyst dedicated to working on decommissioning and oversight activities related to SONGS. In order to provide additional fiscal oversight, two additional personnel, a budget analyst and project manager, were added to SDG&E’s SONGS team toward the end of 2015.

Many of SDG&E’s labor oversight efforts during decommissioning were very similar to its efforts during operations. For example, SDG&E continued to retain a site representative at the SONGS worksite to review day-to-day decommissioning activities and progress, and provide contact and interaction with SONGS decommissioning management and personnel. The on-site employee served on the SONGS Budget Committee in 2015. The manager attended many

<sup>27</sup> These estimates include pensions and benefits, other labor loaders and purchasing overheads.

<sup>28</sup> These numbers include pensions and benefits, other labor loaders and purchasing overheads.

<sup>29</sup> These labor costs also include internal labor loaders, such as pension and benefits, performance incentives, payroll taxes, worker’s compensation, vacation, sick and paid leave.

<sup>30</sup> Examples of “Other Non-Labor Costs” are employee expenses and lease payments.

1 executive level meetings at SONGS and served as an alternate on the SONGS Executive  
2 Committee in 2015.

3 SDG&E continues to retain a budget analyst<sup>31</sup> to review invoices and track expenditures  
4 against SCE-internal budgets and the DCE estimates. In 2015, SDG&E received invoices for  
5 decommissioning work such as the “Cold and Dark” project and conducting analysis of costs  
6 related to the ISFSI expansion. These projects not only require a review, approval, and audit  
7 process, but also require analysis of the cost compared to the DCE estimates, analysis and  
8 understanding of the change order processes and potential costs, and analysis of potential  
9 impacts to other projects or decommissioning work. In late 2015, SDG&E added another  
10 financial analysis position to support this additional analytical effort. Also in late 2015, SDG&E  
11 also added a project manager to assist with additional oversight and project management work  
12 related to the Decommissioning General Contractor (“DGC”) selection and regulatory filings.

13 Specific project work undertaken at SONGS in 2015 that SDG&E monitored included:  
14 budget variance review and reporting, work related to business governance of SDG&E’s 20%  
15 ownership stake in SONGS, continued decommissioning planning activities, coordination and  
16 oversight of the California Environmental Quality Act (“CEQA”) and National Environmental  
17 Protection Act (“NEPA”) requirements and filings, DGC selection process criteria, work on the  
18 ISFSI expansion project, temporary power ring, and other project work related to the “Cold and  
19 Dark” initiative. These activities were in addition to other work that SDG&E manages  
20 including, but not limited to, regulatory and legal reporting requirements, ad hoc analysis of  
21 various proposals, and coordination with outside legal and nuclear experts as needed.

22 As shown in Table 6 above, SDG&E-only internal labor costs in 2015 were lower than  
23 what was forecasted in the 2014 DCE. The 2014 DCE forecasted three employees for SDG&E  
24 internal costs in 2014 and it was created in mid-2014. SDG&E used fewer internal labor  
25 resources than was originally forecasted in the DCE. Therefore, actual labor expense, which  
26 includes salaries and applicable overheads,<sup>32</sup> was lower than the DCE estimate.

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<sup>31</sup> The SDG&E budget analyst also served on the SONGS Budget Committee.

<sup>32</sup> Labor costs also include internal labor overheads such as pension and benefits, performance incentives, payroll taxes, worker’s compensation, vacation, sick and paid leave.

1           **B.     SDG&E Non-Labor Costs**

2           In 2015, SDG&E incurred non-labor of \$1.9 million (2014\$) for decommissioning and  
3 oversight activities.

4                   **1.     Consultant and Outside Legal Counsel**

5           To supplement its decommissioning oversight, SDG&E retained a nuclear  
6 decommissioning consultant (Mr. Levin) to provide an independent assessment of SCE’s  
7 decommissioning activities. SDG&E incurred \$0.1 million (2014\$) of costs related to Mr.  
8 Levin’s consulting services. Because of Mr. Levin’s extensive industry knowledge and previous  
9 experience with decommissioning, SDG&E believes it is appropriate to use Mr. Levin’s services.  
10 SDG&E retained outside legal counsel to provide legal advice and counsel during the drafting of  
11 the SONGS Decommissioning Agreement and on other decommissioning issues. SDG&E  
12 incurred a total of \$0.2 million (2014\$) in costs associated with outside counsel legal expenses.

13           The actual non-labor costs for consultants and outside legal compared to the 2014 DCE  
14 forecasted non-labor cost for consultants and outside legal was lower by \$0.4 million (2014\$);  
15 the variance is due to lower costs for these services than anticipated.

16                   **2.     Property Taxes**

17           SDG&E paid property taxes related to SONGS of \$1.6 million (2014\$) in 2015. SDG&E  
18 property taxes related to its ownership in SONGS are assessed by the California State Board of  
19 Equalization and allocated to the various counties where SDG&E property is located. The  
20 variance of \$1.2 million (2014\$) between the actual amounts paid and the 2014 DCE estimate is  
21 the result of SDG&E anticipating a reduction in the assessment of the SONGS property when  
22 SONGS changed from an operating plant to a decommissioning plant site. However, the  
23 property was not reassessed as low as anticipated by SCE and SDG&E during the DCE drafted  
24 process.

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**ATTACHMENT A**

**Distributed Costs for Projects Completed in 2014 but Billed to SDG&E in 2015**

## ATTACHMENT A

### Distributed Costs for Projects Completed in 2014 but Billed to SDG&E in 2015

San Diego Gas & Electric						
2015 NDCTP - SONGS Units 2 & 3 Cost Reasonableness						
Comparison of Review Period Expenditure Total to the DCE						
(SDGE 20% Share, 2014\$ in millions)						
	DCE No.	Category	Description	[A] DCE	[B] Recorded	[C = A - B] Variance
1	LT-2-D-2.01	Regulatory Compliance	Develop Certified Fuel Handler Program	\$ 0.0	\$ -	\$ 0.0
2	SNF-2-D-8.07	ISFSI	ISFSI Pad Study	\$ -	\$ -	\$ -
3	SNF-1-D-7.03	Regulatory Compliance	Post Fukushima Modifications - U2	\$ -	\$ -	\$ -
4	SNF-2-D-FLEX	Regulatory Compliance	Flex Initiative	\$ -	\$ -	\$ -
5	SNF-2-D-8.02	Regulatory Compliance	Decay Heat Analysis	\$ -	\$ -	\$ -
6	SNF-2-D-8.03	Regulatory Compliance	Zirconium Fire/ Shine Analysis	\$ -	\$ -	\$ -
<b>2015 Recorded Costs for Distributed Projects Completed in 2014 but Billed to SDG&amp;E in 2015</b>				<b>\$ 0.0</b>	<b>\$ -</b>	<b>\$ 0.0</b>
(i) Distributed costs include projects that were completed in 2014, but billed to SDG&E in 2015 and 2015 DCE costs associated with the projects.						
(ii) Totals may not reconcile due to rounding.						
(iii) Amounts with "\$0.0" or "\$(0.0)" indicate that costs are included in the category but are \$0 when rounded to the nearest hundred thousand. "\$-" indicates that no costs are included in the category.						



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**ATTACHMENT B**

**Distributed Costs for Projects Completed in 2015 and  
Undistributed Costs Billed to SDG&E in 2015**

# ATTACHMENT B

## Distributed Costs for Projects Completed in 2015 and Undistributed Costs Billed to SDG&E in 2015

San Diego Gas & Electric						
2015 NDCTP - SONGS Units 2 & 3 Cost Reasonableness						
Comparison of Review Period Expenditure Total to the DCE						
(SDGE 20% Share, 2014\$ in millions)						
				[A]	[B]	[C = A - B]
	DCE No.	Category	Description	DCE	Recorded	Variance
1	SR-1-D-14.04	Project Governance and Admin	Fuel Cancellation Expense	\$ -	\$ 7.6	\$ (7.6)
2		<b>Nuclear Fuel Cancellation Subtotal</b>		<b>\$ -</b>	<b>\$ 7.6</b>	<b>\$ (7.6)</b>
3						
4	LT-1-D-1.05	Legacy Radwaste Disposal	Disposition of Legacy Waste	\$ -	\$ -	\$ -
5	LT-2-D-2.16	Legacy Radwaste Disposal	Disposition of Legacy Wastes	\$ -	\$ 1.4	\$ (1.4)
6		<b>Legacy Radwaste Disposal Subtotal</b>		<b>\$ -</b>	<b>\$ 1.4</b>	<b>\$ (1.4)</b>
7						
8	SNF-1-D-7.01	Transition Modifications	Security Shutdown Strategy	\$ -	\$ -	\$ -
9	SNF-2-D-8.01	Transition Modifications	Security Shutdown Strategy	\$ -	\$ 0.1	\$ (0.1)
10		<b>Security Programs - Security Shutdown Strategy Subtotal</b>		<b>\$ -</b>	<b>\$ 0.1</b>	<b>\$ (0.1)</b>
11						
12	LT-2-D-2.09	Regulatory Compliance	Prepare Post-Shutdown Emergency Preparedness Plan	\$ 0.0	\$ 0.1	\$ (0.1)
13	LT-2-D-2.10	Regulatory Compliance	Post-Shutdown Emergency Preparedness Plan, NRC Review	\$ 0.0	\$ -	\$ 0.0
14	LT-2-D-2.11	Regulatory Compliance	Prepare Post-Shutdown Decommissioning Activities Report (PSDAR)	\$ -	\$ -	\$ -
15	LT-2-D-2.12	Regulatory Compliance	Post-Shutdown Decommissioning Activities Report (PSDAR) - NRC Review	\$ -	\$ 0.1	\$ (0.1)
16	LT-2-D-2.13	Regulatory Compliance	Respond to NRC Questions on PSDAR	\$ 0.0	\$ -	\$ 0.0
17	LT-2-D-2.14	Regulatory Compliance	Prepare Decommissioning Cost Estimate (DCE)	\$ -	\$ -	\$ -
18	LT-2-D-2.15	Regulatory Compliance	Decommissioning Cost Estimate (DCE) - NRC Review	\$ -	\$ -	\$ -
19	LT-2-D-2.02	Regulatory Compliance	Prepare Post-Shutdown QA Plan	\$ 0.0	\$ -	\$ 0.0
20	LT-2-D-2.03	Regulatory Compliance	Prepare Post-Shutdown Security Plan	\$ 0.0	\$ -	\$ 0.0
21	LT-2-D-2.04	Regulatory Compliance	Prepare Post-Shutdown Fire Protection Plan	\$ 0.0	\$ -	\$ 0.0
22	LT-2-D-2.05	Regulatory Compliance	Prep Defueled Rad Protection Manual	\$ 0.0	\$ -	\$ 0.0
23	LT-2-D-2.06	Regulatory Compliance	Prepare Preliminary Defueled Technical Specifications	\$ -	\$ -	\$ -
24	LT-2-D-2.08	Regulatory Compliance	Implement Technical Spec Mods	\$ 0.3	\$ -	\$ 0.3
25	SNF-2-D-8.05	Regulatory Compliance	Prepare Irradiated Fuel Management Plan & NRC Review	\$ -	\$ -	\$ -
26		<b>Regulatory Submittals Subtotal</b>		<b>\$ 0.5</b>	<b>\$ 0.2</b>	<b>\$ 0.3</b>
27						
28	LT-2-D-2.17	Historical Site Assessment/Characterization	Historical Site Assessment/Site Charac.	\$ -	\$ 1.1	\$ (1.1)
29		<b>Historical Site Assessment/Characterization Subtotal</b>		<b>\$ -</b>	<b>\$ 1.1</b>	<b>\$ (1.1)</b>
30						
31	LT-2-D-2.31	Transition Modifications	Transition Project Modifications	\$ 0.0	\$ 0.2	\$ (0.2)
32		<b>Transition Modifications Subtotal</b>		<b>\$ 0.0</b>	<b>\$ 0.2</b>	<b>\$ (0.2)</b>
33						
34		<b>2015 Recorded Costs for Distributed Projects Completed in 2015</b>		<b>\$ 0.5</b>	<b>\$ 10.6</b>	<b>\$ (10.1)</b>
35						
36	LT-U-1.01	Undistributed - Labor	Labor License Termination Reporting	\$ 7.2	\$ 7.0	\$ 0.2
37	SNF-U-2.01	Undistributed - Labor	Labor Spent Fuel Management Reporting	\$ 4.2	\$ 3.9	\$ 0.3
38	SR-U-3.01	Undistributed - Labor	Labor Site Restoration Reporting	\$ 0.2	\$ 0.1	\$ 0.1
39			<b>Utility Staff Subtotal</b>	<b>\$ 11.6</b>	<b>\$ 11.0</b>	<b>\$ 0.6</b>
40						
41	LT-U-1.03	Undistributed - Labor	Security Guard Force	\$ 0.4	\$ 0.3	\$ 0.1
42	SNF-U-2.04	Undistributed - Labor	Security Guard Force	\$ 5.2	\$ 4.2	\$ 1.0
43	SR-U-3.02	Undistributed - Labor	Security Guard Force	\$ -	\$ -	\$ -
44			<b>Security Force Subtotal</b>	<b>\$ 5.5</b>	<b>\$ 4.5</b>	<b>\$ 1.0</b>
45						
46		<b>Undistributed - Labor Subtotal</b>		<b>\$ 17.1</b>	<b>\$ 15.5</b>	<b>\$ 1.6</b>
47						
48	LT-U-1.11	Undistributed - Labor	Decommissioning General Contractor Staff	\$ 2.0	\$ -	\$ 2.0
49	SR-U-3.08	Undistributed - Labor	Decommissioning General Contractor Staff	\$ 0.3	\$ -	\$ 0.3
50						
51		<b>Undistributed - Decommissioning General Contractor Staff Subtotal</b>		<b>\$ 2.3</b>	<b>\$ -</b>	<b>\$ 2.3</b>
52						
53	SNF-U-2.09	Undistributed - Non-Labor	Emergency Preparedness Fees	\$ 0.9	\$ 0.1	\$ 0.8
54	LT-U-1.24	Undistributed - Non-Labor	Environmental Permits and Fees	\$ 0.5	\$ 0.1	\$ 0.4
55	LT-U-1.17	Undistributed - Non-Labor	Association Fees and Expenses	\$ 0.4	\$ -	\$ 0.4
56						
57	LT-U-1.06	Undistributed - Non-Labor	Site Lease and Easement Expenses	\$ 0.1	\$ -	\$ 0.1
58	SR-U-3.05	Undistributed - Non-Labor	Site Lease and Easement Expenses	\$ 0.3	\$ 0.1	\$ 0.2
59			<b>Site Lease and Easement Expenses Subtotal</b>	<b>\$ 0.4</b>	<b>\$ 0.1</b>	<b>\$ 0.3</b>
60						
61	LT-U-1.07	Undistributed - Non-Labor	NRC Decommissioning Fees	\$ 0.4	\$ 0.3	\$ 0.1
62	SNF-U-2.08	Undistributed - Non-Labor	NRC Spent Fuel Fees	\$ 0.1	\$ -	\$ 0.1
63			<b>NRC Fees Subtotal</b>	<b>\$ 0.5</b>	<b>\$ 0.3</b>	<b>\$ 0.2</b>
64						
65			<b>Fees, Permits, and Leases Subtotal</b>	<b>\$ 2.6</b>	<b>\$ 0.6</b>	<b>\$ 2.0</b>

## ATTACHMENT B (Continued)

San Diego Gas & Electric						
2015 NDCTP - SONGS Units 2 & 3 Cost Reasonableness						
Comparison of Review Period Expenditure Total to the DCE						
(SDGE 20% Share, 2014\$ in millions)						
				[A]	[B]	[C = A - B]
	DCE No.	Category	Description	DCE	Recorded	Variance
66						
67	LT-U-1.08	Undistributed - Non-Labor	Materials and Services	\$ 0.4	\$ 2.3	\$ (1.9)
68	SNF-U-2.11	Undistributed - Non-Labor	Materials and Services	\$ 0.3	\$ 1.2	\$ (0.9)
69	SR-U-3.06	Undistributed - Non-Labor	Materials and Services	\$ -	\$ 0.1	\$ (0.1)
70	LT-U-1.13	Undistributed - Non-Labor	Craft Worker Training	\$ 0.1	\$ -	\$ 0.1
71	SNF-U-2.15	Undistributed - Non-Labor	Craft Worker Training	\$ 0.1	\$ -	\$ 0.1
72	SR-U-3.09	Undistributed - Non-Labor	Craft Worker Training	\$ 0.0	\$ -	\$ 0.0
73	SR-U-Inv Adj	Undistributed - Non-Labor	Vendor Invoice Adjustments	\$ -	\$ -	\$ -
74			<b>Contracted Services Subtotal</b>	<b>\$ 0.9</b>	<b>\$ 3.6</b>	<b>\$ (2.7)</b>
75						
76	LT-U-1.02	Undistributed - Non-Labor	Utility Staff Health Physics Supplies	\$ 0.2	\$ -	\$ 0.2
77	SNF-U-2.02	Undistributed - Non-Labor	Utility Staff Health Physics Supplies	\$ 0.3	\$ -	\$ 0.3
78			<b>Utility Staff Health Physics Supplies Subtotal</b>	<b>\$ 0.5</b>	<b>\$ -</b>	<b>\$ 0.5</b>
79						
80	LT-U-1.25	Undistributed - Non-Labor	Decom Advisor	\$ 0.3	\$ -	\$ 0.3
81	SNF-U-2.10	Undistributed - Non-Labor	Spent Fuel Maintenance	\$ 0.1	\$ -	\$ 0.1
82	LT-U-1.12	Undistributed - Non-Labor	DGC Health Physics Supplies	\$ 0.1	\$ -	\$ 0.1
83						
84	LT-U-1.09	Undistributed - Non-Labor	DAW Disposal	\$ 0.0	\$ -	\$ 0.0
85	SNF-U-2.12	Undistributed - Non-Labor	DAW Disposal	\$ 0.0	\$ -	\$ 0.0
86			<b>Dry Active Waste Disposal Subtotal</b>	<b>\$ 0.1</b>	<b>\$ -</b>	<b>\$ 0.1</b>
87						
88	LT-U-1.04	Undistributed - Non-Labor	Security-Related Expenses	\$ 0.0	\$ -	\$ 0.0
89	SNF-U-2.05	Undistributed - Non-Labor	Security-Related Expenses	\$ 0.1	\$ -	\$ 0.1
90	SR-U-3.03	Undistributed - Non-Labor	Security-Related Expenses	\$ 0.1	\$ -	\$ 0.1
91			<b>Security-Related Expenses Subtotal</b>	<b>\$ 0.1</b>	<b>\$ -</b>	<b>\$ 0.1</b>
92						
93	LT-U-1.19	Undistributed - Non-Labor	Tools and Equipment	\$ 0.0	\$ -	\$ 0.0
94						
95			<b>Plant Operations Subtotal</b>	<b>\$ 2.0</b>	<b>\$ 3.6</b>	<b>\$ (1.6)</b>
96						
97	LT-U-1.30	Undistributed - Non-Labor	Legal	\$ -	\$ 0.3	\$ (0.3)
98	SNF-U-2.30	Undistributed - Non-Labor	Legal	\$ -	\$ -	\$ -
99	SR-U-3.30	Undistributed - Non-Labor	Legal	\$ -	\$ 0.2	\$ (0.2)
100			<b>Legal Subtotal</b>	<b>\$ -</b>	<b>\$ 0.5</b>	<b>\$ (0.5)</b>
101						
102	SR-U-3.11	Undistributed - Non-Labor	Severance	\$ 2.2	\$ 1.5	\$ 0.7
103						
104	LT-U-1.20	Undistributed - Non-Labor	Non-Process Computers	\$ 0.0	\$ 0.2	\$ (0.2)
105	LT-U-1.21	Undistributed - Non-Labor	Telecommunications	\$ 0.0	\$ -	\$ 0.0
106	LT-U-1.22	Undistributed - Non-Labor	Personal Computers	\$ 0.0	\$ -	\$ 0.0
107	SNF-U-2.22	Undistributed - Non-Labor	Personal Computers	\$ 0.0	\$ -	\$ 0.0
108			<b>Information Technology Subtotal</b>	<b>\$ 0.1</b>	<b>\$ 0.2</b>	<b>\$ (0.1)</b>
109						
110	LT-U-1.10	Undistributed - Non-Labor	Energy	\$ 0.9	\$ 0.2	\$ 0.7
111	SNF-U-2.13	Undistributed - Non-Labor	Energy	\$ 0.2	\$ 0.1	\$ 0.1
112			<b>Energy Subtotal</b>	<b>\$ 1.0</b>	<b>\$ 0.3</b>	<b>\$ 0.7</b>
113						
114	LT-U-1.05	Undistributed - Non-Labor	Insurance	\$ 0.6	\$ 0.3	\$ 0.3
115	SNF-U-2.06	Undistributed - Non-Labor	Insurance	\$ 0.2	\$ 0.1	\$ 0.1
116	LT-U-1.14	Undistributed - Non-Labor	Workers Compensation Insurance	\$ 0.0	\$ 0.1	\$ (0.1)
117			<b>Insurance Subtotal</b>	<b>\$ 0.9</b>	<b>\$ 0.5</b>	<b>\$ 0.4</b>
118						
119	LT-U-1.15	Undistributed - Non-Labor	Community Engagement Panel	\$ 0.6	\$ 0.1	\$ 0.5
120	LT-U-1.16	Undistributed - Non-Labor	Property Tax	\$ -	\$ -	\$ -
121						
122	LT-U-1.18	Undistributed - Non-Labor	Utilities (Water, gas, phone)	\$ 0.1	\$ -	\$ 0.1
123	SNF-U-2.18	Undistributed - Non-Labor	Utilities (Water, gas, phone)	\$ 0.2	\$ -	\$ 0.2
124	SR-U-3.13	Undistributed - Non-Labor	Utilities (Water, gas, phone)	\$ -	\$ -	\$ -
125			<b>Utilities (Water, gas, phone) Subtotal</b>	<b>\$ 0.3</b>	<b>\$ -</b>	<b>\$ 0.3</b>
126						
127	SR-U-Bank	Undistributed - Non-Labor	Bank Fees & Interest	\$ -	\$ -	\$ -
128						
129	LT-U-RS	Undistributed - Non-Labor	Results Sharing	\$ -	\$ 0.4	\$ (0.4)
130	SNF-U-RS	Undistributed - Non-Labor	Results Sharing	\$ -	\$ 0.5	\$ (0.5)
131	SR-U-RS	Undistributed - Non-Labor	Results Sharing	\$ -	\$ -	\$ -
132			<b>Results Sharing Subtotal</b>	<b>\$ -</b>	<b>\$ 0.9</b>	<b>\$ (0.9)</b>
133						
134			<b>Other Non-Labor Costs Subtotal</b>	<b>\$ 5.0</b>	<b>\$ 4.0</b>	<b>\$ 1.0</b>
135						
136		<b>Undistributed - Non-Labor Subtotal</b>		<b>\$ 9.6</b>	<b>\$ 8.2</b>	<b>\$ 1.39</b>
137						
138		<b>Undistributed Subtotal</b>		<b>\$ 29.0</b>	<b>\$ 23.7</b>	<b>\$ 5.30</b>
139						
140		<b>Total</b>		<b>\$ 29.5</b>	<b>\$ 34.3</b>	<b>\$ (4.80)</b>

## General Notes:

- (i) Distributed costs include 2015 recorded costs and 2015 DCE costs associated with the projects completed in 2015.  
(ii) Undistributed costs include January - December 2015 recorded costs and 2015 DCE costs.  
(iii) Totals may not reconcile due to rounding.  
(iv) Amounts with "\$0.0" or "\$ (0.0)" indicate that costs are included in the category but are \$0 when rounded to the nearest hundred thousand. "\$ -" indicates that no costs are included in the category.