Application No.: A.22-02-016
Exhibit No.: SDGE-03
Witnesses: Tracy M. Dalu

Charles D. Ladd Juan C. Fernandez

PUBLIC VERSION

PREPARED DIRECT TESTIMONY

ON BEHALF OF

SAN DIEGO GAS & ELECTRIC COMPANY

(2020 SONGS 1 and SONGS 2&3 DCE)



BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

February 28, 2022

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PREPARED DIRECT TESTIMONY ON BEHALF OF SDG&E

I. INTRODUCTION (T. DALU)

The purpose of this testimony is to demonstrate the reasonableness of the Southern California Edison Company ("SCE") 2020 San Onofre Nuclear Generating Station ("SONGS") Unit 1 ("SONGS 1") Decommissioning Cost Estimate ("DCE") and 2020 SONGS Units 2&3 ("SONGS 2&3") DCE (collectively, the "SONGS DCEs" or "DCEs")¹ and San Diego Gas & Electric Company's ("SDG&E") forecast of its SDG&E-only costs for SONGS 1 and SONGS 2&3. This testimony provides support for the California Public Utilities Commission ("CPUC" or "Commission") to:

- (1) Approve the joint request by SCE and SDG&E to find the SCE 2020 SONGS 1

 DCE to be reasonable;²
- (2) Approve the joint request by SCE and SDG&E to find the 2020 SONGS 2&3

 DCE to be reasonable;³ and
- (3) Approve the request by SDG&E that its forecast for future SDG&E-only costs of \$19.4 million (SDG&E share, 2014\$) is reasonable.

The 2020 SONGS DCE dated August 19, 2021, provided as Appendix B to Exhibit ("Ex.") SCE-04 to the Application.

The updated SCE 2020 SONGS 1 DCE, using methodologies consistent with the 2017 SONGS 1 DCE, identifies a \$225.9 million (100% share, 2014\$) total cost for the remaining activities. If the SCE 2020 SONGS 1 DCE is adopted by the Commission, SDG&E's twenty percent (20%) ratable share of decommissioning costs for SONGS 1 would be \$45.2 million (SDG&E share, 2014\$). This excludes future SDG&E-only costs.

The updated 2020 SONGS 2&3 DCE, using methodologies consistent with the 2017 SONGS 2&3 DCE, identifies a \$4,712.2 million (100% share, 2014\$) total cost for the decommissioning activities to be undertaken. If the 2020 SONGS 2&3 DCE is adopted by the Commission, SDG&E's twenty percent (20%) ratable share of decommissioning costs for SONGS 2&3 would be \$942.4 million (SDG&E share, 2014\$). This excludes future SDG&E-only costs.

This volume of testimony is organized as follows: Chapter II discusses SDG&E's efforts to review the SCE 2020 SONGS 1 and SONGS 2&3 DCEs. Chapter III discusses the 2020 SONGS 1 DCE. Chapter IV discusses the 2020 SONGS 2&3 DCE. Chapter V describes SDG&E's estimate for its future "SDG&E-only" costs.

II. SDG&E'S REVIEW OF THE SCE 2020 SONGS 1 AND 2020 SONGS 2&3 DCE (T. DALU)

As a 20% minority owner in SONGS, SDG&E recognizes the need to perform its due diligence in reviewing for reasonableness the SONGS 1 and SONGS 2&3 DCEs. SDG&E reviewed drafts of the DCEs, workpapers and other supporting documentation.

For each category of cost in the DCEs, SDG&E obtained workpapers and supporting documentation from The Kenrich Group, an HKA Company ("Kenrich") and performed a detailed review to determine whether the cost estimate was reasonable. SDG&E reviewed each distributed project and undistributed activity. The review included a comparison and variance explanation between the current DCE and the previous DCE. In addition, the review focused on the basis for the estimate. Questions, concerns, and feedback were documented for SDG&E and followed up with Kenrich and SCE. All questions, concerns, and feedback were adequately addressed by Kenrich and SCE.

III. ESTIMATE OF SCE 2020 SONGS 1 DCE (T. DALU)

The SCE 2020 SONGS 1 DCE estimates that the total cost to complete the remaining decommissioning of SONGS 1 will be \$225.9 million (100% share, 2014\$).⁴ The 2017 SONGS

The SCE 2020 SONGS 1 DCE includes estimated costs of \$183.3 million (100% share, 2014\$) to be incurred after January 1, 2021, plus \$42.6 million (100% share, 2014\$) in recorded costs in 2016 through 2020, totaling \$225.9 million (100% share, 2014\$). There were other SONGS 1 recorded costs incurred from 2016 through 2020 associated with completed projects which are not included in the SCE SONGS 1 2020 DCE because they are the subject of reasonableness review in this proceeding. As explained in SCE-04 Section V and also below in Section III.A.6., the SCE SONGS

1 DCE, adjusted to remove historical costs not included in the SCE 2020 SONGS 1 DCE, was \$203.7 million (100% share, 2014\$).⁵ The SCE 2020 SONGS 1 DCE has increased by \$22.2 million (100% share, 2014\$) for the time period 2021-2053.

The increase between the 2017 SONG 1 DCE and the SCE 2020 SONGS 1 DCE is primarily due to increases in lease payments to the California State Lands Commission ("CSLC") for the SONGS offshore conduits and conduit surety bond payments that are estimated to be incurred through 2053. In addition, a change in the assumption that the Department of Energy ("DOE") will commence accepting spent fuel in 2031 versus 2028 is also contributing to the increase between the 2017 and 2020 DCE. These increases are offset by a decrease in Distributed Other Project costs driven by lower Independent Spent Fuel Storage Installation ("ISFSI") aging management costs, lower Greater than Class C ("GTCC") licensing costs and lower service level agreement ("SLA") costs. Below in Table 1 is a comparison of the SCE 2020 SONGS 1 DCE to the 2017 SONGS 1 DCE.

¹ DCE includes an adjustment of (100% share, 2014\$) to the Kenrich 2020 SONGS 1 DCE to include the transportation and disposal of reactor vessel project costs that are not the subject of reasonableness review in this proceeding.

The 2017 SONGS 1 DCE included estimated costs of \$207.1 million (100% share, 2014\$) to be incurred after January 1, 2018, plus \$1.9 million (100% share, 2014\$) in recorded costs during 2016 and 2017, for a total of \$209.0 million (100% share, 2014) The \$209.0 million, included 2018 through 2020 estimated undistributed costs of \$4.8 million and \$0.5 million associated with completed projects, which are not included in the SCE 2020 SONGS 1 DCE (i.e., \$209.0M - \$5.3M = \$203.7M).

Table 1 SCE 2020 SONGS 1 DCE 100% Share, 2014\$ in Millions

Line No.	Description	2020 DCE Total (2014\$)	2017 DCE Total (2014\$)	Variance (2014\$)
1	Distributed Projects			
2	Other Projects		\$12.0	
3	Substructure Removal & Final Site Restoration	\$34.5	\$34.4	\$0.1
4	Offshore Conduits Removal	\$34.1	\$34.0	\$0.1
5	License Termination for Final Site Restoration	\$6.9	\$6.9	\$0.0
6	ISFSI Demolition	\$3.4	\$3.4	\$0.0
7	Transportation and Disposal of Reactor Vessel		\$50.2	
8	Distributed Subtotal	\$136.3	\$140.9	(\$4.6)
9				
10	Undistributed Activities			
11	Non-Labor	\$54.0	\$27.7	\$26.3
12	Labor-Staffing	\$19.5	\$17.0	\$2.5
13	Service Level Agreements/A&G	\$6.4	\$8.4	(\$2.0)
14	Civil Works Contractor Staffing	\$9.7	\$9.7	\$0.0
15	Undistributed Subtotal	\$89.6	\$62.8	\$26.8
16				
17	Total	\$225.9	\$203.7	\$22.2

General Notes:

- (1) The 2017 DCE included \$0.5 million associated with completed projects and \$4.8 million in 2018-2020 estimated undistributed costs for a total 2017 DCE of \$209.0 million.
- (2) The 2020 DCE includes 2016 through 2020 recorded costs of \$42.6 million for ongoing projects which includes: Transportation and Disposal of Reactor Vessel, ISFSI Aging Management (Other Projects), ISFSI Coastal Development Permit ("CDP") Settlement (Other Projects), and Construction Debris Area Assessment (Other Projects).

A. Distributed Projects (C. Ladd)

The SCE 2020 SONGS 1 DCE estimates remaining costs on distributed projects to be \$136.3 million (100% share, 2014\$) through 2053.⁶ The 2017 SONGS 1 DCE, estimated \$140.9 million (100% share, 2014\$) for the remaining decommissioning at SONGS 1. The decrease in the SONGS 1 DCE value between the 2017 DCE and the 2020 DCE is \$4.6 million (100% share, 2014\$). This reduction in the estimate is due to good contractor performance and improved pricing for other distributed projects.

1. Other Distributed Projects

SCE needs to perform other projects to comply with federal and state regulations and the terms of SCE's real estate authorizations with the Department of the Navy ("Navy").

The SCE 2020 SONGS 1 DCE value for all Other Distributed Projects is

(100% share, 2014\$). The 2017 SONGS 1 DCE value for all of these projects was \$12.0 million

(100% share, 2014\$). The decrease of (100% share, 2014\$) is primarily due to
good contractor performance on the ISFSI Aging Management project and improved pricing on
the GTCC Licensing project. Other Distributed Projects are discussed in more detail below.

Independent Spent Fuel Storage Installation Aging Management – The Aging Management project was established to develop inspection and maintenance programs for the dry storage systems to confirm the continuing integrity of dry cask storage canisters. For SONGS 1, this cost is specific to the Areva⁷ Transnuclear ("Areva TN") advanced horizontal storage module ("AHSM") system. Initial cask testing, inspection equipment and licensing costs for dry cask Nuclear Regulatory Commission ("NRC") Certificate of Compliance ("CoC")

The 2020 DCE assumes decommissioning completion for SONGS 1 and SONGS 2&3 to occur in 2053.

On January 23, 2018, after a restructuring Areva TN changed its name to Orano

renewals, and Safety Analysis Report updates are included in the scope. Annual maintenance and inspections of the AHSMs are included in the undistributed non-labor Aging Management category and are not included in this distributed project. The Aging Management costs are allocated to SONGS 1 based on the proportion of SONGS 1 fuel assemblies stored in the Areva TN ISFSI system.

The SCE 2020 SONGS 1 DCE forecast for ISFSI Aging Management is \$3.6 million (100% share, 2014\$). The 2017 SONGS 1 DCE forecast for ISFSI Aging Management was \$6.8 million (100% share, 2014). The \$3.2 million (100% share, 2014\$) cost decrease was due to good performance by an experienced contractor finding more economical methods to perform the work. The contingency rate applied to this project is 10% and will cover variations in contract support costs.

Greater Than Class C Canister Licensing – The SCE 2020 SONGS 1 DCE includes

(100% share, 2014 \$) to amend the CoC for the Areva TN spent fuel canisters so they
can transport GTCC waste from the ISFSI to an interim storage facility or a final repository. The
Areva TN fuel cannisters were already licensed to transport spent nuclear fuel. The 2017
SONGS 1 DCE included \$2.4 million (100% share, 2014 \$) for this project, resulting in a
decrease of (100% share, 2014 \$). SCE had not yet entered into a contract with
Areva TN to perform this scope when the 2017 SONGS 1 DCE was developed. The SCE 2020
SONGS 1 DCE uses the lower pricing of the contract, which is less than the amount in the 2017
SONGS 1 DCE. This project is required for the DOE to remove the spent fuel canisters that
contain SONGS 1 GTCC waste. The contingency rate applied to this project is

Construction Debris Area Assessment – When SONGS 1 commenced commercial operation in 1968, it did not have a concrete building surrounding the spherical steel containment structure on SONGS 1 or 4kV emergency diesel generators. Later, in 1976 and 1977, a concrete sphere enclosure building was constructed around the steel containment structure and two emergency diesel generators, and a reinforced concrete diesel generator building were added. At that point, the debris generated while excavating for the sphere enclosure building and the diesel generator building required disposal. The debris excavated from the construction area was disposed of by SCE as directed by the Navy in an area referred to as the construction debris area ("CDA").

In 2020, the Navy directed SCE to determine whether there was any radiological and non-radiological contamination in the CDA and to perform any needed remediation. It was also required that SCE obtain a "No Further Action Letter" from the California Department of Toxic Substance Control ("DTSC") indicating the area is available for unrestricted use.

The SCE 2020 SONGS 1 DCE includes \$0.6 million (100% share, 2014 \$) for a CDA Assessment. The activity to perform this investigation and any necessary remediation was not known at the time the 2017 DCE was created and therefore an estimate for this activity was not included. The contingency rate applied to this project is 10% and will cover variations in contract support costs and in the Navy and other agencies' labor hours and pricing.

<u>Decommissioning Cost Estimate Update</u> – California Public Utilities Code section 8326 requires DCE updates for Commission review of Nuclear Decommissioning Cost Triennial Proceedings ("NDCTPs"). The SCE 2020 SONGS 1 DCE update fulfills that regulatory requirement.

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The SCE 2020 SONGS 1 DCE includes \$0.5 million (100% share, 2014 \$) for the preparation of periodic SCE SONGS 1 DCEs for future NDCTPs through 2053. The 2017 SONGS 1 DCE included \$0.4 million for future DCE updates resulting in a cost increase of \$0.1 million. Due to DOE non-performance in accepting spent nuclear fuel the end date of decommissioning has shifted. This will result in an additional DCE being required in 2051 that is included in the 2020 DCE. The contingency rate applied to this project is 15% and will cover variations in labor hours and pricing, and contract support costs.

Greater Than Class C Waste Disposal – There are no disposal facilities licensed to accept GTCC waste in operation in the United States. The Radioactive Waste Policy Amendments Act specifies that the federal government is responsible for the disposal of GTCC radioactive waste.

For purposes of the 2017 SONGS 1 DCE, the cost of shipping and disposing of a GTCC canister was assumed to equal the cost associated with a canister of SONGS 1 spent fuel. The one-mill fee per kilowatt-hour of generation under the Standard Contract was used to estimate this cost. The SCE 2020 SONGS 1 DCE forecast for GTCC Waste Disposal is \$2.0 million (100% share, 2014\$). The 2017 SONGS 1 DCE cost was \$2.0 million (100% share, 2014\$). The contingency rate applied to this project is 20% and will cover variations in the pricing of GTCC waste.

Independent Spent Fuel Storage Installation Coastal Development Permit Settlement – As a result of a settlement agreement with parties opposed to the storage of spent fuel at SONGS, a strategic plan, conceptual transportation plan and an action plan for the relocation of spent fuel was developed and issued in March 2021. The costs are allocated to the units based on the relative number of spent fuel assemblies. The SCE 2020 SONGS 1 DCE cost for ISFSI CDP Settlement is \$0.4 million (100% share, 2014\$). The 2017 SONGS 1 DCE cost for ISFSI CDP

Settlement was \$0.4 million (100% share, 2014\$). The contingency rate applied to this project is 0%.

SDG&E reviewed the supporting documentation for the six Other Distributed Projects described above and considers the associated SCE 2020 SONGS 1 DCE forecast amounts to be reasonable and appropriate.

2. Substructure Removal & Final Site Restoration

This work will be done for SONGS 1 in Period 7 in conjunction with ISFSI removal. In 2052, the physical work to remove the substructures will begin. The structures that remain in 2050 will need to be removed as required by the Navy and include the containment foundation, circulating water structures, sewage treatment plant, as well as the slurry backfill. The north industrial area ("NIA") seawall will also be removed during this period. After substructures are removed, the site will be graded and re-vegetated.

The SCE 2020 SONGS 1 DCE forecast for substructure removal and final site restoration is \$34.5 million (100% share, 2014\$). The previous DCE had a value of \$34.4 million (100% share, 2014\$) and is essentially unchanged. The contingency rate applied to this project is 25% and will cover variations in labor hours and pricing, contract support costs and material costs.

SDG&E reviewed the supporting documentation for the forecast and considers the DCE amount to be reasonable and appropriate.

3. Offshore Conduits Removal

The scope of work of this project is to remove the SONGS 1 offshore conduits. The CSLC has allowed the conduits to remain in place provided that the SONGS 1 Participants retain the liability to remove them should the CSLC determine that removal is required at some future date. Until such time that a final decision is made to eliminate liability from the Participants for conduit removal, it is appropriate to include costs for full removal in the DCE.

The SCE 2020 SONGS 1 DCE amount is \$34.1 million (100% share, 2014\$). The 2017 SONGS 1 DCE estimate was \$34.0 million (100% share, 2014\$) and is essentially unchanged. The contingency rate applied to this project is 25% and will cover variations in labor hours and pricing, and contract support costs. SDG&E reviewed the supporting documentation for the forecast and considers the DCE amount to be reasonable and appropriate.

4. License Termination for Final Site Restoration

Upon removal of all SONGS 1 fuel and GTCC waste, SONGS 1 will apply for final license termination from the NRC. SCE will prepare the License Termination Plan, which will be submitted to the NRC for approval. In addition, final status surveys will be performed and reviewed by the Oak Ridge Institute for Science and Education and the NRC for approval by December 2051.

The SCE 2020 SONGS 1 DCE License Termination for Final Site Restoration amount is \$6.9 million (100% share, 2014\$). The 2017 SONGS 1 DCE estimate was \$6.9 million (100% share, 2014\$). The contingency rate applied to this project is 25% and will cover variations in contract support costs and material costs. SDG&E reviewed the supporting documentation for the forecast and considers the DCE amount to be reasonable and appropriate.

5. Independent Spent Fuel Storage Installation Demolition

SCE will demolish and remove the ISFSI and perform a final status survey of the ISFSI after the removal of all spent fuel and GTCC waste by the DOE. There are three ISFSI pads; pads 1 and 2 are the Areva TN horizontal storage system and pad 3 is the Holtec vertical UMAX system. The costs covered in this project for SONGS 1 are to decontaminate and demolish the two Areva TN ISFSI pads. The costs are prorated between SONGS 1, 2, and 3 based on the portion of each unit's spent fuel stored in the Areva TN ISFSI system.

The SCE 2020 SONGS 1 DCE total estimate at completion for ISFSI demolition is \$3.4 million (100% share, 2014\$). The 2017 SONGS 1 DCE had a value \$3.4 million (100% share, 2014\$). The contingency rate applied to this project is 25% and will cover variations in labor hours and pricing, contract support costs and material costs. SDG&E reviewed the supporting documentation for the forecast and considers the DCE amount to be reasonable and appropriate.

6. Transportation and Disposal of Reactor Vessel

As part of the contract executed with SONGS Decommissioning *Solutions* ("SDS"), SDS was responsible for the transportation and removal of the reactor pressure vessel ("RPV") package from the SONGS site to the Energy *Solutions*' Clive, Utah facility. The 670-ton shipment travelled via rail and road in 2021 to the Energy *Solutions*' facility. Costs incurred for this project include the milestone payment to SDS and applicable disposal fees and taxes. SDS submitted a claim requesting payment for additional project closeout costs, which SCE disputes. Because of this outstanding claim, SCE deferred the reasonableness review for this project until the next NDCTP. As a result, the estimated cost for the RPV Transportation and Disposal project has been added as an adjustment by SCE to the Kenrich 2020 SONGS 1 DCE.

The SCE 2020 SONGS 1 DCE total estimate at completion for transportation and disposal of the reactor vessel is (100% share, 2014\$) and is . SDG&E reviewed the supporting documentation for the forecast and considers the DCE amount to be reasonable and appropriate.

B. Undistributed Activities (T. Dalu)

The SCE 2020 SONGS 1 DCE estimates remaining costs for the undistributed activities to be \$89.6 million (100% share, 2014\$). The undistributed activities major categories are described below.

1. Non-Labor

Non-labor costs include costs for a wide range of decommissioning activities and obligations including the following:

Site Lease and Easement Expenses – SCE makes annual lease payments to the CSLC for the SONGS offshore conduits. The 2020 DCE includes the assumption that the new lease currently in negotiation with the CSLC will have higher lease payments and will also include a conduit surety bond payment required through 2053.

<u>Contracted Services</u> – Contracted services generally consists of estimated payments for shorter-term supplemental resources, specialty contractors and consultants, third-party services, materials, equipment, and supplies. In addition, SONGS 1 seawall maintenance costs are included in this category.

Nuclear Regulatory Commission Fees – As holder of the NRC licenses for SONGS, SCE is required to pay 10 C.F.R. Part 171 annual license fees and 10 C.F.R. Part 170 inspection fees until the NRC licenses are terminated.

California Environmental Quality Act ("CEQA") Reporting – As part of the CEQA review and approval of the CDP, the CSLC and California Coastal Commission ("CCC") imposed conditions and mitigation requirements related to the Final Environmental Impact Report ("EIR") and CDP. In compliance with these mitigation requirements, SCE will incur costs to perform high tide topographic surveys, assess sea level rise vulnerability, and perform real time ISFSI radiation monitoring in accordance with the Memorandum of Understanding ("MOU") agreed to between SCE and local municipalities. Costs for testing conduit integrity and providing quarterly updates and annual progress reports on the surveys and assessments performed are also included in the estimate.

Independent Spent Fuel Storage Installation Aging Management – The Aging Management program for SONGS 1 covers the Areva TN dry storage systems and represents only the undistributed portion of the program. The estimate for the SONGS 1 ISFSI Aging Management program includes annual facility maintenance and inspection costs as well as inservice canister inspections every five years.

<u>Insurance</u> – Estimated insurance costs include premium payments for nuclear liability and property insurance. NRC regulations require SCE to maintain minimum levels of nuclear liability and property insurance until the spent fuel is removed from the SONGS site. SCE also pays premiums for general liability insurance and excess workers' compensation insurance.

Emergency Preparedness Fees – SCE provides funding to local jurisdictional authorities for their radiological emergency preparedness, including planning, response, and recovery activities. The amount in the estimate is based on the 2020 Memorandum of Understanding with the counties of Orange and San Diego and three other local cities and is estimated to continue until all spent fuel has been removed from SONGS.

<u>Water</u> – SCE purchases potable and service water for the SONGS Site. Water is provided by the South Coast Water District Joint Regional Water Supply System ("JRWSS") and water costs are estimated based on JRWSS projections.

<u>Security Related Expenses</u> – The estimate for security related expenses includes the cost of uniforms, weapons, ammunition, supplies, and equipment needed for the SONGS security force. In addition, the cost of background investigations, training, and vendor support will be required as long as spent fuel remains onsite.

2
 3

<u>Energy</u> – SCE purchases electrical energy to power the SONGS site and perform decommissioning work. Energy costs are based on historical retail electricity rates and projected usage.

Spent Fuel Strategic Plan Activities – As part of the ISFSI CDP settlement agreement, SCE and its team of experts developed a strategic plan related to the potential relocation of the spent fuel to an offsite storage facility or a permanent repository. As a result of the strategic plan, a broad-based coalition of stakeholders to advocate for any federal legislation and appropriations needed to support relocation of the SONGS spent fuel will be formed and SCE's cost associated with participation is included in the DCE estimates. In addition, costs associated with the activities to ensure the infrastructure and regulatory programs are ready for the transportation of spent fuel are included in the estimate.

<u>Information Technology</u> – SCE will incur software and network license fees, pay network service providers and provide internal technical support to site personnel at levels commensurate with site staffing until decommissioning is completed. These costs are exclusive of the information technology charges included in the SLAs that focus on network and telecommunication services for the ISFSI, maintenance of nuclear records and cyber security.

<u>Association Fees and Expenses</u> – This category of costs includes payments for Nuclear Energy Institute membership fees and Electric Power Research Institute membership fees.

Ground Water Monitoring – This category of costs include sampling, analysis and monitoring the ground water beneath the area formerly occupied by SONGS 1 for the presence of radioactive elements and will be required through 2053.

<u>Dry Active Waste Disposal</u> – SCE will incur costs for the disposal of dry active waste during the SONGS 1 substructure removal in 2052 - 2053. These costs include disposing of

contaminated clothing, tools, and personal protective equipment (e.g., masks, face shields, gloves).

Loading Spent Fuel and Greater Than Class C Waste to DOE – Under the DOE Standard Contract, SCE is responsible for the cost to transfer spent fuel canisters from the ISFSI and loading them into DOE shipping containers onsite, and then onto the DOE's transportation device. There are 17 canisters containing SONGS 1 spent fuel and one canister containing SONGS 1 GTCC waste.

<u>Civil Works Contractor Health Physics Supplies</u> – This category includes the cost of health physics supplies, such as personal radiological monitoring and equipment that the civil works contractor will require during substructure removal and ISFSI demolition.

The estimated costs for all other non-labor are shown in Table 2 below:

Table 2 Undistributed Non-Labor Cost Estimates SCE 2020 SONGS 1 DCE 100% Share, 2014\$ in Millions

Line No.	Description	2020 DCE Total (2014\$)	2017 DCE Total (2014\$)	Variance (2014\$)		
1	Undistributed Non-Labor					
2	Site Lease and Easements Expenses	\$19.1	\$1.2	\$17.9		
3	Contracted Services	\$7.7	\$4.2	\$3.5		
4	NRC Fees	\$12.3	\$10.3	\$2.0		
5	CEQA Reporting	\$0.9	\$0.0	\$0.9		
6	ISFSI Aging Management	\$1.6	\$1.1	\$0.5		
7	Insurance	\$3.0	\$2.5	\$0.5		
8	Emergency Preparedness Fees	\$1.5	\$1.9	(\$0.4)		
9	Water	\$0.7	\$0.3	\$0.4		
10	Security Related Expenses	\$0.7	\$0.3	\$0.4		
11	Energy	\$0.6	\$0.4	\$0.2		
12	Spent Fuel Strategic Plan Activities	\$0.2	\$0.0	\$0.2		
13	Information Technology	\$0.3	\$0.2	\$0.1		

14	Association Fees and Expenses	\$0.2	\$0.1	\$0.1
15	Ground Water Monitoring	\$0.5	\$0.5	\$0.0
16	DAW Disposal	\$0.0	\$0.0	\$0.0
17	Loading Spent Fuel and GTCC Waste to DOE	\$4.7	\$4.7	\$0.0
18	Civil Works Contractor HP Supplies	\$0.0	\$0.0	\$0.0
19				
20	Total	\$54.0	\$27.7	\$26.3

The contingency rate applied for the undistributed non-labor estimate is 15% and will cover variations in contract support costs, variations in material costs, and variations in lease payments, energy costs, insurance, and required permits and fees.

The SCE 2020 SONGS 1 DCE estimate for non-labor is \$54.0 million (100% share, 2014\$). The 2017 SONGS 1 DCE estimate for non-labor was \$27.7 million (100% share, 2014\$). The increase of \$26.3 million between the 2017 SONGS 1 DCE and SCE 2020 SONGS 1 DCE is primarily due to increases in lease payments to the CSLC for the SONGS offshore conduits and conduit surety bond payments, estimated to be incurred through 2053. In addition, the variance is due to an additional three years of costs that will be incurred as a result of the DOE's non-performance in accepting spent nuclear fuel. SDG&E reviewed the supporting documentation for the forecasts and considers the SCE 2020 SONGS 1 DCE amount to be reasonable and appropriate.

2. Labor-Staffing

The undistributed labor category generally includes the required staffing to provide the oversight, management, and other activities necessary to support the decommissioning project and the storage of the spent fuel. It includes salaries, the short-term incentive compensation costs and labor overheads. Undistributed labor-staffing is categorized into three areas: Site Management & Administration, ISFSI Management, and Decommissioning Project Oversight.

In addition, there are individuals who have been designated as Key Oversight personnel associated within the three categories noted above. The undistributed labor-staffing categories are described below:

Site Management & Administration – After SONGS 2&3 decontamination and dismantlement ("D&D") is complete, the primary activity at SONGS will be the oversight of the ISFSI, and therefore, costs are attributable to all three units. During this time, 10.25% of the Site Management & Administrative labor costs are allocated to SONGS 1.8 After the SONGS 1 spent fuel has been removed in 2037, no Site Management & Administration costs will be allocated to SONGS 1 until 2052, at which point 10.25% of costs associated with the oversight and strategic planning of the ISFSI demolition and final site restoration activities will be allocated to SONGS 1.

ISFSI Management – The ISFSI management personnel, including security officers, are responsible for the operations, maintenance, and security of the plant facilities. After all SONGS fuel was transferred to dry fuel storage in August 2020, the primary responsibility of plant management personnel is the ISFSI. As such costs are allocated between all three units with 10.25% of these costs being allocated to SONGS 1 and continues until all SONGS 1 on-site fuel is removed in 2037.

<u>Decommissioning Project Oversight</u> – The SONGS 1 costs occur during ISFSI demolition, substructure removal work, and final site restoration, and will entail oversight of the contractor selected to perform these tasks. This oversight is in support of all three units and 10.25% of costs will be allocated to SONGS 1. In addition, there will be decommissioning

Costs that are common to Units 1, 2, and 3 are allocated between Units based on the portion of spent fuel assemblies on the ISFSI after all SONGS 2&3 fuel was transferred to dry storage. This results in a 10.25%, 44.75%, 45.00 allocation to Units 1, 2, and 3, respectively.

oversight positions needed solely for SONGS 1 during this period, and those costs will be allocated 100% to SONGS 1.

The contingency rate applied for the SONGS 1 labor-staffing estimate is 5% for the years 2021 through 2028 and 10% for the remainder of the project and will cover variations in staffing requirements and variations in labor hours and labor rates.

The SCE 2020 SONGS 1 DCE forecast for labor-staffing is \$19.5 million (100% share, 2014\$). The 2017 SONGS 1 DCE estimate was \$17.0 million (100% share, 2014\$). The \$2.5 million (100% share, 2014\$) increase in labor-staffing costs can be attributed primarily to an extension in the estimate of when the DOE will commence accepting spent fuel from 2028 to 2031. SDG&E reviewed the supporting documentation for the labor-staffing forecast and considers the SONGS 1 DCE forecast amount to be reasonable and appropriate.

3. Service Level Agreements/Administrative and General Expenses

The SCE 2020 SONGS 1 DCE applies a 5% Administrative & General ("A&G") overhead loader to all remaining decommissioning costs beginning in 2029 to account for SCE's A&G expenses supporting the SONGS 1 decommissioning project. This is a departure from the approach used in the 2017 SONGS 1 DCE, where from 2018 to 2051 SCE's A&G support costs were allocated to SONGS 1. The change in approach was driven by the fact that during SONGS 2&3 D&D, the portion of the SLAs supporting SONGS 1 decommissioning will be de minimis and has resulted in a \$2.0 million (100% share, 2014\$) decrease between the forecast in the 2017 SONGS 1 DCE, \$8.4 million (100% share, 2014\$) and the SCE 2020 SONGS 1 DCE, \$6.4 million (100% share, 2014\$). The contingency rate applied to the SLA in support of SONGS 1 is 10% and will cover variations in SCE labor and contract support requirements. SDG&E reviewed the supporting documentation for the forecast of the SLA/A&G expenses and considers the SCE 2020 SONGS 1 DCE amount to be reasonable and appropriate.

4. Civil Works Contractor Staffing

The Civil Works Contractor staffing undistributed labor category includes the undistributed staffing portion for the contractor that will do the Civil Works project (2048 - 2051) and ISFSI Demolition (2052 - 2053). The contingency rate applied to this estimate is 25%, which is a reasonable rate for this high-level estimate that will occur later in the project.

The SCE 2020 SONGS 1 DCE and the 2017 SONGS 1 DCE forecast for civil works contractor staffing are both \$9.7 million (100% share, 2014\$). SDG&E reviewed the supporting documentation for the civil works contractor staffing forecast and considers the SONGS 1 DCE forecast amount to be reasonable and appropriate.

IV. ESTIMATE OF 2020 SONGS 2&3 DCE (T. DALU)

The 2020 SONGS 2&3 DCE includes the total estimated project cost including recorded costs through December 31, 2020, and estimated costs to 2053. The 2020 SONGS 2&3 DCE estimates that the total cost to decommission SONGS 2&3 will be \$4,712 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE was \$4,479 million (100% share, 2014\$) which is an increase of \$234 million (100% share, 2014\$). The increase of \$234 million can be primarily attributed to an increase in costs for decontamination, demolition and disposal resulting from contract scope changes related to backfill, a delay in SCE issuing the Notice to Proceed for Phase II and miscellaneous scope and timing changes. Other increases include costs associated with the delay in the completion of fuel transfer operations and an increase in GTCC storage costs. These increases are offset by lower ISFSI aging management costs, lower plant easement and lease renewals due to a reduction in environmental assessments and reporting costs and lower

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Table 3 2020 SONGS 2&3 DCE 100% Share, 2014\$ in Millions

Line No.	Description	2020 DCE Total (2014\$)	2017 DCE Total (2014\$)	Variance (2014\$)
1	Distributed Projects			
2	ISFSI & Fuel Transfer Operations ¹⁰	\$297.5	\$264.7	\$32.8
3	Final Site Restoration	\$6.9	\$6.9	-
4	ISFSI Aging Management	\$23.5	\$36.5	(\$13.0)
5	Decontamination, Demolition & Disposal ¹¹			
6	Substructure Removal	\$274.0	\$273.1	\$0.9
7	Other Projects ¹²	\$122.7	\$99.6	\$23.1
8	GTCC Waste Storage	\$63.6	\$26.6	\$37.0
9	Plant Easement/Lease Renewals ¹³	\$10.8	\$27.1	(\$16.3)
10	Offshore Conduits Removal	\$91.9	\$91.6	\$0.3
11	ISFSI Demolition	\$19.3	\$19.2	\$0.1
12	Completed Projects ¹⁴	\$123.3	\$123.3	-
13	Distributed Subtotal			

The Kenrich Group, LLC 2020 Decommissioning Cost Estimate, dated August 19, 2021, provided as Appendix B to Ex. SCE-04 to the Application.

In accordance with Decision ("D.")21-12-026, the contingency in the 2017 SONGS 2&3 DCE associated with the Holtec contract has been reduced to 8%.

This category includes estimates from the 2020 SONGS 2&3 DCE for Decontamination, Demolition & Disposal and Initial Decontamination & Demolition Activities from Completed Projects. In accordance with D.21-12-026, the contingency in the 2017 SONGS 2&3 DCE associated with the Decommissioning General Contract Agreement has been reduced to 8%.

This category excludes estimates from the 2020 SONGS 2&3 DCE for ISFSI Aging Management, GTCC Waste Storage, and Plant Easement/Lease Renewals. Those projects are listed separately on this chart.

This category includes estimates from the 2020 SONGS 2&3 DCE for Initial Real Estate Authorization Renewal and Plant Easement, Plant Easement Extensions, and Plant Easement Amendment for Final Site Restoration.

This category excludes estimates from Initial Decontamination & Demolition Activities from Completed Projects.

14	Undistributed Activities			
15	Contracted Services	\$319.6	\$225.2	\$94.4
16	Labor-Staffing	\$921.1	\$986.2	(\$65.1)
17	Service Level Agreements		\$168.2	
18	All Other Non-Labor	\$645.6	\$623.6	22.0
19	Civil Works Contractor Staffing	\$44.5		
20	Undistributed Subtotal			
21	CPUC Adjustment ¹⁵	N/A	\$121.7	(\$121.7)
22	Total	\$4,712.2	\$4,478.6	\$233.6

A. Distributed Projects (C. Ladd)

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The major distributed projects included in the 2020 SONGS 2&3 DCE are described below.

1. Independent Spent Fuel Storage Installation and Fuel Transfer Operations ("FTO")

The ISFSI and FTO projects facilitate the storage of spent nuclear fuel on site until such time that the DOE takes custody of the spent nuclear fuel and GTCC waste. By transferring spent nuclear fuel to the ISFSI, the spent fuel pools and their associated cooling systems can be drained and demolished. Following a competitive bidding process, SCE awarded a contract to Holtec International to license, design, and construct an expanded on-site ISFSI; and to supply, load, and transfer the multipurpose canisters containing fuel assemblies, from the SONGS 2&3 spent fuel pools to the expanded ISFSI.

The ISFSI pad was completed in October of 2017 and the security building was completed in January of 2018. FTO commenced in January of 2018 and was completed August 7, 2020. SDG&E representatives monitored this work by attending status and schedule meetings and through direct observations of work performed in the field.

D.21-12-026 approved the total 2017 SONGS 2&3 DCE of \$4,478.6 million as reasonable; therefore, a CPUC Adjustment of \$121.7 million is included to maintain the 2017 SONGS 2&3 DCE total that was found reasonable.

The 2020 SONGS 2&3 DCE amount for the ISFSI and FTO project is \$297.5 million (100% share, 2014\$). This project is complete¹⁶ and the DCE forecast is based on recorded costs. This is \$32.8 million (100% share, 2014\$) higher than the 2017 SONGS 2&3 DCE amount of \$264.7 million (100% share, 2014\$). As explained in SCE's testimony, the primary reasons for the cost variance were associated with project oversight, FTO operation support and FTO waste disposal.¹⁷ The contingency rate applied to this project is 0%. SDG&E reviewed the supporting documentation for the ISFSI and FTO project forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

2. Final Site Restoration

Final site restoration scope of work includes the removal of the gunite slope protection, remaining railroad tracks, access roads and parking lots. It is expected that the final site end state determined by the Navy through the National Environmental Policy Act ("NEPA") process will require grading and re-vegetation of the SONGS site.

The 2020 SONGS 2&3 DCE amount for final site restoration is \$6.9 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE had a value of \$6.9 million (100% share, 2014\$). The contingency rate applied to this project is 25% and will cover variations in labor hours and pricing and variation in contract support and material costs. SDG&E reviewed the supporting documentation for the final site restoration project forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

¹⁶ Ex. SDGE-02 at 16-18.

¹⁷ Ex.SCE-03 at 50 line 9-10.

3. Independent Spent Fuel Storage Installation Aging Management

The Aging Management Plan ("AMP") project was established to develop inspection and maintenance programs for the Areva TN and Holtec spent fuel dry storage systems.

The 2020 SONGS 2&3 DCE amount is \$23.5 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE amount for ISFSI Aging Management was \$36.5 million (100% share, 2014\$). The cost variance value is a decrease of \$13.0 million (100% share, 2014). By partnering with Electric Power Research Institute, SCE was able to identify better and more economical methods of performing the testing, mitigation, and inspection activities. These costs include initial cask testing, inspection equipment, and licensing costs for dry cask CoC renewals and SAR updates for the Areva TN and Holtec AMPs. These activities are required in order to renew and maintain NRC CoCs. The contingency rate applied to this project is 10% through 2024 and 20% for years 2024 through 2035 and will cover variations in labor hours and pricing. SDG&E reviewed the supporting documentation for the ISFSI Aging Management project forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

4. Decontamination, Demolition, and Disposal

The scope of work is to remove all SONGS 2&3 structures systems, and components to three feet below grade so the property can be released for unrestricted use. The major components of this work are the characterizing, packaging, transporting, and disposal of waste created by decontaminating and demolishing the facility. This work is performed in two phases.

Phase I is the transition and mobilization phase. During this phase, after a competitive bidding process, SCE executed a contract with SDS to be the decommissioning general contractor. SDS mobilized staff to the project and began the process of transitioning programs from SCE to SDS. The transition of project management, field oversight, planning, and

execution of D&D-related site management and support functions for 21 site programs was done in accordance with the SDS Transition and Mobilization Plan.

The phase II work includes:¹⁸

- Segmenting the SONGS 2&3 reactor vessels and reactor vessel internals and loading them into storage containers appropriate for their waste classification.
- Removing and disposing of large components including SONGS 2&3 reactor pressure vessels, steam generators, pressurizers, and turbine-generators.
- Decontaminating and removing all structures, systems, and components as necessary to achieve partial site release and reduce the Part 50 licenses to the ISFSI area only.
- Removing certain above-seabed components of the ocean conduits.
- Necessary backfill work to achieve elevations and contours defined in the CDP grading plan.
- Development of the partial site release plan in accordance with 10 C.F.R. § 20.1402 site release criteria. SDS will perform necessary D&D work to meet a radiological release criterion that does not exceed 15 millirem per year.

In the 2017 SONGS 2&3 DCE, the estimated cost for Decontamination, Demolition, & Disposal activities was (100% share, 2014\$). The 2020 SONGS 2&3 DCE estimate is (100% share, 2014\$) which is an increase of (100% share, 2014\$). There are three primary reasons for the increased cost: (1) contract scope changes related to backfill and associated material, (2) delay in SCE issuing the Notice to Proceed for Phase II due to delays in the SONGS 2&3 environmental permitting process and the COVID-19 pandemic, and (3) miscellaneous scope and timing changes. The contingency rate applied to this project in the 2020 DCE is and will cover change orders for differing site conditions and change orders for SCE-directed changes. SDG&E reviewed the supporting documentation

¹⁸ 2020 SONGS 2&3 DCE at 30.

¹⁹ Ex. SCE-04, page 33-38.

for the decontamination, demolition, and disposal activities forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

5. Substructure Removal

The substructure removal work will include the activities necessary to achieve the final "end state" requirements determined by the Navy. Substructure removal activities include removing substructure systems and components, backfilling excavations with approved material and leveling the SONGS site, characterizing, packaging, transporting, processing, and disposing of SONGS waste and removing the existing seawall and intake and outfall box culvert.

SCE will seek a Navy determination of the substructure removal requirements. The Navy is expected to make its determination after completing a NEPA process and to include the requirements within a new or amended real estate authorization. This will define the final site release criteria for turnover of the SONGS property back to the Navy.

The cost estimate for substructure removal, developed by High Bridge Associates, reflects the costs to install sheet piling and shoring, install dewatering and effluent treatment systems, and demolish and backfill all buildings and structures 3 feet below grade (elev. 27') and lower. The estimate includes the cost to remove dewatering and effluent treatment systems after dewatering. Labor and equipment cost estimates were based on unit rates and material quantities. The contingency rate applied to this project is 25% and will cover variations in labor hours and pricing, variation in contract support costs and variation in material and disposal costs. For purposes of the 2017 SONGS 2&3 DCE, it is assumed that all SONGS 2&3 substructures will be removed during 2048-2051 (Period 6) (excluding the ISFSI which will be removed in a subsequent period).

The 2020 SONGS 2&3 DCE estimate for substructure removal is \$274.0 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE had a value \$273.1 million (100% share, 2014\$).

The cost increase of \$0.9 million (100% share, 2014\$) is a result of escalation. SDG&E reviewed the supporting documentation for the forecast for the substructure removal project and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

6. Other Distributed Projects

SCE needs to perform other projects to comply with federal and state regulations and the terms of SCE's real estate authorizations with the Navy. These other projects are discussed in more detail below.

The 2020 SONGS 2&3 DCE value for Other Distributed Projects is \$122.7 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE value was \$99.6 million (100% share, 2014\$). The 2020 SONGS 2&3 DCE is higher due to many of the projects not being included in the 2017 SONGS 2&3 DCE and increased costs for other projects. The 2020 SONGS 2&3 DCE estimate is provided below for each project.

Mesa Site Turnover – SCE's Mesa site consists of multiple parcels leased from the Navy. The 2020 SONGS 2&3 DCE currently estimates that Parcels 5-7 and 10-14 will be returned to the Navy in 2021, and Parcels 8 & 9 will be retained until the end of decommissioning. As part of the process to return the parcels to the Navy, SCE must first remediate any contamination. The estimated cost associated with the project is based on currently anticipated remediation requirements. The 2020 SONGS 2&3 DCE value for the Mesa Site Turnover project is \$27.9 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE amount was \$20.3 million (100% share, 2014\$). The increase of \$7.6 million (100% share, 2014\$) is due to additional demolition and remediation required by the Navy. The lease with the Navy mandates that SCE comply with these new requirements. The contingency rate applied to this project is 15% and will cover variations in SCE labor hours and pricing to support Mesa turnover and variations in Navy labor hours and pricing to complete acceptance of Mesa property. SDG&E reviewed the supporting

documentation for the Mesa Site Turnover project forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

<u>California Environmental Quality Act Permitting</u> – Under CEQA, the CSLC, as lead agency, was required to evaluate the SONGS decommissioning project and prepare an EIR in response to SCE's application to modify and extend the existing CSLC lease regarding the offshore conduits.

The CEQA permitting process began in 2015 and the CSLC issued a certified final EIR and approved a new lease on March 21, 2019. SCE's application for a CDP for offshore decommissioning activities described in the EIR was reviewed by the CCC. The CDP was approved by the CCC on October 17, 2019, with certain mitigation measures and special condition requirements. Mitigation plans and special conditions required for decommissioning to begin were satisfied in February of 2020, completing the CEQA permitting project.

The 2020 SONGS 2&3 DCE value for the CEQA Permitting project is \$6.4 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE amount is \$7.9 million (100% share, 2014\$). The cost decrease of \$1.5 million (100% share, 2014\$) was a result of less contract labor hours being required to complete the permitting process than previously estimated.²⁰

The CEQA Permitting project is completed and the 2020 SONGS 2&3 DCE incorporates recorded costs. The contingency rate applied to this project is 0%. SDG&E reviewed the supporting documentation for the CEQA Permitting project forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

²⁰ Ex. SDGE-02 at 19-20.

North Industrial Area Sump Modifications – The NIA sump modification project is no longer in the DCE as a separate line item and instead is included as part of the decontamination, demolition, and disposal project.

Decommissioning Cost Estimate Update – As part of the NDCTP, SCE is required to submit future updated DCEs for approval by the CPUC. The 2020 SONGS 2&3 DCE total estimate for future submissions is \$4.5 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE total estimate for future submissions is \$3.7 million (100% share, 2014\$). The cost increase of \$0.8 million (100% share, 2014\$) is due to the 2017 SONGS 2&3 not including third-party reviews. The contingency rate applied to this project is 15% and will cover variations in contract support costs. SDG&E reviewed the supporting documentation for the DCE Update project forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

Independent Spent Fuel Storage Installation Coastal Development Permits Extensions – CDPs are held by SCE for storage of SONGS 2&3 spent fuel in the Areva TN ISFSI until November 2022 and to store SONGS 2&3 spent fuel at the Holtec ISFSI until 2035. SCE will need to apply for and obtain a CDP extension from the CCC before November 2022. In 2035 SCE will need to apply for and obtain extensions for both the Areva TN and Holtec ISFSI storage systems. The 2020 SONGS 2&3 DCE estimate for ISFSI CDP Extensions is \$4.4 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE was \$5.2 million (100% share, 2014\$) which is a decrease of \$0.8 million (100% share, 2014\$). The cost reduction is due a refined estimate for the Areva TN CDP extension in 2022.

The contingency rate applied to this project is 15% in 2021 - 2024 and will cover variations in contract costs. For 2033 - 2035 a 20% contingency rate is applied to cover

variations in contract costs. SDG&E reviewed the supporting documentation for the ISFSI CDP Extension project forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

Greater Than Class C Waste Disposal – The Federal Government is responsible for the disposal of GTCC waste. It can only be placed in facilities that are license by the NRC to dispose of this classification of waste. No such waste disposal facility has been licensed or built in the United States. The 2020 SONGS 2&3 DCE, assumes the cost of shipping and disposing of a GTCC waste canister will equal the cost associated with shipping and disposing of a canister of SONGS spent fuel. The cost estimate is based on the one-mill fee per kilowatt-hour of nuclear generation under the DOE standard contract.

The 2017 SONGS 2&3 DCE amount is \$40.7 million (100% share, 2014\$) based on \$3,000,000 per canister. For the 2020 DCE the \$3,000,000 is escalated to 2020\$ and is \$3,267,000. The 2020 SONGS 2&3 DCE is essentially the same as the 2017 SONGS 2&3 DCE at \$40.8 million (100% share, 2014\$). The contingency rate applied to this project is 20% and will cover variations in pricing of GTCC waste. SDG&E reviewed the supporting documentation for the GTCC Disposal project forecast and considers it to be reasonable and appropriate.

<u>Substructure Removal Contractor Procurement</u> – The DCE needs to account for costs associated with procurement of a contractor to perform any required substructure removal. The elements of this cost are development of a request for proposal, identification of qualified bidders, evaluations of submitted proposals and ultimately the award of a contract for substructure removal. This DCE assumes that the cost to implement this process will be

approximately one-half the cost to procure the Decommissioning General Contractor ("DGC") for phase I and phase II demolition work.

The 2020 SONGS 2&3 DCE amount is \$7.1 million (100% share, 2014\$) and is essentially the same as the 2017 SONGS 2&3 DCE amount of \$7.0 million (100% share, 2014\$). The contingency rate applied to this project is 20% and will cover variations in labor and contractor support and variations in the bid process. SDG&E considers this to be a reasonable estimate for this future activity and acknowledges that it can be updated as better information is available.

Independent Spent Fuel Storage Installation Coastal Development Permit Settlement – As a result of a settlement agreement with parties opposed to the storage of spent fuel at SONGS, a strategic plan, conceptual transportation plan and an action plan for the relocation of spent fuel was developed and issued in March 2021. The 2020 SONGS 2&3 DCE amount is \$4.3 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE is the same \$4.3 million (100% share, 2014\$) amount. The contingency rate applied to this project is 0%. SDG&E reviewed the supporting documentation for the ISFSI CDP Settlement project forecast and considers it to be reasonable and appropriate.

Cyber Security Modifications – NRC regulations require a Cyber Security Plan at SONGS to ensure certain digital assets, such as computer and communication systems and networks, are secure and protected. The NRC granted approval for a license amendment to remove the cyber security license condition. This allowed waiving the requirement to complete implementation of the final cyber security milestone. The contingency rate applied to this project is 0%. The 2020 SONGS 2&3 DCE amount is \$9.4 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE amount is \$9.4 million (100% share, 2014\$). The DCE forecast is

based on recorded costs. SDG&E reviewed the supporting documentation for the Cyber Security Modifications project forecast and considers it to be reasonable and appropriate.

Coastal Development Permit Amendment – The CCC approved the CDP in October of 2019. The permit contains certain special conditions. Special Condition 3 requires SCE to submit an application to amend the CDP within six months of the completion of decontamination and demolition work. Other process requirements are for SCE to perform certain environmental and engineering analyses prior to the completion of decontamination and demolition work. The DCE assumes that these analyses will assess any impact that the occurrence of sea level rise could have on the removal of substructures in 2048.

The 2020 SONGS 2&3 DCE estimate for CDP Amendment for Site Restoration project is \$6.2 million (100% share, 2014\$). The 2017 DCE did not include any costs for the CDP Amendment for Site Restoration project. The special condition requirements were unknown because the CDP had not been issued. This results in a cost increase of \$6.2 million (100% share, 2014\$).

The contingency rate applied to this project is 20% and will cover variations in labor hours and pricing to support environmental studies and other analyses in support of the CDP amendment and variations in CCC fees for the CDP amendment. SDG&E reviewed the supporting documentation for the ISFSI CDP Amendment project forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

<u>Drainage Dissipator Removal</u> – Drainage dissipators are installed along the ocean side of the bluffs adjacent to parking lot 4 to protect against erosion by slowing the water flow. There are three drainage dissipators that will need to be removed if it is deemed, they are no longer required. The 2020 SONGS 2&3 DCE includes \$5.3 million (100% share, 2014\$) to remove

these drainage dissipators. The 2017 SONGS 2&3 DCE did not include this scope of work in the estimate since it was not known at the time. The cost increase is \$5.3 million (100% share, 2014\$). The contingency rate applied to this project is 20% and will cover variations in contract support costs and material costs. SDG&E reviewed the supporting documentation for the Drainage Dissipator Removal project forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

Plant Easement Terminations – The Navy is expected to require SCE to submit an Environmental Condition of Property report prior to returning the SONGS plant property. SCE will engage with and communicate with the Navy during the final site restoration phase of the project to understand restoration requirements. The 2020 SONGS 2&3 DCE assumes that the Navy will require an Environmental Condition of Property report. The 2020 SONGS 2&3 DCE includes \$3.3 million (100% share, 2014\$) to create this report. The 2017 SONGS 2&3 DCE did not include this cost resulting in a cost variance of \$3.3 million (100% share, 2014\$).

The contingency rate applied to this project is 20% and will cover variations in labor hours and pricing, variation in consultant support required and, variation in Navy labor hours and pricing. SDG&E reviewed the supporting documentation for the Plant Easement Terminations project forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

<u>Department of Toxic Substances Control Corrective Action</u> – The California

Environmental Protection Agency's DTSC and SCE entered into a Corrective Action Consent

Agreement in 2020 to investigate and remediate, if necessary, any potential releases of hazardous constituents into the environment at SONGS. SCE is required to prepare and implement work plans for the investigations and remediations of soil and groundwater.

The 2020 SONGS 2&3 DCE estimate for the DTSC Corrective Action project is \$2.6 million (100% share, 2014\$). The Corrective Action Consent Agreement was agreed to in 2020, and therefore was not known at the time of the 2017 SONGS 2&3 DCE. Therefore, there is an increase in cost of \$2.6 million (100% share, 2014\$) from the 2017 SONGS 2&3 DCE. The contingency rate applied to this project is 15% and will cover variations in labor hours and pricing to support corrective action work plans and variations in hours and pricing of various agencies to support corrective actions. SDG&E reviewed the supporting documentation for the DTSC Corrective Action project forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

Emergency Planning Zone ("EPZ") Siren Removal Project – Nuclear power plants are required to have emergency response sirens located within a 10-mile radius of the facility. They are used to warn the public during plant emergencies and are required by the NRC and the Federal Emergency Management Agency.

After SONGS became a shutdown, defueled facility they were no longer required for emergency notifications, since there are no accident scenarios that could require recommending evacuations or sheltering in place. Local communities did not want the sirens, for their use, and they were removed in 2019 and 2020.

The 2020 SONGS 2&3 DCE estimate for the EPZ Siren Removal project is \$0.5 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE did not include the EPZ Siren Removal project. The EPZ Siren Removal project is completed and the DCE incorporates recorded costs. The contingency rate applied to this project is 0%. SDG&E reviewed the supporting documentation for the EPZ Siren Removal project forecast and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

7. Greater Than Class C Waste Storage

In the 2017 and 2020 SONGS 2&3 DCEs, it is assumed that it is necessary to license and purchase ten new canisters for storing and disposing of GTCC waste from SONGS 2&3 D&D activities and to use two existing Areva TN canisters for storing GTCC waste from the spent fuel pools.

The estimated costs are for the purchase and licensing of GTCC canisters, as well as SCE self-performing the loading, drying and transfer from the containment buildings to the ISFSI pad managing the work performed by specialty contractors. The 2020 SONGS 2&3 DCE amount is \$63.6 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE amount was \$26.6 million (100% share, 2014\$). This results in an increase of \$37.0 million (100% share, 2014\$) to properly load, transfer, and store GTCC waste from reactor vessel internal segmentation and spent fuel pools.²¹

The contingency rate applied to this project is 20% and will cover variations in contract support costs. SDG&E reviewed the supporting documentation for the forecasts and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

8. Plant Easement/Lease Renewals

This Plant Easements/Lease Renewal category consists of three separate projects in the SONGS 2&3 DCE. They are the: (1) Initial Real Estate Authorization Renewal and Plant Easements project, (2) Plant Easement Extensions project, and (3) Plant Easement Amendment for the Final Site Restoration project.

The Initial Real Estate Authorization Renewal and Plant Easements project is for SCE to request that the Navy extend the terms of the existing real estate authorizations that expire in

²¹ Ex. SCE-04 at 38.

2024, without making any significant changes to the terms. SCE currently expects that the extension of the existing real estate authorization, without substantive changes to the existing terms and conditions will not result in an environmental assessment and environmental impact statement being required. A contingency rate of 15% was used for variations in labor hours and pricing, variation in consultant support required and variations in Navy labor hours and pricing. The 2020 SONGS 2&3 DCE amount for Initial Real Estate Authorization Renewal and Plant Easements project is \$3.5 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE was \$14.4 million (100% share, 2014\$) resulting in a decrease of \$10.9 million (100% share, 2014\$) due to an environmental assessment and environment impact statement not being required.

The Plant Easement Extensions project is for SCE to apply to extend the real estate authorizations every five years since the Navy has informed SCE that it will now authorize extensions in five-year increments and not require a new lease. A contingency rate of 20% was used for variations in labor hours and pricing, variation in consultant support required and variations in Navy labor hours and pricing. The 2020 SONGS 2&3 DCE amount for Plant Easement Extensions project is \$1.4 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE was \$3.9 million (100% share, 2014\$) resulting in a decrease of \$2.5 million (100% share, 2014\$). The cost decrease is due to the 2020 SONGS 2&3 DCE assumption that the Navy will issue easement extensions every five years instead of requiring a new lease.

The Plant Easement Amendment for Final Site Restoration project is for the Navy to perform a NEPA review to determine the final site restoration conditions, including the substructure removal requirements. As part of the NEPA process and to determine the end state requirements it is assumed that an environmental impact statement will be required. A contingency rate of 20% was used for variations in labor hours and pricing, variation in

consultant support required and variations in Navy labor hours and pricing. The 2020 SONGS 2&3 DCE amount for Plant Easement Amendment for Final Sire Restoration project is \$5.9 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE was \$8.7 million (100% share, 2014\$) resulting in a decrease of \$2.8 million (100% share, 2014\$). Cost decrease is based on discussions with the Navy and reflects that Navy's current lower estimates of the costs it will incur to complete the NEPA review and determine the final site restoration requirements. SDG&E reviewed the supporting documentation for the forecasts and considers the 2020 SONGS 2&3 DCE amount to be reasonable and appropriate.

9. Offshore Conduits Removal

This project is to fully remove the offshore intake and outfall conduits located below the sea floor for SONGS 2&3. The new SONGS 2&3 lease has requirements for a bond guaranteeing SCE's performance of all lease²² conditions, including the removal of conduits if required to do so. For this reason, the 2020 SONGS 2&3 DCE includes an estimated cost for full removal of the conduits.

The 2020 SONGS 2&3 DCE estimate for offshore conduits removal is essentially unchanged at \$91.9 million (100% share, 2014\$). The previous estimate from 2017 SONGS 2&3 DCE was \$91.6 million (100% share, 2014\$). The contingency rate applied to this project is 25% and will cover variations in labor hours and pricing and variation in contract support and material costs. SDG&E reviewed the supporting documentation for the forecast and considers the 2017 SONGS 2&3 DCE amount to be reasonable and appropriate.

²² State of California State Lands Commission, "Lease No. PRC 6785.1", March 21, 2019.

10. Independent Spent Fuel Storage Installation Demolition

After all the spent nuclear fuel and GTCC waste has been removed by the DOE, SCE will demolish and remove the ISFSI and perform activities necessary for the final restoration of the SONGS site. The ISFSI demolition estimate is for full removal of the ISFSI, which includes ISFSI pads 1, 2 and 3.

The 2020 SONGS 2&3 DCE estimate for ISFSI demolition is \$19.3 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE, ISFSI demolition costs are essentially the same at \$19.2 million (100% share, 2014\$). The contingency rate applied to this project is 25% and will cover variations in labor hours and pricing and variation in contract support and material costs.

SDG&E reviewed the supporting documentation for the forecast and considers the 2020 SONGS 2&3 DCE amount for ISFSI Demolition project to be reasonable and appropriate.

11. Completed Projects

Following the transition to decommissioning in June 2013, SCE began efforts to prepare the site for decommissioning and obtain necessary approvals of NRC license amendments.

During the period from June 7, 2013, to September 30, 2017, SCE began and completed several distributed projects.

The actual recorded costs for the completed projects were incorporated into the 2017 SONGS 2&3 DCE and the 2020 SONGS 2&3 DCE. Because the basis of the estimate is recorded costs, SDG&E considers including these costs in the 2020 SONGS 2&3 DCE to be reasonable.

B. Undistributed Activities (T. Dalu)

The undistributed activities major categories included in the 2020 SONGS 2&3 DCE are described below.

1. Contracted Services

The undistributed contracted services category includes the shorter-term supplemental resources, specialty contractors and consultants, scalable staff, third-party services, materials, equipment, and supplies needed to support the following SONGS groups: Decommissioning Agent ("DA") Contract Management, DA Business Services, Environmental/Waste & Radiation Protection, Engineering, ISFSI Management, Nuclear Oversight & Safety Culture, Decommissioning Finance and Site Management & Administration. In addition, in the 2020 SONGS 2&3 DCE, contracted services also include known infrastructure and maintenance projects, such as rip rap and beach walkway repairs required by the 2019 CDP.

The contingency rate applied for contracted services is 15% and covers variations in contract support and material costs.

The 2020 SONGS 2&3 DCE forecast for contracted services is \$319.6 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE estimate was \$225.2 million (100% share, 2014\$). The increase of \$94.4 (100% share, 2014\$) million between the 2017 and 2020 SONGS 2&3 DCE can be attributed to scalable staff previously included as undistributed labor-staffing in the 2017 DCE being included in contracted services in the 2020 DCE. In addition, the 2020 DCE includes rip rap and beach walkway repairs that were not identified in the 2017 DCE. SDG&E reviewed the supporting documentation for the contracted services forecast and considers the DCE forecast amount to be reasonable and appropriate.

2. Labor-Staffing

The undistributed labor category generally includes the required staffing to provide the oversight, management and other activities necessary to support the decommissioning project and the security force over the spent fuel pool. It includes salaries, the short-term incentive compensation costs and labor overheads.

In 2017, SCE transitioned various management programs and functions to SDS, however SCE still maintains an oversight role with respect to the SDS contract. In addition, SCE is directly responsible for ongoing license-related operations and security for the ISFSI, the ISFSI management and the Mesa Turnover to the Navy. After the completion of the SDS contract, the on-site programs and functions will be transitioned back to SCE.

Undistributed labor-staffing is categorized into three areas: Site Management & Administration, ISFSI Management, and Decommissioning Project Oversight. In addition, there are individuals who have been designated as Key Oversight personnel associated with one of the three categories noted above. The undistributed labor-staffing categories are described below.

Site Management & Administration – Staff designated as Site Management & Administration are responsible for oversight and strategic planning, safety and security, ensuring compliance with regulatory and permitting requirements and managing the project cost and schedule.

<u>ISFSI Management</u> – Staff designated as ISFSI Management are responsible for the operations, maintenance, and security of the plant facilities. After all SONGS fuel was transferred to dry fuel storage in August 2020, staffing levels decreased significantly.

<u>Decommissioning Project Oversight</u> – Staff designated as Decommissioning Project Oversight are responsible for overseeing the SDS contract and managing the ISFSI and other distributed projects.

The contingency rate applied for the labor-staffing estimate is 5% during D&D and 10% for the remainder of the project and will cover variations in staffing requirements and variations in labor hours and labor rates.

The 2020 SONGS 2&3 DCE forecast for labor-staffing is \$921.1 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE cost was \$986.2 million (100% share, 2014\$). The decrease of \$65.1 million (100% share, 2014\$) in labor-staffing costs is primarily attributed to many utility staff positions being covered by scalable staff and being included in the non-labor contracted services cost category.

SDG&E reviewed the supporting documentation for the labor-staffing forecast and considers the 2020 SONGS 2&3 DCE forecast amount to be reasonable and appropriate.

3. Service Level Agreements/Administrative & General Expenses

Beginning in 2016, SONGS implemented annual intra-company SLAs with SCE corporate service providers. Each SLA describes the specific A&G functions and services SCE provides to SONGS. Beginning in 2029, the 2020 DCE assumes applying the 5% A&G overhead loader to all remaining decommissioning costs until project completion in 2053.

The contingency rate applied to all SLAs is and will cover variations in SCE labor and contract support requirements.

The 2020 SONGS 2&3 DCE estimate for SLAs/A&G expenses is

share, 2014\$). The 2017 DCE estimated \$168.2 million (100% share, 2014\$). The decrease of

(100% share, 2014\$) in SLAs/A&G expenses can be attributed to moving

information technology costs from the SLAs to information technology non-labor, a reduction in

scope for the Controllers' SLA in the 2020 SONGS 2&3 DCE. SDG&E reviewed the supporting

documentation for the forecast of the SLAs/A&G expenses and considers the 2020 SONGS 2&3

DCE amount to be reasonable and appropriate.

4. All Other Non-Labor

Non-labor costs include a wide range of decommissioning activities and obligations, including the following:

<u>Insurance</u> – Estimated insurance costs include premium payments for nuclear liability and property insurance. NRC regulations require SCE to maintain minimum levels of nuclear liability and property insurance until the spent fuel is removed from the SONGS site. SCE also pays premiums to maintain general liability insurance, excess workers' compensation insurance

Site Lease and Easement – SCE is required to make annual easement and lease payments to the Navy for the onshore plant site and SONGS Mesa facility and to the CSLC for the SONGS 2&3 offshore conduits. The new CSLC lease agreement, finalized in 2019, imposed much higher lease payments than the prior lease and includes periodic increases in lease payments through 2053.

and wildfire insurance, a portion of which is allocated to SONGS through the end of D&D work.

California Environmental Quality Act Reporting – As part of the CEQA review and approval of the CDP, the CSLC and CCC imposed conditions and mitigation requirements related to the Final EIR and CDP. To comply with these mitigation requirements, SCE will incur costs to monitor biological resources, water quality and archaeological and tribal artifacts. It will also incur costs to perform sea level rise vulnerability and beach profile assessments, perform real time ISFSI radiation monitoring in accordance with the MOU agreed to between SCE and local municipalities and perform surveys for specific species and rare plants. Costs associated with providing quarterly updates and annual progress reports on the surveys and assessments performed are also included in the estimate.

Department of Toxic Substances Control Corrective Action - Ongoing Monitoring – As part of the corrective action consent agreement between DTSC and SCE entered into in 2020, SCE will incur costs beginning in 2022 through 2028 to perform ongoing monitoring for potential releases of hazardous constituents into the environment.

Emergency Preparedness Fees – SCE provides funding to local jurisdictional authorities for their radiological emergency preparedness and will continue to do so until all spent fuel has been removed from SONGS. These fees are based on a 2020 Memorandum of Understanding with the counties of Orange and San Diego and the three cities of San Clemente, San Juan Capistrano, and Dana Point.

<u>Information Technology</u> – SCE will incur software and network licensing fees, pay network service providers, and provide internal technical support to site personnel at levels commensurate with site staffing until decommissioning is completed. These costs are exclusive of the information technology charges included in the SLAs that focus on network and telecommunication services for the ISFSI, maintenance of nuclear records and cyber security.

<u>Energy</u> – SCE purchases electrical energy to power the SONGS site and perform decommissioning work. Energy costs are based on historical retail electricity rates and projected usage.

<u>Water</u> – SCE is required to purchase potable and service water for the SONGS Site.

Water is provided by the South Coast Water District Joint Regional Water Supply System and water costs are estimated based on JRWSS projections.

NRC Fees – As holder of the NRC licenses for SONGS, SCE is required to pay 10 C.F.R. Part 171 annual license fees and 10 C.F.R. Part 170 inspection fees until the NRC licenses are terminated.

<u>Loading Spent Fuel and GTCC Waste to DOE</u> – Under the DOE Standard Contract, SCE is responsible for the cost to transfer spent fuel canisters from the ISFSI and loading them into DOE shipping containers onsite, and then onto the DOE's transportation vehicle.

Severance – Under the California Nuclear Facilities Decommissioning Act of 1985,²³ SCE is required to provide severance benefits to SCE employees at SONGS whose jobs are eliminated as a result of the permanent retirement of SONGS. These costs include lump-sum cash payments based on years of service, outplacement services, and educational reimbursement costs.

<u>COVID-19 Impacts</u> – As a result of the COVID-19 pandemic certain costs were incurred in order to mitigate the risks of a COVID-19 outbreak occurring at SONGS. These costs included the sequestration of security officers and plant operators, increased disinfection and cleaning services, and pandemic-related supplies.

<u>Security Related Expenses</u> – The estimate for security related expenses includes the cost of uniforms, weapons, ammunition, supplies and equipment needed for the SONGS security force. In addition, the cost of background investigations, training, medical physicals for the officers and vendor support costs will be required as long as the spent fuel remains onsite.

<u>DGC Executive Oversight</u> – The SDS contract requires a three-person committee that provides oversight and resolves contractual issues. The committee includes one person each from SCE and SDS, and one independent third-party member that SCE and SDS share the cost for.

<u>Environmental Permits and Fees</u> – SONGS must comply with a variety of environmental regulations and maintain numerous environmental permits that require periodic payments of fees.

<u>Decommissioning Agent Advisor</u> – SCE pays the SONGS Decommissioning Agent Advisor to provide subject matter expertise and assistance on D&D, engineering, regulatory and

²³ California Public Utilities Code Section 8322(g).

licensing issues, spent fuel storage, and project management. The Decommissioning Agent Advisor will meet with SONGS management twice a year through D&D.

<u>Association Fees and Expenses</u> – This category of costs includes payments for Nuclear Energy Institute membership fees and Electric Power Research Institute membership fees.

Spent Fuel Strategic Plan Activities – As part of the ISFSI CDP settlement agreement, SCE and its team of experts developed a strategic plan related to the potential relocation of the spent fuel to an offsite storage facility or a permanent repository. As a result of the strategic plan, a broad-based coalition of stakeholders to advocate for any federal legislation and appropriations needed to support relocation of the SONGS spent fuel has been formed and SCE's costs associated with participation is included in the DCE. In addition, costs associated with the activities to ensure the infrastructure and regulatory programs are ready for the transportation of spent fuel are included in the estimate.

Office Space – After major decontamination and demolition is completed, SCE will incur trailer set up costs in order to provide office space for the remaining employees. Costs will also be incurred in 2053 when employees are no longer needed, and the trailers are removed.

ISFSI Aging Management – Aging Management programs cover both the Areva TN and Holtec dry storage systems. This represents only the undistributed portion of the program which includes annual facility maintenance and inspection as well as in-service canister inspections every five years. In addition, the Holtec Inspection and Maintenance Program requires an additional inspection of a test canister every two and one-half years and will require use and maintenance of the shield removal device.

<u>Third-Party Legal</u> – SCE incurs costs to retain outside counsel as necessary to handle legal matters that require specific expertise or additional resources.

Ground Water Monitoring – The estimate for ground water monitoring includes costs required to periodically sample, analyze, and monitor the ground water beneath the SONGS site.

Ground water monitoring costs will be required through the end of SONGS decommissioning.

Community Engagement Panel – The SONGS Community Engagement Panel ("CEP") is intended to serve as a conduit of information to the public and other stakeholders regarding decommissioning. The CEP seeks to educate and explain SONGS 2&3 decommissioning matters of interest to the local public. Costs associated with the SONGS CEP include holding four meetings or workshops per year through 2028 and one meeting per year from 2029 to 2053. The CEP meetings provide the public with information on various issues, including decommissioning plans, spent fuel management, emergency planning, security and the environmental review process.

The estimated costs for all other non-labor are shown in Table 4 below:

Table 4
Undistributed All Other Non-Labor
2020 SONGS 2&3 DCE
100% Share, 2014\$ in Millions

Line No.	Description	2020 DCE Total (2014\$)	2017 DCE Total (2014\$)	Variance (2014\$)
1	Undistributed Non-Labor			
2	Insurance	\$21.0	\$63.7	(\$42.7)
3	Site Lease and Easements	\$126.3	\$97.5	\$28.8
4	CEQA Reporting	\$21.8	-	\$21.8
5	DTSC Corrective Action – Ongoing Monitoring	\$14.0	-	14.0
6	Emergency Preparedness Fees	\$34.8	\$48.3	(\$13.5)
7	Information Technology	\$41.7	\$31.9	\$9.8
8	Energy	\$78.3	\$84.7	(\$6.4)
9	Water	\$22.6	\$16.5	\$6.1
10	NRC Fees	\$36.4	\$31.2	\$5.2
11	Loading Spent Fuel and GTCC Waste to DOE	\$26.2	\$30.6	(\$4.4)
12	Severance	\$116.9	\$121.0	(\$4.1)
13	COVID-19 Impacts	\$3.6	-	\$3.6
14	Security Related Expenses	\$15.4	\$11.8	\$3.6
15	DGC Executive Oversight	\$0.2	\$3.7	(\$3.5)
16	Environmental Permits and Fees	\$10.1	\$6.7	\$3.4
17	Decommissioning Agent Advisor	\$6.5	\$9.9	(\$3.4)
18	Association Fees and Expenses	\$11.4	\$8.6	\$2.8
19	Spent Fuel Strategic Plan Activities	\$1.7	-	\$1.7
20	Office Space	\$2.5	\$1.7	\$0.8
21	Utility Staff Health Physics Supplies*	\$2.8	\$3.7	(\$0.9)
22	ISFSI Aging Management	\$14.8	\$15.3	(\$0.5)
23	Third Party Legal	\$23.5	\$23.8	(\$0.3)
24	Tools and Equipment*	\$0.1	\$0.0	\$0.1
25	Ground Water Monitoring	\$0.5	\$0.5	-
26	DAW Disposal*	\$0.0	\$0.0	-
27	Community Engagement Panel	\$12.5	\$12.5	-
28	Total	\$645.6	\$623.6	\$22.0

^{*} This category has only recorded costs and no estimated future costs.

The contingency rate applied for the undistributed non-labor estimate is 15%, with the exception of emergency preparedness fees at 5%, and will cover variations in contract support and material costs, and variations in lease payments, energy costs, insurance and required permits and fees.

In the 2020 SONGS 2&3 DCE, other non-labor costs are estimated at \$645.6 million (100% share, 2014\$). The 2017 SONGS 2&3 DCE had an estimate of \$623.6 million (100% share, 2014\$), resulting in an increase of \$22 million (100% share, 2014\$). The net increase is primarily due to increases in site lease and easement, CEQA reporting, DTSC corrective action, and information technology costs offset by decreases in insurance costs and emergency preparedness fees. SDG&E reviewed the variance explanations provided by SCE and the supporting documentation for the other non-labor forecast and considers the 2020 SONGS 2&3 DCE forecast amount to be reasonable and appropriate.

5. Civil Works Contractor Staffing

The civil works contractor staffing undistributed labor category includes the contractor that will do the Civil Works project (2048-2051) and ISFSI Demolition (2052-2053). The estimate for the Civil Works project and ISFSI Demolition developed during the 2014 SONGS 2&3 DCE was used for the 2017 SONGS 2&3 DCE and also for the 2020 SONGS 2&3 DCE.

The contingency rate applied to this estimate is 25%, which is a reasonable rate for this high-level estimate that will occur later in the project.

The 2020 SONGS 2&3 DCE forecast for civil works contractor staffing is \$44.5 million (100% share, 2014\$) and the 2017 SONGS 2&3 DCE estimate was million (100% share, 2014\$). SDG&E reviewed the supporting documentation for the Civil Works Contractor Staffing forecast and considers the DCE forecast amount to be reasonable, appropriate, and consistent with the 2017 DCE.

V. ESTIMATE OF FUTURE SDG&E-ONLY COSTS IS REASONABLE (J. FERNANDEZ)

The purpose of my testimony is to demonstrate that the estimate of future SDG&E-only costs are reasonable.

In addition to SDG&E's 20% share of SONGS costs invoiced by SCE, SDG&E anticipates incurring SDG&E-only costs throughout the SONGS decommissioning process.

These costs are for SDG&E's internal activities related to decommissioning and oversight activities. SDG&E is responsible for and will incur 100% of these costs; the costs will not be billed to or shared by SCE.

These costs are organized into two high-level categories: labor and non-labor. Labor refers to SDG&E internal labor. Non-labor has several components including consulting, outside legal and other miscellaneous expenses.

A detailed estimate of SDG&E-only costs is provided in the Labor and Non-Labor forecast tables in Attachment A. As summarized in Table 5, SDG&E estimates its future total internal costs over the decommissioning period of 2021 through 2053 at \$19.4 million (2014\$). The 2017 SDG&E-only cost estimate for years 2018 through 2051 was \$45.9 million (2014\$). The decrease of \$26.5 million between the 2020 SDG&E-only estimate and the 2017 SDG&E-only estimate can be primarily attributed to the 2020 SDG&E-only not including 2018 through 2020 in the estimate and the removal of trust administration fees²⁴ and property taxes²⁵ from the current estimate.

The trust administration fees are factored into the trust return calculation and therefore not included in the 2020 SDG&E-only estimate. Ex. SDGE-04 at 6-7.

In late 2018, SDG&E received a favorable property tax appeal ruling establishing SDG&E would no longer be assessed property tax on the SONGS facility. The ruling had an effective date of July 1, 2018.

Table 5 SDG&E-Only SONGS Decommissioning Costs 100% Share, 2014\$ in Millions

	SDG&E Labor	Other/Non-Labor	Total Costs
Total	\$15.1	\$4.3	\$19.4

As discussed in the testimony of Mr. Guidi, SDG&E adds these SDG&E-only costs to its 20% share of the SCE 2020 SONGS 1 and SONGS 2&3 DCEs to demonstrate that SDG&E's Nuclear Decommissioning Trust is adequately funded.²⁶

A. Allocations of Estimated SDG&E-Only Costs Between SONGS 1 and SONGS 2&3

The total SDG&E-only internal costs for SONGS 1 and SONGS 2&3 are \$19.4 million (2014\$). SONGS 1 is allocated 5.90% of these costs (\$1.1 million, 2014\$), and Units 2&3 are allocated 94.10% of these costs (\$18.3 million, 2014\$). The SDG&E-only internal costs allocations are based on the remaining decommissioning costs estimates in the SCE 2020 SONGS 1 DCE and the 2020 SONGS 2&3 DCE.²⁷

B. SDG&E Labor

The SDG&E Labor category in Table 5 represents SDG&E staff who provide oversight of SONGS decommissioning costs and activities. Since the SONGS closure announcement in 2013, SDG&E has worked to develop a dedicated and focused core SONGS Team to oversee SONGS decommissioning activities. The goal of the SONGS Team is to manage SDG&E's oversight of decommissioning activities in an efficient and effective manner from a technical,

²⁶ Ex. SDGE-04 at 6-7.

To perform this calculation, the SCE 2020 DCE for SONGS 1 is \$183.3 M (100% share, 2014\$) for 2021 through 2053 and the 2020 DCE for SONGS 2&3 is \$2,903.8 M (100% share, 2014\$) for 2021 through 2053 forecasted costs.

regulatory, and financial perspective. SDG&E expects internal staffing levels to correlate with the periods of decommissioning activities. SDG&E will provide the appropriate level of resources for its SONGS Team, as needed. SDG&E's labor cost forecast for 2021 through 2053 is \$15.1 million (2014\$) compared to \$19.4 million (2014\$) in the previous 2017 DCE forecast which covered years 2018 through 2051. The decrease of \$4.3 million is primarily due to the current labor forecast excluding the 2018 to 2020 period which has elapsed.

As of February 2022, SDG&E's SONGS Team is organized according to the structure set forth below.

Principal Business Principal Business Senior Accountant Staff Accountant

SDG&E SONGS Team

SDG&E expects to supplement this focused core team with outside industry experts, consultants and legal counsel, as needed, detailed in Section C below.

C. Other/Non-Labor

Analyst

The second type of SDG&E-only costs identified in Table 5 is Other/Non-Labor. The Other/Non-Labor category consists of three specific types of costs: decommissioning consultants

external to SDG&E, decommissioning counsel external to SDG&E, and direct costs related to oversight activities.

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As SDG&E proceeds through the decommissioning process, specific decommissioning expertise in decommissioning projects learned at other nuclear sites can provide significant benefits for ratepayers and independently assure SDG&E that the efforts at SONGS are consistent with industry practice. SDG&E currently retains external decommissioning consultants. One such expert is Mr. Adam Levin, whose specific industry knowledge and decommissioning experience has been valuable to SDG&E in determining that SONGS decommissioning processes and proposed activities are consistent with similar nuclear stations undergoing decommissioning. Additionally, SDG&E has previously enlisted the expertise of Mr. Joseph Carignan and Mr. Thomas LaGuardia to help review previous DCEs for SONGS 1, and SONGS 2&3 and may engage similar services, if needed, in the future. SDG&E's use of decommissioning consultants and experts is expected to follow the decommissioning activities in terms of use and intensity. For example, SDG&E expects to utilize experts and consultants to supplement its on-site oversight staff during critical periods in the D&D phase, currently assumed to go through 2028. SDG&E expects the need for such expertise to taper off following the completion of the dismantling work when SONGS will have only spent fuel on site while awaiting DOE pickup and final license termination. SDG&E forecasts use of experts and consultants again from 2048 through 2053 during the Civil Works projects and ISFSI Demolition & Final Site Restoration phases.

SDG&E also has retained outside legal counsel with expertise in nuclear decommissioning issues to advise and counsel SDG&E on numerous decommissioning topics. The costs associated with this area are difficult to anticipate or estimate, but SDG&E has

endeavored to include a reasonable estimate of outside legal costs based on anticipated future activities. SDG&E's outside consultant and legal counsel cost forecast, including overheads and contingency for 2021 through 2053 is \$3.3 million (2014\$). This compares to a previous DCE forecast total of \$4.3 million (2014\$). The \$1.0 million decrease is primarily due to the previous forecast including \$0.8 million for the 2018 through 2020 period, which is not part of the current forecast period.

Finally, SDG&E incurs direct costs related to its oversight activities at SONGS, including a lease/easement paid directly to the Navy, travel and travel related expenses, and employee training. SDG&E's miscellaneous non-labor cost forecast, including overheads and contingency for 2021 through 2053 is \$1.0 million (2014\$). These costs are consistent with miscellaneous non-labor costs forecasted in the 2017 SDG&E-only DCE.

D. Contingency

SDG&E applies a contingency to labor of 5% for years 2021-2028, 10% for years 2029-2053 and a 15% rate to all non-labor costs included in its estimated 2020 SDG&E-only DCE. The contingency amount will help SDG&E manage risk associated with currently unknown events as SDG&E proceeds through the decommissioning process and learns more about its needs and incurs actual costs.

The contingency applied to labor of 5% to 10% is lower than the 15% contingency applied to labor in the previous 2017 SDG&E-only DCE forecast. Non-labor charges continue to receive a contingency rate of 15%, consistent with the previous 2017 forecast. However, SDG&E believes the 2020 DCE percentages more accurately represents the unknown risks associated with its internal costs and is better suited to the particular types of costs at issue (i.e., labor, legal and consulting). In addition, SDG&E's forecast of internal costs is more detailed and refined than previous estimates, due in part to lessons learned from several years of

decommissioning history. Therefore, SDG&E asserts that depending on type of cost, applying a 5% to 15% contingency factor to its SDG&E-only DCE forecast is reasonable and appropriate.

E. Escalation

The costs provided in Table 5 above are shown in 2014\$. Any potential escalated costs would use the same escalation projections that SCE utilizes from the IHS Markit, Inc. economic forecasting service.²⁸ This service has been used in past escalation projections by both utilities.

F. 2018-2020 Undistributed Costs by Cost Categorization Guidelines

In D.18-11-034, the Commission ordered SCE and SDG&E to meet with Energy
Division staff and other interested parties to develop protocols for recording staff time to
Distributed activities, and to define what activities will be considered Undistributed and
Distributed activities.²⁹ The Commission also ordered SDG&E to update its cost categorization
structure so that recordkeeping will directly and transparently reflect the appropriate location,
and the appropriate detail, and support for Distributed Activities.³⁰ Accordingly, SDG&E
participated in various workshops with the Energy Division, SCE, and interested parties (Cal
Advocates, TURN, and the Alliance for Nuclear Responsibility or A4NR) to discuss these issues.
In June 2019, the parties (SCE, SDG&E, and TURN) finalized the Cost Categorization
Guidelines ("Guidelines"), which provide a greater level of detail for undistributed costs and
assist the Commission and interested parties in reviewing the reasonableness of these costs. In
accordance with these Guidelines, and as shown in Attachment A at page A-4, SDG&E has
categorized the 2020 SDG&E-only DCE costs to conform with the following three main

²⁸ Ex. SCE-06 at 7.

²⁹ D.18-11-034 OP 5.

³⁰ *Id.*, OP 12.

- categories: (1) Decommissioning Project Oversight Costs; (2) Site Costs; and (3) Administrative
 and General Support Costs.
- This concludes our prepared direct testimony.

ATTACHMENT A

SDG&E-Only Cost Estimate

SDG&E-Only Labor Forecast (2014 Dollars in Thousands)

Year	Oversight	Site	A&G Support	Overhead	Contingency	Total Labor
2021	223	0	330	454	50	1,057
2022	223	0	330	454	50	1,057
2023	223	0	330	454	50	1,057
2024	223	0	330	454	50	1,057
2025	223	0	330	454	50	1,057
2026	223	0	330	454	50	1,057
2027	223	0	330	454	50	1,057
2028	223	0	330	454	50	1,057
2029	0	0	278	229	51	558
2030	0	0	278	229	51	558
2031	0	0	92	76	17	185
2032	0	0	92	76	17	185
2033	0	0	92	76	17	185
2034	0	0	92	76	17	185
2035	0	0	92	76	17	185
2036	0	0	92	76	17	185
2037	0	0	92	76	17	185
2038	0	0	92	76	17	185
2039	0	0	92	76	17	185
2040	0	0	92	76	17	185
2041	0	0	92	76	17	185
2042	0	0	92	76	17	185
2043	0	0	92	76	17	185
2044	0	0	92	76	17	185
2045	0	0	92	76	17	185
2046	0	0	92	76	17	185
2047	0	0	92	76	17	185
2048	103	0	92	160	36	391
2049	103	0	92	160	36	391
2050	103	0	92	160	36	391
2051	103	0	92	160	36	391
2052	103	0	92	160	36	391
2053	103	0	92	160	36	391
Total	2,403	0	5,315	6,338	1,003	15,059

SDG&E-Only Non-Labor Forecast (2014 Dollars in Thousands)

Year	Oversight	Site	A&G	Overhead	Contingency	Total Non-
			Support			Labor
2021	96	18	48	1	25	188
2022	103	18	53	1	26	201
2023	103	18	53	1	26	201
2024	103	18	53	1	26	201
2025	103	18	53	1	26	201
2026	103	18	53	1	26	201
2027	103	18	53	1	26	201
2028	103	18	53	1	26	201
2029	23	18	54	1	14	110
2030	23	18	54	1	14	110
2031	5	18	48	0	11	82
2032	5	18	48	0	11	82
2033	5	18	48	0	11	82
2034	5	18	48	0	11	82
2035	5	18	48	0	11	82
2036	5	18	48	0	11	82
2037	5	18	48	0	11	82
2038	5	18	48	0	11	82
2039	5	18	48	0	11	82
2040	5	18	48	0	11	82
2041	5	18	48	0	11	82
2042	5	18	48	0	11	82
2043	5	18	48	0	11	82
2044	5	18	48	0	11	82
2045	5	18	48	0	11	82
2046	5	18	48	0	11	82
2047	5	18	48	0	11	82
2048	94	18	48	1	24	185
2049	94	18	48	1	24	185
2050	94	18	48	1	24	185
2051	94	18	48	1	24	185
2052	94	18	48	1	24	185
2053	94	18	48	1	24	185
Total	1,503	605	1,633	20	564	4,325

SDG&E-Only Forecast Total (2014 Dollars in Thousands)

Year	SDG&E Labor	SDG&E Non-Labor	SDG&E
	Total	Total	Total
2021	1,057	188	1,245
2022	1,057	201	1,258
2023	1,057	201	1,258
2024	1,057	201	1,258
2025	1,057	201	1,258
2026	1,057	201	1,258
2027	1,057	201	1,258
2028	1,057	201	1,258
2029	558	110	668
2030	558	110	668
2031	185	82	267
2032	185	82	267
2033	185	82	267
2034	185	82	267
2035	185	82	267
2036	185	82	267
2037	185	82	267
2038	185	82	267
2039	185	82	267
2040	185	82	267
2041	185	82	267
2042	185	82	267
2043	185	82	267
2044	185	82	267
2045	185	82	267
2046	185	82	267
2047	185	82	267
2048	391	185	576
2049	391	185	576
2050	391	185	576
2051	391	185	576
2052	391	185	576
2053	391	185	576
Total	15,059	4,325	19,384

SDG&E Forecast by Cost Categorization Categories (2014 Dollars in Thousands)

Year	Oversight	Site	A&G Support	Total
2021	538	21	686	1,245
2022	546	21	692	1,259
2023	546	21	692	1,259
2024	546	21	692	1,259
2025	546	21	692	1,259
2026	546	21	692	1,259
2027	546	21	692	1,259
2028	546	21	692	1,259
2029	26	21	620	667
2030	26	21	620	667
2031	5	21	240	266
2032	5	21	240	266
2033	5	21	240	266
2034	5	21	240	266
2035	5	21	240	266
2036	5	21	240	266
2037	5	21	240	266
2038	5	21	240	266
2039	5	21	240	266
2040	5	21	240	266
2041	5	21	240	266
2042	5	21	240	266
2043	5	21	240	266
2044	5	21	240	266
2045	5	21	240	266
2046	5	21	240	266
2047	5	21	240	266
2048	314	21	240	575
2049	314	21	240	575
2050	314	21	240	575
2051	314	21	240	575
2052	314	21	240	575
2053	314	21	240	575
Total	6,390	699	12,295	19,384

ATTACHMENT B

DECLARATION OF ESTELA M. DE LLANOS REGARDING CONFIDENTIALITY OF CERTAIN DATA/DOCUMENTS PURSUANT TO D.17-09-023

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

DECLARATION OF ESTELA M. DE LLANOS REGARDING CONFIDENTIALITY OF CERTAIN DATA/DOCUMENTS **PURSUANT TO D.17-09-023**

I, Estela M. de Llanos, do declare as follows:

1. I am Vice President - Energy Procurement and Sustainability for San Diego Gas & Electric Company ("SDG&E"). I have reviewed the confidential information included in SDG&E's Direct Testimony ("Exhibit SDGE-03C"), submitted concurrently herewith. I am personally familiar with the facts in this Declaration and, if called upon to testify, I could and would testify to the following based upon my personal knowledge and/or information and belief.

- 2. I hereby provide this Declaration in accordance with Decision ("D.") 17-09-023 and General Order ("GO") 66-D to demonstrate that the confidential information ("Protected Information") provided in the Testimony is within the scope of data protected as confidential under applicable law.
- 3. In accordance with the narrative justification described in Exhibit 1, the Protected Information should be protected from public disclosure.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct to the best of my knowledge.

Executed this 24th day of February, 2022, at San Diego.

Estela

Vice President – Energy Procurement and

Sustainability

EXHIBIT 1

SDG&E REQUEST FOR CONFIDENTIALITY
ON THE FOLLOWING INFORMATION IN TESTIMONY

Location of Protected Information	Legal Citations	Narrative Justification
Information Gray shaded portions of direct testimony SDGE-03C at table 1 page 4, at table 3 page 20-21 and at page 3, 5, 6, 11, 24, 40 and 47.	California Gov. Code § 6255 (the public interest served by not disclosing the information is clearly outweighed by the public interest served by disclosure of the record). CPRA Exemption, Gov. Code § 6254(k) ("Records, the disclosure of which is exempted or prohibited pursuant to federal or state law"). See, e.g., D.11-01-036, 2011 WL 660568 (2011) (agreeing that confidential prices and contract terms specifically negotiated with a program vendor is proprietary and commercially sensitive and should remain confidential).	The Protected Information includes confidential contract cost and terms. Market-sensitive contract cost and term information, if disclosed could provide market participants, competitors, and vendors competitors with insight into SCE's and SDG&E's activities, plans, scope, sequence and other strategies, which would place SCE and SDG&E at an unfair business disadvantage. This could ultimately result in increased cost to ratepayers. If disclosed, SCE's and SDG&E's competitors and market participants could also derive economic value from this information. For example, if a vendor seeking to bid on a subcontract or another activity knew the previously negotiated pricing terms, the vendor would have an opportunity to adjust its bid prices (e.g., the vendor could bid higher than it otherwise may have bid). Public release of this information could also hinder SCE's ability to obtain favorable contract terms for any required work, labor, materials or supplies not covered under these agreements. In addition, market participants, competitors and vendors competitors could misuse the information during the bidding process for other similar utility projects across the world and potentially threaten the financial health of both companies, to the detriment of the companies' financial health to complete contractually required services for SONGS in the future without interruption.