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Decision 16-04-019 April 21, 2016

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Joint Application of Southern California Edison Company (U338E) and San Diego Gas & Electric Company (U902E) to Find the 2014 SONGS Units 2 and 3 Decommissioning Cost Estimate Reasonable and Address Other Related Decommissioning Issues.

Application 14-12-007
(Filed December 10, 2014)

DECISION APPROVING DECOMMISSIONING COST ESTIMATE

Table of Contents

<u>Title</u>	<u>Page</u>
DECISION APPROVING DECOMMISSIONING COST ESTIMATE	
Summary	2
1. Background	2
2. Positions of the Parties	5
2.1. Edison and SDG&E	5
2.2. SDG&E	9
2.3. ORA	9
2.4. TURN.....	11
2.5. UCAN.....	13
2.6. The Alliance for Nuclear Responsibility	14
2.7. Other Parties	14
3. Discussion	14
3.1. Reasonableness of the Decommissioning Cost Estimate	17
3.2. Procedural Requests	20
3.2.1. Balancing Account Proposal Denied	20
3.2.2. Advice Letter Process for Disbursing Funds Held in Nuclear Decommissioning Trusts	21
3.2.3. Final Ratemaking Reviews of Decommissioning Costs	23
3.2.4. Presumption of Reasonableness Summarily Denied	25
4. State Role in Nuclear Energy Regulation	26
5. Categorization and Need for Hearing	27
6. Comments on Proposed Decision.....	28
7. Assignment of Proceeding.....	28
Findings of Fact.....	29
Conclusions of Law	31
ORDER	34

DECISION APPROVING DECOMMISSIONING COST ESTIMATE

Summary

This decision finds reasonable the 2014 San Onofre Nuclear Generating Station Unit Nos. 2 and 3 Decommissioning Cost Estimate of \$4.411 billion. Southern California Edison Company and San Diego Gas & Electric Company have each collected sufficient funds from their respective ratepayers to fund their share of the Decommissioning Cost Estimate and the funds are currently held in Nuclear Decommissioning Trusts. Accordingly, decommissioning cost collections from ratepayers can be reduced to \$0.0 based on currently known and estimated costs. This proceeding is closed.

1. Background

On December 10, 2014, Southern California Edison Company (Edison) and San Diego Gas & Electric Company (SDG&E) filed this joint application seeking the following Commission actions with regard to the 2014 Decommissioning Cost Estimate for the San Onofre Nuclear Generating Station (SONGS) Units 2 and 3:

- Find that the updated Decommissioning Cost Estimate of \$4.411 billion is reasonable;
- Authorize Edison, effective immediately, to reduce to \$0.0 its annual contribution to the Nuclear Decommissioning Trust;
- Authorize SDG&E, effective January 1, 2016, to reduce to \$0.0 its annual contribution to the Nuclear Decommissioning Trust;
- Create and approve an advice letter process for authorizing disbursements from the Nuclear Decommissioning Trusts, reporting incurred costs and forecasting future costs, and submitting Nuclear Decommissioning Trust balance statements; and
- Authorize Edison and SDG&E to file annual applications seeking reasonableness review for decommissioning activities completed during the previous year, for the years in which the Commission

does not conduct a Nuclear Decommissioning Cost Triennial Proceeding.

In the application, Edison individually requested Commission authorization for a Balancing Account for recording unanticipated decommissioning costs for SONGS Units 2 and 3.

SDG&E sought approval for its own \$16.549 million (2014\$) of the decommissioning costs, as well as to include \$1.09 million in revenue requirement for SONGS Unit 1 Nuclear Decommissioning, and to reduce its contribution to the Nuclear Decommissioning Trust to \$0.0 effective January 1, 2016.

On January 15, 2015, Protests were filed and served by Office of Ratepayer Advocates (ORA), The Utility Reform Network (TURN), Citizens Oversight, Inc., and the Alliance for Nuclear Responsibility. Donna Gilmore filed and served a Response to the application on January 9, 2015. Ruth Henricks filed and served a Motion for party status on January 7, 2015, as did Pacific Gas and Electric Company on January 14, 2015. On March 20, 2015, The Utility Consumers' Action Network (UCAN) filed and served its Motion for Party Status, which was granted at the Prehearing Conference (PHC).

The assigned Commissioner and Administrative Law Judge (ALJ) convened a PHC on April 2, 2015. A procedural schedule was adopted, the parties presented the result of their meet and confer regarding scoping issues, and potential consolidation with other proceedings was discussed.

On April 22, 2015, the assigned Commissioner issued his scoping memo. The assigned Commissioner found that the scope of the matter properly before the Commission was whether or not the applicants have met their burden of demonstrating that the relief requested is justified as set forth in Pub. Util. Code § 455, and that the resulting rates will be just and reasonable as required by

Pub. Util. Code § 451. The assigned Commissioner declared that the specific issues before the Commission included determining if the applicants had justified the Nuclear Decommissioning Cost Estimate, the proposed adjustments to contributions to the Nuclear Decommissioning Trust, and processes for annual review of decommissioning cost expenditures. In addition, Edison needed to justify its proposed balancing account for unanticipated decommissioning costs, and SDG&E its share of the decommissioning costs and proposed revenue requirement.

The assigned Commissioner also excluded specific issues from the scope of this proceeding. The assigned Commissioner determined in the scoping memo that the reasonableness of the Nuclear Decommissioning Cost Estimates did not include operational decisions, such as vendor selection or equipment specifications. The soundness of cost assumptions and contingency planning, however, was determined to be within the scope of the proceeding.

Pursuant to the procedural schedule adopted in the scoping memo, evidentiary hearings were held on August 25, 26, and 27, 2015. Pursuant to the schedule set at the conclusion of hearings, opening briefs were submitted on October 15, 2015, by Edison, SDG&E, ORA, TURN, UCAN, Citizens Oversight, Inc., the Alliance for Nuclear Responsibility, and Donna Gilmore.

Reply briefs were filed on November 13, 2015, by the same parties. The proceeding was submitted for Commission decision on November 13, 2015. Final Oral argument before the Commission was held on April 18, 2016.

2. Positions of the Parties

2.1. Edison and SDG&E

Although presented separately, the two utilities' positions are functionally identical; that is, Edison has demonstrated that the 2014 Decommissioning Cost Estimate for SONGS Units 2 and 3 are reasonable and should be approved.

Edison presented the 2014 Decommissioning Cost Analysis of the SONGS Units 2 and 3, by Energy Solutions, LLC as the primary support for its request. The 2014 Cost Analysis results in the 2014 Decommissioning Cost Estimate for SONGS Units 2 and 3 of \$4,411,246,000.

The 2014 Cost Analysis contained the following summary, shown in 2014 dollars in thousands, broken down into the three primary cost components:

Cost Account	Unit 2	Unit 3	Total
<u>License termination</u> (decommissioning work as required by 10 CFR 50.75(c), includes removal of contaminated equipment and structures on site, excludes cost of removal and disposal of structures that are not radioactive material)	\$1,034,230	\$1,078,016	\$2,112,246
<u>Spent fuel management</u> (as required by 10 CFR 50.54(bb), assumes spent fuel pool ceases operation after seven years, then spent fuel stored in canisters at on-site Independent Spent Fuel Storage Installation, DOE accepts spent fuel starting in 2024.	\$623,209	\$652,987	\$1,276,196
<u>Site Restoration</u> (as required by Site Easements which mandate demolition and removal of all on-shore and off-shore improvements, regardless of depth)	\$423,297	\$599,507	\$1,022,804
TOTAL	\$2,080,735	\$2,330,511	\$4,411,246

Each of the three major cost accounts are further subdivided into project periods defined specifically for decommissioning these two nuclear generating units and each period is described with the major activities to be accomplished during that period. License Termination, Spent Fuel Management, and Site Restoration each initiated work in 2013 when the plant officially ceased operations.

License Termination is divided into six periods covering the 19.52 years that this effort is expected to require and costs a total of just over \$2.1 billion. The initial two periods, Transition to Decommissioning and Decommissioning Planning and Site Modifications, were completed by the end of 2015. These two periods were relatively modest in terms of cost, about \$300 million, and time, about two years. The next period, Preparations and Reactor Internals Segmentation, takes almost four years, and the fourth period, Plant Systems and Large Component Removal, adds a little more than three years. During this seven-year period, Edison expects to spend just over \$1.3 billion, which is more than half of the total \$2.1 billion for License Termination. The final two periods of License Termination are Building Decontamination and License Termination During Demolition, with just under \$500 million in costs, but this last period takes over eight years to complete.

The duration of the Spent Fuel management cost account is the longest at 38.23 years, and the total cost is \$1.3 billion. This cost account tracks the timeline and expenses associated with moving the Spent Nuclear Fuel from the spent fuel pool to storage canisters and then to the existing but expanded Independent Spent Fuel Storage Installation. The first period, Spent Fuel Management Transition, is completed, and the second period, Spent Fuel Transfer to Dry Storage is underway. This second period is expected to last

about five and half more years, concluding in mid-2019. During this period, Edison will select the design and vendor for its dry storage system canister, design and construct the needed expansion to the existing Independent Spent Fuel Storage Installation, and purchase, deliver, and load the canisters with spent fuel and transfer the loaded canisters to the expanded storage facility. The total cost for this period is \$716 million. The next three periods, Dry Storage During Decommissioning, a period of Dry Storage Only that includes all three units, and a Dry Storage Only period for just Units 2 and 3, last for over 30 years and conclude in 2049. The total cost of the Dry Storage periods is about \$400 million. This schedule is premised on the U.S. Department of Energy starting to receive spent nuclear fuel in 2024, which leads to SONGS spent fuel being scheduled for transfer starting in 2030. The last canisters would be scheduled for shipment in 2049 from the Independent Spent Fuel Storage Installation at the SONGS site. The final two periods provide for terminating the license for and demolition of the Independent Spent Fuel Storage Installation.

The Site Restoration cost account calls for six non-continuous periods. The first two periods include general transition and site restoration for the Mesa site and switchyard. These two locations have no known need for radiological or chemical remediation. At the conclusion of the second Site Restoration period in mid-2017, the Mesa site restoration will be complete and the lease will terminate. These initial two Site Restoration periods cost a total of \$181 million. The Site Restoration cost account then shows no planned activities until October 2019, when period three, Subsurface Demotion Engineering and Permitting, begins and that period concludes in July 2024. The fourth period is: "Building Demolition to 3 Feet Below Grade" which begins in July 2024 and concludes in October 2028. The cost for periods three and four, which focus primarily on

demolishing and removing structures down to three feet below grade level, is approximately \$300 million. In the fifth period, all subgrade structures below three feet are removed. This process takes a little over three years - from 2028 to 2031 - and costs \$441 million. No site restoration work is planned from 2031 to 2050. The last Site Restoration period is Final Site Restoration and Lease Termination which commences in 2050 after the Independent Spent Fuel Storage Installation is empty with all the spent nuclear fuel canisters having been delivered to the U.S. Department of Energy facility. This final period takes about a year and a half and costs just over \$103 million. It is currently scheduled to be completed in December 2051.

Funding Nuclear Decommissioning for SONGS Units 2 and 3

Edison testified that the current balance in its Nuclear Decommissioning Trusts for SONGS Units 2 and 3 was \$3.37 billion, with a net liquidation value of \$3.05 billion. Based on its forecast of decommissioning costs described above and projected trust fund asset returns, Edison and SDG&E determined that no further ratepayer contributions were required.

Both Edison and SDG&E requested authorization to take their annual contributions to \$0.0 effective immediately, and to refund any overcollections via the Nuclear Decommissioning Adjustment Mechanism.

All parties supported these requests, except the Alliance for Nuclear Responsibility, which contended that the actual decommissioning costs were likely to be higher but presented no evidence on the actual amount it believed would be needed for decommissioning.

Advice Letter Process for Nuclear Decommissioning Trust Disbursements

Edison and SDG&E requested that the Commission authorize them to continue using the advice letter process created in Decision (D.) 14-12-082 for

authorizing disbursements from the Nuclear Decommissioning Trusts, reporting incurred costs and forecasting future costs, and submitting Nuclear Decommissioning Trust balance statements.

No party opposed this request.

Rebuttable Presumption of Reasonableness

Edison proposed that its actual decommissioning expenditures be presumed reasonable so long as the expenditures are less than the forecasted amount in the Decommissioning Cost Estimate and Edison provides required documentation.

Other than Edison and SDG&E, all other parties opposed this request.

SONGS Balancing Account

Edison proposed that the Commission authorize Edison to record in a balancing account all unanticipated costs associated with SONGS Units 2 and 3 that are not related to decommissioning.

Other than Edison and SDG&E, all other parties opposed this request.

Reasonableness Reviews

Edison requested authorization to file annual applications for the Commission to review its SONGS Units 2 and 3 decommissioning expenditures for reasonableness.

2.2. SDG&E

SDG&E supported Edison's presentation of the \$4.411 billion Decommissioning Cost Estimate. SDG&E also requested authorization for its own decommissioning costs of \$16.549 million, which no party opposed.

2.3. ORA

ORA recommended against the Commission approving the Decommissioning Cost Estimate. ORA argued that, as presented by Edison, the

current estimate of decommissioning costs is a non-engineered estimate, based on uncertain assumptions and which acknowledges that certain project costs remain unknowable at this time, such as the timing and rate of the removal of the spent fuel from the plant sites by the Department of Energy.

ORA argued that Edison's cost estimates reflect assumptions of presently unknown future events. Specifically, Edison assumes that the Department of Energy will commence the spent fuel transfer activity in 2024 and would accept spent fuel over the ensuing 25 years. However, ORA points out, the Department of Energy has not yet decided when and where a permanent spent nuclear fuel site will be available.

ORA also contended that Edison's assumption that no site-specific contaminated soil will require remediation is unreasonable. ORA explained that Edison presented few, if any, records supporting this assumption as reasonable; rather, Edison presented just an employee opinion from 2007. ORA stated that a final Historical Site Assessment, which would consist of soil analyses, possible remediation, and associated cost increases, would provide more objective data to replace the employee opinion but the final Historical Site Assessment has not yet been prepared.

ORA pointed out that Edison admits it will continue to update the Cost Estimate as decommissioning proceeds, and detailed plans for decommissioning activities are engineered, with specialty contractor pricing is identified.

ORA concluded that the record shows that it would be premature to adopt a final Decommissioning Cost Estimate at this time.

ORA did not oppose Edison's proposal to make two Advice Letter filings per year for distributions from Decommissioning Trust. In October, Edison would file an Advice Letter projecting anticipated decommissioning expenses for

the following calendar year and request authorization to be reimbursed from the trust for those expenditures. In the spring, Edison proposed to file a second Advice Letter that would be retrospective in nature and would set forth actual costs from the previous calendar year as compared to the forecast.

ORA requested that the Advice Letters contain additional information on cash flows and major scheduling changes which will assist ORA in its reasonableness review of the Advice Letters and advise the Commission on the progress of decommissioning.

2.4. TURN

TURN did not challenge the reasonableness of the \$4.411 billion plan outlined in the revised Decommissioning Cost Estimate presented by Edison. However, TURN expressed concern that this massive project requires greater oversight by the Commission to ensure that the customer contributions held in the decommissioning trust funds are prudently managed to ensure completion of the entire project at the lowest reasonable cost.

TURN presented expert testimony on nuclear power technical, regulatory and policy issues. TURN's expert, Bruce Lacy, offered recommendations on three topics: spent nuclear fuel storage, license termination, and site restoration. The recommendations focused on establishing reasonableness determinations based on milestones. TURN's expert explained that reasonableness reviews should be triggered by completion of discrete units of physical progress, defined and agreed to in advance. In this way, the Commission would be able to assess whether delays are occurring and spending is commensurate with physical progress on a task as part of the reasonableness review. In contrast, the expert explained, Edison's proposed annual reasonableness reviews are arbitrarily tied

to the calendar and will not have any objective connection to actual projects which may obscure delays, changes in the scope of work, and cost overruns.

TURN recommended that the Commission require reasonableness reviews of distributed and undistributed costs based on defined milestones tied to discrete measures of physical progress, and proposed nine milestones covering projects forecast to be complete between 2014 and 2019. As an alternative, TURN suggested that the Commission require the parties to work on a specific milestones proposal in post-decision workshops, followed by Commission review in either a Tier 3 Advice Letter or the 2015 Nuclear Decommissioning Cost Triennial Proceeding.

TURN's expert also commented that Edison's proposed use of a Decommissioning General Contractor was not supported by U.S. experience and that the organization of the actual work at the site to date has not matched up with the cost study categories used in the 2014 Decommissioning Cost Estimate. Each of these comments, the expert concluded, supported use of the milestone approach to reasonableness reviews. TURN also recommended that Edison be responsible for any cost increases attributable to the selection of the Decommissioning General Contractor.

TURN opposed Edison's proposal for annual reasonableness reviews, which TURN argued would be inconsistent with past practice, unsupported by credible rationales, and contrary to efforts to hold Edison and SDG&E accountable for scopes of work that occur over multiple years.

TURN also asked the Commission to require Edison to provide quarterly reports on decommissioning work.

TURN's expert presented a unique request - that the Commission provide a procedural mechanism for Edison and SDG&E to timely return any excess

balances in the decommissioning trust funds that may be identified by the Commission in a future proceeding. TURN's expert explained that the total decommissioning funds that have been collected for SONGS Units 2 and 3 are more than twice the amount estimated for decommissioning costs at four comparable two-unit nuclear power plant sites in the United States. TURN's expert pointed to three specific items that may result in significant cost reductions: (1) damage payments from the U.S. government for delay in removal of the spent nuclear fuel from the site, (2) renegotiation of the site termination requirements in the lease with the U.S. Navy, and (3) the possibility of relief from the California Coastal Commission. TURN's expert testified that cost savings from these or any other efficiencies should be promptly returned to customers to achieve intergenerational equity between customers who contributed to the trust and those who might receive refunds at some point in the distant future.

2.5. UCAN

UCAN presented testimony from two ratemaking and technical experts primarily on the topic of risk sharing. UCAN'S experts recommended that the contracts for decommissioning work should be structured to assign some risk to the contractors, but to hold Edison ultimately responsible for oversight of the contractor's performance. UCAN proposed that cost variance of up to 5%, either over or under the estimates, should be reflected in rates for recovery from ratepayers, but those variances greater than 5% would be shared between ratepayers and shareholders based on an incentive mechanism and any costs that were not reasonable and prudent would be absorbed by shareholders. UCAN's experts opposed Edison's proposed balancing account for SONGS Units 2 and 3 operation and maintenance costs. The experts also recommended a rate cap of

0.5% for any rate increase necessary to fund unanticipated decommissioning costs.

UCAN supported setting ratepayer contributions to the nuclear decommissioning trust to zero, but opposed Edison's proposal for a presumption of reasonableness for costs that do not exceed the Decommissioning Cost Estimate.

2.6. The Alliance for Nuclear Responsibility

The Alliance for Nuclear Responsibility argued that Edison and SDG&E had failed to meet their burden of proving that rates should be changed, such that the utilities should continue collecting funds for nuclear decommissioning at the existing levels, and not reduce the collection to \$0.0 as proposed by the utilities. The Alliance for Nuclear Responsibility argued that the assumption that the U.S. Department of Energy would begin accepting spent nuclear fuel in 2024 is unreasonable and not supported in the record.

2.7. Other Parties

Citizens Oversight, Inc., conducted cross examination and filed briefs, and Donna Gilmore presented testimony and filed briefs on meritorious issues related to nuclear power that were outside the scope of this proceeding. Neither party made a substantial contribution to this decision as required by Pub. Util. Code § 1803.

3. Discussion

Pursuant to Pub. Util. Code § 451 each public utility in California must:

Furnish and maintain such adequate, efficient, just and reasonable service, instrumentalities, equipment and facilities, ...as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.

The duty to furnish and maintain safe equipment and facilities falls squarely on California public utilities, including electric utilities, such as Edison and SDG&E.

Also pursuant to Pub. Util. Code § 451 all rates and charges collected by a public utility must be “just and reasonable,” and a public utility may not change any rate “except upon a showing before the commission and a finding by the commission that the new rate is justified.” (§ 454.) The Commission requires that the public utility demonstrate with admissible evidence that the costs it seeks to include in revenue requirement are reasonable and prudent. The Commission is charged with the responsibility of ensuring that all rates demanded or received by a public utility are just and reasonable.

Pursuant to Pub. Util. Code § 8326, Edison and SDG&E as the owners of SONGS Units 2 and 3, must prepare, submit, and periodically revise their Decommissioning Cost Estimate for the Units:

(a) Each electrical utility owning, in whole or in part, or operating a nuclear facility, located in California or elsewhere, shall provide a decommissioning cost estimate to the commission or the board for all nuclear facilities which shall include all of the following:

- (1) An estimate of costs of decommissioning.
- (2) A description of changes in regulation, technology, and economics affecting the estimate of costs.
- (3) A description of additions and deletions to nuclear facilities.
- (4) Upon request of the commission or the board, other information required by the Nuclear Regulatory Commission regarding decommissioning costs.

(b) The decommissioning costs estimate study shall be periodically revised in accordance with procedures adopted by the commission or the board pursuant to Section 8327.

The Commission's directive to review Edison and SDG&E's Decommissioning Cost Estimate is set forth in § 8327:

The commission or the board shall review, in conjunction with each proceeding of the electrical utility held for the purpose of considering changes in electrical rates or charges, the decommissioning costs estimate for the electrical utility in order to ensure that the estimate takes account of the changes in the technology and regulation of decommissioning, the operating experience of each nuclear facility, and the changes in the general economy. The review shall specifically include all cost estimates, the basis for the cost estimates, and all assumptions about the remaining useful life of the nuclear facilities.

The burden of proof is on SDG&E and Edison to demonstrate the reasonableness of the Decommissioning Cost Estimate and the resulting rate change requests. The standard of proof is that of a preponderance of evidence, which means such evidence as, when weighed with that opposed to it, has more convincing force and the greater probability of truth.

Here, the utilities request authorization to decrease customer rates by reducing the contribution to nuclear decommissioning costs to \$0.0. Although a rate decrease, the utilities must justify this rate change with substantial evidence demonstrating the reasonableness of this action. The utilities justify their proposed rate reduction with their contention that the SONGS Units 2 and 3 Nuclear Decommissioning Trusts are currently sufficiently funded, with projected asset returns and inflation, to pay all decommissioning costs plus a contingency. The utilities offer their Decommissioning Cost Estimate and asset return forecasts in support of their contention.

As set forth below, we have analyzed the utilities' presentation along with the parties and conclude that the utilities have met their burden of proving that SONGS Units 2 and 3 nuclear decommissioning trusts are currently sufficiently

funded to justify reducing further contributions to \$0.0 at this time. As the decades unfold during which decommissioning will occur, however, we will be monitoring the continuing reasonableness of this determination and will revise it if needed.

We deny the utilities' request to accord a presumption of reasonableness to cost elements where the actual costs are no greater than the amount reflected in the Decommissioning Cost Estimate. Accurately forecasting the cost of an activity does not necessarily lead to the conclusion that the particular activity is reasonable or even needed. The utilities must show for all their nuclear decommissioning expenditures that they have taken the appropriate actions and at a reasonable cost.

3.1. Reasonableness of the Decommissioning Cost Estimate

In Application 12-12-012, the Commission approved the previous SONGS Units 2 and 3 Decommissioning Cost Estimate of \$4.132 billion as set forth in D.14-12-082. Edison explained that the 2012 application for the previous Decommissioning Cost Estimate was prepared in 2011 dollars and that escalated for inflation to 2014 dollars that Decommissioning Cost Estimate would increase to \$4.518 billion or about \$107 million more than the current estimate of \$4.411 billion. In short, the current Decommissioning Cost Estimate is slightly less than the previous one. Edison also pointed out that the current Estimate is based on an executable work plan and reflects a much greater degree of detail, whereas the previous Estimate was largely conceptual in its level of detail. For comparison purposes, Edison showed that the estimated costs for License Termination increased by about \$277 million between estimates, but that Spent Fuel Management decreased by \$266 million and Site Restoration decreased by

\$118 million, for an overall reduction in Estimated Decommissioning Costs of \$107 million.

Edison stated that its Decommissioning Cost Estimate has been reviewed by the Nuclear Regulatory Commission and found to be reasonable, as well as by SDG&E with a similar conclusion of reasonableness.¹

The Alliance for Nuclear Responsibility argued that the assumption that the U.S. Department of Energy would begin accepting spent nuclear fuel in 2024 is unreasonable and not supported in the record.

The Commission addressed this issue in D.14-12-082:

We find there is little more than speculation in the record to support the projected date when DOE [Department of Energy] will begin to accept SNF [Spent Nuclear Fuel] for long-term storage. Many complex technical, political, and administrative decisions will eventually drive the development by DOE of any interim or long-term storage of SNF. We agree that 2024 is optimistic, and the actual implementation of a permanent geologic repository will be impacted by many considerations outside this proceeding.

However, the sooner the utilities can safely transfer SNF to DOE control the better. The longer the transfer to DOE is delayed, the higher the transfer and storage costs for SNF. The record provides no support for any particular date other than 2024. Thus, substitution of an unsupported alternative, as suggested by some parties, would be less reasonable than DOE's own position in the record, even if we are skeptical of a near-term political solution at the NRC, the courts or in the U.S. Congress.

Therefore, we find, for purposes of making cost estimates in the 2012 NDCTP, [Nuclear Decommissioning Cost Triennial

¹ Edison Opening Brief at 3.

Proceeding] it is reasonable to assume that DOE will not begin to accept SNF for long-term storage prior to 2024.²

Edison stated that it used the 2024 start date from the previous Decommissioning Cost Estimate because “it would be wholly speculative to make any other assumption.”³ No party offered an alternative date with a persuasive supporting analysis.

As summarized above, TURN included the possibility of damage payments from the U.S. government due to the delay as one of three potential sources for significant decommissioning cost reductions. TURN’s expert explained that the total decommissioning funds collected for SONGS Units 2 and 3 are more than twice the amount estimated for decommissioning costs at four comparable two-unit nuclear power plant sites in the United States. TURN’s expert pointed to three specific items that may result in significant cost reductions: (1) damage payments from the U.S. government for delay in removal of the spent nuclear fuel from the site, (2) renegotiation of the site termination requirements in the lease with the U.S. Navy, and (3) the possibility of relief from the California Coastal Commission. TURN argues that cost savings from these or any other efficiencies should be promptly returned to customers to achieve intergenerational equity between customers who contributed to the trust and those who might receive refunds at some point in the distant future.

We agree that known and quantifiable decommissioning cost reductions should be promptly incorporated into the Decommissioning Cost Estimate. At this time, the potential sources of such reductions offered by TURN are not

² D.14-12-082 at 22 – 23.

³ Edison Opening Brief at 29.

sufficiently certain to be incorporated into the Estimate. Edison and SDG&E must monitor these and all other potential cost reductions for incorporation into the next Decommissioning Cost Estimate review proceeding.

We find, therefore, that the Decommissioning Cost Estimate reasonably relies on the planning assumption that the Department of Energy will begin accepting Spent Nuclear Fuel in 2024 and that this date is uncertain.

The asset yield return forecast is also reasonable because the Nuclear Decommissioning Trusts are managed by professional financial trust fund committee members. The current assets plus forecasted yield returns will adequately fund now-known decommissioning costs.

We find that Edison has demonstrated that the Decommissioning Cost Estimate is reasonable. We similarly find that SDG&E's own decommissioning costs of \$16.549 million are also reasonable. We conclude that the respective Decommissioning Cost Estimates for Edison and SDG&E should be approved.

Therefore, we grant the requests of Edison and SDG&E to reduce their respective SONGS Units 2 and 3 Nuclear Decommissioning Trust fund collection to \$0.0. The Commission retains jurisdiction over this determination, which is subject to review and possible revision in future Decommissioning Cost Estimate proceedings and Nuclear Decommissioning Cost Triennial Proceedings.

3.2. Procedural Requests

3.2.1. Balancing Account Proposal Denied

As set forth above, UCAN's experts opposed Edison's proposed balancing account for SONGS operation and maintenance costs that cannot be funded from the decommissioning trust funds. Edison explained that such costs might arise for the no-longer-operating SONGS Units 2 and 3 by the Nuclear Regulatory Commission or Internal Revenue Service deciding that certain costs being

incurred at the sites are not decommissioning expenses and thus not eligible for reimbursement from the Nuclear Decommissioning Trusts.⁴ Edison gave no examples of any such known expenses.

UCAN explained that this extra decommissioning fund could provide a means to charge ratepayers more than the decommissioning costs approved in this proceeding. UCAN stated that should a particular area of decommissioning expense exceed the forecasted amount, Edison could record the excess cost in the proposed balancing account and have it recovered in rates without any further review.

We deny Edison's request for a balancing account in which to record SONGS Units 2 and 3 operations and maintenance costs not eligible for reimbursement from the Nuclear Decommissioning Trusts. Edison has not met its burden of demonstrating the necessity of this ratemaking mechanism, which UCAN correctly identifies as having the potential for confusing decommissioning cost recovery. When and if Edison identifies SONGS Units 2 and 3 operations and maintenance costs not eligible for reimbursement from the Nuclear Decommissioning Trusts, then Edison may seek ratemaking authorization from this Commission.

3.2.2. Advice Letter Process for Disbursing Funds Held in Nuclear Decommissioning Trusts

Edison proposes a two-step process for disbursing funds held in the Nuclear Decommissioning Trusts. First, at the end of each calendar year, Edison will file and serve a Tier 2 Advice Letter forecasting its SONGS Units 2 and 3 decommissioning costs for the following calendar year. Based on this forecast,

⁴ Edison Opening Brief at 52.

the Commission will authorize disbursements from the Trust Funds to pay costs anticipated in the calendar year.

Second, Edison will file another Tier 2 Advice Letter after the completion of the calendar year. This second Advice Letter will show actual recorded expenditures. The calendar year actual expenditures will be reconciled to the forecast expenditures for which disbursements from the Nuclear Decommissioning Trust were made, and any variance recorded. The variance will then be offset against or added to the disbursement Edison requests for the following calendar year.

No party opposed the two Advice Letter process proposed by Edison, but TURN requested additional detailed information to enable tracking expenditures and actual progress towards identified components in the overall decommissioning plan.

We grant TURN's request. These two annual Advice Letters will provide the Commission, and the parties, with ongoing review of the decommissioning effort and will be the place where emerging issues will unfold. To be useful, Edison's Advice Letters must be tied to the Nuclear Decommissioning Cost Estimate and show expenditures and related progress toward specific major milestones in the decommissioning process. Accounting data only without linkage to progress on a program goal will not provide the Commission or the parties with the financial and operational status of the decommissioning process. Therefore, we will require Edison to prepare its Forecast and Recorded Decommissioning Disbursements Tier 2 Advice Letters to include direct references to the Decommissioning Cost Estimate to allow parties and the Commission to tie forecasted and recorded disbursements to the Decommissioning Cost Estimate. The Advice Letters must also include status

reports that show progress in terms of costs and timelines for each major component of the decommissioning plan.

SDG&E should also file two Tier 2 Advice Letters annually, consistent with its share of decommissioning costs as presented by Edison and billed to SDG&E, plus SDG&E's own decommissioning costs.

All disbursements from the Nuclear Decommissioning Trust Funds are provisional and subject to an obligation to refund any improper costs to the Trust Fund.

3.2.3. Final Ratemaking Reviews of Decommissioning Costs

Edison proposes to file an annual application for review of decommissioning costs recorded and completed during the previous year. Edison argued that annual reasonableness reviews for completed work and costs would allow the Commission and all interested parties to review SONGS Units 2 and 3 decommissioning activities and costs more frequently than provided in the Nuclear Decommissioning Cost Triennial Proceedings. Edison contended that frequent cost reviews by the Commission will benefit all stakeholders by keeping the Commission more closely tied with the large magnitude of expenditures forecasted for the twenty-year plan for completing major decommissioning activities. Edison also cited to Pub. Util. Code §§ 8326 and 8327 for the proposition that the Utilities and the Commission must perform ongoing reasonableness reviews to ensure there is sufficient funding for decommissioning.

ORA opposed Edison's proposal for annual reasonableness reviews. ORA supported the triennial review process used for reviewing completed projects for SONGS 1 and Humboldt Bay Unit 3. ORA explained that annual reasonableness reviews for SONGS Units 2 and 3 would severely strain the already limited

administrative resources of the Commission, where processing an application takes an average of 1.4 years. The last Nuclear Decommissioning Cost Triennial Proceedings took over a year to issue the Phase I Decision and over two years for the Phase II Decision. ORA concluded that Edison's proposal for annual reasonableness reviews is unrealistic. For these same reasons, ORA recommended that the Commission required Edison and SDG&E to update the Decommissioning Cost Estimate as part of the Nuclear Decommissioning Cost Triennial Proceedings.

TURN opposed Edison's proposed annual schedule for filing reasonableness reviews. TURN explained that the level of detail in the Decommissioning Cost Estimate is not sufficient to correlate individual line items with scope of work in activity plans, and actually requires the project-based milestone approach advocated by TURN. TURN argued that Edison admitted its intention to offset overages and underages for a project and to "wait until it seeks a reasonableness review to determine how to allocate expenditures amongst various line items."⁵

We are persuaded by ORA that Edison's annual reasonableness review proposal is not feasible, and by TURN that the information presented in an annual report will not necessarily be useful in discharging our duty to review decommissioning costs as required by Pub. Util. Code §§ 451 and 8327.

As recommended by ORA, we agree that the logical proceeding for decommissioning cost review is the Nuclear Decommissioning Cost Triennial

⁵ TURN Opening Brief at 12 -13.

Proceedings.⁶ We also recognize that the completion of major projects – termed “milestones” by TURN – also represents a logical point to review decommissioning costs. Because we are now just beginning the long journey that will be decommissioning SONGS Units 2 and 3, we find that setting a definite schedule for reasonableness is premature.

Generally, we expect reasonableness review requests no less frequently than in each Nuclear Decommissioning Cost Triennial Proceeding. In this way, the reasonableness reviews will reflect a status report both in terms of amounts spent and work accomplished. This will enable Edison and SDG&E to monitor the progress of the decommissioning effort in relation to the anticipated cost and the available assets in the Nuclear Decommissioning Trust Funds. However, when a major project is completed, a separate application with a comprehensive showing from the conceptual cost estimate through the actual recorded costs will be required. As the decommissioning process unfolds in the Nuclear Decommissioning Cost Triennial Proceedings, we will set specific procedural schedules for filing requests for reasonableness reviews. The parties shall meet and confer to propose a filing schedule for reasonableness reviews that identifies major projects and anticipated filing dates.

3.2.4. Presumption of Reasonableness Summarily Denied

We summarily deny the utilities’ request to accord a presumption of reasonableness to cost elements where the actual costs are no greater than the amount reflected in the Decommissioning Cost Estimate. Accurately forecasting the cost of an activity does not necessarily lead to the conclusion that the

⁶ The Triennial Review Proceedings are also the logical venue for ratemaking proposals such as that brought forward by UCAN in this docket.

particular activity is reasonable or even needed. The utilities must show for all their nuclear decommissioning expenditures that they have taken the appropriate actions and at a reasonable cost.

4. State Role in Nuclear Energy Regulation

Citizen's Oversight and Donna Gilmore raised issues that are beyond the jurisdiction of this Commission, e.g., storage cask selection. As the Commission previously noted in D.14-12-082 at 20-21:

Some of the advice and recommendations from intervenors, appear to ignore the distinct jurisdictional roles of the federal and state government regarding nuclear safety, operational issues, and decommissioning a closed nuclear facility.

The Atomic Energy Act of 1954⁷ provided the federal government with exclusive jurisdiction to license the transfer, delivery, receipt, acquisition, possession, and use of nuclear materials.⁸ Congress, in passing the 1954 Act and later amendments, intended that "the U.S. Government should regulate the radiological safety aspects involved in the construction and operation of a nuclear plant, but that the States retain their traditional responsibility in the field of regulating electrical utilities for determining questions of need, reliability, cost, and other related state concerns."⁹

In a 1983 pre-emption test of state law, the U.S. Supreme Court affirmed the Federal Government maintains complete control of the safety and "nuclear" aspects of energy generation; and that

⁷ 42 U. S. C. § 2011 et seq.

⁸ *PG&E v. State Energy Resources Conservation and Development Commission* (1983), 461 U.S. 190, 207.

⁹ *Id.* at 205.

states have “no role” regarding the license, transfer, delivery, receipt, acquisition, possession, and use of nuclear materials.¹⁰

For example, issues regarding the type of nuclear fuel used in operations, the type of casks used for dry storage, the operation of the SNF pool, are federal jurisdictional matters. As an example of this federal authority, to receive an NRC operating license, one must submit a safety analysis report, which includes a radioactive waste handling system.¹¹ The regulations specify general design criteria and control requirements for fuel storage and handling and radioactive waste to be stored at the reactor site. [10 C.F.R. pt. 50, app. A (1982).] In addition, the NRC has promulgated detailed regulations governing storage and disposal away from the reactor. [10 C.F.R. pt. 72 (1982).] Lastly, The NRC issued its first nuclear decommissioning requirements in 2000.¹²

We, therefore, decline to review these issues here. We reiterate, however, that Edison remains responsible for all decommissioning planning and operational actions whether conducted by Edison employees or a contractor, and that this Commission will hold reasonableness reviews of all decommissioning expenses.

5. Categorization and Need for Hearing

The Commission preliminarily categorized this Application as ratesetting as defined in Rule 1.3(a)(e) and anticipated that this proceeding would require evidentiary hearings in ALJ 176-3346 on December 18, 2014. The assigned Commissioner’s scoping ruling affirmed the preliminary categorization of this proceeding as ratesetting and the need for hearings.

¹⁰ *Id.* at 207.

¹¹ 10 C.F.R. § 50.34(b)(2)(i), (ii) (1982), and 150.15(a)(1)(i) (1982).

¹² NRC Research Guide 1.184 (Decommissioning of Nuclear Power Reactors (July 2000)) <http://pbadupws.nrc.gov/docs/ML0037/ML003701137.pdf>.

6. Comments on Proposed Decision

The proposed decision of ALJ in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure.

Comments on the proposed decision were filed and served on March 16, 2016, by: Alliance for Nuclear Responsibility, Donna Gilmore, UCAN, SDG&E, Edison, and TURN. The same parties filed and served reply comment on March 21, 2016, with the applicants submitting joint reply comments.

In their comments, UCAN and SDG&E identified factual errors in the proposed decision. These errors have been corrected.

Edison claimed that the requirement for a reasonableness review after a major component of decommissioning work was completed "lacks specificity and evidentiary support."¹³ In response, today's decision has clarified to require that parties meet and confer in the next Nuclear Decommissioning Cost Triennial Proceeding to identify major components of decommissioning and propose an expected schedule for these reasonableness reviews.

All comments and reply comments have been thoroughly reviewed and recommended revisions carefully considered.

As revised, today's decision meets the Commission's legal requirements to review decommissioning costs as set forth in Pub. Util. Code §§ 451 and 8327.

7. Assignment of Proceeding

Michel Peter Florio is the assigned Commissioner and ALJ Maribeth A. Bushey is the assigned ALJ in this proceeding.

¹³ Southern California Edison Comments at 2.

Findings of Fact

1. On December 10, 2014, Edison and SDG&E filed this joint application seeking a finding that the updated 2014 Decommissioning Cost Estimate of \$4.411 billion is reasonable for SONGS Units 2 and 3.

2. Edison testified that the current balance in its Nuclear Decommissioning Trust for SONGS Units 2 and 3 was \$3.37 billion, with a net liquidation value of \$3.05 billion.

3. Edison demonstrated that the contributions to the Nuclear Decommissioning Trusts for SONGS Units 2 and 3, with forecasted return on assets and expected inflation, are sufficient to meet the Decommissioning Cost Estimate on the timetable set forth in the Estimate.

4. Edison and SDG&E requested authorization to reduce to \$0.0 their respective annual contribution to the Nuclear Decommissioning Trust and to refund any overcollections via the Nuclear Decommissioning Adjustment Mechanism.

5. SDG&E testified that it will also incur decommissioning costs of \$16.549 million, in addition to its share of the Edison Decommissioning Cost Estimate, and no party opposed this estimate.

6. The Commission has previously determined that for purposes of making cost estimates in the 2012 Nuclear Decommissioning Cost Triennial Proceeding that it was reasonable to assume that the U.S. Department of Energy will begin to accept Spent Nuclear Fuel for long-term storage in 2024.

7. No party persuasively demonstrated the reasonableness of an alternative date for U.S. Department of Energy to begin to accept Spent Nuclear Fuel for long-term storage.

8. For purposes of the 2014 Decommissioning Cost Estimate for SONGS Units 2 and 3, it is reasonable to assume that the U.S. Department of Energy will begin to accept Spent Nuclear Fuel for long-term storage in 2024.

9. Edison failed to meet its burden of demonstrating the necessity of a balancing account in which to record SONGS Units 2 and 3 operations and maintenance costs not eligible for reimbursement from the Nuclear Decommissioning Trusts.

10. Edison proposed a two-step process for disbursing funds held in the Nuclear Decommissioning Trusts; first, at the end of each calendar year, Edison will file and serve a Tier 2 Advice Letter forecasting its SONGS Units 2 and 3 decommissioning costs for the following calendar year, and second, Edison will file another Tier 2 Advice Letter after the completion of the calendar year with actual recorded expenditures.

11. TURN requested additional detailed information to enable tracking expenditures and actual progress towards identified components in the overall decommissioning plan.

12. To be useful to the Commission and the parties, the two annual Advice Letters must be tied to the Nuclear Decommissioning Cost Estimate and show expenditures and related progress toward specific major milestones in the decommissioning process. The Forecast and Recorded Decommissioning Disbursements Advice Letters must include direct references to the Decommissioning Cost Estimate to tie forecasted and recorded disbursements to the Decommissioning Cost Estimate as well as include status reports that show progress in terms of costs and timelines for each major component of the decommissioning plan.

13. All disbursements from the Nuclear Decommissioning Trust Funds are provisional and subject to an obligation to refund any improper costs to the Trust Fund.

14. After-the-fact reasonableness reviews of expenditures for decommissioning SONGS Units 2 and 3 should be conducted in the Nuclear Decommissioning Cost Triennial Proceedings, unless otherwise scheduled.

15. When Edison completes a major component of nuclear decommissioning for SONGS Units 2 and 3, Edison should submit a separate application with a comprehensive showing from the conceptual cost estimate through the actual recorded costs.

Conclusions of Law

1. The 2014 Decommissioning Cost Estimate of \$4.411 billion is reasonable for SONGS Units 2 and 3.

2. SDG&E's estimate of its own decommissioning costs of \$16.549 million for SONGS Units 2 and 3, plus its share of costs to be incurred by Edison, is reasonable.

3. The respective Decommissioning Cost Estimates for Edison and SDG&E should be approved.

4. The Nuclear Decommissioning Trusts of Edison and SDG&E for SONGS Units 2 and 3 are sufficiently funded, plus forecasted return on assets, to meet the current Decommissioning Cost Estimates.

5. Edison and SDG&E should be authorized to reduce to \$0.0 their respective annual contribution to the Nuclear Decommissioning Trust and to refund any overcollections via the Nuclear Decommissioning Adjustment Mechanism.

6. We similarly find that SDG&E's own decommissioning costs of \$16.549 million is reasonable. The respective Decommissioning Cost Estimates for Edison and SDG&E should be approved.

7. Edison's request for a balancing account in which to record SONGS Units 2 and 3 operations and maintenance costs not eligible for reimbursement from the Nuclear Decommissioning Trusts should be denied.

8. The Forecast and Recorded Decommissioning Disbursements Tier 2 Advice Letters should be filed annually and must contain information supporting the requested disbursement tied to the Nuclear Decommissioning Cost Estimate and show expenditures and related progress toward specific major milestones in the decommissioning process.

9. All disbursements from the Nuclear Decommissioning Trust Funds are provisional and subject to an obligation to refund any improper costs to the Trust Fund.

10. Discharging our duty to review decommissioning costs as pursuant to Pub. Util. Code §§ 451 and 8327 requires that Edison file after-the-fact reasonableness reviews of expenditures for decommissioning SONGS Units 2 and 3 in the Nuclear Decommissioning Cost Triennial Proceedings, unless otherwise scheduled.

11. Discharging our duty to review decommissioning costs as pursuant to Pub. Util. Code §§ 451 and 8327 requires that when Edison completes a major component of nuclear decommissioning for SONGS Units 2 and 3, Edison should submit a separate reasonableness application with a comprehensive showing the decommissioning activities and costs from the conceptual plan through the actual recorded costs tied to line items in the Decommissioning Cost Estimate.

12. Further scheduling for reasonableness reviews of nuclear decommissioning costs for SONGS Units 2 and 3 will be set in the Nuclear Decommissioning Cost Triennial Proceedings, and the parties should meet and confer to identify major projects and propose an expected filing schedule.

13. The utilities' request to accord a presumption of reasonableness to cost elements where the actual costs are no greater than the amount reflected in the Decommissioning Cost Estimate is summarily denied.

14. As required by Pub. Util. Code § 451 all rates and charges collected by a public utility must be "just and reasonable," and a public utility may not change any rate "except upon a showing before the commission and a finding by the commission that the new rate is justified," as provided in § 454.

15. Edison remains responsible for all decommissioning activities whether conducted by Edison employees or a contractor.

16. Pub. Util. Code § 451 requires safe operation of an electric system. It is a long-standing and continuing responsibility, not a one-time obligation.

17. The burden of proof is on SDG&E and Edison to demonstrate the reasonableness of the rate request.

18. The standard of proof is that of a preponderance of evidence, which means such evidence as, when weighed with that opposed to it, has more convincing force and the greater probability of truth.

19. This decision should be effective today.

20. This proceeding should be closed.

O R D E R

IT IS ORDERED that:

1. The 2014 Decommissioning Cost Estimate of \$4.411 billion for San Onofre Nuclear Generating Station Unit Nos. 2 and 3 is adopted; Southern California Edison Company and San Diego Gas & Electric Company shall use this Decommissioning Cost Estimate for all decommissioning planning for San Onofre Nuclear Generating Station Units Nos. 2 and 3.
2. San Diego Gas & Electric Company is authorized to add to its share of the 2014 Decommissioning Cost Estimate for San Onofre Nuclear Generating Station Unit Nos. 2 and 3 the additional increment of \$16.549 million for San Diego Gas & Electric Company's own decommissioning cost.
3. Southern California Edison Company and San Diego Gas & Electric Company are authorized to reduce to \$0.0 their respective annual contributions to the San Onofre Nuclear Generating Station Unit Nos. 2 and 3 Nuclear Decommissioning Trust and to refund to ratepayers any overcollections via the Nuclear Decommissioning Adjustment Mechanism. San Diego Gas & Electric Company is authorized to implement this decrease and refund to customers with its next anticipated revenue change.
4. Southern California Edison Company must file annually Forecast and Recorded Decommissioning Disbursements Tier 2 Advice Letters; each such Advice Letter must show information supporting the requested disbursement tied to the Nuclear Decommissioning Cost Estimate and show expenditures and related progress toward specific major milestones in the decommissioning process.

5. San Diego Gas & Electric Company (SDG&E) must file annually Forecast and Recorded Decommissioning Disbursement Tier 2 Advice letters consistent with its share of San Onofre Nuclear Generating Station 2 and 3 decommissioning costs as presented by Edison and billed to SDG&E by Edison, plus include any additional administrative costs unique to SDG&E. Such advice letters must show information supporting the requested disbursements.

6. All disbursements from the Nuclear Decommissioning Trust Funds are provisional and subject to an obligation to refund any improper costs to the Trust Funds.

7. Southern California Edison Company and San Diego Gas & Electric Company must file after-the-fact reasonableness reviews of expenditures for decommissioning San Onofre Nuclear Generating Station Units 2 and 3 in the Nuclear Decommissioning Cost Triennial Proceedings, unless otherwise scheduled.

8. Southern California Edison Company and San Diego Gas & Electric Company must file after-the-fact reasonableness reviews of expenditures for decommissioning San Onofre Nuclear Generating Station (SONGS) Units 2 and 3 when Southern California Edison Company completes a major component of nuclear decommissioning for SONGS Units 2 and 3, and such a separate reasonableness application must contain a comprehensive showing of the decommissioning activities and costs from the conceptual plan through the actual recorded costs tied to line items in the Decommissioning Cost Estimate.

9. Further scheduling for reasonableness reviews of nuclear decommissioning costs for San Onofre Nuclear Generating Station Units 2 and 3 will be set in the Nuclear Decommissioning Cost Triennial Proceedings, and the parties to such

proceedings must meet and confer to identify major components and propose a schedule for filing.

10. Application 14-12-007 is closed.

This order is effective today.

Dated April 21, 2016, at San Francisco, California.

MICHAEL PICKER

President

MICHEL PETER FLORIO

CATHERINE J.K. SANDOVAL

CARLA J. PETERMAN

LIANE M. RANDOLPH

Commissioners