Application No.:	14-12-XXX
Exhibit No.:	SCE-02
Witnesses:	Paul Hunt Todd Cameron Greg Henry Alfred Lopez Doug Snow

SOUTHERN CALIFORNIA
EDISON®

An *EDISON INTERNATIONAL®* Company

(U 338-E)

TESTIMONY ON SUMMARY AND COMPARISON OF TRUST FUND PERFORMANCE

Before the

Public Utilities Commission of the State of California

Rosemead, California
December 10, 2014

SCE-02: Testimony On Summary And Comparison Of Trust Fund Performance

Table Of Contents

SCE-02: Testimony On Summary And Comparison Of Trust Fund Performance

Table Of Contents (Continued)

SCE-02: Testimony On Summary And comparison Of Trust Fund Performance

List Of Tables

I.

AMOUNT OF DECOMMISSIONING TRUST FUND CONTRIBUTIONS

A. Introduction

The purpose of this testimony is to explain Southern California Edison Company's (SCE) determination that contributions to the nuclear decommissioning trust (NDT) funds for San Onofre Nuclear Generating Station Units 2 and 3 (SONGS 2 & 3) are not needed at this time based upon the current estimate of decommissioning costs, current level of funding of the NDTs, and projected financial market conditions. The current level of funding in SCE's NDT is sufficient at this time to meet SCE's share of the estimated cost of decommissioning SONGS 2 & 3, as outlined in the decommissioning cost estimate (DCE).

In OII-86, Decision (D.) 87-05-062, the California Public Utilities Commission (Commission or CPUC) adopted externally managed trust funds as the vehicle for accumulating funds for the ultimate decommissioning of the nuclear power plants owned by California utilities. In response to D.87-05-062, SCE established two master trust agreements for SCE's share of nuclear decommissioning costs. SCE established one trust agreement as the vehicle to hold the decommissioning funds for contributions which qualify for an income tax deduction under Section 468A of the Internal Revenue Code (Qualified Trust).[1] SCE also established one non-qualified master trust agreement that creates Non-Qualified Trusts designed to hold the remaining decommissioning funds that cannot be held in Qualified Trusts.[2] Within each master trust, SCE established separate trust accounts for each nuclear unit. The Commission approved SCE's master trust agreement and, following Internal Revenue Service approval of SCE's Schedules of Ruling Amounts,[3] the trusts were initially funded in February 1988.

---

[1] 26 U.S.C. 468A.

[2] As of June 30. 2014, the Non-Qualified Trust has $545k in it which accounts for less than 0.02% of the entire SONGS 2 & 3 nuclear decommissioning trust. The Qualified and Non-Qualified Trusts are explained in further detail in Section II.A.2.

[3] These schedules provide maximum allowable annual deductible contribution amounts, and are updated at various times in accordance with the tax rules, or as necessary.

B. SCE Request for Interim Relief

In anticipation of not needing additional decommissioning trust funding at this time, SCE has only contributed $5.681 million to the SONGS 2&3 qualified decommissioning trust funds in 2014,[4] less than the current annual funding level of $22.726 million authorized in D.10-07-047. In A.12-12-013, SCE requested that the current annual funding level of $22.726 million be continued.[5] The Commission has not acted on that request and A.12-12-013 is pending before the Commission at this time.

Should the Commission continue SCE's current contribution level in deciding A.12-12-013, SCE respectfully requests that the Commission modify the 2014 authorized contribution to $5.681 million by issuing an interim decision in this Application as soon as possible.[6] SCE does not anticipate that any party to this Application will object to this request and believes that the Commission can issue such a decision on an *ex parte* basis without hearings. If hearings are required to dispose of this request, SCE requests that they be held as soon as possible.

SCE is requesting an interim decision and an expeditious resolution because the Commission could reject this request and order a contribution amount that is greater than the $5.681 million for 2014. For 2014 contributions to receive full tax deductibility in 2014 and realize maximum benefit for customers, they must be deposited in the qualified NDT funds by March 15, 2015. SCE's request does not result in retroactive ratemaking because the revenue requirement associated with SCE's NDT contributions is recovered through the Nuclear Decommissioning Adjustment Mechanism (NDAM) balancing account, so that the ultimate revenue requirement collected from customers will be based only on the actual contributions made to the NDT funds.

---

[4] The $5.681 million is the contribution for the first quarter of 2014.

[5] A.12-12-013, Exhibit SCE-6, p. 2. When A.12-12-013 was filed, SCE requested an increased contribution. In Exhibit SCE-6, SCE requested "that the Commission stay its request for an increase from the currently authorized contribution amounts until such time as SCE has completed its site specific decommissioning plan and provided that plan to the Commission."

[6] SCE also made this request in its comments to the Commission's proposed decision for Application (A.) 12-12-013.

C. Present Funding Levels for SONGS 2 & 3

The current CPUC authorized annual contribution to SCE's SONGS 2 & 3 NDT is $22.726 million. The current annual contribution set in D.10-07-047 was based on SCE's trust fund balances as of December 31, 2009 and economic and financial projections that were available in 2009, plus assumptions that were agreed to as part of the settlement agreement between SCE, SDG&E, and TURN contained in Appendix B to D.10-07-047.[7]

D. Proposed Funding Levels for SONGS 2 & 3

SCE proposes zero annual contributions to the SONGS 2 & 3 decommissioning trust funds beginning January 1, 2015. The market value of SCE's nuclear decommissioning trust funds for SONGS 2 & 3 is $3.37 billion as of June 30, 2014. This equates to a net liquidation value of $3.05 billion, which will be available to fund decommissioning activities, after adjusting the market value for estimated taxes that will be paid on net investment gains when the securities are sold. Section III of this exhibit explains why the recommended contribution of zero is reasonable.

E. Proposed Funding Levels Have Decreased

Table I-1 summarizes the differences between the economic and financial assumptions that support SCE's proposed annual contribution in A.12-12-013 and SCE's new proposed zero annual contribution in this Application.

[7] Pacific Gas & Electric Company was also a party to the settlement agreement.

Table I-1
Economic and Financial Assumptions
2012 NDCTP Early Shutdown Supplemental Filing July 2013[8] Versus 2014 Decommissioning Application

	2012 NDCTP Early Shutdown Supplemental Filing July, 2013	2014 Decommissioning Application
SONGS 2&3 Cost (100% Share)	$4,119 million (2011$)	$4,411 million (2014$)
Escalation		
Labor	2.77%	2.92%
Material, Equipment, Other	1.89%	1.75%
Low Level Waste Burial Escalation	7.33%	1.99% 2014 - 2026 7.33% 2027 - 2052
Qualified Trust Rate of Return (SCE)		
Stocks, Pre-Tax	7.79%	7.04%
Bonds, Pre-Tax	4.27%	4.17%
10-Year After-Tax Fund Return	2013 - 2022 = 4.07%	3.77% 2014 - 2023
Post-10-Year After-Tax Fund Return	2023 - 2051 = 4.18%	3.71% 2024 - 2052
SONGS 2 & 3 Contribution Period	2014 - 2022 (9 years)	2015 - 2022 (8 Years)

F. The Commission Should Adopt The Proposed Annual Contributions

The Commission should adopt SCE's proposed annual contribution level of zero. The contribution estimate is based upon the latest available decommissioning cost estimates, SCE's June 30, 2014 SONGS 2 & 3 trust fund balances, and reasonable projections of cost escalation and trust fund asset returns. Of course, actual outcomes will differ from projections.

G. The Commission Should Update Annual Contributions In This Application

1. General Policy

One of the major factors affecting SCE's proposed contribution is the current level of SCE's trust fund balances. SCE's experience in recent NDCTP applications has been that trust fund balances can change considerably between the time of the application and the time when the Commission renders a decision on that application.

[8] A12-12-013 is still pending a decision at the time of this filing.

SCE calculates its trust fund balances at the end of each month. SCE proposes that the Commission permit the updating of SCE's trust fund balances after the close of hearings in this Application and update SCE's required contribution levels accordingly, so that the Commission can have the latest information available as it decides SCE's application. This is similar to the updating for interest rates that occurs in cost of capital applications.[9] A post-hearing update will allow the Commission to consider changes in trust fund balances after the application is filed. The settlement agreement in SCE's 2009 NDCTP application included a trust fund balance update.[10]

H. **Amount Necessary to Decommission**

SCE estimated $4.411 billion (100% share, 2014$) as the cost to decommission SONGS 2 & 3. SCE discusses the SONGS 2 & 3 DCE in Exhibit SCE-1.[11]

---

[9] The Rate Case Plan provides for a late-filed exhibit at day 122 in annual cost of capital applications. D.89-01-040, Appendix C, 1989 Cal. PUC LEXIS 37, *88. In SCE's 2013 cost of capital application, A.12-04-015, this exhibit was filed on October 9, 2012.

[10] D.10-07-047, Appendix B, Section 3.1.

[11] *See* Exhibit SCE-1, Section II SONGS 2 & 3 Decommissioning Cost Estimate

II.

FINANCIAL ASSUMPTIONS AND RATE OF RETURN

A. Introduction

To estimate the contributions needed to fully fund decommissioning of the SONGS 2 & 3 nuclear units, SCE uses trust fund liquidation values, current dollar cost estimates, trust fund forecast returns, tax rates, and escalation rates. In this proceeding, SCE has calculated separate escalation rates for: (1) labor, (2) nonlabor (the combined category of material, equipment, and other) and (3) low level radioactive waste (LLRW) burial. These escalation rates are described in more detail below. Secondly, the rate of return of the trust and applicable tax rates are forecast to project the future after-tax earnings of the trust. SCE based its projections of future trust returns upon equity and fixed income forecasts provided by capital market sources and IHS Global Insight.

1. Escalation

SCE based its projections for labor escalation and nonlabor (material, equipment, and other) escalation upon projections provided by the IHS Global Insight long-term macro economic forecasting service. IHS Global Insight is a reliable, independent, and accurate source for cost escalation forecasts. SCE subscribes to certain IHS Global Insight products and has used IHS Global Insight projections in numerous proceedings before the Commission.[12]

a) Labor Escalation

To escalate labor costs from base-year dollars to future-year dollars, SCE used the IHS Global Insight projection of the employment cost index for total compensation, private sector.[13] One important feature of the employment cost index for total compensation is that it is applicable to contract labor because it covers both direct compensation (wages and salaries) and the cost of employee benefits provided by employers.

---

[12] For instance, SCE has used IHS Global Insight indexes in all of its general rate cases since at least the early 1980s. Pacific Gas & Electric, San Diego Gas & Electric, and Southern California Gas Company also use various IHS Global Insight indexes in their general rate cases.

[13] IHS Global Insight, Long Term Macro Forecast, Quarter 1, 2014, variable JECIWSSP.

b) Nonlabor - Material, Equipment, and Other Escalation

To escalate costs from base-year dollars to future-year dollars for the nonlabor categories of material, equipment, and other, SCE constructed an index that is a weighted average of Producer Price Indexes for fuels and related products and power (WPI05), metals and metal products (WPI10), construction machinery and equipment (WPU112), general purpose machinery and equipment (WPU114), and the chain-weighted price index for the Gross Domestic Product (GDP; the acronym for the associated price index is JPGDP). SCE directly used WPI05, WPI10, and JPGDP projections through 2044 by IHS Global Insight.[14] For the period beyond the IHS Global Insight forecast, the average growth rate of the last four-years (2041 – 2044) was applied to the last 8-year period (2045 – 2052) of the project.

For the variables WPU112 and WPU114, only a 10-year forecast is available from IHS Global Insight.[15] To estimate a 30-year projection for WPU112 and WPU114, SCE constructed an econometric forecasting model that related the historical changes in WPU112 and WPU114 to WPI11, the Producer price index--machinery & equipment and to JPGDP, the chain-weighted price index for the Gross Domestic Product. The regression was performed on historical data ranging from 1960 to 2013.[16] The regression coefficients were applied to the IHS Global Insight growth forecasts of WPI11 and JPGDP, respectively.[17] The average of the two projected growth rates for each variable represent the WPU112 and WPU114 forecast.

c) Burial Escalation

SCE currently has contracts for the disposal and burial of Class-A, Class-B, and Class-C low level radioactive waste (LLRW). The Class-A LLRW is contracted with Energy*Solutions* through 2022 and the Class-B and Class-C LLRW is contracted with WCS through 2019. Both contracts include an annual cost-escalation clause. SCE is in the process of extending and/or renewing

[14] IHS Global Insight, Long Term Macro Forecast, Quarter 1, 2014, variables WPU05, WPU10, JPGDP.

[15] IHS Global Insight, Short Term Macro Forecast, March, 2014, variables WPU112 and WPU114.

[16] BLS, WPU112, WPU114, WPI11

[17] IHS Global Insight, Long Term Macro Forecast, Quarter 1, 2014, variable WPI11 and JPGDP

the LLRW disposal contracts under the current contract terms, through the end of radiological demolition and deconstruction (D&D) period (2026). The LLRW burial cost escalation rates reflect the contract annual escalation rate through the radiological D&D period (2026). The LLRW burial escalation rate through the D&D period (2014 – 2026) is projected to be, on average, 1.99%[18].

To project the burial escalation rates beyond the D&D period, SCE has examined historical trends in burial cost escalation factors published by the Nuclear Regulatory Commission (NRC).[19] The NRC report is written to be an "appropriate source of information for obtaining . . . waste burial/disposition costs"[20] for use by nuclear power reactor licensees in providing to the NRC "reasonable assurance . . . that funds will be available for decommissioning."[21] Various revisions of this report provide historical burial cost escalation factors from 1986 through 2010 for burial sites in the states of Nevada, South Carolina, and Washington.[22]

SCE used the burial cost escalation factors to statistically estimate the range of annual burial cost escalation rates that occurred over the period from 1986 to 2010 for the three burial sites. For the South Carolina and Washington sites, two rates were calculated: one for direct burial, and another for disposition of waste by vendors. The statistical model was an exponential growth model.

The analysis estimated five annual burial escalation rates, ranging from a low rate of 0.2 percent to a high rate of 13.9 percent. The mean rate was 7.3 percent and the median rate was 8.4 percent. SCE proposes to use the mean rate of 7.3 percent to estimate its future burial costs beginning in 2027. Although SCE recognizes that none of the disposal sites referenced in the NRC reports are currently available for SONGS 2 & 3 decommissioning, the escalation rates in the reports are the most representative of any burial escalation rate data available. SCE's burial escalation rate should be adopted to estimate SCE's LLRW burial costs in the post D&D period.

---

[18] IHS Global Insight, Long Term Macro Forecast, Quarter 1, 2014, variable CPI-U

[19] Division of Policy and Rulemaking, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, "Report on Waste Burial Charges/Changes in Decommissioning Waste Disposal Costs at Low-Level Waste Burial Facilities", NUREG-1307, Revision 14, October 2010, plus older revisions.

[20] *Id.*, Foreword.

[21] 10 C.F.R. 50.75(a).

[22] NUREG-1307, Table 2.1.

2. **Tax Treatment Of Trusts**

a) Income Tax Treatment Of Decommissioning Trusts

As previously stated in this Application, SCE maintains external funds for the sole purpose of satisfying SCE's obligation to pay its share of SONGS decommissioning costs. These external funds are maintained in trusts that are subject to a Qualified Master Trust Agreement or a Non-Qualified Master Trust Agreement that each provide separate trust accounts for each of the nuclear power plant units. The Qualified Master Trust Agreement applies to tax-advantaged trusts that satisfy the requirements of Internal Revenue Code ("IRC") Section 468A. The Non-Qualified Master Trust Agreement applies to trusts that do not have to satisfy the requirements of IRC Section 468A. Approximately 98% of these external funds for purposes of satisfying SCE's SONGS decommissioning obligation are currently in trusts that satisfy the requirements of IRC Section 468A ("Qualified Trusts"), with the remaining percentage in trusts that do not have to satisfy the requirements of IRC Section 468A ("Non-Qualified Trusts").

b) Qualified Trusts

Qualified Trusts are tax-advantaged trusts that must meet the requirements of IRC Section 468A and its related Treasury Regulations. The tax-advantaged attributes include the ability of SCE to deduct amounts contributed into Qualified Trusts. In addition, the Federal income tax rate for Qualified Trusts when investment gains are realized is 20% instead of the maximum Federal corporate tax rate of 35%. Each of the SONGS Units 1 through 3 maintain Qualified Trusts for the sole purpose of decommissioning that particular unit, and cannot be used to decommissioning any other unit. Once the funds are placed into a Qualified Trust, such funds can only be used for purposes of: (1) satisfying any of SCE's liability for the decommissioning of the SONGS unit, (2) paying administrative and other incidental expenses of the trust in connection with the operation of the trust, and (3) making investments. For purposes of satisfying SCE's decommissioning liability, amounts extracted from the Qualified Trusts must only be for "nuclear decommissioning costs" as defined in Treasury Regulations Section 1.468A-1(b)(6). In addition, as amounts are extracted from the Qualified Trusts, SCE is required to recognize such amounts as taxable income in its tax returns. Failure to comply with the requirements of IRC Section 468A and related regulations can result in the disqualification of the Qualified Trust, which could cause the trust to be treated as having distributed all of its funds in a taxable transaction to SCE on the date such disqualification. If the trusts continue to satisfy the requirements of IRC Section 468A, the trusts will continue to be treated as Qualified Trusts until the decommissioning process of the nuclear units is substantially completed, at which time the trust shall be terminated.

c) Non-Qualified Trusts

Non-Qualified Trusts are trusts that do not need to meet the requirements of IRC Section 468A and its related Treasury Regulations. SCE's Non-Qualified Trusts are treated as grantor trusts of SCE, and any contributions paid into these Non-Qualified Trusts were not deductible by SCE. In addition, any realized investment gains are taxed at the same Federal corporate tax rate as SCE (i.e., typically 35%). Funds that are placed into the Non-Qualified Trusts are not subject to the "use limitations" of IRC Section 468A(e)(4), but are required to comply with the terms of the Non-Qualified Master Trust Agreement. As amounts are extracted from the Non-Qualified Trusts, SCE is not required to recognize such amounts as taxable income in its tax returns. Non-Qualified Trust were established because when IRC Section 468A was first enacted into law in 1984, only the portion of the decommissioning liability associated with the unit in operations after enactment of IRC Section 468A relative to its total projected years of operations could be funded with a Qualified Trust. Nuclear units that were in operations prior to July 17, 1984 had some portion of their decommissioning liability ineligible for funding through a Qualified Trust. Hence, grantor trusts (i.e., Non-Qualified Trusts) were created to fund this portion of their decommissioning liability. SONGS Unit 1's decommissioning liability ineligible for funding through a Qualified Trust was 53.33 percent, and SONGS Unit 2's ineligible liability was 3.23 percent (100 percent of SONGS Unit 3 liability was eligible for funding through a Qualified Trust). However, in 2005, IRC Section 468A was amended to essentially allow all decommissioning liability to be funded through Qualified Trusts.[23] In November 2011, SCE transferred

[23] IRC § 468A(f)

all of the funds from its SONGS Unit 1 and Unit 2 Non-Qualified Trust to their related Qualified Trusts. SONGS Unit 1 and Unit 2 Non-Qualified Trusts will contain any monetized tax benefits associated with the tax deduction of the pour-over amounts for each of their respective units.

3. Rate of Return Estimates

a) Qualified Trust

Prior to January 1, 1993, the Qualified Trust investments were subject to certain restrictions, known as "Black Lung" restrictions. In October 1992, the Energy Policy Act of 1992 eliminated these restrictions and lowered the tax rate on trust earnings from the maximum corporate rate (then 34%) to 22% beginning in 1994, and to 20% beginning in 1996. Subsequent to the passage of the Energy Policy Act of 1992, PG&E, SDG&E, and SCE all filed petitions for modification of D.87-05-062 in OII-86,[24] seeking relaxation of previous restrictions on the investments of the Qualified Trust.

In D.13-01-039, the Commission determined that up to 80% of the funds of a Qualified Trust may be invested in equities.[25] In D.13-01-039, the Commission determined that up to 30% of the funds invested in equities within a Qualified Trust may be invested in international equities.[26] At least 50% of the equity portion of the funds of a Qualified Trust must be invested passively.[27] Up to 100% of the funds of a Qualified Trust may be invested in investment grade fixed-income securities.[28]

b) Non-Qualified Trust

D.13-01-039 also established investment restrictions for the Non-Qualified Trust. These are identical to those of the Qualified Trust.[29]

---

24 These petitions were filed on May 18, 1993 (PG&E), May 21, 1993 (SCE), and August 18, 1993 (SDG&E).

25 D.07-01-003, Appendix B, Section 4.1.1.2.1.

26 D.13-01-039, Conclusions of Law 7.

27 A passive investment strategy is one that seeks to match the return of a benchmark index, such as the Standard & Poor's 500 index, by replicating the composition of the index. D.13-01-039, Conclusion of Law 9.

28 Investment grade securities are those rated BBB- or higher by Standard & Poor's or equal to or higher than the equivalent rating by other rating agencies. D.95-07-055, Finding of Fact 9.

29 D.13-01-039, Conclusions of Law 4.

(1) Forecasting Sources Related To Trust Returns

SCE based its projections of future trust returns on forecasts provided by capital market sources and IHS Global Insight. For the thirty-year equity return forecast, SCE used capital market equity return projections from five investment consultants for the first twenty-years and IHS Global Insight forecast of the S&P equity return and dividend yield for the last ten-years. For the thirty-year fixed income return forecast, SCE used capital market fixed income return projections from five investment consultants for the first twenty-years and IHS Global Insight fixed income return projections for last ten-years.[30] The returns are averaged for the entire forecast period and projections are made on a pre-tax basis. SCE adjusted the returns for applicable taxes and fees. The average forecast for equity and debt returns for the 30-year forecast period (2014 – 2044) were utilized for periods beyond 2044 (2045 – 2052).

(a) Equity Returns

SCE utilized long-term capital market forecasts for US and non-US equity returns developed by current investment consultants and IHS Global Insight's long-term macro forecast in order to forecast a thirty-year equity return. SCE utilized US an non-US equity forecasts from investment consultants including Russell Investments, BlackRock, Aon Hewitt, Callan Associates, and JP Morgan. The equity return forecast utilizes a weighted average of US equities at 70% and non-US equities at 30%. The weighted-average return across the five investment consultants was applied to the first twenty-years of the equity forecast (July 2014 – June 2034). The US equity return forecast from the investment consultant group ranged from 6.9% (Aon Hewitt) to 8.5% (JP Morgan), and averaged 7.66% for the group. For non-US equities returns, the forecasts ranged from 7.62% (Blackrock) to 9.72% (JP Morgan) and averaged 8.27% for the group. In order to forecast the remaining ten-years (July 2034 – 2044) of equity returns, SCE utilized IHS Global Insight's long-term macro forecasts for S&P500 price appreciation and dividend returns.[31] The average S&P500 equity

---

[30] IHS Global Insight Long Term Macro Forecast Quarter 2, 2014.

[31] IHS Global Insight Long Term Macro Forecast, Quarter 2, 2014, variable SP500 and SP500YLD.

return for the last ten-years of the forecast is 5.46%. The overall average equity return for the forecast period is 7.04%.

(b) Fixed-Income Returns

For fixed income return projections, SCE utilized capital market fixed income return projections from investment consultants and IHS Global Insight's long-term macro projected yield on ten-year constant maturity U.S. Treasury bonds. For the first twenty-years of the forecast (July 2014 – June 2034), SCE utilized capital market forecasts from investment consultants including Russell Investments, BlackRock, Aon Hewitt, Callan Associates, and JP Morgan.[32] The fixed income return forecast from the investment consultant group ranged from 2.75% (Callan) to 4.45% (JP Morgan) and averaged 3.70% for the group. A twenty-five basis point performance adder is included in the investment manager group fixed income return, increasing the rate from 3.70% to 3.95%. For the last ten-years of the forecast period (July 2034 – 2044), SCE used the IHS Global Insight's projected yield on ten-year constant-maturity U.S. Treasury bonds.[33] The average yield for ten-year Treasury bonds is 4.6%, assuming the instrument is held through maturity. The overall average fixed income return for the forecast period is 4.17%.

(2) Projected After-Tax Trust Fund Returns

Projected after-tax returns for the Qualified Trust and the Non-Qualified Trust depend on: (1) the pre-tax returns discussed immediately above, (2) the tax rates applicable to the different financial instruments held by each trust, (3) trust management fees and (4) the projected investment strategy chosen by the Decommissioning Trust Investment Committee that each trust is projected to pursue within the restrictions set by the Commission. The tax rates and the trust investment strategies are summarized in Table II-2:

[32] The capital market fixed income return projection includes a 25 basis-point performance hurdle.

[33] IHS Global Insight Long Term Macro Forecast, Quarter 2, 2014, variable RMTCM10Y.

Table II-2
Tax Rates and Trust Investment Strategies

Characteristic	Qualified Trust	Nonqualified Trust
Federal tax rate	20.00%	35.00%
State tax rate	8.84%	8.84%
Combined tax rate	27.07%	40.75%
Trust management fees (pre tax)	0.10% annually	0.10% annually
Equity portfolio turnover	24.67% annually	24.67% annually
Federal dividend exclusion	0%	70%
Fixed income asset	10-Year Treasury Bonds	10-Year Treasury Bonds

(3) Asset Allocation

Callan Associates was hired by the SCE Nuclear Decommissioning Trust (NDT) Committee in December 2012 to conduct an asset allocation study on the nuclear trusts. Callan was asked in June 2013 by SCE to update the asset allocation study for the ABZ early-shutdown scenario filed in SCE's July 2013 supplemental filing in the 2012 NDCTP. Callan was again asked by SCE in August 2014 to update the asset allocation study based on the 2014 SONGS 2 & 3 decommissioning cost estimate.

The equity glide path used by SCE in the contribution analysis is extracted from Callan's 2014 asset allocation study. SCE supplied the 2014 decommissioning cost estimate and associated financial assumptions for Callan to utilize in its asset allocation analysis. For the remainder of 2014, SCE has adjusted the asset allocation value to 37.5% which represents the median point between the June 30, 2014 trust asset allocation and the Callan 2014 target equity allocation.

Based on the decommissioning cash flows, tax rates and trust investment strategies shown in the testimony and Table I-1 and Table II-2 above, the equity allocation and after-tax trust fund returns are presented in Table II-3 below:

Table II-3
Equity Allocation and After-Tax Trust Fund Returns Employed by SCE

Year	Equity Allocation	After Tax Rate of Return
2014	37.5%	3.93%
2015	29%	3.78%
2016	29%	3.78%
2017	27%	3.74%
2018	27%	3.74%
2019	27%	3.74%
2020	27%	3.74%
2021	27%	3.74%
2022	28%	3.76%
2023	27%	3.74%
2024	28%	3.76%
2025	27%	3.74%
2026	26%	3.72%
2027	25%	3.71%
2028	26%	3.72%
2029	26%	3.72%
2030	32%	3.83%
2031	43%	4.03%
2032	47%	4.10%
2033	47%	4.10%
2034	45%	4.07%
2035	44%	4.05%
2036	43%	4.03%
2037	41%	4.00%
2038	40%	3.98%
2039	38%	3.94%
2040	37%	3.92%
2041	33%	3.85%
2042	28%	3.76%
2043	22%	3.65%
2044	16%	3.54%
2045	10%	3.44%
2046	5%	3.35%
2047	2%	3.29%
2048	0%	3.26%
2049	0%	3.26%
2050	0%	3.26%
2051	0%	3.26%
2052	0%	3.26%

III.

CALCULATING DECOMMISSIONING CONTRIBUTIONS

A. Method for Calculating Decommissioning Contributions

1. Annual Contribution Amount

There are four key elements used in determining the annual contribution amount: (1) trust fund balances, (2) current-dollar decommissioning cost studies, (3) cost escalation, and (4) projected after-tax rates of return of the trust. To determine the necessary contribution levels, annual escalation rates convert the decommissioning cost estimates from current dollars[34] to the dollars of the year when they will be actually incurred. The estimated rate of return and taxes are used to calculate an expected growth in the decommissioning trust fund balances. The future annual decommissioning costs will be treated as annual withdrawals from the projected trust fund balances. The escalation rates and rate of return assumptions are discussed in Chapter II of this Volume.

B. Recommended Contributions Levels Commencing January 1, 2015

1. SCE

The updated contribution analysis is based upon the updated decommissioning cost estimates described in Exhibit SCE-1, the trust fund balances as of June 30, 2014, the estimated escalation rates, and the rates of return established in SCE-2 Chapter II.

Based on these parameters, the analysis shows that SONGS 2 and 3 do not require ratepayer contributions after the first quarter of 2014 in order to meet the future liabilities at this time. This is primarily due to the actual trust fund performance, changes in estimated escalation rates, after-tax rates of return, updated cost estimates and project scheduling. The total annual decommissioning fund contribution requirement commencing January 1, 2015 for SONGS 2 & 3 units is zero (SCE share). Table III-4 below provides this estimate and the associated variables. Table III-5 below shows the estimated contributions and revenue requirements for each unit starting January 1, 2015.

---

[34] *See* Exhibit SCE-1, Section II SONGS 2 & 3 Decommissioning Cost Estimate. The engineering cost studies provide the cost estimates in 2014 dollars for SONGS 2 & 3.

Table III-4
Proposed Nuclear Decommissioning Recovery SONGS 2 & 3 (SCE Share) 2012 NDCTP Early Shutdown Supplemental Filing July, 2013 Versus 2014 Decommissioning Application
(Nominal $000, unless otherwise stated)

Description	2012 NDCTP Estimated	2014 Decommissioning Application
Estimated Costs (SCE share)	$3,143,534 (2011$ Dollars)	$3,341,175 (2014$ Dollars)
Fund Liquidation Value	$ 2,607,921	$3,051,752
Fund Date	09/30/2012	06/30/2014
Annual Contribution	$39,221	$0.00
Annual Revenue Requirement	$39,662	$0.00

Table III-5
Authorized[35] and Proposed Nuclear Decommissioning Contribution Amounts by Unit (SCE Share)
(Nominal $000)

	SONGS 2		SONGS 3		Total
Authorized: (D.10-07-047)	Qualified	Non-Qualified	Qualified	Non-Qualified	
Edison's Authorized Contribution Amount	$17,594	$0	$5,133	$0	$22,727
Edison's Authorized Revenue Requirement	$17,798	$0	$5,192	$0	$22,990
Proposed:					
Edison's Proposed Contribution Amount	$0	$0	$0	$0	$0
Edison's Proposed Revenue Requirement	$0	$0	$0	$0	$0

[35] Contributions authorized in D.10-07-047.

IV.

RATEMAKING

A. Cost Recovery for Refunding Amounts Collected But Not Used to Fund the Trust

The Commission authorized ratemaking for Nuclear Decommissioning Trust funding ensures that SCE only recovers its authorized funding amount through the use of the Nuclear Decommissioning Adjustment Mechanism (NDAM). The process for recovery of the decommissioning funding starts with SCE including in rates the annual funding amount authorized by the Commission. The Commission in D.10-07-047, and as revised by Advice Letter 2639-E, has authorized SCE to recover $22.990 million annually in SCE's Nuclear Decommissioning rate component.[36] Through the use of the NDAM, SCE balances the revenue it receives from customers through the Nuclear Decommissioning rate (*i.e.* credit) to the authorized nuclear decommissioning funding amount (*i.e.* debit). At the end of the year, if the amount of Nuclear Decommissioning revenue is greater than the authorized funding amount, the "over-collection" is returned to customers in the subsequent year by reducing the Nuclear Decommissioning revenue requirement. Likewise, if the Nuclear Decommissioning revenue is less than the authorized amount, the "under-collection" is recovered from customers in the subsequent year by increasing the Nuclear Decommissioning revenue requirement. This process ensures recovery of no more and no less than the authorized funding amount.

As discussed above, if the Commission authorizes SCE's proposal to cease funding of the Nuclear Decommissioning trust beginning April 1, 2014, SCE will make the appropriate adjustment to unwind the authorized funding amounts that have been recorded in the NDAM since April 1, 2014. This adjustment, a credit entry, will be recorded in the NDAM resulting in the NDAM to be "over-collected" since the authorized funding amount is still included in rate levels. Consistent with how SCE disposes of the year-end NDAM balance each year, the over-collection recorded in the NDAM as of December

---

[36] The annual Nuclear Decommissioning Trust funding authorized by the Commission is $22.727 million. Including authorized allowances for Franchise Fees and Uncollectables, the total amount included in the Nuclear Decommissioning revenue requirement and rates is $22.990 million.

31, 2014 will be used to reduce the 2015 NDAM revenue requirement and 2015 Nuclear Decommissioning rate levels.

B. Balancing Account and Proposed Tariff Change[37]

SCE requests authority to establish Preliminary Statement, Part GG, SONGS Operations and Maintenance Balancing Account (SOMBA), a two-way balancing account, which will be used to track SONGS O&M expense that cannot be funded from the decommissioning trusts. At the end of each month, or as soon as possible thereafter, SCE will examine its recorded expenses and first determine if the recorded expenses can be defrayed by disbursements from the decommissioning trusts. After making such a determination, SCE would then record any remaining SONGS O&M expenses in the balancing account. At the end of each year, the difference between authorized SONGS O&M expenses and the recorded amount (over-collection) would be transferred from SOMBA and credited to SCE's Energy Resource Recovery Account (ERRA) balancing account to help mitigate fuel and purchased power (*i.e.*, ERRA) under-collections. If the recorded O&M amount exceeds the authorized amount, SCE would transfer the undercollection from SOMBA and debit SCE's Base Revenue Requirement Balancing Account (BRRBA) for recovery in rates. At this time, SCE proposes to only recover the recorded SONGS O&M expenses from current SCE customers to the extent that such expenses are not eligible to be recovered from the decommissioning trusts. The SOMBA will be an interest-bearing balancing account.

---

37 SCE also made this request in AL-2968E.

Appendix A

Appendix A

1. Contribution Level Assuming Rates of Return Litigated in A.12-12-013

For comparison, the return methodology utilized in the 2012 NDCTP filing is included. In A.12-12-013 Utilities-3,[1] SCE based its projections of future trust returns upon forecasts provided by capital market sources and IHS Global Insight. For the equity return forecast, which is relevant through 2024, SCE used long-term capital market asset class return assumptions from five financial consultants. For the fixed income return forecast, which is relevant through 2055, SCE used 15-year capital market fixed income return assumptions from five financial consultants through 2028 and IHS Global Insight fixed income return projections for the period 2029 - 2044.[2]

SCE calculated the contribution and revenue requirement using the rates of return litigated in the 2012 NDCTP. Based upon the returns previously litigated in A.12-12-013 Utilities-3,[3] and using the current asset glide path, the total annual decommissioning fund contribution and revenue requirement for SONGS 2 & 3 units is zero (SCE share).

2. Equity Rate of Return, A.12-12-013

For comparison, the rate of return on equities utilized in the 2012 NDCTP filing are included. In A.12-12-013 Utilities-3,[4] SCE utilized projected long-term capital market return forecasts from various investment consultants including Russell Investments, BlackRock, Aon Hewitt, Callan Associates, and JP Morgan. The US equity return forecasts ranged from 7.30% (Russell Investments) to 8.78% (JP Morgan). The average investment consultants' capital market pre-tax return is 7.79% for equities and the projected equity returns were applied through 2024.

---

[1] A.12-12-013 Utilities-3, p. 15, line 19.

[2] IHS Global Insight Long Term Macro Forecast, Quarter 3, 2012.

[3] A.12-12-013 Utilities-3, p. 15-16.

[4] A.12-12-013 Utilities-3, p. 16, line 6.

3. **Fixed Income Rate of Return, A.12-12-013**

For comparison, the rate of return on fixed income utilized in the 2012 NDCTP filing are included. In A.12-12-013 Utilities-3,[5] for fixed income return projections, SCE used long-term capital market fixed income returns for the ten-year period 2013 -2022 and IHS Global Insight Long Term Macro forecasts for fixed income projections beyond ten-years. For the first ten-years of the forecast, SCE utilized projected ten-year to thirty-year long-term capital market fixed income returns from various investment consultants including Russell Investments, BlackRock, Aon Hewitt, Callan Associates, and JP Morgan. For 2023-2043, SCE used fixed income projections from IHS Global Insight. SCE used the forecasted yield on ten-year constant maturity U.S. Treasury bonds as the source for projected returns on fixed income securities beyond ten-years. The yield for ten-year Treasury bonds is calculated assuming the instrument is held through maturity. Over the forecast period, the combined projected fixed income pre-tax return averages 4.27% per year.

Table 1

Contributions Resulting From Previously Litigated Rates of Return from 2012 NDCTP Filing and 2014 Decommissioning Application Returns

Description	2012 NDCTP A12-12-013	2014 Decommissioning Application
Equity Rate of Return (Pre-Tax/After-Taxes & Fees)	7.79% / 5.97%	7.04% / 5.07%
Equity Forecast Period	2013 – 2024	2014 – 2048
Source	Capital Markets	Capital Markets and IHS Global Insight
Fixed Income Rate of Return (Pre-Tax/After Taxes & Fees)	4.27% / 3.32%	4.17% / 3.26%
Fixed Income Forecast Period	2013 – 2055	2014 - 2052
Source	Capital Markets and IHS Global Insight	Capital Markets and IHS Global Insight
Contribution Assuming Previously Litigated Returns and 2014 Decommissioning Cost Estimate	$0.00	$0.00

[5] A.12-12-013 Utilities-3, page 16, line 11.

Appendix B

Appendix B

The following table shows SCE's historical contribution levels.

Table 1
SCE Historical Trust Fund Contributions

CPUC Decision(s)	Annual Trust Fund Contribution ($ Millions)	Annual Revenue Requirement ($ Millions)
D.10-07-047	22.726	23.845*
D.07-01-003 and D.06-11-025	45.904	46.488
D.03-10-015	31.530*	32.848
D.99-06-007 (Settlement)	24.488	25.000
D.96-01-011	99.822	104.426**
D.91-12-076	96.325	NA
D.87-05-062	97.104	NA

* This amount does not appear in the decision, but can be found in the spreadsheet that was used to estimate the annual trust fund contribution and revenue requirement.

** This amount appears in D.99-06-007, listed as the revenue requirement corresponding to the $99.822 million contribution.