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January 18, 2013

ADVICE LETTER 2450-E
(U902-E)

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

**SUBJECT: IDENTIFICATION OF CERTAIN CAPITAL PROJECTS AT SAN ONOFRE
NUCLEAR GENERATING STATION PURSUANT TO INVESTIGATION (I.)12-
10-013**

PURPOSE

Pursuant to I.12-10-013, San Diego Gas & Electric Company (SDG&E) respectfully submits this advice letter to provide notice of certain capital projects that Southern California Edison (SCE) is implementing at San Onofre Nuclear Generating Station (SONGS). SDG&E attaches SCE's Advice Letter 2838-E filed on January 14, 2013 as Attachment A herein.

BACKGROUND

On November 1, 2012, the California Public Utilities Commission (Commission) issued I.12-10-013 to consolidate and consider issues raised by the extended outages at SONGS. Per Ordering Paragraph (OP) #4(e), the Commission directs SCE and SDG&E to:

File and serve, no less than five days before a utility management final decision to proceed with a major project, a Tier 1 Informational Advice Letter with the Energy Division Director before making any capital expenditure related to SONGS. For this purpose, a major capital expenditure is an amount in excess of \$10 million (total expenditure before allocation to SCE, SDG&E and City of Riverside).

While SDG&E as a non-operating owner of SONGS can vote on capital project budgets, its participation in decisions to proceed with capital projects is limited by the SONGS Operating Agreement. The Operating Agreement provides that SCE, as the majority owner and NRC licensee authorized to operate SONGS, is solely responsible for the continued safe and reliable operation and making capital improvements at SONGS. As a 20% co-owner, SDG&E on behalf of its bundled retail customers is responsible for paying 20% of such costs. As such, SDG&E files this advice letter in compliance with OP#4 of I.12-10-013 and notes that there are 11 major capital expenditures in excess of \$10 million that have been listed by SCE. Discussions of these 11 capital expenditures are found in Attachment A.

EFFECTIVE DATE

SDG&E believes this filing is subject to Energy Division disposition and should be classified as Tier 1 (effective pending disposition) pursuant to GO 96-B. SDG&E respectfully requests that this filing become effective on January 18, 2013, which is the date of the filing.

PROTEST

Anyone may protest this Advice Letter to the California Public Utilities Commission. The protest must state the grounds upon which it is based, including such items as financial and service impact, and should be submitted expeditiously. The protest must be made in writing and must be received no later than February 7, 2013, which is 20 days of the date this Advice Letter was filed with the Commission. There is no restriction on who may file a protest. The address for mailing or delivering a protest to the Commission is:

CPUC Energy Division
Attention: Tariff Unit
505 Van Ness Avenue
San Francisco, CA 94102

Copies of the protest should also be sent via e-mail to the attention of the Energy Division at EDTariffUnit@cpuc.ca.gov. A copy of the protest should also be sent via both e-mail and facsimile to the address shown below on the same date it is mailed or delivered to the Commission.

Attn: Megan Caulson
Regulatory Tariff Manager
8330 Century Park Court, Room 32C
San Diego, CA 92123-1548
Facsimile No. (858) 654-1879
E-mail: MCaulson@semprautilities.com

NOTICE

A copy of this filing has been served on the utilities and interested parties shown on the attached list including interested parties in service list I.12-10-013, by providing them a copy hereof, either electronically or via the U.S. mail, properly stamped and addressed.

Address changes should be directed to SDG&E Tariffs by facsimile at (858) 654-1879 or by email to SDG&ETariffs@semprautilities.com.

CLAY FABER
Director – Regulatory Affairs

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No. **SAN DIEGO GAS & ELECTRIC (U 902)**

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: Joff Morales

Phone #: (858) 650-4098

E-mail: jmorales@semprautilities.com

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas
PLC = Pipeline HEAT = Heat WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: 2450-E

Subject of AL: Identification of Certain Capital Projects at San Onofre Nuclear Generating Station Pursuant to Investigation (I) 12-10-013

Keywords (choose from CPUC listing): Compliance, Capital Projects

AL filing type: Monthly Quarterly Annual One-Time Other

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:

Investigation (I)12-10-013

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: None

Summarize differences between the AL and the prior withdrawn or rejected AL¹: N/A

Does AL request confidential treatment? If so, provide explanation: None

Resolution Required? Yes No

Tier Designation: 1 2 3

Requested effective date: 1/18/2013

No. of tariff sheets: 0

Estimated system annual revenue effect (%): N/A

Estimated system average rate effect (%): N/A

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: None

Service affected and changes proposed¹: None

Pending advice letters that revise the same tariff sheets: None

Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Ave.,
San Francisco, CA 94102
EDTariffUnit@cpuc.ca.gov

San Diego Gas & Electric
Attention: Megan Caulson
8330 Century Park Ct, Room 32C
San Diego, CA 92123
mcaulson@semprautilities.com

¹ Discuss in AL if more space is needed.

General Order No. 96-B
ADVICE LETTER FILING MAILING LIST

cc: (w/enclosures)

Public Utilities Commission

DRA

Y. Schmidt
W. Scott

Energy Division

P. Clanon
S. Gallagher
H. Gatchalian
D. Lafrenz
M. Salinas

CA. Energy Commission

F. DeLeon
R. Tavares

Alcantar & Kahl LLP

K. Harteloo

American Energy Institute

C. King

APS Energy Services

J. Schenk

BP Energy Company

J. Zaiontz

Barkovich & Yap, Inc.

B. Barkovich

Bartle Wells Associates

R. Schmidt

Braun & Blaising, P.C.

S. Blaising

California Energy Markets

S. O'Donnell
C. Sweet

California Farm Bureau Federation

K. Mills

California Wind Energy

N. Rader

CCSE

S. Freedman
J. Porter

Children's Hospital & Health Center

T. Jacoby

City of Chula Vista

M. Meacham
E. Hull

City of Poway

R. Willcox

City of San Diego

J. Cervantes
G. Lonergan
M. Valerio

Commerce Energy Group

V. Gan

Constellation New Energy

W. Chen

CP Kelco

A. Friedl

Davis Wright Tremaine, LLP

E. O'Neill
J. Pau

Dept. of General Services

H. Nanjo
M. Clark

Douglass & Liddell

D. Douglass
D. Liddell
G. Klatt

Duke Energy North America

M. Gillette

Dynegy, Inc.

J. Paul

Ellison Schneider & Harris LLP

E. Janssen

Energy Policy Initiatives Center (USD)

S. Anders

Energy Price Solutions

A. Scott

Energy Strategies, Inc.

K. Campbell
M. Scanlan

Goodin, MacBride, Squeri, Ritchie & Day

B. Cragg
J. Heather Patrick

J. Squeri

Goodrich Aerostructures Group

M. Harrington

Hanna and Morton LLP

N. Pedersen

Itsa-North America

L. Belew

J.B.S. Energy

J. Nahigian

Luce, Forward, Hamilton & Scripps LLP

J. Leslie

Manatt, Phelps & Phillips LLP

D. Huard
R. Keen

Matthew V. Brady & Associates

M. Brady

Modesto Irrigation District

C. Mayer

Morrison & Foerster LLP

P. Hanschen

MRW & Associates

D. Richardson

OnGrid Solar

Andy Black

Pacific Gas & Electric Co.

J. Clark
M. Huffman
S. Lawrie
E. Lucha

Pacific Utility Audit, Inc.

E. Kelly

R. W. Beck, Inc.

C. Elder

School Project for Utility Rate
Reduction

M. Rochman

Shute, Mihaly & Weinberger LLP

O. Armi

Solar Turbines

F. Chiang

Sutherland Asbill & Brennan LLP

K. McCrea

Southern California Edison Co.

M. Alexander

K. Cini

K. Gansecki

H. Romero

TransCanada

R. Hunter

D. White

TURN

M. Florio
M. Hawiger

UCAN

M. Shames

U.S. Dept. of the Navy

K. Davoodi

N. Furuta

L. DeLacruz

Utility Specialists, Southwest, Inc.

D. Koser

Western Manufactured Housing
Communities Association

S. Dey

White & Case LLP

L. Cottle

Interested Parties in

1.12-10-013

San Diego Gas & Electric Advice Letter 2450-E
January 18, 2013

ATTACHMENT A

January 14, 2013

ADVICE 2838-E
(U 338-E)

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
ENERGY DIVISION

SUBJECT: Informational Advice Letter
Identification of Certain Capital Projects at San Onofre Nuclear
Generating Station Pursuant to Investigation (I.)12-10-013

PURPOSE

Pursuant to I.12-10-013, Southern California Edison Company (SCE) respectfully submits this Tier 1 informational Advice Letter (Tier 1 AL) to provide notice of certain capital projects that SCE is implementing at San Onofre Nuclear Generating Station (SONGS).

BACKGROUND

On November 1, 2012, the California Public Utilities Commission (Commission) issued I.12-10-013 to consolidate and consider issues raised by the extended outages at SONGS. To facilitate its investigation, the Commission has directed SCE to track and record all SONGS O&M and capital costs in a SONGS memorandum account (SONGSMA), and to submit a number of filings related to SONGS costs.¹ In particular, Ordering Paragraph 4(e) of I.12-10-013 provides:

SCE and SDG&E shall each file and serve, no less than five days before a utility management final decision to proceed with a major project, a Tier 1 Informational Advice Letter with the Energy Division Director before making any capital expenditure related to SONGS. For this purpose, a major capital expenditure is any amount in excess of \$10 million (total expenditure before allocation to SCE, SDG&E and City of Riverside).

¹ Ordering Paragraph 4(a)-(h).

In addition, in Decision (D.)12-11-051 (2012 GRC Decision), the Commission provided that, no later than January 30, 2013, SCE should file an application for a reasonableness review of the expenses tracked in the SONGSMA. On December 10, 2012, Administrative Law Judge (ALJ) Melanie M. Darling issued an Administrative Law Judge's Ruling Requesting Additional Testimony (ALJ Ruling), including a requirement that SCE provide an "explanation of the reasonableness of each recorded O&M expense and capital expenditure made in 2012 related to SONGS, taking into account the changed circumstances arising from the extended outages of Units 2 and 3." See ALJ Ruling at p. 2.

DISCUSSION

SCE acknowledges that the Commission's objective in requiring the various filings discussed above is to ensure that the Commission remains informed about significant SONGS activities implemented during the outages. SCE has not approved any new projects meeting the filing requirements for a Tier 1 AL as set forth in Paragraph 4(e) of the ALJ Ruling. However, out of an abundance of caution in order to fulfill the Commission's objective to remain informed about significant SONGS activities and their costs, SCE is respectfully providing notice of the following capital projects that were implemented in 2012 or will be implemented in future years that SCE management approved *before* the Commission issued I.12-10-013, and that will exceed the \$10 million-total-project-cost threshold set forth in Ordering Paragraph 4(e) of the ALJ Ruling:

- (1) Procure and Install Reactor Vessel Head (RVH) – Unit (U)2 & U3
- (2) Rapid Refueling – U2 & U3
- (3) High Pressure Turbine (HPT) Retrofit Project – U2 & U3
- (4) Dry Cask Spent Fuel Storage – Canisters – U2 & U3
- (5) SCR 32PTH System – Canister
- (6) Dry Cask Spent Fuel Storage – 34 AHSMs – U2 & U3
- (7) CCW Heat Exchangers – U2 & U3
- (8) Security Rule
- (9) Cyber Security – Phase 2
- (10) Large Organism Exclusion Device (LOED) – U2 & U3
- (11) National Fire Protection Association (NFPA)

In addition to this Tier 1 AL, SCE submitted testimony regarding these projects on January 9, 2013, in connection with I.12-10-013.

1) Procure and Install Reactor Vessel Head – U2 & U3

The original SONGS U2 & U3 RVHs were made from an iron-nickel-chrome alloy known as Inconel 600. Industry experience has revealed that this alloy is susceptible to primary water stress corrosion cracking in the high temperature environment of the Reactor Coolant System (RCS). This cracking can lead to pressure boundary leaks, and if allowed to continue, is capable of causing failure of RCS pressure boundary

components. The Nuclear Regulatory Commission (NRC) has classified the stress corrosion cracking of Inconel 600 components in the RCS as unacceptable degradation of the RCS pressure boundary. As a result, the NRC has mandated on-going retest requirements and repairs of Inconel 600 nozzle cracking in the reactor heads as the plants age.

Based on the findings from the RCS tests, the SONGS U2 RVH required replacement. The RVH was procured in 2011 and installed in 2012 during the U2 Cycle 17 Refueling Outage (RFO). SCE has postponed and has not yet rescheduled the testing and potential repair of the U3 RVH pending its continuing analysis of the outage at U3 and its determination of how to address that outage.

The total cost of this project collectively for both units is estimated to be \$16.4 million (2012\$, 100% Level).

2) Rapid Refueling – U2 & U3

The original engineering design of the SONGS U2 & U3 RVHs required substantial time and polar crane usage to disassemble and reassemble the RVHs during RFOs. In addition, tensioning and de-tensioning of the RVH closure nuts and the closure of the in-core instrumentation seals required substantial time and labor, increasing radiation exposure to workers during an RFO. SCE implemented Rapid Refueling Head Modifications (RRHM) at SONGS U2 & U3, resulting in fewer crane lifts, simultaneous tensioning of the head bolts, and the elimination of the assembly and torquing of the existing seal connections.

The SONGS U2 RRHM was completed during the U2 Cycle 17 RFO in association with the installation of the U2 RVH Replacement. SCE has postponed and has not yet rescheduled the testing and potential repair of the U3 RVH pending its continuing analysis of the outage at U3 and its determination of how to address that outage.

The total cost of this project collectively for both units is estimated to be \$66.8 million (2012\$, 100% Level).

3) High Pressure Turbine Retrofit Project – U2 & U3

Each of the SONGS U2 & U3 steam turbines consists of HPT, reheaters and moisture separators, and the Low Pressure Turbine (LPT) section. The HPT connects directly to the generator, and as the generator rotates, electrical power is produced and transmitted to the electrical grid for use by SCE's customers.

The existing SONGS HPTs are original plant equipment and were manufactured in the 1970s making them approximately 26-27 years old and obsolete.

The U2 HPT project was included in the SONGS 2009 GRC request and was approved with installation planned in 2011. After the 2009 GRC was completed, installation of the

U2 HPT was rescheduled to occur during the U2 Cycle 17 RFO. SCE installed the U2 HPT as approved by the Commission during the U2 Cycle 17 RFO. This work was in progress before the full extent of the wear conditions in the U2 & U3 replacement steam generators was known. The SONGS U3 HPT retrofit costs were approved in the 2012 GRC decision, and were originally scheduled to occur in 2012. SCE has postponed and has not yet rescheduled the repair or replacement of the HPT for U3 pending its continuing analysis of the outage at U3 and its determination of how to address that outage.

The total cost of this project collectively for both units is estimated to be \$84.9 million (2012\$, 100% Level).

4) Dry Cask Spent Fuel Storage – Canisters – U2 & U3

The Independent Spent Fuel Storage Installation (ISFSI) canisters contain radioactive materials by encapsulating the materials in an inert atmosphere. The canisters provide shielding and criticality control during transfer to the Used Fuel Dry Storage Facility.

SCE fabricates canisters as necessary to store used fuel that can be removed from the used fuel pools, and to support SONGS U2 & U3 continued operations through the end of their respective operating licenses while maintaining full core off-load capacity for each unit.

The total cost of this project collectively for both units is estimated to be \$40.6 million (2012\$, 100% Level).

5) SCR 32PTH System – Canister

This project upgraded the aging SONGS canister equipment and dry fuel storage technology to the 32PTH1-DSC and HSM-H system. This upgrade required the purchase of a new larger diameter OS-200 Transfer Cask, a new Transfer Trailer Skid Positioning System and Yoke. In addition, a new Automatic Welding System and Vacuum Dryer, plus modifications to the cask platform to accommodate the larger diameter Transfer Cask were also required.

The total costs of this project is estimated to be \$52.0 million (2012\$, 100% Level).

6) Dry Cask Spent Fuel Storage – 34 AHSMs – U2 & U3

Advanced Horizontal Storage Modules (AHSMs) are constructed for each refueling with reinforced concrete structures designed to support and shield the fuel storage canisters while providing passive heat removal. The modules protect the canisters from extreme weather conditions and seismic activity and provide radiation protection to the public and site personnel.

SCE's spent fuel off-loading requirements have been revised to incorporate the "Zero defects by 2010" Institute of Nuclear Power Operations (INPO) initiative. The "Zero defects by 2010" initiative increased the number of new AHSM assemblies required from 100 to 108 per refueling and changed the cycle length to 18 months, which accelerates the need for spent fuel storage and requires clearing spent fuel pool cells to provide for fuel sipping and testing.

The capital expenditures incurred for AHSMs reflect costs SCE was required to incur during the U2 Cycle 17 RFO and after the U3 outage based on its spent fuel off-loading requirements, as augmented by the INPO initiative.

The total cost of this project collectively for both units is estimated to be \$27.2 million (2012\$, 100% Level).

7) CCW Heat Exchangers – U2 & U3

The Component Cooling Water (CCW) heat exchangers provide the primary means of removing the heat loads from plant primary system components, during normal and emergency operation, to the ultimate heat sink — the Pacific Ocean. The heat exchanger is accomplished through Saltwater Cooling (SWC) pumps — four pumps per unit, of which two are in service during normal operating conditions, and the other two pumps are on standby. By the SONGS U2 & U3 operating NRC license, all four of the pumps associated with a unit must be operable to keep a unit on-line.

SCE is in the process of a planned replacement of the pumps for U2, so that the U2 CCW Heat Exchanger will be operable and in compliance with the SONGS operating license, if and when U2 is returned to service. SCE has postponed and has not yet rescheduled the repair or replacement of the heat exchangers for U3 pending its continuing analysis of the outage at U3 and its determination of how to address that outage.

The total cost of this project collectively for both units is estimated to be \$19.9 million (2012\$, 100% Level).

8) Security Rule

This project is made up of several smaller security improvements required to meet the new NRC rule for security requirements (Federal Register Vol 74, No. 58, 13926-13993). Although the specifics of this initiative are considered Safeguards Information, the general scope of work includes improvements to aircraft attack response, access authorization, training and qualification for security and physical security (alarm stations).

The total cost of this project is estimated to be \$20.2 million (2012\$, 100% Level).

9) Cyber Security – Phase 2

The NRC issued a ruling requiring all United States nuclear power plants to implement a cyber-security defense strategy to protect data and controls for each plant component or piece of equipment identified as critical to the safe operation of the facility.² To comply with this new ruling, SONGS submitted a schedule to the NRC comprised of three phases spanning a timeframe of 60 months. In 2012, SCE implemented Phase 2 of the schedule, focusing on engineering for the development of a data warehouse for cyber-critical assets. SCE will develop and implement plans for the remaining phases over the next several years.

The total cost of this project is estimated to be \$27.6 million (2012\$, 100% Level).

10) Large Organism Exclusion Device – U2 & U3

A California state water quality control policy regarding the use of coastal and estuarine waters for power plant cooling, enacted into regulation by the State Water Resources Control Board,³ requires SCE to install large organism exclusion devices to the SONGS U2 & U3 intake structures to prevent marine mammals and other large organisms from entering the intake piping. SCE began this project in 2012 and it is ongoing.

The total costs of this project collectively for both units are estimated to be \$24.0 million (2012\$, 100% Level).

11) National Fire Protection Association

This project is being performed to ensure compliance with the National Fire Protection Association Standard 805, “Performance-Based Standard for Fire Protection for Light-Water Reactor Electric Generating Plants” (NFPA 805) regulations at SONGS U2 & U3. These regulations specify the fire protection requirements for existing light water nuclear power plants during all phases of plant operation, including shutdown, degraded conditions, and decommissioning. The project includes fire area modeling and nuclear safety capability assessment costs, in addition to plant modifications.

SCE began this project in 2012 and it is ongoing.

The total cost of this project is estimated to be \$19.3 million (2012\$, 100% Level).

² 10CFR § 73.54, as defined in the SONGS Cyber Security Plan and implementation schedule submitted to the NRC under proposed license amendment change number, NPF-10/15-595, Cyber Security Plan San Onofre Nuclear Generating Station, Units 2 and 3.

³ Per Appendix A - Statewide Water Quality Control Policy on the use of Coastal and Estuarine Waters for Power Plant Cooling, Page 7, Section C.

TIER DESIGNATION

Pursuant to General Order (GO) 96-B, Energy Industry Rule 5.1, and I.12-10-013, this advice letter is submitted with a Tier 1 designation.

In accordance with Public Utilities Code Section 491, notice to the public is hereby given by filing and keeping the advice filing open for public inspection at SCE's corporate headquarters.

For questions, please contact Doug Snow at (626) 302-2035 or by electronic mail at Douglas.Snow@sce.com.

Southern California Edison Company

Akbar Jazayeri

AJ:ds:sq

CALIFORNIA PUBLIC UTILITIES COMMISSION

ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY UTILITY (Attach additional pages as needed)

Company name/CPUC Utility No.: Southern California Edison Company (U 338-E)

Utility type:

ELC GAS
 PLC HEAT WATER

Contact Person: Darrah Morgan

Phone #: (626) 302-2086

E-mail: Darrah.Morgan@sce.com

E-mail Disposition Notice to: AdviceTariffManager@sce.com

EXPLANATION OF UTILITY TYPE

ELC = Electric GAS = Gas
 PLC = Pipeline HEAT = Heat WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL) #: 2838-E Tier Designation: 1

Subject of AL: Informational Advice Letter – Identification of Certain Capital Projects at San Onofre Nuclear Generating Station Pursuant to Investigation 12-10-013

Keywords (choose from CPUC listing): Compliance, Nuclear

AL filing type: Monthly Quarterly Annual One-Time Other _____

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution #:

I.12-10-013

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL: _____

Summarize differences between the AL and the prior withdrawn or rejected AL¹: _____

Confidential treatment requested? Yes No

If yes, specification of confidential information:

Confidential information will be made available to appropriate parties who execute a nondisclosure agreement.

Name and contact information to request nondisclosure agreement/access to confidential information: _____

Resolution Required? Yes No

Requested effective date: N/A No. of tariff sheets: -0-

Estimated system annual revenue effect (%): _____

Estimated system average rate effect (%): _____

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected: None

Service affected and changes proposed¹: _____

Pending advice letters that revise the same tariff sheets: _____

¹ Discuss in AL if more space is needed.

All correspondence regarding this AL shall be sent to:

CPUC, Energy Division
Attention: Tariff Unit
505 Van Ness Ave.,
San Francisco, CA 94102
E-mail: EDTariffUnit@cpuc.ca.gov

Akbar Jazayeri
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