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November 30, 2004

Dwight E. Nunn Vice President

Mr. Akira Sawa General Manager Mitsubishi Heavy Industries, LTD Kobe Shipyard & Machinery Works 1-1, Wadasaki-Cho 1-Chome Hyogo-Ku Kobe 652-8585 Japan

Dear Mr. Sawa:

Subject: Replacement Steam Generators San Onofre Nuclear Generating Station, Units 2 & 3

Since I was unable to participate in the Replacement Steam Generator contract signing in September due to emergent problems at our facility, let me now express my appreciation for Mitsubishi Heavy Industries' willingness to partner with us on providing the replacement steam generators for San Onofre. This is an extremely important undertaking, not just for San Onofre, but for the entire Southern California Edison Company. Our detailed and exhaustive evaluation convinced us that Mitsubishi Heavy Industries was the best match for our needs.

This will be one of the largest steam generators ever built for the United States and represents a significant increase in size from those that Mitsubishi Heavy Industries has built in the past. It will require Mitsubishi Heavy Industries to evolve a new design beyond that which they currently have available. Such design evolutions require a careful, well thought approach that fully evaluates the risks inherent in creating a new and significantly larger steam generator. Such design evolutions tend to challenge the capability of existing models and engineering tools used for proven steam generator designs. Success in developing a new and larger steam generator design requires a full understanding of the risks inherent in this process and putting in place measures to manage these risks. Understanding the difficulty in transitioning from the standard Mitsubishi Heavy Industries steam generator design to a new and larger two-loop design, San Onofre has made it a goal to partner with Mitsubishi Heavy Industries and maintain a close relationship with your engineering and fabrication organization to assist them in this design evolution. To this end we are performing detailed, intrusive evaluations of your design documentation and your approach to design evolution on this job. A recent example of successful cooperation between our engineers is the design of the feedwater distribution system. San Onofre's concern with potential water hammer as a result of the design of the distribution ring has been address by Mitsubishi Heavy Industries by utilizing the J-tube design. Prudent questioning by San Onofre followed by an exhaustive evaluation by Mitsubishi Heavy Industries led to a design revision to address a potential risk to the success of the project. However, we recognize that we are not designers of steam generators and there are limitations to the assistance we can provide. Notwithstanding this fact and after working with your organization for almost two months, we have some observations that we'd like to share with you.

P.O. Box 128 San Clemente, CA 92674-0128 949-368-1480 Fax 949-368-1490 Mr. Akira Sawa

• A detailed and accurate calculation of Reactor Coolant System flow is critical to ensure the steam generators are designed to within limits required to satisfy our existing licensing basis of 106% of the original flow rate (as required by our Purchase Order). Failure to meet this requirement would have significant impact on the operation of San Onofre including a potential inability to operate the units. We understand that Mitsubishi Heavy Industries is currently in discussions with Westinghouse to develop a detailed loop model to perform this analysis. We support Mitsubishi Heavy Industries' sensitivity to the significance of this issue and the prudent course of action they are undertaking.

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- Anti-Vibration Bar design (and installation) is by far one of the most challenging tasks that will face Mitsubishi Heavy Industries and San Onofre; in fact, it is in our opinion the single most significant task facing the industry for steam generators of our size today. Since the San Onofre steam generators are one of the largest steam generators ever built and large steam generators appear more susceptible to wear (in fact, our current steam generators have experienced a high percentage of plugged tubes due to wear), it is a paramount concern of ours that we ensure a reliable support design. We consider this engineering challenge perhaps the most critical issue at this time. Recent industry experience with Anti Vibration Bar supports has demonstrated the difficulty in developing a successful design (the recent experience at a United State's plant emphasized this point when more that 180 tubes were found to have wear indications after only one cycle of operations, some of these indications were up to 20% through wall). Our discussions with Mitsubishi Heavy Industries to date have not resulted in a plan that will successfully address this industry concern. Both San Onofre and Mitsubishi Heavy Industries are having difficulty in formulating such a plan.
- San Onofre is located in a high seismic zone. As Mitsubishi Heavy Industries is aware this creates significant design challenges, especially in light of the fact that the San Onofre steam generators are among the largest ever built in the United States and are the largest ever built by Mitsubishi Heavy Industries. We have been working very closely with your staff to assist them in any manner we can in this design effort. As part of this seismic design effort, Mitsubishi Heavy Industries developing a stick mass spring model for the new steam generators. In addition, Mitsubishi Heavy Industries is developing some localized three-dimensional models of the new steam generators to benchmark the stick model. However, these models aren't ready for use at this time and the design effort must proceed to meet the 2008 delivery date for the steam generators for Unit 2. Consequently, the design of the new steam generators is currently proceeding using the existing steam generator seismic response based on a like-for-like replacement concept (although the old and new steam generators will be similar in many respects they aren't like-for-like replacements). Should there be a significant difference in the seismic response of the old and new steam generators, changes in the steam generator design may be necessary. Therefore, it is imperative that adequate margin be provided in the replacement steam generator design to accommodate this possibility while simultaneously expediting the necessary new analysis (procurement of major components is currently in progress and purchase of new forging can't be accommodated in the schedule should it become necessary). The development of an accurate stick model, using conservative assumption and subsequent validation of this stick model

Mr. Akira Sawa

November 30, 2004

using results from the three dimensional models is essential to minimize the risk of any future design modification after the major forgings are procured and/or machined.

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• The San Onofre steam generator moisture separator assembly will be the largest Mitsubishi Heavy Industries has ever designed. The configuration of the moisture separators and dryers and their ability to achieve the required performance remains a concern for San Onofre. Scaling up an existing design is not necessarily a linear task and if not performed correctly may result in unsatisfactory performance at San Onofre. Mitsubishi Heavy Industries is encouraged to consider using all available resources (such as being done with respect to the Reactor Coolant System flow analysis) in the design the steam generators to ensure acceptable performance.

Based upon these observations, I am concerned that there is the potential that design flaws could be inadvertently introduced into the steam generator design that will lead to unacceptable consequences (e.g., tube wear and eventually tube plugging). This would be a disastrous outcome for both of us and a result each of our companies desire to avoid. In evaluating this concern, it would appear that one way to avoid this outcome is to ensure that relevant experience in designing larger sized steam generators be utilized. It is my understanding the Mitsubishi Heavy Industries is considering the use of Westinghouse in several areas related to scaling up of your current steam generator design (as noted above). I applaud your effort in this regard and endorse your attempt to draw upon the expertise of other individuals and company's to improve the likelihood of a successful outcome for this project. I, would encourage you to continue to draw upon those resources available to you to produce a design that will represent a Mitsubishi Heavy Industries steam generator capable of meeting not just San Onofre's, but the world's needs.

Should you have any questions or desire further discussion on this matter, I can be reached at (949) 368-1480. I look forward to visiting your facility again in the near future.

Sincerely.

Dwight E. Nunn Vice President

cc: Y. Nishi J. E. Hutter H. Kaguchi H. Hirano M. Ida M. A. Wharton R. L. Park

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# Goldthrite, Cody

From:	AdviceTariffManager@sce.com
Sent:	Wednesday, April 13, 2011 12:23 PM
To:	mp1@cpuc.ca.gov
Subject:	SCE Letter regarding SONGS_SGRP_Recovery of Costs Application
Attachments:	SCE Letter re SONGS_SGRP.pdf

Attached is Southern California Edison Company's letter regarding San Onofre Nuclear Generating Station (SONGS), Steam Generator Replacement Project (SGRP)- Recovery of Costs Application.

(See attached file: SCE Letter re SONGS\_SGRP.pdf)

Advice Letter Group Southern California Edison Company Fax (626) 302-4829 AdviceTariffManager@sce.com Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 7 of 191



Akbar Jazayeri Vice President of Regulatory Operations

April 13, 2011

Paul Clanon Executive Director California Public Utilities Commission 505 Van Ness Avenue San Francisco, CA 94102

### Re: San Onofre Nuclear Generating Station (SONGS), Steam Generator Replacement Project (SGRP) – Recovery of Costs Application

Dear Mr. Clanon:

Southern California Edison Company (SCE) hereby informs the Commission of its current intent to file a single application, at the end of the second quarter of 2012, that seeks authority: 1) to permanently include in rates the capital costs incurred in the procurement and installation of replacement steam generators at SONGS; and, 2) to permanently include in rates the cost of removal and disposal of the original steam generators.

In Decision (D.) 05-12-040, the Commission ordered the following:

After completion of the SGRP, SCE shall be required to file an application for inclusion of the SGRP costs permanently in rates, regardless of whether costs exceed \$680 million.<sup>1</sup> If a reasonableness review of such costs is performed, it shall be done in connection with the application. In the event the removal and disposal of the original steam generators is delayed significantly beyond the commercial operation of both units, it may be addressed in a subsequent application.<sup>2</sup>

The replacement of the steam generators in Units 2 and 3 at SONGS has now been completed. The units returned to commercial operation in April 11, 2010 and February 18, 2011, respectively, following the completion of other refueling outage activities. SCE is currently negotiating resolution of certain vendor and workforce issues concerning the installation of the

<sup>&</sup>lt;sup>1</sup> On October 8, 2010, SCE filed a Petition for Modification (Petition) to reduce the SGRP cost cap from \$680 million to \$670.8 million. SCE's Petition is still pending.

See D.05-12-040, Ordering Paragraph No. 11, p. 110. The Commission noted in D.05-12-040 that SCE's proposal was to file two separate applications, the first to establish and permanently include in rates the SGRP construction costs six months after SONGS returned to commercial operation and the second to cover the cost of removal and disposal of the original steam generators six months after the last removal and disposal costs are incurred. *Id.*, pp. 48-49. Two separate applications for cost reasonableness are not required per the Commission's final order cited above, nor is it in the best interests of administrative and judicial economy.

Paul Clanon Page 2 April 13, 2011

steam generators, which SCE anticipates will be resolved by the first quarter of 2012. The resolution of those issues is required before SCE can calculate the final cost of the procurement and installation of the steam generators that it would seek to include in rates by its application. In addition, removal and disposal of the original steam generators for Units 2 and 3 is not scheduled to occur until late November 2011, with the possibility that weather conditions may result in a delay of the final transport of contaminated materials until the spring of 2012. Therefore, in the interest of administrative and judicial economy, SCE currently intends to file a single application in the second quarter of 2012 for authority to permanently include in rates the costs incurred for the SONGS steam generator replacement project, and the cost of removal and disposal of the original steam

Very truly yours,

#### <u>/s/ AKBAR JAZAYERI</u> Akbar Jazayeri

Cc: President Michael Peevey Commissioner Timothy Alan Simon Commissioner Mike Florio Commissioner Catherine Sandoval Commissioner Mark Ferron Director Julie Fitch, Energy Division

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#### Steam generators

# Improving likefor-like RSGs





The RSG is lifted onto a purpose-build platform, skidded into the building, and then set into its final position by the containment vessel's internal crane



Although in a recent project Mitsubishi Heavy Industries suppled what were nominally replacements-in-kind of original steam generators at the San Onofre Nuclear Generating Station, the specifications in fact included many new requirements to improve longevity, reliability, performance and maintainability. By Boguslaw Olech and Tomoyuki Inoue

Water Reactor (PWR) nuclear power plant (NPP) located in California, USA. SONGS consists of two twin units (unit 2 and unit 3) each rated at 3358 MWt (1180 MWe). SONGS is majority owned and operated by Southern California Edison Company (Edison). SONGS unit 2 began commercial operation in 1983 and unit 3 in 1984.

Each of the SONGS units were originally equipped with two CE Model 3340 recirculating steam generators. The OSGs were designed for a 40-year service life.

Over the years of operation of the PWR plants, it became evident that the steam generator tubes, made predominantly of Alloy 600, were susceptible to inter-granular attack (IGA) and primary water stress corrosion cracking (PWSCC). These corrosion mechanisms were resulting in tube degradation necessitating plugging large numbers of tubes. In addition, the SONGS OSG design has shown to be susceptible to tube through-wall wear and severe corrosion of the tube supports. It became evident that the OSGs would have to be replaced much sooner than stipulated by their design service life.

Replacement of the steam generators has typically been performed when the utility concluded that they were reaching their

economic end-of-life. This occurs when forecasts of maintenance and repair costs exceed the amortized benefits of the reduced costs achievable with the replacement steam generators. Continuing to operate with highly degraded steam generators can involve substantial economic risks from forced outages, extended refuelling outages, as well as the direct costs of inspections and repair. Several plants have been required by safety analysis to conduct mid-cycle inspection and repair outages. The repair levels (including plugging, sleeving, or using alternative repair criteria) at the replacement plants averaged 25%. Edison has set a 21.4% plugging level as the technical end-of-life of the SONGS steam generators. Forecasting when this would occur resulted in a range of years depending on the level of confidence in the projection. The SONGS worst case forecast indicated that the 21.4% plugging level could be reached as early as 2012.

All the considerations mentioned above prompted Edison to undertake a conservative decision to replace the SONGS steam generators in both units during their respective cycle 16 refueling outages. The contract for design and fabrication of the RSGs was awarded to MHI and the unit 2 RSGs were delivered and replaced in 2009; unit 3 RSGs were delivered and replaced in 2010.

#### Design bases

The SONGS CE recirculating steam generators employed heat transfer tubing made of Alloy 600 Mill Annealed (MA) and the carbon steel egg-crate type tube supports with batwings in the tube bundle U-bend region. Because of the unit two-loop design, the SONGS steam generators were one of the largest in the industry. The major shortcoming of such large steam generators, as seen during their operating history, was tube wear, particularly in the U-bend region.

At SONGS, the steam generators have the following design functions:

- To function as a part of the reactor coolant system (RCS) pressure boundary (the primary side and the tubes)
- To remove heat from the RCS and transfer it to the main steam system (MSS)
- To remove heat from the RCS to achieve and maintain safe shutdown following design-basis accidents (except for a large break LOCA) and other transients
- To provide high-quality steam to the main turbine

The steam generators also have the following design bases:

- To transfer a total of 3458 MWt with two steam generators from the RCS to the MSS
- To produce 15.176x10<sup>6</sup> lbs/hr (6.88 x10<sup>6</sup> kg/hr) of saturated steam at a pressure

Steam generators

ensuring safe and efficient plant operation, and with a very low moisture content

To ensure that a blowdown rate of at least 2% of the feedwater flow can be achieved and maintained continuously, if necessary or desired.

At SONGS, the major premise of the steam generator replacement project was that it would be implemented under the 10CFR50.59 rule, that is, without prior approval by the US Nuclear Regulatory Commission (USNRC). To achieve this goal, the RSGs were to be designed as 'in-kind' replacement for the OSGs in terms of form, fit and function. The design limitations were identified by performing a preliminary 50.59 Safety Evaluation, a standard tool used in the US nuclear power industry for determination whether or not prior NRC approval is required for a proposed plant change.

Also, the replacement was to be designed such that it involved no, or only minimal, permanent modifications to the plant systems, structures or components (SSCs) other than the steam generators themselves. Also, the replacement was to be designed with no intended changes to the plant set points or plant computer software.

In order to meet all these objectives, the specification for design and fabrication of the SONGS RSGs imposed several requirements and limitations on the RSG design. These requirements and limitations for the key RSG parameters are listed in Table 1 and are compared to the values of these parameters as-designed by MHI. This comparison clearly shows that the MHI design satisfied all specified requirements.

However, imposing the requirements listed in Table 1 did not mean that the RSGs were intended to be merely OSG duplicates. The SONGS RSGs were intended to include all possible improvements introduced by the industry into the steam generator design and fabrication processes based on the US industry operating experience with all PWR plants, inside and outside of the USA.

Therefore, the SONGS specification also incorporated design and fabrication requirements derived from the SONGS operating experience with its OSGs, and the industry experience with the plants with both the OSGs and RSGs installed, including those supplied by MHI. These requirements were aimed at addressing these experiences and overall improving longevity, reliability, performance and maintainability of the steam generators. During RSG fabrication, strict quality controls were in effect at MHI to ensure as best as possible execution of the improved design and fabrication processes. All these requirements were imposed with the following goals in mind:

Table 1: Key design parameters			
Parameter	units	As-required	As-designed -
1 Thermal rating (@ 100% reactor power)	MWt	1729	1729
2 Design pressure: primary side	(MPa (Psia)	17.24 (2590)	17,24 (2500)
3 Design temperature: primary side	°C (°F)	343 (650)	343 (650)
4 Design pressure: secondary side	MPa (Psia)	7.58 (1100)	7.58 (1100)
5 Design temperature: secondary side	°C (°F)	293 (560)	293 (560)
6 Steam pressure (at RSG outlet nozzle)	MPa (Psia)	≤6.21 (900)	5.74 (833) (1)
7 RCS design flow (0% tubes plugged)	% Лрт (gpm)	≤106.5/958,615 (210,870)	106/954,114 (209,880) <sup>(1)</sup>
8 Tube plugging margini	%	28	8
9 Primary coolant volume	m³ ( <b>ft</b> ³)	≤57.2 (2020)	56.7 (2003)
10 Molsture carryover (at 100% clesion steam flow)	46	< 0:10	<0/10
11 Continuous blowdown (at 100% power)	%	≥2	2
12 Upper shell:outside diameter	mm (in)	≤6709 (264 1/8)	6709 (264,1/8)
13 Lower shell outside diameter	mm (in)	≤4531 ( <b>1</b> 78 3/8)	4436 (174.65)
14 Overall vessel height	mm (in)	19.964 (786)	19.954 (785.6)
15 Steam/water weight (at 0% power)	kg (Lbm)	≤127,458 (280,991)	122681 (270,460)
	MARANA PANALANAN	wanter makeri katikati ni makati ni matakati ni	Sarahar ella sakat ella skatela
16 Steam/water weight (at 100% power)	kg (Lbm)	≤83,474 -{184,026}	77.679 (171.250)
17 Total operating weight (at 100% power)	kg (Lbm)	≤710,181	702,490
	and the second	(1,565,654)	(1,548,700)
18 Operating centre of gravity (at 100% power)	mm (in).	9681-9703 (381 9/16-382)	9855 (388)

<sup>(1)</sup> Best estimate values

- To minimize wear of the steam generator tubes
- To eliminate susceptibility of the steam generator tubes to inter-granular attack (IGA) and primary water stress corrosion cracking (PWSCC)
- To provide tube-to-tubesheet joints with proper strength, leak resistance and corrosion resistance
- To minimize general corrosion within the steam generators
- To eliminate susceptibility to thermal stratification in the feedwater inlet piping to the feedwater ring
- To eliminate potential for feedwater ring water hammer

To maintain operating characteristics the same as that of the OSGs in terms of water level stability and controllability

To optimize the materials of construction for the intended applications.

#### Design and fabrication

Including all these requirements and improvements in the RSG design without affecting their form, fit and function and their ability to be installed under the 50.59 rule, and satisfying the design requirements without exceeding imposed limitations presented many challenges for the Edison and MHI project teams. Table 2 summarizes the challenges which both teams faced over the design and fabrication cycle of the SONGS RSGs. The table lists the RSG components/assemblies for which meeting the specification requirements was particularly challenging in the areas of design, fabrication and/or quality control, the reason for which it was challenging and the area of the challenge. Below it is described how these challenges were addressed by the Edison and MHI project teams in order to obtain a satisfactory outcome.

#### Channel head

The RSG had to have the same thermal rating as the OSG, the number of heat transfer tubes had to be maximized, the stay cylinder supporting the tubesheet had to be eliminated and the channel head had to have a flat bottom. On the other hand, limitations were imposed on the maximum allowable reactor coolant flow rate to prevent the potential for fuel pin fretting and on a relative increase of the primary side volume to prevent exceeding containment allowable flooding levels.

These requirements presented two unique design and fabrication challenges. First, elimination of the stay cylinder allowed for installation of more tubes than there were in the OSG, but having more tubes was leading to higher reactor coolant flow rates. Second, having more tubes and no stay cylinder was leading to primary side volume increase. The first challenge was addressed by performing

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#### Steam generators

RSG Component Assembly		Challenge	Designi Fe	brication	QC
1 Channel head	<ul> <li>Maintain thermal rating</li> <li>Maximize number of heat transfer tubes</li> <li>Eliminate stay cylinder</li> </ul>	<ul> <li>8 Maintaining reactor coolant flow rate within specified limits</li> <li>8 Optimizing primary side volume</li> </ul>	x x	х	
2 Tubesheet	Withstand primary-to-secondary full dP Limit on tube hole punout Minimize numper of hole surface imperfectoris	8 Optmizing bubesheet fluckness 2 Tubesheet drilling	X - 12 - 12 - 12	×	×
3 Tube bundle	Limit on number of tube dings at time of delivery	<ul> <li>Controlling tube bundle sag during assembly</li> <li>Monitoring temperature distribution during</li> <li>PWHT of the channel head-to-tubesheet weld</li> </ul>		x x	x x
2 Tube-to-tubesheet joints	<ul> <li>Ensuring adequate tube-to tubesheet joint strength, leak resistance and corrosion resistance.</li> <li>Imit on allowable tube-to-tubesheet previce depth</li> </ul>	<ul> <li>Qualifying tube-to-tubesheet joint</li> <li>Controlling tube-to-tubesheet joint crevice , depth</li> </ul>		X	X X
5 Tube supports	<ul> <li>Preventing tube wear</li> <li>Preventing tube denting at tube supports</li> </ul>	Configuring tube-to-tube support interface	X	a y 19 66 (60 a 60 a 60 a 60 a 60 a 60 a 60 a	
6. AVE support structure.	88 Preventing tube wear	E AVE structure assembly	X	X	X
7 Feedwater distribution system	Elimination of susceptibility to water hammer and thermal stratification Resistance to erosion/corrosion	88 Configuring inlet piping to feedwater ring	х		
8 Moisture separators	🕱 Limit on allowable moisture carryover	🕷 Designing moisture separator assemblies	$\sim \mathbf{X}$ (1)		

extensive computer modeling and 1:5.2 scale model testing of the RSG primary side, which resulted in incorporation of a carefully-sized reactor coolant flow limiting orifice in the RSG hot leg. The flow orifice had to limit the flow rate somewhat, but not to the degree to which



it might affect the reactor core thermalhydraulics. The second challenge was addressed by reducing the volume of the channel head by lowering the tubesheet while still maintaining the channel head vertical clearance sufficiently to perform tube inspections and maintenance.

#### Tubesheet

The tubesheet had to be designed such that it could withstand the differential pressure resulting from the primary side being at the design pressure and the secondary side at atmospheric pressure, without excessive deformation. To meet this objective, the tubesheet had to be made thicker than in the OSG, as it was supported only by a flat structural divider plate in lieu of the stay cylinder. Also, the tubesheet had to be clad with Alloy 690 equivalent to provide a surface suitable for welding the heat transfer tubes made from Alloy 690. In addition, the tubesheet had to be fabricated with a very tight tolerance on tube hole runout, and with a minimal number of tube hole surface imperfections (for example, tool marks) to meet the requirements for tube-to-tubesheet joints.

A thicker tubesheet clad with a very hard material, along with these fabrication requirements, presented a unique challenge for tubesheet drilling and quality control. This challenge was addressed starting with the use of the BTA drilling technique, through extensive mockup qualification testing and extensive quality control, and ending with utilizing modified drill bits having much better performance characteristics.

#### Tube bundle

The RSG tube bundle had to be fabricated such that the number of tube dings was minimized, and remained within the specified limit.

Considering the size and weight of the SONGS RSG tube bundles, this requirement presented two unique fabrication challenges. The first challenge was tube bundle assembly when dings could be generated as a result of the bundle sagging considerably. The second challenge was during post-weld heat treatment (PWHT) of the channel headto-tubesheet weld when dings could be generated by bowing of the RSG vessel due to its uneven thermal expansion as a result of temperature stratification within the vessel. The first challenge was addressed by customizing the assembly process, analytically determining the maximum allowable sag and monitoring the sag throughout the assembly process. The second challenge was addressed by analytically determining the maximum shell distortion and 1:1 scale model mockup testing to empirically determine the magnitude of shell distortion necessary to result in tube dinging.

#### Tube-to-tubesheet joints

The tube-to-tubesheet joints had to be designed such that they had adequate strength, leakage resistance and corrosion resistance, and that the tube-to-tubesheet crevice depth was kept within the specified limits. The single biggest challenge here was to devise and implement a competent joint

#### Steam generators

qualification process. To address this challenge, an extensive and in-depth joint qualification program was developed, comprising both analytical and empirical elements, and was meticulously implemented in the MHI R&D centre, and properly documented.

#### **Tube** supports

The tube supports had to be designed such that the potential for tube wear due to flowinduced vibration was minimized, and the potential for tube denting at tube supports due to corrosion product deposition was eliminated. To achieve this objective, seven tube support plates made from Type 405 ferritic stainless steel with broached, trefoil tube holes were installed in each RSG. The tube support plates were designed with a flat-land tube-to-tube support plate contact geometry to reduce the tube-to-tube support plate contact and crevice areas, while providing for a maximum steam/water flow in the open areas adjacent to the tube.

#### AVB support structure

The term 'AVB structure' describes tube supports in the tube bundle U-bend region. The AVB structure had to be designed such that the potential for tube wear due to flow induced vibration was minimized.

To achieve this objective, six sets of Vshaped AVBs made from Type 405 ferritic stainless steel, providing up to 12 support points per tube bend, were installed in the U bend region to provide support in the region where the tubes are most susceptible to degradation due to wear from flow-induced vibration. The single major challenge here was control of the AVB thickness and flatness, and tube-to-AVB gap size. This challenge was addressed by customizing the fabrication and assembly processes and implementing strict quality control in various stages of AVB fabrication and AVB structure assembly.

#### Feedwater distribution system

The feedwater distribution system consisted of the feedwater distribution ring and the inlet piping to the feedwater ring internal to the RSG. The feedwater distribution system had to be designed such that it was not susceptible to water hammer, the inlet piping had to be configured such that no thermal stratification occurred in this piping, and the inlet piping had to be especially resistant to erosion/corrosion. To address these requirements, the feedwater spray nozzles were mounted on the top of the feedwater ring to prevent it from draining, thus eliminating the potential for water hammer on steam generator water level decrease. The design of the inlet piping included a vented

goose-neck extending above the elevation of the feedwater spray nozzles. This feature eliminated thermal stratification in the RSG feedwater nozzle and the inlet piping to the feedwater ring, and prevented the feedwater ring from draining on loss of main feedwater flow, thus also eliminating the potential for water hammer. The feedwater ring was fabricated from Cr-Mo alloy steel with the tee and elbows made from Alloy 690 TT, which provided excellent resistance to erosion/corrosion.

#### Moisture separators

The moisture separators had to be designed such as to provide the first stage of moisture separation adequate to limit the moisture carry-over in the steam leaving the RSG to no more than 0.1% by weight. For this purpose, MHI had to come up with a brand-new separator size and separator assembly configuration. In order to verify that the new design could meet this requirement, and to optimize the size of the individual separators and their number, MHI utilized the results of an extensive R&D programme conducted to develop the design of moisture separators for its smaller steam generators.

#### Results

Even though all design and fabrication challenges were addressed during manufacturing, it was not known if the asdesigned and fabricated RSGs would eventually perform as specified. To verify this, the RSGs were functionally tested after installation in the plant after unit re-start from the replacement outage. The following essential operating parameters were verified throuch functional tests.

#### Heat transfer (steam pressure)

As-designed, the RSGs operating at full (100%) reactor rated power with the reactor coolant temperature at the design point were expected to generate steam whose pressure was to be no less than 816 psia (and no greater than 900 psia) at the steam outlet nozzle. As-tested, one RSG generated steam at approximately 831 psia (5.73 MPa) and the other one at approximately 837 psia.

#### Water level stability

As-designed, in the RSGs operating at any power level between 0 and 100% reactor rated power, including ramp power level changes of up to +/-15% per hour, the maximum amplitude of the water level fluctuations was expected not to exceed +/-1% of the narrow range span. The test was performed in a form of simulator runs using the plant long-term cooling (LTC) model, as the 15% per hour reactor power changes could not be imposed on the plant during normal startup, shutdown, or power operation. The simulator runs have shown that the amplitude of water level fluctuations was less than 1% under all specified transient conditions.

#### Moisture carryover

As-designed, the RSGs operating at full (100%) reactor rated power were expected to generate steam with moisture content less than 0.1% by weight. As-tested, one RSG generated steam with moisture content of approximately 0.0037% and the other one with approximately 0.0042%.

#### Reactor coolant flow rate

As-designed, with the RSGs operating at full (100%) reactor rated power with reactor coolant temperature at a design point, the 'as-measured' reactor coolant flow rate was expected not to exceed 106.5% of the original volumetric design flow rate. As-tested, the reactor coolant flow rate was 104.35% of the original design flow rate.

#### Primary-to-secondary leakage

As-designed, the RSGs were not supposed to exhibit a detectable primary-to-secondary leakage with the primary side at 2250 psia, and the secondary side at the normal operating pressure and temperature. Astested, a primary-to-secondary leakage of less than 1 gallon per day (3.87 litres/day) was reported when the plant stabilized at full (100%) reactor rated power.

#### Blowdown capacity

As-designed, with the RSGs operating at full (100%) reactor rated power with reactor coolant temperature at the design point, the continuous blowdown capacity with the RSG installed was expected to be no less than that with the OSGs installed. As-tested, it was verified that with the RSGs installed the same blowdown flow rate could be attained as with the OSGs installed.

Boguslaw Olech, P.E., Southern California Edison Company, 14300 Mesa Rd., San Clemente, CA 92674, USA, Email: bob.olech@sce.com. Tomoyuki Inoue, Mitsubishi Heavy Industries Ltd. (MHI), 1-1 Wadasaki-cho 1-Chome, HyogoKu, Kobe, Japan 652 8585, Email: tomoyuki\_inoue@mhi.co.jp. The authors wish to acknowledge all Edison and MHI personnel involved in the SONGS steam generator replacement project for their efforts to make this project a success. This article was based on a paper published at ICAPP 2011, 2-5 May 2011, Nice, France, paper 11330

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# Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 15 of 191

# Goldthrite, Cody

From:	Les.Starck@sce.com
Sent:	Tuesday, January 31, 2012 5:54 PM
То:	mp1@cpuc.ca.gov; tas@cpuc.ca.gov; catherine.sandoval@cpuc.ca.gov; mike.florio@cpuc.ca.gov; mark.ferron@cpuc.ca.gov; pac@cpuc.ca.gov; Lindh, Frank
Subject:	SONGS Unit 3 Unplanned Shutdown
Attachments:	Press release Unit 3 unplanned shutdown Jan 11.docx

FYI, SCE began a precautionary shutdown of Unit 3 this afternoon because sensors detected a possible leak in one of the unit's steam generator tubes. Attached is the just-published press release:

1

Les Starck Senior Vice President Regulatory Affairs Southern California Edison Office: 626-302-4883 Cell: 202-256-7159

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2244 Walnut Grove Ave., Rosemead, Calif., 91770

NEWS www.edison.com/pressroom

Draft: January 31, 5:30 p.m.

FOR IMMEDIATE RELEASE

Media Contact: Gil Alexander, (626) 302-2255

# San Onofre Nuclear Generating Station Operators Perform Precautionary Shutdown of Reactor Unit

ROSEMEAD, Calif., Jan. 31, 2012 – Southern California Edison (SCE), operator of the San Onofre Nuclear Generating Station, has begun a precautionary shutdown of Unit 3 because sensors installed for this purpose detected a possible leak in one of the unit's steam generator tubes.

The potential leak poses no imminent danger to the public or plant workers. There has been no release to the atmosphere. San Onofre personnel will evaluate the cause of the leak and the steps required to repair it and resume operations.

Unit 2 is currently offline for a planned maintenance, refueling and technology upgrade outage. Southern California Edison has ample reserve power to meet customer needs while Unit 3 is offline.

The Nuclear Regulatory Commission was immediately informed of this development.

#### **About Southern California Edison**

An Edison International (NYSE:EIX) company, Southern California Edison is one of the nation's largest electric utilities, serving a population of nearly 14 million via 4.9 million customer accounts in a 50,000-square-mile service area within Central, Coastal and Southern California.

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# Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 17 of 191

### Goldthrite, Cody

From: Sent: To:	Les.Starck@sce.com Wednesday, February 01, 2012 5:52 PM mp1@cpuc.ca.gov; tas@cpuc.ca.gov; catherine.sandoval@cpuc.ca.gov; mike.florio@cpuc.ca.gov; mark.ferron@cpuc.ca.gov; pac@cpuc.ca.gov; Lindh, Frank
Cc:	Michelle Cooke; julie.halligan@cpuc.ca.gov
Subject:	SONGS Unit 3 Outage
Attachments:	LPB_SONGS Unit 3 FINALv202.01.2012.docx

FYI, attached is the latest information on the SONGS 3 steam generator tube leak.

FOR IMMEDIATE RELEASE

Media Contact: Media Relations, (626) 302-2255

# San Onofre Nuclear Generating Station Operators Assessing Leak and Shutdown of Reactor Unit

ROSEMEAD, Calif., Feb. 1, 2012 – Southern California Edison (SCE), operator of the San Onofre Nuclear Generating Station, continues to plan for the repair of the steam generator tube leak in Unit 3 following a precautionary shutdown Tuesday. Sensitive monitoring instruments at Unit 3 continue to show no change in radiation levels that would be detectable off-site.

Operators responded quickly yesterday to indications of a steam generator tube leak based on readings from highly sensitive instruments designed to detect this condition, and in time to take action to prevent any potential change in detectable radiation exposure outside the plant boundary. Operators safely shut the plant down and isolated the component that contained the leaking tube within four hours of detecting the indications.

Currently, operators are cooling down Unit 3 and reducing pressure in the plant, which is the method to stop the tube from leaking. They are meticulously following prescribed procedures written specifically for addressing a tube leak condition.

"There was no threat then, nor is there now any danger to the public or to plant workers," said Pete Dietrich, senior vice president and Chief Nuclear Officer for Southern California Edison. "Our operators performed exactly as they are trained to perform and took prompt action to ensure we did not create a situation involving any challenge to the health and safety of the public," Dietrich said.

Unit 2 is currently offline for a planned maintenance, refueling and technology upgrade outage. Service will not be affected; Southern California Edison has ample reserve power to meet customer needs.

#### About Southern California Edison

1

An Edison International (NYSE:EIX) company, Southern California Edison is one of the nation's largest

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NEWS www.edison.com/pressroom

FOR IMMEDIATE RELEASE

Media Contact: Media Relations, (626) 302-2255

# San Onofre Nuclear Generating Station Operators Assessing Leak and Shutdown of Reactor Unit

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# Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 20 of 191

From: Sent: To: Subject: Beck, Valerie Friday, February 10, 2012 6:16 PM Lok, Ronald E. RE: CPUC Inquiry SONGS radiation leak

Perfect-thanks Ron.

From: Lok, Ronald E. Sent: Friday, February 10, 2012 2:54 PM To: <u>Kathy.Yhip@sce.com</u> Cc: Beck, Valerie; Ho, Winnie Subject: FW: CPUC Inquiry SONGS radiation leak

CORRECTION.....please reply by FEB 17, 2012.

Thaks,

Ron Lok

From: Lok, Ronald E. Sent: Friday, February 10, 2012 2:33 PM To: <u>Kathy.Yhip@sce.com</u> Cc: Beck, Valerie; Ho, Winnie Subject: CPUC Inquiry SONGS radiation leak

Kathy,

This is in reference to SONGS Unit 3 forced shutdown due to a radiation leak on Feb. 7, 2012 and the current Unit 2 scheduled shutdown and discovery compromised Steam Generator tubes. We are monitoring this situation and request that all future information regarding this subject be submitted to the California Public Utilities Commission. Based on the information we may further initiate an investigation via a data-request. For now we require your clarifications for the following:

- 1. In a press release the NRC stated that a small amount of radiation could have been released into the atmosphere, this contradicts SONGS facts on this matter.
- Why did radioactive gases vent into the Aux Building and expose personnel is this designed to happen when the steam generator is contaminated? Or was this action manually triggered per design procedures.
- 3. Neither the NRC nor SONGS was able to supply the amount of radiation detected in the auxiliary building. Which radiation alarm indicated that the steam generator was contaminated, was it from the water or steam side of the generator or was it from an alarm inside the Aux Building. For the instrument that detected the radiation, what was its alarm set point?
- 4. A contractor fell into the Unit 2 reactor fuel pool while trying to retrieve a fallen flashlight: Please explain and list procedures that contractors must take before working at SONGS, and what were the duties of this person (contractor) and specific training he received for the work he was performing.
- 5. The Nuclear Regulatory Commission (NRC) found extensive wear on tubes that carry radioactive water in a steam generator at Unit 2, which was offline for a planned maintenance, refueling, and technology upgrade outage. The tubes were reportedly installed less than two years ago. Two tubes showed more

than 30% wall thinning, 69 had 20% thinning, and more than 800 had 10% thinning, which is abnormally accelerated based on their age. Is this damage related to the repair work in Sept. 2009 when the new replacement generators for Unit 3 had developed cracks in a weld that connects a 5-inch-thick steel plate that supports each generator's innards?

6. Based on the information you now have what is the best and worst case scenario for Songs Units 2 & 3 to resume full load operation.

Finally, please provide names and email addresses for SONGS, NRC, and other governmental agencies involved in this investigation. Your response would be appreciated no later than Feb. 8, 2012. Please verify receipt of this email.

2

Thanks,

Ron Lok Utilities Engineer CPUC 415-703-1355

# Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 23 of 191

# Goldthrite, Cody

From: Sent: To: Cc:	Les.Starck@sce.com Friday, March 02, 2012 3:51 PM mp1@cpuc.ca.gov; tas@cpuc.ca.gov; catherine.sandoval@cpuc.ca.gov; mike.florio@cpuc.ca.gov; mark.ferron@cpuc.ca.gov Michelle Cooke; julie.halligan@cpuc.ca.gov; vjb@cpuc.ca.gov; efr@cpuc.ca.gov; Lindh,
Subject:	Frank; pac@cpuc.ca.gov San Onofre Status Update
Attachments:	SONGS statement_0302.docx

Commissioners, as a follow-up to Ron Litzinger's call to you this afternoon, attached is a copy of SCE's news release pertaining to SONGS. Please call if you have any questions or need further information.

1

Les Starck Senior Vice President Regulatory Affairs Southern California Edison Office: 626-302-4883 Cell: 202-256-7159

#### Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 25 of 191





Media Contact: Media Relations, (626) 302-2255

# San Onofre Nuclear Generating Station Provides Status Update

ROSEMEAD, Calif., March 2, 2012 — Southern California Edison (SCE) continues to perform extensive testing and inspections of the steam generators at the San Onofre Nuclear Generating Station.

Unit 2 was taken out of service on Jan. 9 for a planned refueling outage, inspections and maintenance. During these inspections, SCE engineers found some isolated areas of tube wear. This resulted in the plugging of approximately one percent of the tubes preventively in Unit 2. That amount is well within the extra tube allowance for each steam generator to account for wear and other routine operational developments.

On Jan. 31, a water leak was detected in one of the Unit 3 steam generator tubes. The unit was safely taken off line. Initial analysis from the inspections does not indicate any correlation between the leak in Unit 3 and the tube wear seen in Unit 2. However, SCE has decided not to restart Unit 2 until it is satisfied that the issue with Unit 3 will not occur in Unit 2. This is a thoughtful process that requires deliberate and meticulous analysis. Based on that analysis, the utility will identify any other tests or decisions that may be necessary as a result.

"Nuclear safety is our top priority," said Pete Dietrich, SCE senior vice president and chief nuclear officer. "Everything we do — from normal plant operations and routine refueling outages to specialized repairs and equipment replacement — is done with the utmost care to protect the health and well-being of the community and our employees. There is no timeline on safety."

During the Unit 2 planned outage, SCE engineers performed inspection, maintenance and repair work, including replacing the reactor head and modifying the steam turbine with new high-pressure turbine components that run more efficiently. Approximately half of the reactor fuel also was replaced with new fuel.

Inspection, testing and analysis continue in Unit 3.

SCE is committed to the safe operation of the San Onofre Nuclear Generating Station and will not return the plant's generating units to service until the company is satisfied it is safe to do so.

#### About Southern California Edison

An Edison International (NYSE:EIX) company, Southern California Edison is one of the nation's largest electric utilities, serving a population of nearly 14 million via 4.9 million customer accounts in a 50,000-square-mile service area within Central, Coastal and Southern California.

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Message

From:	Peevey, Michael R. [michael.peevey@cpuc.ca.gov]
Sent:	3/3/2012 9:29:04 PM
To:	Les Starck@sce.com
Subject:	RE: Dinner Next Week

Yes. Let's say at 6.

From: Les.Starck@sce.com [mailto:Les.Starck@sce.com] Sent: Sat 3/3/2012 7:56 AM To: Peevey, Michael R. Cc: Michael.Hoover@sce.com Subject: Re: Dinner Next Week

Thanks Mike, March 7 will work. Are you good with Jardinere?

From: "Peevey, Michael R." [michael.peevey@cpuc.ca.gov] Sent: 03/02/2012 05:11 PM PST To: Les Starck Subject: RE: Dinner Next Week

Could do the 7th. In SCal and Sac all of the following week.

From: Les.Starck@sce.com [mailto:Les.Starck@sce.com] Sent: Fri 3/2/2012 4:30 PM To: Peevey, Michael R. Cc: Michael.Hoover@sce.com Subject: Dinner Next Week

Hi Mike. Would you be available for dinner with Hoover and me sometime in the next week or two? I'm at CEEE early in the week, but could do dinner either Tuesday or Thursday evenings. Wednesday and Thursday of the following week would work as well. Thanks.

Les Starck Senior Vice President Regulatory Affairs Southern California Edison Office: 626-302-4883 Cell: 202-256-7159

# Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 28 of 191

Message	
From:	Gary.Schoonyan@sce.com [Gary.Schoonyan@sce.com]
Sent:	3/12/2012 3:27:10 PM
то:	df1@cpuc.ca.gov; efr@cpuc.ca.gov; ner@cpuc.ca.gov; carol.brown@cpuc.ca.gov
CC:	Lawrence.Oliva@sce.com; Mark.Nelson@sce.com; Colin.Cushnie@sce.com; Patricia.Arons@sce.com
Subject:	Handout to be used for 11:00 Call today
Attachments:	SONGS and Summer 2012.ppt

Attached below is the high level handout that we will talk from for our meeting this morning.

Call in number Redacted Participant: Redacted

Gary Schoonyan San Francisco (415) 929-5518 Pax 75518 Sacramento (916) 441-4114 PAX 50910 Cell (916) 718-6526 <u>.</u>\_\_\_



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# Current SONGS Status

- Unit 2 is in cold standby awaiting completion of Unit
   3 steam generator analysis
- Unit 3 Steam generator tube inspection/testing and analysis continues

# SONGS Out Cases Being Considered

- Scenario A Unit 2 returns to service in spring 2012, while Unit 3 remains off-line. Unit 2 trips during 2012 summer peak
- Scenario B Both SONGS units off-line through 2012 peak, but at least one of the units return to service beginning in 2013.

# Summer 2012 Peak Without SONGS

- Sufficient system wide resources to cover overall resource adequacy requirements are available provided no other problems occur with major import paths or large generation sources
- Sufficient resources available to offset lost energy
- Likely insufficient local area resources remaining in the LA Basin without at least one of the SONGS units

# Possible Generation Actions

- Evaluating possible return of retired plants
  - We are working with Cal-ISO
- Evaluating use of large portable generators at key substations



- Accelerate Del Amo-Barre-Ellis 230kV Loop-in
- Investigate short-term under voltage protection schemes in south Orange County to shed up to 2000 MW of load for critical transmission outages






 Save Power Day (PTR) presently not available in 2012 in South Orange County

• Consideration for 20/20 program in OC only

- Targeted summer readiness customer campaigns
  - A/C tune up
  - Appliance recycling
- Flex Your Power Campaign (\$3.5 million statewide)
  Voluntary reductions (unknown potential in South OC)
- Other customer marketing on conservation



### Current Market Impacts of SONGS Outage

- Some change in congestion patterns observed
- No significant energy price changes observed since outage
- No significant Ancillary Service prices observed since outage

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Name	MW	Event day	Triggers	Availability	Locational	
BIP	600	Day-of	Stage 1 imminent GCC load needs Transmission	Year round 15 or 30 minute dispatch 1 event per day (6 hrs max) 10 events per month 180 hours per year	No	
SDP - Commercial	60	Day-of	Stage 1 imminent GCC load needs Transmission	June 1- October 1 Mult, events per day Max 6 hours per day	A-bank District	
API	40	Day-of	Stage 1 imminent. GCC load needs Transmission	Year round 1 event per day (6 hrs max) 4 per calendar week 25 per calendar month	A-bank	
				Pro Brancies		
Nàme	MW	Event day	Triggers	Availability	Locational	
SDP – Residential	500	Day-of	High prices CAISO needs. GCC load needs Transmission	Year round (beg. June 1) Muit. events per day Max 6 hours per day	B-bank	
СРР	35	Day-ahead	High prices	2-6 pm 12 events per summer	No	
DBP	20	Day-ahead	High prices	12pm-8pm No limit on # of events	No	
СВР	15	Day-of Day-ahead	High prices	11am-7ṗm 24 hours per month	No	
DRC	175	Day-of Day-ahead	High prices	Depends on contracts	No	

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### Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 43 of 191

### Goldthrite, Cody

From:	Les.Starck@sce.com
Sent:	Thursday, March 15, 2012 5:50 PM
To:	mp1@cpuc.ca.gov; tas@cpuc.ca.gov; catherine.sandoval@cpuc.ca.gov;
	mike.florio@cpuc.ca.gov; mark.ferron@cpuc.ca.gov
Cc:	Lindh, Frank; pac@cpuc.ca.gov
Subject:	SONGS 2 and 3
Attachments:	NRC Press Release.pdf

Commissioners, the NRC announced today that they are sending an "Augmented Inspection Team" to SONGS to review the circumstances that led to the Unit 3 steam generator tube leak. Their press release is attached.

Les Starck Senior Vice President Regulatory Affairs Southern California Edison Office: 626-302-4883 Cell: 202-256-7159

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**NRC NEWS** 

U.S. NUCLEAR REGULATORY COMMISSION Office of Public Affairs Region IV 1600 E. Lamar Blvd. Arlington, TX 76011-4511 Telephone: (817) 860-8100 Site: www.nrc.gov Blog: http://public-blog.nrc-gateway.gov

No. IV-12-008 Contact: Victor Dricks (817) 200-1128 Lara Uselding (817) 200-1519 March 15, 2012 E-Mail: <u>OPA4.Resource@nrc.gov</u>

### NRC TO SEND AUGMENTED INSPECTION TEAM TO SAN ONOFRE NUCLEAR GENERATING STATION

The Nuclear Regulatory Commission will send an Augmented Inspection Team (AIT) to the San Onofre Nuclear Generating Station to review the circumstances that led to three tubes failing a pressure test at Unit 3 yesterday.

Operators of the plant, located near San Clemente, Calif., shutdown Unit 3 on Jan. 31, after a tube leak in one steam generator was identified. Resident inspectors responded to the control room to monitor site activities during the incident. The unit has remained safely shutdown and NRC has had a steam generator expert and additional inspectors at the site inspecting the licensee's activities and tests of the steam generator tubes.

On Wednesday, March 14, three tubes in Unit 3 failed a pressure test indicating they would be more likely to rupture during certain plant events that affect the pressure inside the steam generator. The test involves pumping water inside a tube and increasing the pressure while monitoring a pressure gauge to evaluate the integrity of the tube. The integrity of steam generator tubes is important because the tubes provide an additional barrier inside the containment building to prevent a radioactive steam release. Steam generators do experience some wear during the first year of operation but the level of tube wear at Unit 3 is unusual.

AITs are used by the NRC to review more significant issues such as a tube failure at NRC-licensed facilities. The team has assumed responsibility from the resident inspectors for gathering information about the current condition and will travel to the site in the coming days. The team will include inspectors from the NRC's Region IVoffice and NRC Headquarters in Rockville, Md. The team will be led by NRC Region IV Branch Chief Greg Werner of the Division of Reactor Safety.

"An AIT is used when the NRC wants to promptly review the circumstances surrounding a significant issue," said NRC Region IV Administrator Elmo E. Collins. "We want to make sure we understand the cause of the degraded steam generator tubes and take appropriate actions based on our inspection results." The team will review information associated with the design, construction, shipping, operation, and testing of the Unit 3 steam generators. The team's report will not contain inspection findings, but will identify areas for further inspection follow-up.

The NRC will hold a public exit meeting with the licensee upon completion of the inspection to discuss preliminary findings. The meeting will be open to interested members of the public and the news media, and team members will be available to answer questions after the results are presented. The AIT will also issue a written report within 30 days of completion of the inspection.

### ###

News releases are available through a free *Listserv* subscription or by clicking on the EMAIL UPDATES link on the NRC homepage (<u>www.nrc.gov</u>). E-mail notifications are sent to subscribers when news releases are posted to NRC's website. For the latest news, follow the NRC on <u>www.twitter.com/NRCgov</u>.

### Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 46 of 191

### Goldthrite, Cody

From:Les.Starck@sce.comSent:Thursday, March 15, 2012 7:25 PMTo:Catherine J. K. Sandoval; Mark Ferron; Michel Florio; Michael R. Peevey; Timothy A.<br/>SimonSubject:SONGS 3 "In Situ" Test Results

Commissioners, we have just received results of today's "in situ" test at SONGS. An additional four tubes failed in Unit 3 today, so we will be issuing the attached updated press release within the next hour:

San Onofre Nuclear Generating Station Continues Unit 3 Testing

ROSEMEAD, Calif., March 15, 2012 — Southern California Edison's (SCE) San Onofre Nuclear Generating Station (SONGS), which is safely shut down for inspections and testing, had four additional Unit 3 steam generator tubes fail today during a pressure stress test known as "in-situ testing." Three tubes failed the "in-situ testing" on Wednesday. Unit 3 has been shut down since Jan. 31 when it was safely taken off line after station operators detected a leak in one of the unit's steam generator tubes. Additionally, the Nuclear Regulatory Commission (NRC) announced today that it will send an Augmented Inspection Team to the plant to perform inspections of SONGS Unit 3 equipment. SONGS welcomes the involvement of the augmented NRC team, which is anticipated to begin its inspections on Monday. Following industry standards and requirements, SCE immediately notified the NRC of the tube test failures. SCE engineers and industry experts are on site to assist and oversee the ongoing testing process. There are 19,454 steam generator tubes in Unit 3. SCE is conducting "in-situ" tests on 129, or approximately 1 percent of those tubes, which show higher than normal wear. "Tests at a nuclear plant are designed to detect potential safety issues, and these tests serve that purpose," said Ron Litzinger, president of SCE, which operates the plant as the majority owner. "Our tube testing plan, in accordance with industry standards, is designed to help us understand the potential safety implications and significance of this situation."Both Unit

3 and Unit 2 are off line at this time. The two Unit 3 steam generators currently are undergoing extensive testing and inspections so SONGS engineers can fully assess their condition, as well as the cause of the Jan. 31 leak and the observed tube wear. Unit 2 was taken out of service for a planned outage on Jan. 9. The scheduled and additional inspections and maintenance on Unit 2 are nearly completed. Repairs were made through plugging, in accordance with industry guidelines and protocols, of tubes found during the inspections that showed wear or susceptibility to wear. SCE is committed to the safe operation of SONGS and will not return the plant's generating units to service until the company is satisfied it is safe to do so. Nineteen percent of all power used by SCE customers comes from nuclear generation.

Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 48 of 191

### Goldthrite, Cody

From: Sent: To:	Les.Starck@sce.com Tuesday, March 27, 2012 5:43 PM mp1@cpuc.ca.gov; tas@cpuc.ca.gov; catherine.sandoval@cpuc.ca.gov; mike.florio@cpuc.ca.gov; mark.ferron@cpuc.ca.gov
Cc:	pac@cpuc.ca.gov; Lindh, Frank; EFR@cpuc.ca.gov
Subject:	NRC Confirmatory Action Letter and SCE News Release
Attachments:	March 27-2012 CAL.pdf; SONGS CAL Release 3_27_12_FINAL.pdf

### Commissioners,

Attached below is the NRC Confirmatory Action Letter and the associated NRC News Release. As you are aware, the confirmatory action letter describes a series of actions we must complete at SONGS before seeking permission from the NRC to restart Units 2 and 3. I've also attached SCE's press release. Please know that the NRC letter doesn't contain any major surprises as to what we need to do to safely return SONGS to operation.

The press release:

Les Starck Senior Vice President Regulatory Affairs Southern California Edison Office: 626-302-4883 Cell: 202-256-7159



**NRC NEWS** 

U.S. NUCLEAR REGULATORY COMMISSION Office of Public Affairs Region IV 1600 E. Lamar Blvd. Arlington, TX 76011 - 4125 Site: <u>www.nrc.gov</u> Blog: <u>http://public-blog.nrc-gateway.gov</u>

No. IV-12-011 Contact: Victor Dricks (817) 200-1128 Lara Uselding (817) 200-1519 March 27, 2012 E-Mail: <u>OPA4.Resource@nrc.gov</u>

### NRC ISSUES CONFIRMATORY ACTION LETTER FOR SAN ONOFRE NUCLEAR GENERATING STATION RESTART PREPARATIONS

The U.S. Nuclear Regulatory Commission has issued a Confirmatory Action Letter documenting actions that Southern California Edison Co. (SCE) officials have agreed to take related to unusual wear on steam generator tubes prior to restarting both units of the San Onofre Nuclear Generating Station. SCE operates the plant, located near San Clemente, Calif.

"This Confirmatory Action Letter formalizes commitments that Southern California Edison has made to ensure that the cause of the tube wear in both steam generators is understood and appropriately addressed in order to ensure safe operation," NRC Region IV Administrator Elmo E. Collins said. "Until we are satisfied that has been done, the plant will not be permitted to restart."

On Jan. 31, operators performed a rapid shutdown of the Unit 3 reactor after indications of a steam generator tube leak. Unit 2 has been shut down since Jan. 9 for a planned refueling and maintenance outage. Subsequent inspections at both units have identified unusual wear in many tubes of the steam generators, which were replaced in January 2010 at Unit 2 and January 2011 in Unit 3.

SCE has identified two causes of the unusual wear: tubes are vibrating and rubbing against adjacent tubes and against support structures inside the steam generators. They are still working to determine why this is occurring.

Only one tube required pressure testing on Unit 2. However, six other tubes required plugging, and 186 additional tubes were plugged as a precautionary measure. Eight tubes failed pressure testing at Unit 3, indicating that these tubes could have failed under some accident conditions. Evaluation for additional plugging or other corrective actions are continuing for Unit 2, based on ongoing evaluations of Unit 3 test results.

As a result, SCE has committed to take the following actions prior to restart of each unit:

- SCE will plug all tubes in Units 2 and 3 for which testing indicated wear in excess of industry guidelines, as well as all tubes susceptible to this wear because of their location.
- SCE will determine the causes of the tube-to-tube degradation and establish a protocol of inspections and or operational limits for Unit 2 and 3, including plans for mid-cycle shut down for further inspections. The protocol is intended to minimize the progression of tube wear, and ensure that any tube wear does not progress to the point where it compromises tube integrity.

Copies of the Confirmatory Action Letter are attached:

### ###

News releases are available through a free *listsery* subscription or by clicking on the EMAIL UPDATES link on the NRC homepage (<u>www.nrc.gov</u>). E-mail notifications are sent to subscribers when news releases are posted to NRC's website. For the latest news, follow the NRC on <u>www.twitter.com/NRCgov</u>.



UNITED STATES NUCLEAR REGULATORY COMMISSION REGION IV 1600 EAST LAMAR BLVD ARLINGTON, TEXAS 76011-4511

March 27, 2012

CAL 4-12-001

Mr. Peter Dietrich Senior Vice President and Chief Nuclear Officer Southern California Edison Company San Onofre Nuclear Generating Station P.O. Box 128 San Clemente, CA 92674-0128

### SUBJECT: CONFIRMATORY ACTION LETTER – SAN ONOFRE NUCLEAR GENERATING STATION, UNITS 2 AND 3, COMMITMENTS TO ADDRESS STEAM GENERATOR TUBE DEGRADATION

Dear Mr. Dietrich:

On January 31, 2012, your staff at San Onofre Nuclear Generating Station (SONGS) Unit 3 performed a rapid shutdown because of indications of a steam generator tube leak on the 3E88 steam generator. Following extensive testing of 100 percent of the steam generator tubes in both Unit 3 steam generators, your staff identified unexpected wear caused by steam generator tubes rubbing against each other, as well as against retainer bars. Additional in-situ pressure testing of 129 steam generator tubes was performed for the tubes that exhibited the most wear. Your staff identified that eight steam generator tubes in the Unit 3 3E88 steam generator had failed the pressure test. Failure of the in-situ pressure test is an indication that, for certain design basis events, such as a main steam line break, these steam generator tubes may not be able to maintain design structural integrity. You are continuing to evaluate these results to develop corrective actions for the Unit 3 steam generators.

SONGS Unit 2 was shutdown at the time of this event for a regularly scheduled refueling outage, and planned testing of 100 percent of the steam generator tubes was already in progress. Testing results on Unit 2 showed unexpected wear at retainer bars similar to the Unit 3 results, but did not show any wear from tubes rubbing against each other. Based on these results, your staff identified 6 tubes requiring plugging, and 186 additional tubes that were plugged as a precautionary measure. Evaluation for additional plugging or other corrective actions is continuing for Unit 2, based on ongoing evaluations of Unit 3 testing results.

For both Units 2 and 3, this was the first cycle of operation with new replacement steam generators. Unit 2 replaced its steam generators in January 2010, and Unit 3 in January 2011. Each steam generator has 9,727 steam generator tubes.

On March 23, 2012, you sent NRC a letter describing the actions you were committing to take prior to returning Units 2 and 3 to power operation (Agencywide Documents Access and Management System (ADAMS) Accession Number ML12086A182). In a phone conversation on March 26, 2012, I confirmed with you the commitments as described in your letter. This Confirmatory Action Letter (CAL) confirms that SONGS Unit 2 will not enter Mode 2, and SONGS Unit 3 will not enter Mode 4 (as defined in the technical specifications), until the NRC has completed its review of your actions listed below. The permission to resume power operations will be formally communicated to you in written correspondence.

### Actions for Unit 2

- 1. Southern California Edison Company (SCE) will determine the causes of the tube-to-tube interactions that resulted in steam generator tube wear in Unit 3, and will implement actions to prevent loss of integrity due to these causes in the Unit 2 steam generator tubes. SCE will establish a protocol of inspections and/or operational limits for Unit 2, including plans for a mid-cycle shutdown for further inspections.
- 2. Prior to entry of Unit 2 into Mode 2, SCE will submit to the NRC in writing the results of your assessment of Unit 2 steam generators, the protocol of inspections and/or operational limits, including schedule dates for a mid-cycle shutdown for further inspections, and the basis for SCE's conclusion that there is reasonable assurance, as required by NRC regulations, that the unit will operate safely.

### Actions for Unit 3

- SCE will complete in-situ pressure testing of tubes with potentially significant wear indications in accordance with the Electric Power Research Institute (EPRI) Steam Generator In-situ Pressure Test Guidelines and will plug tubes in accordance with those guidelines.
- 4. SCE will plug all tubes with wear indications in excess of your Steam Generator Program Requirements (SGPR) and EPRI guidelines as well as perform preventive plugging or take other corrective actions to address retainer bar-related tube wear in Unit 3.
- 5. SCE will determine the causes of tube-to-tube interaction and implement actions to prevent recurrence of loss of integrity in the Unit 3 steam generator tubes while operating.
- 6. SCE will establish a protocol of inspections and/or operational limits for Unit 3, including plans for a mid-cycle shutdown for inspections. The protocol is intended to minimize the progression of tube wear, and ensure that tube wear will not progress to the point of degradation that could cause tubes not to meet leakage and structural strength test criteria.
- 7. Prior to entry of Unit 3 into Mode 4, SCE will submit to the NRC in writing the results of your assessment of Unit 3 steam generators, the protocol of inspections and/or operational limits, including schedule dates for a mid-cycle shutdown for further inspections, and the basis for SCE's conclusion that there is a reasonable assurance, as required by NRC regulations, that the unit will operate safely.

This CAL will remain in effect until the NRC has (1) reviewed your response to the actions above, including responses to staff's questions and the results of your evaluations, and (2) the staff communicates to you in written correspondence that it has concluded that SONGS Units 2

and 3 can be operated without undue risk to public health and safety, and the environment.

Issuance of this CAL does not preclude the issuance of an order formalizing the above commitments or requiring other actions on the part of SCE; nor does it preclude the NRC from taking enforcement actions for violations of NRC requirements that may have prompted the issuance of this letter. Failure to take the actions as described in this CAL may also result in an order if the NRC determines that failure to meet that action would result in a loss of reasonable assurance of the protection of public health and safety, and the environment.

Pursuant to Section 182 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2232), you are required to:

- (1) Notify me immediately if your understanding differs from that set forth above;
- (2) Notify me if for any reason you cannot complete the actions and your proposed alternatives; and
- (3) Notify me in writing when you have completed the actions addressed in this Confirmatory Action Letter.

In accordance with 10 CFR 2.390 of the NRC's regulations a copy of this letter, and any response will be made available electronically for public inspection in the NRC Public Document Room or from the ADAMS, accessible from the NRC Web site at <a href="http://www.nrc.gov/readingrm/adams.html">http://www.nrc.gov/readingrm/adams.html</a>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information. If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

Please contact Ryan Lantz at (817) 200-1173 if you have any questions concerning this letter.

Sincerely,

### /RA/

Elmo E. Collins Regional Administrator

Docket No.: 50-361, 50-362 License No.: NPF-10, NPF-15

cc: Electronic Distribution

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Media Contact: Media Relations, (626) 302-2255

### Southern California Edison Welcomes Nuclear Regulatory Commission Letter Outlining Next Steps for San Onofre Nuclear Generating Station

### NRC Sends Plant a Confirmatory Action Letter

ROSEMEAD, Calif., March 27, 2012 — Southern California Edison (SCE) has received the Nuclear Regulatory Commission's (NRC) Confirmatory Action Letter, which outlines actions SCE must complete at the San Onofre Nuclear Generating Station (SONGS) before seeking permission from the NRC to restart Units 2 and 3. SCE is committed to working with the NRC and abiding by its requirements on the restart process of Units 2 and 3.

"We welcome the NRC's letter, which is a formal step in the process of restarting Units 2 and 3," said Ron Litzinger, president of SCE, which operates the plant as the majority owner. "Our number one priority is, and always has been, the health and safety of the public and our employees. The utility will only bring the units on line when we and the NRC are satisfied that it is safe to do so."

SCE recently submitted a letter to the NRC describing a series of actions it is taking regarding steam generator issues at SONGS. Units 2 and 3 are safely shut down for inspections, analysis and testing.

An NRC augmented inspection team has been on site at the plant conducting its own inspections and analysis since March 19.

Unit 2 was taken out of service for a planned outage on Jan. 9. Unit 3 has been shut down since Jan. 31, when it was safely taken off line after station operators detected a leak in one of the unit's steam generator tubes. As a result of the leak, SCE recently completed eight days of extensive testing of the steam generator tubes and reported the results to the NRC.

SCE has committed in writing to the NRC that it "will proceed deliberately and conservatively to implement these steps, always bearing in mind that safety is our first priority."

More information is available at <u>www.edison.com/songsupdate</u>.

### About Southern California Edison

An Edison International (NYSE:EIX) company, Southern California Edison is one of the nation's largest electric utilities, serving a population of nearly 14 million via 4.9 million customer accounts in a 50,000-square-mile service area within Central, Coastal and Southern California.

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-----Original Appointment-----From: Lo, Doris On Behalf Of Randolph, Edward F. Sent: Monday, April 02, 2012 10:07 AM To: Randolph, Edward F.; Room 5305; Sterkel, Merideth "Molly"; Ikle, Judith; 'Gary.Schoonyan@sce.com'; Clanon, Paul; Kersten, Colette; Lindh, Frank; St. Marie, Stephen Subject: Updated: Meeting with SCE Follow-Up Information on Summer Supply Outlook with Gary Schoonyan When: Wednesday, April 04, 2012 2:00 PM-3:00 PM (GMT-08:00) Pacific Time (US & Canada). Where: Room 5305

Hi,

Please attend the rescheduled the SONGS meeting for Southern California Edison. They will discuss about the current status regarding SONGS Summer Supply Outlook.

If I have missed any names, please go ahead and invite them to the meeting.

Thanks,

Doris

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From:	Stevens, Brian [brian.stevens@cpuc.ca.gov]
Sent:	4/5/2012 10:56:32 PM
Το:	Randolph, Edward F. [edward.randolph@cpuc.ca.gov]; Room 5305 [room5305@cpuc.ca.gov]; Sterkel, Merideth
	"Molly" [merideth.sterkel@cpuc.ca.gov]; Ikle, Judith [judith.ikle@cpuc.ca.gov]; Gary.Schoonyan@sce.com; Clanor
	Paul [paul.clanon@cpuc.ca.gov]; Kersten, Colette [colette.kersten@cpuc.ca.gov]; Lindh, Frank
	[frank.lindh@cpuc.ca.gov]; St. Marie, Stephen [stephen.stmarie@cpuc.ca.gov]; Franz, Damon A.
	[damon.franz@cpuc.ca.gov]; Beck, Valerie [valerie.beck@cpuc.ca.gov]; Baker, Simon [simon.baker@cpuc.ca.gov];
	Liang-Uejio, Scarlett [scarlett.liang-uejio@cpuc.ca.gov]; Brown, Carol A. [carol.brown@cpuc.ca.gov]; Como, Joe
	[joe.como@cpuc.ca.gov]; Sandoval, Catherine J.K. [catherine.sandoval@cpuc.ca.gov]; Charkowicz, Ed
	[ed.charkowicz@cpuc.ca.gov]; Tisdale, Matthew [matthew.tisdale@cpuc.ca.gov]; Prosper, Terrie D.
	[terrie.prosper@cpuc.ca.gov]; Brooks, Donald J. [donald.brooks@cpuc.ca.gov]; Lakhchaura, Megha
	[megha.lakhchaura@cpuc.ca.gov]; Kaneshiro, Bruce [bruce.kaneshiro@cpuc.ca.gov]
ubject:	Notes from April 4th SCE SONGS Summer Outlook meeting
Attachments:	Notes April 4 SONGS summer planning meeting with SCE.doc

Please feel welcome to provide input on these notes to ensure I have a robust capture of the meeting.

The main action items from this meeting include:

Colette requested a page informational sheet on market monitoring from SCE

The next meeting with SCE could be next Friday the 20<sup>th</sup> before 2:00 PM.

And at a later meeting in ED regarding DR, we should plan a separate meeting with the ISO regarding DR planning

Thanks,

**Brian Stevens** 

From: Ikle, Judith on behalf of Randolph, Edward F.

Sent: Mon 4/2/2012 10:28 AM

**To:** Randolph, Edward F.; Stevens, Brian; Room 5305; Sterkel, Merideth "Molly"; Ikle, Judith; 'Gary.Schoonyan@sce.com'; Clanon, Paul; Kersten, Colette; Lindh, Frank; St. Marie, Stephen; Franz, Damon A.; Beck, Valerie; Baker, Simon; Liang-Uejio, Scarlett; Brown, Carol A.; Como, Joe

Subject: FW: Updated: Meeting with SCE Follow-Up Information on Summer Supply Outlook with Gary Schoonyan

When: Wednesday, April 04, 2012 2:00 PM-3:00 PM (GMT-08:00) Pacific Time (US & Canada).

Where: Room 5305

Note: The GMT offset above does not reflect daylight saving time adjustments.

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### 1) Current SONGS status

- a. Both units are still in cold shutdown
- b. Return to service forecast: Unit 2- June 1<sup>st</sup>; Unit 3 June 16<sup>th</sup>
  - i. These numbers represent the work needed to be done to get the units restarted. Parallel to this is the analysis to identify the root cause.
  - ii. They do need to go to the NRC to permission to restart; these dates represent the physical work needed.
  - iii. Commissioner Sandoval: If for some reason they are not able to identify the root cause, these dates should be pushed out.
  - iv. The time to restart the steam units is 1-2 weeks.
  - v. There is about a month of continued investigation with unit 2. They will begin restart after the NRC is satisfied and they have taken into account in unit 2 the lessons learned from unit 3.
- c. Valerie Beck: Some discussions alluded that SCE made a differentiation between root cause and direct cause. Are they making that differentiation?
  - i. This is NRC correction actions speak.
  - ii. The difference is to identify what happened v. why it happened. Finding the root cause of unit three is crucial to ensure it doesn't happen to unit 2.
  - iii. They will need to get us to speak with the engineers for further information.
  - iv. Commissioner Sandoval: The NRC letter is very concerned with why it happened not just what happened.
- 2) Contingency Planning Cases Being Considered
  - a. Scenario A Unit 2 returns to service in spring 2012 while Unit 3 remains off-line. Unit 2 trips during 2012 summer peak.
  - Scenario B Both SONGS units off-line through 2012 peak but at least one of the units return to service beginning in 2013.
- 3) Summer 2012 Peak Without SONGS
  - a. There are still questions to answer regarding local resources in LA Basin.
    - i. Including whether there will be emission issues in the Basin with whatever is necessary to replace SONGS

- ii. AQMD raising some questions about HB emissions questions SCE's model does not take into account the diesel that will fire up in case of a blackout.
  - 1. SCE at this point cannot add that to their model, but they can do that analysis after the fact.
- iii. Carol Brown: there is the whole Port of LB issue and whether the ships can plug into electricity or run diesel (also Port of LA)
  - 1. SCE believes this "cold ironing" issue is understood and analyzed.
- iv. Carol Brown heard the AQMD does not like HB units 3 and 4 coming online, but how can they say that if they haven't modeled these other contingencies?
- v. Commissioner Sandoval: emergency diesel does not ding the companies under US EPA regs. This is a major deficiency in the model.
- vi. Colette: In general we have a better summary for how we are prepped for market monitoring in the summer. Prices have not been impacted even if supply is scarce, and there are other benchmarks including exceptional dispatch and congestion revenue. If we're doing our job, we need to look at specificity other than prices. REQUESTED: a page on market monitoring to leave it to their judgment as to what should be covered.
- vii. SCE: we did some assessments and to date there has been no impact to price with the units out, although this summer there is a projected \$/MWh increase in cost.
- b. Judith: We've heard CAISO's software has caused more starts than historically has been the case; can SCE confirm?
  - i. Edison's 4 peakers have run more in the last year than previous in terms of starts, and the CAISO market design has changed as they are concerned about having flexible resources in real time. They have 400-700 MW/hour in standby services, and those resources are starter more than in the past.
- c. Commissioner Sandoval: question about the third bullet (likely insufficient local area resources in the LA Basin without at least one of the SONGS units): What is their perspective about what this means?
  - i. Concern not just the LA Basin but also SD -
  - ii. The grid isn't as homogenous as they would like it, for procurement they need about 10,600 MW of supply in the LA Basin to meet demand, and there is a total of 12,000MW of supply in the LA Basin.

- iii. With SONGS 2 and 3 out, they are 800MW short as opposed to 1,500MW long.
- iv. It is in south OC where the problem is not just amount of power but the supply of vars necessary to keep voltage up. SDG&E faces the same issue.
  - 1. OC Ellis substation, Santiago substation from HB down to SONGS
- 4) Possible Generation Actions
  - a. They are talking with CAISO to return HB 3 and 4 which would serve 450 MW to the grid
  - b. Cost to get HB running again
    - i. Up to \$20 million
    - ii. AES says the gas service has been cut and there have been holes punched in the boiler for tax purposes. They can get them back online, and there is no public sign they have been demolished. It would take about 1 month to get them back online.
  - c. They can put trailer mounted generators at substations
    - i. 4 25MW generators with a total capacity of 100MW (10 million dollars/unit/year)
    - ii. They want to lock these down without committing for the year.
    - There may or may not be gas lines nearby, in which case they would use diesel if not.
- 5) Transmission considerations
  - a. Voltage drop
    - i. They put in systems such that there are relays so if voltage drops, they drop significant load to maintain the system reliability.
      - 1. The load drop is 1,500 MW.
    - ii. They are forced because of the time constraints so they would be dropping load at the four south OC substations.
      - 1. The system is "smart" and would drop 1 to 4 substations as needed
      - 2. The substations are Ellis HB, Viejo Lake Forest, Santiago Irvine, and Johanna Santa Ana: These are the substations closest to SONGS.

- 3. If HB 3 and 4 are available, these contingencies are still necessary
- iii. Community outreach on this topic is needed.
  - Commissioner Sandoval: the community outreach needs to not only say what is happening, but it needs to be explicit about what denizens of the area need to do to respond. Also, the outreach must be towards nontraditional media and being multi-lingual: specifically in Spanish, Vietnamese, and Chinese.
  - 2. And we need to use weather forecasts to see this coming in advance
    - a. SCE explains that the marine layer in this area during this time is very unpredictable and thus can cause the temperature to change up to 10 degrees without notice.
- iv. Coordination with SD because this is the southern part of SCE near northern SDG&E, any contingency would impact them too.
- 6) Demand Side Resource Summary
  - a. Key Programs
    - Summer discount plan is AC cycling 50MW of curtailment potential in those 4 substations available. They have potential for 5-8 MW through a couple of measures (more customers on the program, replacing the switches on the ACs that might not be working)
      - There is no correlation between the customer participation and which substation will be shut off first – just the substation with the lowest voltage.
    - ii. Base interruptible program
      - 1. 30 MW of load reduction potential for those customers. Right now they don't geographically dispatch this program.
    - iii. There is 27 more MW in the programs if users turn their base generators on to participate in the event. There are policy issues at AQMD, although the CPUC tariff allows for this. However, a clarification from the CPUC allowing it would be helpful, and a CPUC or Gov's office declaration of emergency might be necessary to get AQMD on board.
      - 1. The current permits only allow the generators to run if there is a blackout not to run to prevent a blackout.
    - iv. Other 2012 DR and conservation options

### 1. 20/20 potential reeffectuate

- a. 11 MW for commercial customers only
- b. SCE will file an advice letter seeking approval to move forward
- c. During the energy crisis it wasn't just commercial, not now the non commercial programs are covered by other programs.
- d. Startup cost would be 200k for marketing, outreach, and billing changes.
- 2. Signing the contract with Mcguire this week
  - a. This would be a robust program to explain what you need to do in a flex your power situation over the course of the summer.
  - b. Commissioner Sandoval They have yet to sign a contract
    - Do they have in the contract stuff for outreach for multilingual people, non traditional media sources, the Santa Ana area has a lot of Latinos and Vietnamese people.
    - ii. SCE yes, this is multi lingual, and it is similar to the advertisements of the past.
    - iii. We need to be cautious that we don't replicate the past because last September she heard an ad that didn't explain what to do – don't repeat that.
    - iv. Commissioner Sandoval "The takes are high, and we're trying to prevent a blackout – we need to make sure we get the message right."
  - c. From an internal proposal, they asked Wally to provide a 6, 8, and 10 million dollar proposal.
    - i. The 10 million dollar proposal might be state wide -- and we should target the affected areas.
  - d. Ed Randolph: We can help with free media campaigns, as well, through the CPUC and Governor's Office.
- 7) Electric Emergency Action Plan

- a. Every year they file this plan with the CAISO and ED, and they are working on it to coordinate the changes necessary for this year.
- b. They are not starting from scratch here augmenting last year's plan
- c. Ed Randolph: one DR question, we've had spirited conversations with CAISO over our DR forecast v. theirs and he they would incorporate DR programs into their forecast. For all DR programs they have, how do they anticipate these programs get used and help reduce the cost of having other resources on standby?
  - i. SCE has other DR resources available to dispatch on a day ahead economic basis, and they can do it when the forecast for energy is at a trigger point.
  - ii. This includes aggregation with EnerNOC, and critical peak pricing that is their dynamic pricing. The summer discount plan and AC cycle program is 60MW another AC program is 650 MW, so when they have a system wide event, they can dispatch 1000 MW of most of the programs.
- d. Scarlet: What about south of Lugo? SCE seemed to be focusing only on south OC. The ISO asked for DR mapping in that location only.
  - i. Yes, what is available with the DR is the summer response program that can be dispatched south of Lugo. They are working for geographical dispatch on the main four, not south of Lugo.
- 8) Next meeting?

a. It can be the 23<sup>rd</sup>, or Friday the 20<sup>th</sup> before 2:00 PM.

- i. Prior to that meeting, SCE will try to put together an agenda to put together the items.
- 9) Post SCE DR discussion
  - a. Should we derate the MW of available due to customer fatigue after on a third consecutive day? Specifically for the agriculture pump and AC cycling.
    - i. We have data that says for these programs there is no customer fatigue from day 1 to day 2, but there is no data on what happens in day 3.
      - 1. Simon thinks the biggest risk is going to the ISO and saying we're giving these DR programs a haircut because there would be some fatigue even there is no data.
      - 2. The question here is what is the sunk cost?

3. We should follow up with the CAISO in a separate meeting not the Friday meetings.

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### Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 68 of 191

Message	
From:	Stevens, Brian [brian.stevens@cpuc.ca.gov]
Sent:	4/16/2012 4:50:25 PM
To:	Randolph, Edward F. [edward.randolph@cpuc.ca.gov]; Sterkel, Merideth "Molly" [merideth.sterkel@cpuc.ca.gov];
	Ikle, Judith [judith.ikle@cpuc.ca.gov]; Clanon, Paul [paul.clanon@cpuc.ca.gov]; Kersten, Colette
	[colette.kersten@cpuc.ca.gov]; Lindh, Frank [frank.lindh@cpuc.ca.gov]; St. Marie, Stephen
	[stephen.stmarie@cpuc.ca.gov]; Franz, Damon A. [damon.franz@cpuc.ca.gov]; Beck, Valerie
	[valerie.beck@cpuc.ca.gov]; Kaneshiro, Bruce [bruce.kaneshiro@cpuc.ca.gov]; Liang-Uejio, Scarlett [scarlett.liang-
	uejio@cpuc.ca.gov]; Brown, Carol A. [carol.brown@cpuc.ca.gov]; Como, Joe [joe.como@cpuc.ca.gov]; Stevens, Brian
	[brian.stevens@cpuc.ca.gov]; Gary.Schoonyan@sce.com
Subject:	SCE Summer Outlook Update
Attachments:	meeting.ics

This meeting is a follow-up from the April 4<sup>th</sup> meeting with SCE regarding the SONGS summer outlook and status.

Please contact Brian Stevens ( brc@cpuc.ca.gov (415) 703-2148 ) if you have any questions.

Best,

**Brian Stevens** 

**Brian Stevens** 

Regulatory Analyst - Energy Division

California Public Utilities Commission

505 Van Ness; San Francisco, CA 94102

415-703-2148

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### Electric Safety and Reliability Branch (Generation Section) Monthly Status Report – June 2012

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### 3. Power Plant Investigations

ERSB investigates complaints related to power plants, and notable/questionable plant outages. We summarize our current investigations below.

### Steam Generator Leak at San Onofre Nuclear Generating Station (SONGS) Investigator: Ron Lok

ESRB opened an investigation on the following recent safety concerns at SONGS:

- On January 31, a tube leak in Unit 3's steam generator allowed radioactive water circulating from the reactor to mix with water in the steam generator. Some radioactive steam may have leaked out of the turbine building.
- Since January 31, early media reports that the Nuclear Regulatory Commission (NRC) observed signs of excessive wear on up to 800 out of roughly 9,700 tubes in Unit 2's reactor.

Southern California Edison (SCE) took Units 2-3 out of service to investigate the tube thinning, and steam generator tube leak problems. SCE will keep both units offline until it completes its investigation, and NRC approves their return to service. With both units down, Southern California is short 2250 MW of capacity that may adversely affect generation availability during the summer months. Ron continues to monitor the NRC/SCE investigation.

### El Segundo Natural Gas Line Dig-in Incident

### Investigator: Brian Leung

On November 3, 2011 at 1042 hours, plant staff at El Segundo initiated a forced outage to Units 3 and 4 after damaging a 1/2-inch carbon steel sensing line that resulted in a natural gas leak during trench excavation. Plant staff initiated its own Emergency Action Plan and performed an emergency shutdown of both Units 3 and 4. Plant staff evacuated the area and isolated the main gas line. Plant staff repaired and leak tested the 1/2-inch gas line before placing the main gas line back in service.

On November 4, 2011, Brian visited the plant. According to plant staff, the 1/2 -inch gas line owned by the plant did not appear in the schematics used during excavation planning. This incident did not meet the reporting requirements of GO 167, Rules 10.4 but ERSB initiated an investigation due to concerns with the plant's lack of knowledge of a live natural gas line. On December 9, the GAO submitted a data response. After some inactivity on the investigation, Brian resumed work mid-February. In March, he created a data request for additional information from the plant. On April 6, Brian sent the data request to the plant. GAO responded on April 30. Brian is working on the investigation report.

### Ammonia Leak at San Onofre Nuclear Generating Station (SONGS) Investigator: Ron Lok

On November 1, 2011 at 1450 hours, Southern California Edison (SCE) declared an

### Electric Safety and Reliability Branch (Generation Section) Monthly Status Report – June 2012

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alert due to an ammonia leak in Unit 3's make-up water treatment system. SCE contained the leak within a few hours and reported 25 gallons of aqueous ammonium hydroxide leaked into a secondary containment, plus 96 ppm (parts per million) of ammonia gas released at the source. ESRB opened an investigation due to concerns about a news report stating that the ammonia tank is located near a switchyard which poses safety hazards and operational problems. Ron Lok examined SONGS' preliminary investigation report that revealed the plant failed to detect the leak over a few days and experienced three <u>concurrent</u> failure elements that contributed to the leak. ESRB believes the failures may be due to deficiencies in the plant's programs for operator training, routine equipment inspection, and predictive maintenance.

On May 21, Ron visited SONGS to inspect equipment involved in the incident. He met with three managers, various engineers, and privately with both resident NRC inspectors. The NRC inspectors' primary focus and mandates (CFR) are on systems that handle radiation, they do not have much control over the nonradiation systems like the steam generator, steam turbine, water treatment, and chemical systems. However, if the non-radiation systems adversely affect the radiation systems, then the NRC inspectors could order it fixed and/or shut down the plant for safety reasons. The NRC inspector brought this to Ron's attention because the water treatment systems are deteriorating due to neglected maintenance.

### Cross Cutting Investigation of the San Diego Blackout Investigators: Ben Brinkman and Steve Intably

On September 8, 2011, San Diego County suffered a blackout for approximately nine hours following a chain of electrical events that took place in the Southwest region of the United States and northern Mexico. Initially, an Arizona Public Service worker tripped the Southwest Power Link (SWPL), a 500kV line, while working on a substation. SWPL is one of two main transmission lines that provide power to San Diego County. The other transmission line is Path 44 which connects Southern California Edison (SCE) to San Diego Gas & Electric (SDG&E) territory via a switchyard at the San Onofre Nuclear Generating Station (SONGS). Within a period of eleven minutes, Path 44 overloaded due to a series of problems with power plants, substations, and transmission lines. This left San Diego County with insufficient power supply to meet the heavy demand due to unusually hot weather conditions.

Winnie assisted with the initial investigation of the event, and analyzed the data available at that time. As noted above, our USRB colleagues Ben Brinkman and Steve Intably are the principle investigators, with management support from Valerie.

### Contractor Burned While Refueling Equipment at Pastoria Investigator: Alan Shinkman

On August 14, 2011, a contractor suffered burns to his body while refueling a crane with a portable fuel tank. His injuries required hospitalization. Alan is conducting an investigation to determine if the plant violated GO 167. In February, Alan completed evaluation of the documentation from Pastoria and determined that the plant failed to provide documentation to support its claim that the contractor was told not to refuel equipment. Alan is preparing an investigation report and letter for the GO 167 violation.

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#### Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 73 of 191

STATE OF CALIFORNIA PUBLIC UTILITIES COMMISSION SAN FRANCISCO, CA 94102-3298

June 13, 2012

Advice Letters 2648-E-A/E-B/E-C

Akbar Jazayeri Vice President, Regulatory Operations Southern California Edison Company P O Box 800 Rosemead, CA 91770

#### Subject: Supplemental Filings – Implementation of SCE Company's Consolidated Revenue Requirement and Rate Change on January 1, 2012

Dear Mr. Jazayeri:

Advice Letters 2648-E-A/E-B/E-C are effective January 1, 2012.

Sincerely, Gedurard Ramboph

Edward F. Randolph, Director Energy Division



Edmund G. Brown Jr. Governor



Akbar Jazayeri Vice President of Regulatory Operations

December 27, 2011

ADVICE 2648-E-A (U 338-E)

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA ENERGY DIVISION

#### SUBJECT: Supplement to Advice 2648-E, Implementation of Southern California Edison Company's Consolidated Revenue Requirement and Rate Change on January 1, 2012

#### **PURPOSE**

Southern California Edison Company (SCE) files this supplemental advice letter to submit revised tariff schedules reflecting the consolidated revenue requirement and other rate changes effective January 1, 2012, as discussed in Advice 2648-E. This advice letter supplements and replaces Advice 2648-E in its entirety. Revised tariff sheets reflecting the revenue requirement and rate changes discussed herein are attached hereto as Attachment A.

#### BACKGROUND

As discussed in more detail below, the California Public Utilities Commission (Commission) as well as the Federal Energy Regulatory Commission (FERC) have authorized SCE to change various components of its revenue requirement and rates on January 1, 2012. This advice filing does not incorporate any changes pending in SCE's 2012 Energy Resource Recovery Account (ERRA) Forecast Proceeding (A.11-08-002), or its 2012 General Rate Case (GRC) (A.10-11-015). SCE will file an advice letter implementing authorized revenue requirement changes when Commission decisions are issued in these two proceedings.

Rates reflecting final consolidated revenue requirement changes were not yet authorized at the time Advice 2648-E was filed and, therefore, are being provided with this supplemental advice filing.

ADVICE 2648-E-A (U 338-E)

- 7 -

December 27, 2011

#### 3. Department of Water Resources (DWR) Power and Bond Charges

In D.11-12-005, the Commission allocated DWR's total 2012 Power Charge Revenue Requirement among the three IOUs' customers using the allocation methodology adopted in D.08-11-0596, and set the 2012 DWR Bond Charge. SCE's allocated 2012 DWR Power Charge revenue requirement will be a negative \$441 million resulting in a negative DWR Power Charge, the DWR Energy Credit, of \$0.00593 per kWh. D.11-12-005 also adopted a DWR Bond Charge of \$0.00513 per kWh. In Advice Letter 2674-E, SCE implemented D.11-12-005. The impact of D.11-12-005 is a reduction of \$1.059 billion from the 2011 DWR revenue requirement. The DWR Bond Charge and new DWR Energy Credit are reflected in the rates included in Attachment A. SCE also provides a sample bill format showing the new DWR Energy Credit line item in Attachment B.

#### 4. SCE Generation Rate

#### i. Effect of SCE Supplying 100 Percent of Bundled Service Load

Effective January 1, 2012, DWR will no longer provide energy on behalf of SCE's bundled service customers. Although SCE will then be providing 100 percent of bundled service load, SCE at this time is not proposing to change its generation rates from those reflecting its currently authorized ERRA (i.e., fuel and purchased power) revenue requirement. Upon a decision in its 2012 ERRA Forecast proceeding (A.11-08-002), SCE will file an advice letter in compliance with that decision and will update its ERRA revenue requirement and rates accordingly. Until SCE implements its 2012 ERRA forecast, the effect of SCE serving 100 percent of bundled service customers' load (as opposed to approximately 79 percent during 2011) will be an increase in SCE's generation revenues, based on current generation rates. SCE's purchased power expenses are also expected to increase. Any resulting over- or under-collection prior to the 2012 ERRA rate change will be recorded in the ERRA Balancing Account. The annual increase in SCE's generation revenues is estimated to be \$970.7 million, but this amount will be more than offset by the \$1.059 billion reduction in the DWR Power Charge Revenue Requirement.<sup>3</sup>

#### ii. SONGS Steam Generator Replacement (SGR)

In D.05-12-040, the Commission adopted SCE's proposal to replace the San Onofre Nuclear Generating Station Units 2 and 3 (SONGS 2&3) steam generators. In accordance with Ordering Paragraph 9 of D.05-12-040, the SGR revenue requirement for each unit shall be included in SCE's generation rates on an interim basis (subject to refund), commencing on January 1 of the year subsequent to the date that installation of the new replacement steam generators is completed and they are placed in commercial operation. Interim rate increases shall be implemented through advice letter filings.

<sup>&</sup>lt;sup>3</sup> See Line No. 45 of Table 1.

ADVICE 2648-E-A (U 338-E)

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December 27, 2011

On June 20, 2009, SCE filed Advice Letter 2355-E and established the ratemaking associated with replacing the SONGS 2&3 steam generators in compliance with D.05-12-040.<sup>4</sup> Specifically, SCE established Preliminary Statement, Part Z, SONGS 2&3 Steam Generator Replacement Balancing Account; and Preliminary Statement, and Part SS, SONGS 2&3 Steam Generator Removal and Disposal Balancing Account. Pursuant to these preliminary statements, the advice letters implementing revisions to the generation revenue requirement shall be filed at least 60 days prior to the date on which rates are to be implemented.

On November 1, 2010, SCE filed Advice Letter 2521-E to include the revenue requirement associated with replacing the two SONGS Unit 2 steam generators in generation rates on January 1, 2011. The SONGS Unit 2 steam generator replacement was completed on April 11, 2010.<sup>5</sup> Likewise, in this advice letter, SCE is proposing to include the revenue requirement associated with replacing the SONGS Unit 3 steam generators in generation rates on January 1, 2012, as the SONGS Unit 3 steam generators replacement was completed on February 18, 2011. Therefore, SCE is authorized to include the forecast SONGS 2&3 steam generators replacement revenue requirement in rates on January 1, 2012. Table 6 below shows the estimated change in SCE's generation revenue requirement in 2012 associated with the SONGS SGR.

SONGS Steam Generators Revenue Requirement (\$000)					
	2011	2012	Change		
SONGS Steam Generator Replacement Generation BA	-				
Unit 2	56,694	57,699	1,005		
Unit 3	0	57,540	57,540		
Subtotal Steam Generators Replacement:	56,694	115,239	58,545		
SONGS 2&3 Steam Generator Removal and Disposal *					
Unit 2 & Unit 3	4,107	0	(4,107)		
Total Steam Generators Revenue Requirement:	60,802	115,239	54,438		
*Pursuant to D.05-12-040, SCE has recovered its share of the 20% of estimated removal					
and disposal costs for the SONGS 2 & 3 original steam generators and is removing the					
annual revenue requirement from rates.					

#### TABLE 6

The total 2012 forecast SONGS 2&3 steam generators revenue requirement is estimated to be \$115.239 million and includes estimated depreciation, taxes, return on rate base, plus FF&U, consistent with Preliminary Statement, Part Z. Any difference between this estimate, which is included in 2012 generation rates provide in Attachment

<sup>&</sup>lt;sup>4</sup> Advice Letter 2355-E became effective on July 30, 2009.

<sup>&</sup>lt;sup>5</sup> Advice Letter 2521-E became effective on December 1, 2010.

ADVICE 2648-E-A (U 338-E)

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December 27, 2011

A, and the actual recorded revenue requirement is recorded in the Base Revenue Requirement Balancing Account.

#### iii. SONGS 2&3 Flexible Refueling and Maintenance Outages

In D.09-03-025 (2009 GRC), the Commission authorized SCE to continue use of the flexible Refueling and Maintenance Outage cost recovery for refueling outages at SONGS. In both 2009 and 2010, there was one refueling outage. In 2011, SCE's authorized GRC-related generation revenue requirement did not include recovery of any costs associated with refueling as there were no refueling outages. SCE will have two refueling outages in 2012: one expected to begin in January associated with SONGS Unit 2; and a second refueling outage estimated to begin in October for SONGS Unit 3. The amount currently authorized in D.09-03-025 (2009 GRC) for each refueling outage is \$51.303 million (see Table 7). Therefore, SCE is proposing to increase its generation revenue requirement in 2012 by \$102.606 million, which is reflected in the Generation rates included in Attachment A. SCE is also updating the Generation Monthly Distribution Percentages to be applied to the 2012 refuelings such that the first refueling outage revenue requirement is allocated evenly between January and February 2012, and the second refueling outage revenue requirement is allocated evenly between October and November 2012. The amount for these refuelings will be adjusted accordingly based upon a final Commission decision in SCE's 2012 GRC. Anv difference between the refueling outage revenue requirement ultimately adopted in the 2012 GRC and the currently authorized refueling outage revenue requirement of \$51,303 million per outage will be recorded in SCE's 2012 GRC Memorandum Account.

SONGS 2&3 Flexible Refueling and Maintenance Outages (\$000)					
	2009	2010	2011	2012*	Change
SONGS 2&3 Refueling Revenue Requirement:	47,160	49,165	-	102,606	102,606
* \$51.303 million for one refueling (\$49.165 x 1.0435); the 2012 amount reflects two refuelings, or \$102.606 million.					

#### **TABLE 7**

#### 5. FERC Jurisdictional – Transmission

On June 3, 2011, SCE filed revisions to its Transmission Owner (TO) Tariff with FERC in Docket No. ER11-3697-000 to implement a formula rate for the costs associated with its transmission facilities. That filing also set forth an increase in SCE's retail and wholesale electric transmission rates resulting from the implementation of the formula rate. On August 2, 2011, FERC issued its Order Accepting And Suspending Proposed Formula Rate Filing And Establishing Hearing And Settlement Judge Procedures, 136 FERC ¶ 61,074 (August 2, 2011) (Order) with respect to SCE's proposed formula rate filing. In the Order, FERC accepted the formula rate for filing, subject to refund, to be effective January 1, 2012; set a number of issues for hearing and settlement

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### EXHIBIT 18

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#### Goldthrite, Cody

From: Sent: To: Cc: Subject: Attachments: Les.Starck@sce.com Tuesday, June 19, 2012 1:07 PM mp1@cpuc.ca.gov cab@cpuc.ca.gov SONGS OII Letter to CPUC SONGS OII Letter to CPUC 061912.pdf

Dear President Peevey,

Attached is the letter I sent today expressing SCE's concerns about the proposed SONGS OII. This is on the agenda for the June 21 commission conference.

(See attached file: SONGS OII Letter to CPUC 061912.pdf)

Les Starck Senior Vice President Regulatory Affairs Southern California Edison Office: 626-302-4883 Cell: 202-256-7159 Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 80 of 191



Leslie E. Starck Senior Vice President

June 19, 2012

President Michael R. Peevey Commissioner Timothy Alan Simon Commissioner Michel Peter Florio Commissioner Catherine J.K. Sandoval Commissioner Mark J. Ferron 505 Van Ness Avenue San Francisco, Ca 94102

Dear President Peevey and Commissioners:

The agenda for your June 21 meeting proposes the issuance of an Order Instituting Investigation (OII) regarding the recent outages at our San Onofre Nuclear Generating Station (SONGS). For the reasons summarized below, the OII is premature and would unnecessarily divert resources and management attention from the important work that needs to be accomplished to return the units to service. In addition, the issuance of this OII would severely restrict the exchange of information between SCE and Commissioners on developments at SONGS.

The OII posits a number of questions that can be fully addressed in regulatory filings that SCE will make in the ordinary course of previously mandated proceedings or as required by law. For example, replacement power costs will be reviewed in SCE's Energy Resource Recovery Account application that will be filed on April 1, 2013. The capital costs of the replacement steam generators are subject to review in an application filed pursuant to D. 05-12-040 (the steam generator replacement project decision). Operation and maintenance expenses for the units for the years 2012 through 2014 have been considered and are awaiting a Commission decision in SCE's 2012 general rate case. Future O&M expenses will be subject to Commission review in the test year 2015 general rate case, the notice of intent for which is to be filed in 2013.

Moreover, the Legislature has established a directly applicable procedure for the Commission to follow with respect to generating assets which are out of service for more than nine months. Under that procedure, which is codified at Public Utilities Code Section 455.5, SCE will be required to file an outage notice with the Commission for Unit 3 on November 1 if Unit 3 has not yet returned to service at that time. Upon the filing of that notice, the Commission must institute an investigation of the outage and can in that proceeding evaluate the impact of the outage on our customers. If Unit 2 remains offline for more than nine months, an outage notice for that unit would likewise be submitted under Section 455.5.

601 Van Ness Avenue Suite 2030 San Francisco, CA 94102 (415) 929-5512 les.starck@sce.com CPUC Commissioners June 19, 2012 Page 2

In addition to distracting both SCE's management and the plant's personnel from the important job at hand - safely returning the units to service - an investigation at this time would waste valuable Commission resources by prematurely inquiring into areas that will be much better informed when the Nuclear Regulatory Commission (NRC) has completed its ongoing review of the current SONGS outages. The NRC has been engaged in a detailed review of the underlying causes of the problems with the steam generators since shortly after the initial tube leak in Unit 3. That review has largely been conducted by an NRC Augmented Inspection Team (AIT) and has already resulted in a Confirmatory Action Letter (CAL) which sets forth a process that will need to be met before the units can be returned to service. By deferring its own investigation until after the NRC review has been concluded, the Commission will have a much sounder basis for drawing reasoned conclusions regarding the status of the units and their future operation. Any conclusions reached by a Commission investigation in advance of this information would be highly speculative and of dubious value.

For these reasons, SCE respectfully urges the Commission to defer issuance of the proposed OII to ensure that any Commission determinations are the result of a well-timed and fully-informed deliberative process. This is particularly appropriate given that the economic consequences of the SONGS outages can and should be reviewed through other proceedings that already exist under Commission mandate or law.

Thank you for your consideration of this matter,

Sincerely,

Leslie E. Starck Senior Vice President

cc: Carol Brown, Advisor to President Peevey Phyllis R. White, Advisor to Commissioner Simon Sepideh Khosrowjah, Advisor to Commissioner Florio Ditas Katague, Advisor to Commissioner Sandoval Charlotte TerKeurst, Advisor to Commissioner Ferron

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# EXHIBIT 19

#### Public Utilities Commission of the State of California

Public Agenda 3296 Thursday, June 21, 2012 9:00 a.m. San Francisco, California

Commissioners

Michael R. Peevey, President Mark J. Ferron Michel Peter Florio Catherine J.K. Sandoval Timothy Alan Simon

For each agenda item, a summary of the proposed action is included; the Commission's decision may, however, differ from that proposed.

Website: http://www.cpuc.ca.gov

#### Scheduled Commission Meetings 505 Van Ness Avenue, San Francisco

Ratesetting Deliberative Meeting*	Commission Meeting
Room 5305	Auditorium
(1:30 p.m.)	(9:00 a.m.)
Closed to the <b>Publi</b> c	Open to the Public
Monday, July 09, 2012 (San	Thursday, July 12, 2012 (San
Francisco)	Francisco)
Monday, July 30, 2012 (San	Thursday, August 02, 2012 (San
Francisco)	Francisco)
Monday, August 20, 2012 (San	Thursday, August 23, 2012 (San
Francisco)	Francisco)
Monday, September 10, 2012 (San	Thursday, September 13, 2012 (San
Francisco)	Francisco)
Monday, September 24, 2012 (San	Thursday, September 27, 2012 (San
Francisco)	Francisco)

\*Ratesetting Deliberative Meeting dates are reserved as noted but will be held only if there are ratesetting matters to be considered and a Commissioner has requested that a Ratesetting Deliberative Meeting be held.

Matters of Public Interest

For the convenience of the public and media representatives, items of widespread public interest will be taken up at the beginning of the meeting.

For further information contact the Public Advisor (415) 703-2074 E-mail: public.advisor@cpuc.ca.gov



This location is accessible to people with disabilities. If specialized accommodations for the disabled are needed, e.g. sign language interpreters, please call the Public Advisor at (415) 703-2074 or TTY# (415) 703-5282 or toll free # 1-866-836-7825 three business days in advance of the meeting.

Public Agenda 3296

Thursday, June 21, 2012

#### PUBLIC COMMENT

The following items are not subject to public comment:

- All items on the closed session agenda.
- · 10, 21

**Public Comment:** 

#### **Consent Agenda**

Items shown on the Consent Agenda will be taken up and voted on as a group in one of the first items of business of each Commission meeting. Hems may be removed from the Consent Agenda for discussion on the Regular Agenda at the request of any Commissioner prior to the meeting

#### Consent Agenda - Orders and Resolutions

### ItemPreliminary Categorizations and Hearing Determinations for1Recently Filed Formal Applications

[11371]

Res ALJ 176-3296

#### **PROPOSED OUTCOME:**

Ratification of preliminary determination of category for proceedings initiated by application. The Preliminary determinations are pursuant to Rule 7.1 of the Commission's Rules of Practice and Procedure.

#### **ESTIMATED COST:**

None.

http://docs.cpuc.ca.gov/Cyberdocs/AgendaDoc.asp?DOC\_ID=582667

Public Agenda 3296

Thursday, June 21, 2012

-

Consent Agenda - Orders and Resolutions (continued)

#### Item Order Extending Statutory Deadline

29

[11385]

A09-04-007, A09-04-009 - Related matters.

Application of Pacific Gas and Electric Company in its 2009 Nuclear Decommissioning Cost Triennial Proceeding.

#### PROPOSED OUTCOME:

Extends statutory deadline to August 28, 2012.

#### ESTIMATED COST:

None.

(Comr Simon - ALJ Darling) http://docs.cpuc.ca.gov/Cyberdocs/AgendaDoc.asp?DOC\_ID=582507

Pub. Util. Code §1701.1 -- This proceeding is categorized as Ratesetting.

Public Agenda 3296

Thursday, June 21, 2012

Consent Agenda - Orders and Resolutions (continued)

New Order Instituting Investigation Item 30



[11386]

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Order Instituting Investigation on the Commission's Own Motion into the Rates, Operations, Practices, Services and Facilities of Southern California Edison Company and San Diego Gas & Electric Company Associated with the San Onofre Nuclear Generating Station Units 2 and 3.

#### **PROPOSED OUTCOME:**

Opens this investigation to obtain information on the recent outages at the San Onofre Nuclear Generating Station Units 2 and 3, and the resulting effect on the provision of electric service at just and reasonable rates.

We may issue orders based on this investigation to address ratemaking and other matters under our jurisdiction.

#### **ESTIMATED COST:**

Unknown.

(Comr Florio)

The following items are currently being held or withdrawn. The list is subject to changes and items may be added or deleted at any time at the discretion of the Commission. The Commission has the discretion to take action on any items at the Commission Meeting.

6/20/12 1:30 PM Final

#### AGENDA CHANGES June 21, 2012 Agenda No. 3296

**REASON: HELD BY: ITEM NO: HELD TO:** Further Review Sandoval 8/2/12 4 Staff 5 8/2/12 Simon Further Review 7/12/12 6 Further Review Ferron Take up with Regular Agenda; 10 Discuss and Hold to 8/2/12 Further Review Simon 7/12/12 13 Further Review Peevev 8/2/12 30 Further Review Sandoval 7/12/12 35 Take up with Consent Agenda 40 Further Review Simon 41 7/12/12 Take up with Consent Agenda 42 Further Review Florio 7/12/12 43 Further Review Discuss and Hold to 7/12/12 Sandoval 45 Take up with Consent Agenda 46 47 Withdrawn Take up with Consent Agenda 48 Take up with Consent Agenda 49 Staff 7/12/12 50 Staff 7/12/12 51 Take up with Consent Agenda 52 Staff 54 7/12/12 Staff 7/12/12 55 Take up with Consent Agenda 56

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### EXHIBIT 20

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#### Goldthrite, Cody

From:	Les.Starck@sce.com
Sent:	Friday, July 13, 2012 1:28 PM
To:	mp1@cpuc.ca.gov; timothy.simon@cpuc.ca.gov; catherine.sandoval@cpuc.ca.gov; mike.florio@cpuc.ca.gov; mark.ferron@cpuc.ca.gov
Сс:	Lindh, Frank; pac@cpuc.ca.gov; EFR@cpuc.ca.gov; Tisdale, Matthew; cab@cpuc.ca.gov; cft@cpuc.ca.gov; dmk@cpuc.ca.gov; prw@cpuc.ca.gov; skh@cpuc.ca.gov
Subject: Attachments:	Press Release - Southern California Edison Releases Steam Generator Tube Wear Data SCE press release SG tube wear data 7_13_12.docx

Commissioners, FYI, attached is today's press release reporting on the release of SONGS steam generator tube wear data to the NRC.

(See attached file: SCE press release SG tube wear data 7\_13\_12.docx)

Les Starck Senior Vice President Regulatory Affairs Southern California Edison Office: 626-302-4883 Cell: 202-256-7159 Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 90 of 191





Media Contact: Media Relations, (626) 302-2255 Investor Relations Contact: Scott Cunningham, (626) 302-2540

#### Southern California Edison Releases Steam Generator Tube Wear Data

ROSEMEAD, Calif., July 13, 2012 — Southern California Edison (SCE) has released steam generator tube wear data associated with the San Onofre Nuclear Generating Station (SONGS) to the Nuclear Regulatory Commission. The data show that most of the wear, or tube wall thinning, was less than 20 percent. This is far below the 35 percent wall-thinning limit, which would require that the tube be plugged. The majority of this wear is related to support structures. The nature of the support structure wear is not unusual in new steam generators and is part of the equipment settling in.

"We're using this information and additional detailed data collected through testing to develop our repair plans according to best practices and industry standards, particularly the data on the unexpected tube-to-tube wear," said Senior Vice President and Chief Nuclear Officer Pete Dietrich. "Safety continues to be the guiding principle behind all the work we are doing."

The data include the various types of wear on the tubes and the number of tubes affected.

There were three major categories of wear: anti-vibration bar wear, tube support plate wear and tube-to-tube wear. Two minor categories of wear were also included: retainer bar wear and wear due to a foreign object. The foreign object wear, also not unusual in new steam generators, was only found in Unit 2 and was caused by a piece of welding material about the size of a quarter rubbing against two tubes.

In Unit 2, 1,595 tubes showed wear of some type and 510 tubes were ultimately plugged — six tubes for showing wear of more than 35 percent and the rest for preventative measures.

In Unit 3, 1,806 tubes showed wear of some type and 807 tubes were ultimately plugged — 381 tubes for wear of more than 35 percent and the rest for preventative measures.

The complete data for both units is available on the commission website for SONGS information: www.nrc.gov/info-finder/reactor/songs/tube-degradation.html.

Both units of the plant are currently safely shut down for inspections, analysis and tests. Unit 2 was taken out of service Jan. 9 for a planned outage. Unit 3 was safely taken offline Jan. 31 after station operators detected a leak in a steam generator tube. The units will remain shut down until SCE and the commission are satisfied that the units are safe to operate.

#### About Southern California Edison

An Edison International (NYSE:EIX) company, Southern California Edison is one of the nation's largest electric utilities, serving a population of nearly 14 million via 4.9 million

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#### Southern California Edison Releases Steam Generator Tube Wear Data Page 2

customer accounts in a 50,000-square-mile service area within Central, Coastal and Southern California.

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## EXHIBIT 21

### Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 93 of 191

Message		
From:	Ron.Litzinger@sce.com [Ron.Litzinger@sce.com]	
on behalf of	Lyneece.James.Johnson@sce.com [Lyneece.James.Johnson@sce.com]	
Sent:	7/17/2012 11:42:32 PM	
To:	carol.brown@cpuc.ca.gov	
Subject:	Accepted: CPUC Briefing Request on Tube Wear Reports (CONFERENCE CALL)	

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#### Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 96 of 191

#### Leading the Way in Electricity \*\*\* **Current Status** Unit 2 Status: - Shutdown on Jan. 9 for routine refueling and maintenance outage & reactor vessel head replacement - Current return to service date -11/18/2012 Unit 3 Status: ٠ - Operators safely shutdown Unit 3 after steam generator tube leak identified on January 31 - Current return to service date -12/31/2012

SOUTHERN CALFORNIA EDISC



#### Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 98 of 191







Two vertical, inverted U-tube Steam Generators consisting of a primary side and a secondary side. Height:65' 6" Diameter:14 to 22 ft (bottom to top) Weight:over 600 tons

Design Data Heat Transfer Rate:5.900 x 109 BTU/HR Tube OD:3/4" / Inconel 690 Thermally Treated Tube Thickness: 0.0429" Number of tubes: 9727



Leading the Way in Electricity \*\*

#### Actions Taken to Date

- Discovered unexpected tube-to-tube wear in limited portions of Unit
  3 steam generators
- Deferred Unit 2 restart pending investigation

- Assembled team of experts to inform, assist and challenge
- Completed extensive tests and analysis on both units in all steam generators to support determining cause









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Leading the Way in Electricity "

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#### NRCs AIT and CAL Chronology

- On March 15<sup>th</sup>, the NRC dispatched an Augmented Inspection Team (AIT) to SONGS to review the circumstances leading to the tube failures during testing
  - AITs are used by the NRC to review more significant issues such as a tube failure at NRC-licensed facilities
- On March 27<sup>th</sup> a Confirmatory Action Letter (CAL) was issued by the NRC to SCE outlining actions SCE must complete before restarting Units 2 and 3
- On June 18<sup>th</sup>, the NRC had an AIT exit public meeting describing their findings
- Only July 18th, the NRC issued its AIT report

Leading the Way in Electricity

#### SONGS Confirmatory Action Letter March 27, 2012

#### Actions for Unit 2

•Southern California Edison Company (SCE) will determine the causes of the tube-to-tube interactions that resulted in steam generator tube wear in Unit 3, and will implement actions to prevent loss of integrity due to these causes in the Unit 2 steam generator tubes. SCE will establish a protocol of inspections and/or operational limits for Unit 2, including plans for a mid-cycle shutdown for further inspections.

•Prior to entry of Unit 2 into Mode 2, SCE will submit to the NRC in writing the results of your assessment of Unit 2 steam generators, the protocol of inspections and/or operational limits, including schedule dates for a mid-cycle shutdown for further inspections, and the basis for SCE's conclusion that there is reasonable assurance, as required by NRC regulations, that the unit will operate safely.

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Leading the Way in Electricity

# SONGS Confirmatory Action Letter March 27, 2012

#### Actions for Unit 3

•SCE will complete in-situ pressure testing of tubes with potentially significant wear indications in accordance with the Electric Power Research Institute (EPRI) Steam Generator In-situ Pressure Test Guidelines and will plug tubes in accordance with those guidelines.

•SCE will plug all tubes with wear indications in excess of your Steam Generator Program Requirements (SGPR) and EPRI guidelines as well as perform preventive plugging or take other corrective actions to address retainer bar-related tube wear in Unit 3.

•SCE will determine the causes of tube-to-tube interaction and implement actions to prevent recurrence of loss of integrity in the Unit 3 steam generator tubes while operating.

•SCE will establish a protocol of inspections and/or operational limits for Unit 3, including plans for a mid-cycle shutdown for inspections. The protocol is intended to minimize the progression of tube wear, and ensure that tube wear will not progress to the point of degradation that could cause tubes not to meet leakage and structural strength test criteria.

•Prior to entry of Unit 3 into Mode 4, SCE will submit to the NRC in writing the results of your assessment of Unit 3 steam generators, the protocol of inspections and/or operational limits, including schedule dates for a mid-cycle shutdown for further inspections, and the basis for SCE's conclusion that there is a reasonable assurance, as required by NRC regulations, that the unit will operate safely.

Leading the Way in Electricity "

OUTHERN CALLFORNIA EDISCN

# **AIT Report Summary**

- Faulty computer modeling that inadequately predicted conditions in steam generators at the San Onofre Nuclear Generating Station and manufacturing issues contributed to excessive wear of the components, U.S. Nuclear Regulatory Commission inspectors have concluded.
- The team also determined that Southern California Edison provided the NRC with all the information required under existing regulations about proposed design changes to its steam generators prior to replacing them in 2010 and 2011.
- The NRC will schedule a meeting in the near future to receive and respond to public comments and questions about the now-finalized report and the inspection report process, and other issues that may arise. Open items in the report will be subject to follow-up inspections.
- The report also identifies 10 issues requiring additional follow-up by the NRC including: (1) further review of the adequacy of the plant's post trip/transient procedure; (2) review of the adequacy of acoustical alarms used to identify loose parts in steam generators; (3) evaluation of steam generator retainer bar design for vibration impacts; (4) evaluation of and control of the Unit 3 divider plate repair; (5) Unit 3 steam generator shipping requirements; (6) lack of tube bundle support for steam generators during shipment; (7) evaluation and disposition of accelerometer data used to measure unusual movement of steam generator shipping packages; (8) review of the process used by the NRC to approve the plant's steam generator replacement; (9) control of manufacturing differences; and (10) adequacy of Mitsubishi Heavy Industries' computer simulation modeling.



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# Next Steps Follow up on Augmented Inspection Team's additional requests Implement our corrective actions Develop additional information as stated in Confirmatory Action Letter Continue work to develop intermediate and long term solutions Will require extensive analysis, mock-ups and testing

SOUTHERN CALIFORNIA EDIS

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# EXHIBIT 22

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From:	Ronald Litzinger/SCE/EIX [Ron.Litzinger@sce.com]	
то:	Peevey Michael R. [michael.peevey@cpuc.ca.gov]; Ronald Litzinger/SCE/EIX [Ron.Litzinger@sce.com]	
Subject:	bject: Updated: Meeting with Ted Craver, Ron Litzinger, and Bob Adler (Edison)	
Location:	LA Office	
Start:	7/30/2012 9:00:00 PM	
End:	7/30/2012 10:00:00 PM	
Show Time A	As: Busy	

Recurrence: (none)

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# EXHIBIT 23

#### Public Utilities Commission of the State of California

Public Agenda 3298 Thursday, August 2, 2012 9:00 a.m. San Francisco, California

Commissioners

Michael R. Peevey, President Mark J. Ferron Michel Peter Florio Catherine J.K. Sandoval Timothy Alan Simon

For each agenda item, a summary of the proposed action is included; the Commission's decision may, however, differ from that proposed.

Website: http://www.cpuc.ca.gov

#### Scheduled Commission Meetings 505 Van Ness Avenue, San Francisco

Ratesetting Deliberative Meeting*	Commission Meeting
Room 5305	Auditorium
(1:30 p.m.)	(9:00 a.m.)
Closed to the Public	Open to the Public
Monday, August 20, 2012 (San	Thursday, August 02, 2012 (San
Francisco)	Francisco)
Monday, September 10, 2012 (San	Thursday, August 23, 2012 (San
Francisco)	Francisco)
Monday, September 24, 2012 (San	Thursday, September 13, 2012 (San
Francisco)	Francisco)
Monday, October 08, 2012 (San	Thursday, September 27, 2012 (San
Francisco)	Francisco)
Monday, October 22, 2012 (San	Thursday, October 11, 2012 (San
Francisco)	Francisco)

\*Ratesetting Deliberative Meeting dates are reserved as noted but will be held only if there are ratesetting matters to be considered and a Commissioner has requested that a Ratesetting Deliberative Meeting be held.

Matters of Public Interest

For the convenience of the public and media representatives, items of widespread public interest will be taken up at the beginning of the meeting.

For further information contact the Public Advisor (415) 703-2074 E-mail: public.advisor@cpuc.ca.gov



This location is accessible to people with disabilities. If specialized accommodations for the disabled are needed, e.g. sign language interpreters, please call the Public Advisor at (415) 703-2074 or TTY# (415) 703-5282 or toll free # 1-866-836-7825 three business days in advance of the meeting.

Public Agenda 3298

Thursday, August 2, 2012

Consent Agenda - Orders and Resolutions (continued)

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New Order Instituting Investigation



**5** [11386]

#### I.

Order Instituting Investigation on the Commission's Own Motion into the Rates, Operations, Practices, Services and Facilities of Southern California Edison Company and San Diego Gas & Electric Company Associated with the San Onofre Nuclear Generating Station Units 2 and 3.

#### **PROPOSED OUTCOME:**

Opens this investigation to obtain information on the recent outages at the San Onofre Nuclear Generating Station Units 2 and 3, and the resulting effect on the provision of electric service at just and reasonable rates.

We may issue orders based on this investigation to address ratemaking and other matters under our jurisdiction.

#### **ESTIMATED COST:**

Unknown.

(Comr Florio)

http://docs.cpuc.ca.gov/Cyberdocs/AgendaDoc.asp?DOC\_ID=584030 Agenda 3296, Item 30 6/21/2012 (Peevey)

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The following items are currently being held or withdrawn. The list is subject to changes and items may be added or deleted at any time at the discretion of the Commission. The Commission has the discretion to take action on any items at the Commission Meeting.

8/1/12 1:52 PM Final

# AGENDA CHANGES August 2, 2012 Agenda No. 3298

]	ITEM NC	): HELD TO:	HELD BY:	REASON:
	2	8/23/12	Ferron	Further Review
	3	9/13/12	Staff	
	4	8/23/12	Staff	
	≥ 5	8/23/12	Florio	Further Review
	7.	8/23/12	Staff	•
	8	8/23/12	Florio	Further Review
	20	8/23/12	Simon	Further Review
	34	Discuss and Hold to 8/23/12	Simon	Further Review
	35	Take up with Consent Agenda	a	
	36	8/23/12		311(e) Requirement
	36a	8/23/12		311(e) Requirement
	37	8/23/12	Simon	Further Review
	38	8/23/12	Simon	Further Review
	39	8/23/12	Staff	
	40	Take up with Consent Agenda	a	
	41	Take up with Consent Agenda	a	
	42	Take up with Consent Agenda	a	
	43	Take up with Consent Agenda	a	
	44	8/23/12	Staff	
	45	8/23/12	Staff	
	46	Take up with Consent Agenda	a	
	47	Take up with Consent Agenda	a	
	48	8/23/12	Sandoval	Further Review
	49	Take up with Consent Agenda	a	
	50	Take up with Consent Agenda	a	

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# EXHIBIT 24



# **California Public Utilities Commission**

505 Van Ness Ave., San Francisco

PRESS RELEASE

FOR IMMEDIATE RELEASE Media Contact: Terrie Prosper, 415.703.1366, <u>news@cpuc.ca.gov</u>

# CPUC OPENS FORMAL INVESTIGATION INTO SAN ONOFRE OUTAGES

SAN FRANCISCO, October 25, 2012 - The California Public Utilities Commission (CPUC) today opened a formal investigation into the extended outages of Units 2 and 3 at the San Onofre Nuclear Generating Station (SONGS). The investigation will determine whether to remove all costs related to SONGS from the rates of Southern California Edison (SCE) and San Diego Gas and Electric (SDG&E) going forward, and whether to refund SONGS-related costs already collected in rates back to January 1, 2012.

The investigation will consider the causes of the outages, the utilities' responses, the future of the SONGS units, and the resulting effects on the provision of safe and reliable electric service at just and reasonable rates, including:

- Whether or not rate adjustments should be made; if so, when they should start and the amount;
- The reasonableness of the actions and expenditures of SCE and SDG&E with respect to SONGS steam generator replacements and subsequent activities;
- The reasonableness of the actions and expenditures of SCE and SDG&E in securing energy, capacity, and other related services to replace the output of SONGS during the outage;
- The cost-effectiveness of various options for repairing or replacing one or both units of SONGS going forward;
- Any additional ratemaking issues associated with the above, including the availability of insurance or warranty coverage for any of the costs related to the SONGS outage; and,
- The reasonableness and necessity of each SONGS-related operation and maintenance expense, and capital expenditure made, on and after January 1, 2012, reviewed within the context of the facts and circumstances of the extended outages of Units 2 and 3.

The investigation provides a forum to consider evidence and argument on these issues. Evidence taken in the proceeding will be the basis for findings, conclusions, and CPUC orders.



"The CPUC realizes the importance of the San Onofre nuclear plant to the state of California and the consequences of the problems with the plant for ratepayers and for all affected," said CPUC President Michael R. Peevey. "This investigation will allow us to address issues related to the outages as part of our responsibility to keep the lights on and keep rates just and reasonable. We will look very critically at the utilities' financial responsibility for the prolonged outage and who should bear those costs."

"I welcome this investigation to consider evidence and arguments regarding the SONGS outages," said Commissioner Timothy Alan Simon. "We look forward to working with the Nuclear Regulatory Commission and other governing bodies to ensure safe, reliable service and to protect ratepayers."

Added Commissioner Mike Florio, "The order we issue today preserves and consolidates all of the cost and near-term planning issues related to the SONGS outages for future review in this new proceeding. Issues of nuclear safety are within the exclusive jurisdiction of the federal Nuclear Regulatory Commission and cannot be addressed at the state level."

Said Commissioner Catherine J.K. Sandoval, "Safety is our first responsibility. We want to ensure that the operation of SONGS and the plans for energy resources in Southern California, our state's most populous area, are consistent with the duty of the CPUC and the duty of the utilities we regulate to provide safe, reliable service at just and reasonable rates. It is in the public interest to initiate and carry out this investigation into the facts and circumstances of the SONGS outages and carefully consider appropriate transmission, generation, and demand response strategies. This proceeding provides the appropriate platform within our statutory authority to address cost recovery, rates, and the role of SONGS in the Southern California energy system."

"We will investigate the causes of the outages, the response of the operator, and the future of the plant thoroughly and carefully," said Commissioner Mark J. Ferron. "This includes reviewing the reasonableness of the operator's costs incurred for operations, repairs, and replacement power since the time of the outage, and a consideration of whether or not there should be an adjustment to rates to ensure that ratepayers are not paying for a non-useful asset."

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A Pre-hearing Conference will be set in the coming weeks to establish the schedule for the proceeding.

The proposal voted on is available at

http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M030/K513/30513811.PDF.

For more information on the CPUC, please visit <u>www.cpuc.ca.gov</u>.

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# EXHIBIT 25

### COM/MF1/sbf

#### Date of Issuance 11/1/2012

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

Order Instituting Investigation on the Commission's Own Motion into the Rates, Operations, Practices, Services and Facilities of Southern California Edison Company and San Diego Gas and Electric Company Associated with the San Onofre Nuclear Generating Station Units 2 and 3.

FILED PUBLIC UTILITIES COMMISSION OCTOBER 25, 2012 IRVINE, CA INVESTIGATION 12-10-013

### ORDER INSTITUTING INVESTIGATION REGARDING SAN ONOFRE NUCLEAR GENERATING STATION UNITS 2 AND 3

#### **Table of Contents**

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Attachment A: July 18, 2012 San Onofre Nuclear Generating Station – NRC Augmented Inspection Team Report

Attachment B: Adopted Schedule

Attachment C: Service List

## ORDER INSTITUTING INVESTIGATION REGARDING SAN ONOFRE NUCLEAR GENERATING STATION UNITS 2 AND 3

#### 1. Introduction

We open this investigation to consolidate and consider issues raised by the extended outages of Units 2 and 3 at the San Onofre Nuclear Generating Station (SONGS). This includes determining whether to order the immediate removal effective today of all costs related to SONGS from the rates of Southern California Edison Company (SCE) and San Diego Gas & Electric Company (SDG&E), with placement of those costs in a deferred debit account pending the return of one or both facilities to useful service or other possible action. It also includes considering appropriate rate treatment for all SONGS-related costs in other proceedings.

This investigation will consider the causes of the outages, the utilities' responses, the future of the SONGS units, and the resulting effects on the provision of safe and reliable electric service at just and reasonable rates. Due to the size, location, ownership structure, and unique nuclear licensing requirements of SONGS, the unexpected outages raise particularly complex issues. These issues come before us in many proceedings. This investigation will consider these issues in a consolidated manner that is efficient for the utilities, parties and the Commission. To facilitate that objective, all costs incurred on and after January 1, 2012 that are associated with SONGS shall be tracked in a memorandum account. SCE and SDG&E shall each, within 30 days of today, file with the Energy Division Director and serve on the service list a Tier 1 advice letter to establish that account, including specified subaccounts.

Appeals to categorization shall be filed and served within 10 days. Comments on this investigation shall be filed and served within 30 days. SCE

- 2 -

and SDG&E shall each, within 45 days of today, serve proposed testimony with its recommended rate adjustments.

#### 2. Background

The San Onofre Nuclear Generation Stations (SONGS) Units 2 and 3 are located adjacent to Camp Pendleton near San Clemente California. They are jointly owned by Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), and the City of Riverside (with shares of 78%, 20% and 2% respectively).<sup>1</sup> These units generate approximately 2,340 megawatts (MW) of baseload power, and they play a critical role in the reliability of the California electricity grid. SCE is the operator of these units.

Unit 2 steam generators were replaced in January 2010. Unit 3 steam generators were replaced in January 2011. Both units have been offline since January 2012.

Unit 3 was taken offline on January 31, 2012, after station operators detected a leak in a steam generator tube. The Nuclear Regulatory Commission (NRC) was formally notified of the Unit 3 steam generator leak on the same day. Unit 2 was taken out of service on January 10, 2012 for a scheduled outage, which was expected to end March 5, 2012. However, on February 6, 2012, the first inspection of Unit 2 steam generators installed in 2010 showed accelerated wear requiring some tubes to be taken out of service.

On March 19, 2012, the NRC dispatched an Augmented Inspection Team to gather facts regarding the SONGS outages. On July 18, 2012, the NRC issued its report: "San Onofre Nuclear Generating Station – NRC Augmented Inspected

<sup>&</sup>lt;sup>1</sup> The City of Riverside is a municipal utility not under the California Public Utilities Commission's (Commission's) jurisdiction.

Team Report."<sup>2</sup> The report provides background information that will be useful for this investigation, and a copy is attached. (Attachment A.) Among other things, the report identifies design flaws in the SONGS replacement steam generators.

On August 28, 2012, SCE announced plans to remove the nuclear fuel from the SONGS Unit 3 reactor. SCE intends to place the unit in a longer term safe shutdown mode.

Both units have now been out of service since January 2012. This presents many questions regarding the future operation of the units, along with the provision of safe and reasonable service at just and reasonable rates.

#### 3. Commission Jurisdiction

SCE and SDG&E are public utility companies under the Commission's jurisdiction. The Commission regulates their rates, operations, practices, programs, and services, plus the reliability, safety, and adequacy of facilities, pursuant to Pub. Util. Code Sections 451, 454, 701, and other statutes.<sup>3</sup> The Commission executes these responsibilities in a range of different proceedings. These include applications, investigations, rulemakings, and other forums as appropriate. Applications involve a range of matters including general rate cases (GRC), energy resource recovery account (ERRA) proceedings, special cost recovery proceedings (such as (a) the steam generator replacement program and (b) seismic safety programs), and others at the request of utilities or when ordered by the Commission.

<sup>&</sup>lt;sup>2</sup> <u>http://www.nrc.gov/info-finder/reactor/songs/ML12188A748.pdf</u>.

<sup>&</sup>lt;sup>3</sup> All statutory citations are to the Public Utilities Code unless noted otherwise.

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#### I.12-10-013 COM/MF1/sbf

Under Section 451, the Commission is responsible for ensuring safe and

reliable service at just and reasonable rates:

All charges demanded or received by any public utility...shall be just and reasonable.

Every public utility shall 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.

Sections 455.5(a) and (f) address rate adjustments to eliminate the value of,

and expenses related to, major facilities when they are out of service:

- (a) In establishing rates for any electrical, gas, heat, or water corporation, the Commission may eliminate consideration of the value of any portion of any electric, gas, heat, or water generation or production facility which, after having been placed in service, remains out of service for nine or more consecutive months, and may disallow any expenses related to that facility. Upon eliminating consideration of any portion of a facility or disallowing any expenses related thereto under this section, the Commission shall reduce the rates of the corporation accordingly and shall, for accounting purposes, record the value of that portion of the facility in a deferred debit account and shall treat this amount similar to the treatment of the allowance for funds used during construction. When that portion of the facility is returned to useful service...the corporation may apply to the commission for the inclusion of its value and expenses related to its operation for purposes of the establishment of the corporation's rates.
- (f) For purposes of this section, an electric, gas, heat, or water generation or production facility includes only such a

facility that the commission determines to be a major facility of the corporation...<sup>4</sup>

Section 455.5(b) requires that utilities keep the Commission informed

regarding outages of such facilities:

(b) Every electrical, gas, heat, and water corporation shall periodically, as required by the commission, report to the commission on the status of any portion of any electric, gas, heat, or water generation or production facility which is out of service and shall immediately notify the commission when any portion of the facility has been out of service for nine consecutive months.

Section 455.5(c) requires that the Commission, upon notification by the

utility, take specific action and make rates associated with the facility subject to

refund, in coordination with other proceedings:

(c) Within 45 days of receiving the notification specified in subdivision (b), the commission shall institute an investigation to determine whether to reduce the rates of the corporation to reflect the portion of the electric, gas, heat, or water generation or production facility which is out of service. For purposes of this subdivision, out-of-service periods shall not include planned outages of predetermined duration scheduled in advance. The commission's order shall require that rates associated with that facility are subject to refund from the date the order instituting the investigation was issued. The commission

<sup>&</sup>lt;sup>4</sup> The Commission has determined major facilities to be: "For electric utilities, a 'major generation or production facility' for purposes of the requirements of Pub. Util. Code § 455.5 includes any generation plant or facility with nameplate capacity of 50 megawatts (MW) or more, or that represents at least one percent (1%) of an electric utility's retained generation system capacity, whichever is smaller. System capacity includes the utility's ownership share in jointly-owned and out-of-state facilities." (Decision (D.) 07-09-021 at 8.)

shall consolidate the hearing on the investigation with the next general rate proceeding instituted for the corporation.

Section 455.5(d) provides, upon a facility's return to useful service, that a

utility may apply for the inclusion of its value and associated operating expenses in rates:

(d) Upon being informed by the corporation that any portion of its electric, gas, heat, or water generation or production facility which was eliminated from consideration by the commission in establishing rates for being out of service for nine or more consecutive months pursuant to subdivision (a) or (b), has been restored to service and has achieved at least 100 continuous hours of operation, the commission may again consider that portion of the facility for purposes of establishing rates, and may adjust the corporation's rates accordingly without a hearing, except that a hearing is required on whether to include, for purposes of establishing rates, any additional plant value added.

#### Section 701 provides that:

The Commission may supervise and regulate every public utility in the State and may do all things, whether specifically designated in this part or in addition thereto, which are necessary and convenient in the exercise of such power and jurisdiction.

#### 4. Discussion

SONGS Units 2 and 3 have been out of service since early 2012. Consistent with § 455.5(b), we expect to be notified soon by SCE and SDG&E that these units have experienced an unplanned outage of nine consecutive months.

Utility rates currently include recovery for SONGS costs of over \$800 million in fixed costs (rate base), for which ratepayers provide a return to shareholders, and over \$300 million in annual variable costs (operation and maintenance). They include costs related to the steam generator replacement program and seismic programs. The outages may result in more costs, including

but not limited to the cost of investigations, studies, repairs, replacement power, litigation, and appearing in regulatory proceedings (before the NRC and this Commission).

Design flaws identified by NRC may have contributed to the accelerated wear and tear of the steam generators. If so, there may be questions about the degree to which the manufacturer may be responsible for expenses related to the shutdown. There may or may not be other sources of funds for some or all of the resulting costs (e.g., warranties, insurance, federal assistance). There are issues about how much cost, if any, should be paid by ratepayers and company owners. Therefore, it is in the public interest to undertake an investigation into the facts and circumstances of the SONGS outages for the purpose of exercising our statutory authority over rate recovery of associated utility costs, and to ensure safe and reliable service at just and reasonable rates.

Several rate-related proceedings have recently been decided or are currently pending before the Commission. These include GRC, ERRA and other proceedings such as but not limited to (these proceedings are open unless noted otherwise, and in some cases are joint proceedings):

1. SCE

- a. Application (A.) 10-11-015 (2012 test year GRC)
- b. A.11-04-001 (2010 ERRA compliance)
- c. A.12-04-001 (2011 ERRA compliance)
- d. A.11-08-002 (2012 ERRA forecast; D.12-07-007; closed)
- e. A.12-08-001 (2013 ERRA forecast)

- f. A.11-04-006 (Seismic Program Costs; D.12-05-004; closed)<sup>5</sup>
- g. A.04-02-026 (Steam Generator Replacement; D.05-12-040; D.11-05-035; closed)
- h. A.09-04-009 (Joint application for nuclear decommissioning cost recovery)
- 2. SDG&E
  - a. A.10-12-005 (2012 test year 2012 GRC)
  - b. A.11-06-003 (2010 ERRA compliance)
  - c. A.11-09-022 (2012 ERRA forecast; D.12-07-006; closed)
  - d. A.12-04-003 (ERRA trigger; D.12-08-007; closed)
  - e. A.12-10-002 (2013 ERRA forecast)
  - f. A.11-05-011 (Seismic Program Costs; D.12-05-004; closed)<sup>6</sup>

There is also the potential for review of some or all of the \$671 million authorized for the steam generator replacement program (SGRP).<sup>7</sup> In particular, we authorized up to \$671 million with the intention not to conduct an after-the-fact reasonableness review if the costs did not exceed \$671 million. However, we also ordered:

<sup>&</sup>lt;sup>5</sup> Costs up to \$50.1 million are entered into the Base Revenue Requirement Balancing Account, recoverable in a subsequent ERRA compliance filing. Costs in excess of \$64.0 million may be recorded, but require reopening the proceeding. Costs for Energy Division Director Review may be entered into an Energy Division Director's Review Memorandum Account, recoverable in a subsequent ERRA compliance filing.

<sup>&</sup>lt;sup>6</sup> Costs up to \$12.8 million are entered into one of two balancing accounts. Costs in excess of \$12.8 may be recorded in a SONGS Seismic Research Memorandum Account (SRMA), with recovery subject to review for reasonableness and prudence. Costs for Energy Division Director Review may be entered into the SONGS SRMA.

<sup>&</sup>lt;sup>7</sup> The original authorization of \$680 million (D.05-12-040) was reduced to \$671 million. (D.11-05-035.)

If the SGRP cost exceeds [\$671 million], or the Commission later finds that it has reason to believe the costs may be unreasonable regardless of the amount, the entire SRGP cost may be subject to reasonableness review." (D.05-12-040, Ordering Paragraph 5.)

It is important that all relevant costs be properly treated. To do this, all SONGS costs and expenditures, including SRGP, should be tracked in a memorandum account for review by the Commission. This is the case whether or not the costs have been previously approved. Thus, pending conclusion of this investigation, we direct SCE and SDG&E to track all costs associated with SONGS Units 2 and 3 (and all related costs as explained below) that were or are incurred on or after January 1, 2012, in a memorandum account and, to the extent included in rates, collect these costs subject to refund.

SCE and SDG&E should each establish a memorandum account for this purpose, called the SONGS Outage Memorandum Account (SONGS OMA). SONGS OMA should contain subaccounts that separately identify:

- a. existing SONGS fixed costs (e.g., capital costs in rate base);
- b. revenue requirements for SONGS ratebase costs (e.g., depreciation, return, taxes);
- c. existing SONGS variable costs (e.g., fuel, operation, maintenance);
- d. existing SONGS seismic safety program costs;
- e. SGRP costs;
- f. other existing SONGS costs;
- g. outage investigation costs;
- h. replacement generation costs;
- i. safety-related program costs implemented pursuant to NRC findings or orders;

- j. the cost of other energy products or services to provide reliable electric service during the period of the outage (including Demand Response programs);
- k. the cost of other transmission upgrades or other system improvements to provide reliable electric service during the period of the outage (including substation or line related work);
- 1. other repair costs (separately identified as fixed and variable);
- m. other routine operational costs;
- n. regulatory costs;
- o. litigation costs; and
- p. any other costs related to SONGS.

The subaccounts should include reasonable and appropriate subdivisions as necessary to further identify costs and cost categories. The memorandum account should record all costs incurred beginning January 1, 2012 and thereafter with the exception of the SGRP subaccount. The SGRP subaccount should track all SGRP costs. SCE and SDG&E should file Tier 1 Advice Letters establishing the memorandum accounts within 30 days of this order.<sup>8</sup>

This formal proceeding allows the Commission to exercise its regulatory oversight, responsibilities and duties in the best interests of ratepayers and the public. We will consider information and proposals by SCE, SDG&E,

<sup>&</sup>lt;sup>8</sup> The Energy Division Director may specify more or other subaccounts (or subdivisions of subaccounts). The Director may also consolidate or eliminate subaccounts or subdivisions. We expect each utility to propose clear, accurate and correct accounts and accounting treatment to accomplish the required purpose. Before filing the Tier 1 advice letter, each utility should meet and confer with Commission staff to explain proposals and address issues or concerns, if any. We expect each utility and Energy Division to use their best efforts to resolve all necessary accounting matters for efficient and timely disposition of the Tier 1 advice letter.

Commission staff and others regarding the rates, operations, practices, programs, services, and facilities of SCE and SDG&E as they relate to the outages of SONGS Unit 2 and 3, and as are necessary to promote the safety, health, comfort, and convenience of their patrons, employees, and the public. We will also do all things that are necessary and convenient to supervise and regulate matters under our jurisdiction in the public interest.

The investigation provides a forum to consider evidence and argument on the issues. It may result in directives to SCE and SDG&E that promote just and reasonable rates, services, and facilities in furtherance of the public interest. The Commission may enter orders on matters for which one or the other respondent may not be the proponent. SCE, SDG&E and the public are placed on notice that the evidence taken in this proceeding may be the basis for findings, conclusions, and Commission orders, and all SONGS related costs collected in rates from January 1, 2012 forward are subject to refund.

Accordingly, we open this Order Instituting Investigation (OII) pursuant, but not limited, to Pub. Util. Code §§ 451, 455.5 and 701, along with Rule 5.1 of the Commission's Rules of Practice and Procedure (Rules). In addition to or as part of the memorandum account specified above, we direct the following ratemaking treatment in order to preserve the information, consolidate the data in one place, and provide a full opportunity to consider all reasonable options:

- SCE and SDG&E shall each track all costs related to SONGS incurred on or after January 1, 2012 in a subaccount of SONGS OMA for subsequent review in this proceeding; this involves all SONGS-related ERRA entries including replacement energy and capacity resulting from the SONGS outages;
- 2. SCE and SDG&E shall each track all costs related to Huntington Beach and Demand Response specifically

implemented to address loss of SONGS Units 2 and 3 capacity into a subaccount of SONGS OMA.

3. SCE and SDG&E shall each identify and track any and all excess energy sales foregone (actual or estimated) by SCE and SDG&E due to the loss of SONGS Units 2 and 3; the amount of the energy and the foregone revenue shall be reported to the Commission in a separate document submitted each time the SONGS OMA is reported to the Commission, in the monthly report noted below, or as directed by the Energy Division Director.

In addition, we order the following:

- 1. SCE and SDG&E shall each file and serve, no less than seven 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 major capital expenditures 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).
- 2. SCE and SDG&E shall each track all expenditures in excess of those removed pursuant to § 455.5 in a separate subaccount of SONGS OMA. The recovery of amounts booked in this memorandum account shall be requested through a formal application filed by each utility with the Commission; and
- 3. SCE and SDG&E shall each file a monthly status report with the Commission's Energy Division with service on the service list. The monthly report shall include an operational update for the units, description of any NRC actions, estimated replacement energy and capacity costs, estimated other operational expenses, estimated foregone revenues due to lost sales of excess energy, and any other information either utility believes is relevant that may impact the Commission's consideration of safe and reliable service at just and reasonable rates, including any additional information directed by the Energy Division Director.

All costs tracked in the SONGS OMA are subject to audit by the Commission.

The Commission recognizes that SONGS Units 2 and 3 may be out of service for some time, and may or may not return to full service. This situation requires that the Commission consider long term options regarding each utility's provision of safe and reliable electric service without SONGS. These long term resource issues are most appropriately considered in the Commission's Long Term Procurement Planning (LTPP) proceeding (Rulemaking (R.) 12-03-014). While issues regarding long term planning without SONGS will be addressed in the LTPP, issues regarding short and medium term service and reliability should be part of this proceeding. Issues regarding costs for replacement power or expanded demand side management programs in the absence of SONGS should also be discussed as part of this proceeding.

#### 5. Preliminary Scoping Memo

Pursuant to Rule 7.1(c), we include a preliminary Scoping Memo to provide an initial determination of this proceeding's scope, schedule, need for hearing, and other procedural matters. The determination of category may be appealed as described below.

#### 5.1. Issues

The general scope of this OII is to review the effect on safe and reliable service at just and reasonable rates on and after January 1, 2012 of the outages at SONGS Units 2 and 3. The issues include:

1. Whether or not rate adjustments should be made; if so, when they should start, the correct amount, and the correct accounting of these adjustments.

- 2. The reasonableness and prudency of each utility action and expenditure with respect to the steam generator replacement program and subsequent activities related thereto.
- 3. The reasonableness and prudency of each utility action and expenditures in securing energy, capacity and other related services to replace the output of SONGS during the outage.
- 4. The cost-effectiveness of various options for repairing or replacing one or both units of SONGS.
- 5. Any additional ratemaking issues associated with the above, including the availability of warranty coverage or insurance for any costs related to the SONGS outage.
- 6. The reasonableness and necessity of each SONGS-related operation and maintenance expense, and capital expenditure made, on and after January 1, 2012 reviewed within the context of the facts and circumstances of the extended outages of Units 2 and 3.

#### 5.2. Category

We determine that the category of this proceeding is ratesetting. (Rules 1.3(e) and 7.1(c).) This is consistent with the preliminary issues focusing on the economic consequences of the outages, repairs, source of replacement electricity, cost of replacement electricity, and cost responsibility. This determination may be appealed under the procedures stated in Rule 7.6.

#### 5.3. Need for Hearing

We expect disputed issues of material fact over which parties will seek to cross-examine others. Therefore, we preliminarily determine that a hearing will be needed. (Rule 7.1(c).)

#### 5.4. Schedule

Appeals of the categorization of this proceeding, if any, are to be filed and served within 10 days of the date this OII was issued. (Rule 7.6(a).) As required by our rules, an appeal shall state why the designated category is wrong as a

matter of law or policy, and shall be served on the Commission's General Counsel, Chief Administrative Law Judge, the President of the Commission, and the service list used for this OII. Responses to an appeal shall be filed within five days of the date an appeal is filed, and shall be served on appellant and all persons on the service list for this OII. (Rule 7.6(b).)

Responses to this OII may also be filed and served, and shall be filed and served within 30 days of the date this OII is issued. (Rule 5.2.) Responses shall state objections, if any, to the preliminary Scoping Memo regarding the issues, need for hearing, and schedule. Replies to responses may be submitted, and must be filed and served within seven days after the date of responses.

The assigned Commissioner shall set a prehearing conference (PHC) for as soon as practicable after responses to this order are filed. (Rule 7.2(a).) The assigned Commissioner and/or the assigned Administrative Law Judge (ALJ) may direct that the two respondent utilities provide background information before the PHC so all participants in the investigation have the same essential starting data (e.g., factual overview of SONGS 2 and 3; dates and causes of recent outages; status of investigation; current engineering and construction schedule to address outages; costs incurred to date with respect to the outages).

The notice setting the PHC may set a date for the filing and service of PHC statements. PHC statements, if any, should state with specificity the party's recommendations for anything necessary to complete the assigned Commissioner's Scoping Memo, plus anything else necessary to reasonably proceed with this investigation. For example, PHC statements should, to the extent feasible, include the party's recommended exact proposed wording for issues, specific dates for the schedule, and necessary detail for hearing (to the extent known at that time). Moreover, to the extent it is possible for parties to

agree on issues, schedule and other matters for the Scoping Memo, parties should employ their best efforts to prepare a joint PHC Statement.

We expect respondents and parties will advise the Commission at the PHC regarding the most efficient way to proceed. We leave the details of process and schedule to the assigned Commissioner or ALJ's.

The first matter, however, is whether or not, pursuant to § 455.5, to reduce rates and by how much. We direct SCE and SDG&E to produce their proposals within 45 days of the date of this order. These proposals should be in the form of proposed testimony. Each proposal should clearly show the amount of SONGS costs in current rates, the amount to be removed, the effective date, and any other information necessary for the Commission to fully implement a just and reasonable rate adjustment pursuant to § 455.5.

The adopted schedule is summarized in Attachment B. The adopted schedule may be changed by the assigned Commissioner or ALJ as necessary to promote efficient and equitable development of the record in this proceeding. It is anticipated that this proceeding shall be resolved within 18 months of the date the Scoping Memo is issued. (*See* § 1701.5.)

#### 6. Service and Official Service List

A service list has been established for this proceeding, a copy of which is attached (*see* Attachment C) and posted on the Commission's website. The service list is composed of all persons on the official service lists for:

- A.11-04-006 (SCE SONGS seismic safety program costs)
- A.10-11-015 (SCE GRC)
- A.10-12-005 (SDG&E GRC)

- A.09-04-009 (Joint application of SCE and SDG&E for nuclear decommissioning cost recovery)<sup>9</sup>
- R.12-03-014 (Long-Term Procurement Rulemaking)
- R.11-10-023 (Resource Adequacy Rulemaking)
- A.11-04-001 (SCE 2010 ERRA compliance)
- A.12-04-001 (SCE 2011 ERRA compliance)
- A.11-08-002 (SCE 012 ERRA forecast)
- A.12-08-001 (SCE 2013 ERRA forecast)
- A.11-06-003 (SDG&E 2010 ERRA compliance)
- A.11-09-022 (SDG&E 2012 ERRA forecast)
- A.12-04-003 (SDG&E ERRA trigger)
- A.12-10-002 (SDG&E 2013 ERRA forecast)
- A.11-05-011 (SDG&E Seismic Program Costs)

We also serve this order on the City of Riverside.<sup>10</sup>

At the present time, all persons shall be entered on the official service list for this proceeding as "information only," with the exception of SCE, SDG&E, and those in state service. SCE and SDG&E are respondents, and are entered in the party category. State service participants from prior lists shall remain in the state service category.

Persons in the information only category may seek party status by making an oral motion at the PHC or hearing, by filing a written motion, or as otherwise

<sup>&</sup>lt;sup>9</sup> Consolidated with A.09-04-007 (Pacific Gas and Electric Company nuclear decommissioning cost recovery).

<sup>&</sup>lt;sup>10</sup> We include the City of Riverside in the information only category. The City may determine whether or not it wishes to monitor this investigation (by continuing in the information only category), participate in this investigation (by filing a motion for party status), or be removed from the information only portion of the service list.

directed by the ALJ. (*See* Rule 1.4(a)(3) and (4).) Commission practice is to allow only one person to formally represent each party. (*See* Commission's form for "Addition/Change to Service List."<sup>11</sup>) To assist with efficient execution of this practice, motions for party status should clearly identify the lead person to be placed in party status, plus the names with other necessary information (e.g., e-mail addresses) for anyone else to be placed into (or remain in) information only.<sup>12</sup>

In addition, any person not on the official service list contained in Attachment C may request addition to the category of state service or information only by making that request to the Process Office. (*See* Rule 1.9(f).) The request should be sent to the Commission's Process Office by e-mail (<u>Process Office@cpuc.ca.gov</u>) or letter (Process Office, California Public Utilities Commission, 505 Van Ness Avenue, San Francisco, CA 94102). The request must include an e-mail address to receive service of electronically served documents. (*See* Rule 1.10(b).) It is the responsibility of each person to notify the Process Office of his or her current postal service mailing address, current electronic-mail address, and any changes or corrections. (Rule 1.9(e).) A person may ask to be removed from the state service or information only portions of the service list at any time by request to the Process Office.

All pleadings in this proceeding shall be served on the official service list, including all those in the information only category (as periodically updated on

<sup>&</sup>lt;sup>11</sup> See <u>http://docs.cpuc.ca.gov/published/service\_lists/sl\_index.htm</u>.

<sup>&</sup>lt;sup>12</sup> This is also true for state service. That is, for example, one person representing the Commission's Division of Ratepayer Advocates may be identified for entry into the party category, with others listed in the state service category.
the Commission's website). The Commission encourages electronic filing and e-mail service in this investigation. Information about electronic filing may be found at <u>http://www.cpuc.ca.gov/PUC/efiling</u>. E-mail service is governed by Rule 1.10. The electronic copy should be in Microsoft Word or Excel formats to the extent possible. E-mail service of documents must occur no later than 5:00 p.m. on the date that service is scheduled to occur. Those persons using e-mail service must also serve a paper copy on the ALJ. (*See* Rule 1.10(e).) Questions about the Commission's filing and service procedures should be directed to the Commission's Docket Office by telephone at (415) 703-2121, by e-mail at

<u>efile-help@cpuc.ca.gov</u>, or by letter to Docket Office, California Public Utilities Commission, 505 Van Ness Avenue, San Francisco, CA 94102.

### 7. Public Advisor

Any person or entity interested in participating in this investigation who is unfamiliar with the Commission's procedures should contact the Commission's Public Advisor in San Francisco by telephone at (415) 703-2074 or (866) 849-8390, or by e-mail at <u>public.advisor@cpuc.ca.gov</u>. The Public Advisor's office in Los Angeles may be reached by telephone at (213) 576-7055 or (866) 849-8391, or by e-mail at <u>public.advisor.la@cpuc.ca.gov</u>. The TTY number is (866) 836-7825. Written communication may be sent to Public Advisor, California Public Utilities Commission, 505 Van Ness Avenue, San Francisco, CA 94102.

### 8. Intervenor Compensation

Any party that expects to claim intervenor compensation for its participation in this investigation shall file its notice of intent to claim intervenor compensation no later than 30 days after the PHC. (*See* Rule 17.1.) Parties are strongly encouraged to use the standardized form attached to the Intervenor

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Compensation Program Guide, which may be found at:

<u>http://www.cpuc.ca.gov/PUC/IntervenorCompGuide/index3.htm</u>. Questions may be directed to the Commission's Public Advisor.

### 9. Ex Parte Communications

Communications with decision makers and advisors in this rulemaking are governed by Article 8 of the Rules of Practice and Procedure. (Rule 8.1, *et seq.*) Specifically, Rule 8.3(c) states that *ex parte* communications in ratesetting proceedings are subject to the restrictions stated in Rule 8.3, and the reporting requirements set forth in Rule 8.4.

### IT IS ORDERED that:

1. In accordance with Public Utilities Code §§ 451, 455.5 and 701, and Rule 5.1 of the Commission's Rules of Practice and Procedure, the Commission institutes this Order Instituting Investigation. This investigation shall obtain information on the outages at the San Onofre Nuclear Generating Station (SONGS) Units 2 and 3. It shall investigate the causes, each utility's responses, the future of the SONGS units, and the resulting effect on the provision of safe and reliable electric service at just and reasonable rates. The Commission shall determine whether to adjust rates due to the outages and shall issue orders, as necessary and appropriate, based on this investigation to address ratemaking and other matters under our jurisdiction.

2. Southern California Edison Company and San Diego Gas & Electric Company are respondents to this Investigation, and shall be subject to Commission orders in this matter, unless determined otherwise by the Commission.

3. All revenues collected in recovery of costs on and after January 1, 2012 related to San Onofre Generating Station Units 2 and 3 are subject to refund. All Steam Generator Replacement Program costs, and rates collected in recovery of those costs, are subject to reasonableness review and refund.

4. Southern California Edison Company (SCE) and San Diego Gas & Electric Company (SDG&E) shall take the following actions:

- a. SCE and SDG&E shall, after a meet and confer session with Commission staff and within 30 days of the date this order is issued, each file and serve a Tier 1 advice letter to establish a San Onofre Nuclear Generating Station (SONGS) Outage Memorandum Account (OMA). Each utility shall track in SONGS OMA all SONGS costs and expenditures incurred on and after January 1, 2012, and the revenues collected in recovery of those costs; except Steam Generator Replacement Program (SGRP) costs and revenues collected in recovery of those costs, which shall track all SGRP costs from SGRP inception. Each utility shall also track in SONGS OMA all costs, expenditures, and related revenues on and after January 1, 2012 for other costs incurred as a result of the outages (e.g., replacement power, repairs, litigation). SONGS OMA shall contain at least the following subaccounts (subject to adjustment at the direction of the Energy Division Director): existing fixed costs, revenue requirements for SONGS, existing variable costs, existing seismic safety program costs, SGRP costs, other existing costs, outage investigation costs, replacement generation costs, safety-related program costs pursuant to Nuclear Regulatory Commission findings or orders, other product and service costs, cost of transmission upgrades or other system improvements related to the outages, repair costs, other routine operational costs, regulatory costs, litigation costs, other costs.
- b. SCE and SDG&E shall each track costs recorded in the Energy Resource Recovery Account (ERRA) that are

incurred on and after January 1, 2012 in a subaccount of SONGS OMA for subsequent review in this proceeding; this involves all ERRA entries including replacement energy and capacity resulting from the SONGS outages;

- c. SCE and SDG&E shall each track all costs related to Huntington Beach and Demand Response specifically implemented to address loss of SONGS Units 2 and 3 capacity in a subaccount of SONGS OMA.
- d. SCE and SDG&E shall each identify and record any and all excess energy sales foregone (actual or estimated) by SCE and SDG&E due to the loss of SONGS Units 2 and 3; the amount of the energy and the foregone revenue shall be reported to the Commission in a separate document submitted each time the SONGS OMA is reported to the Commission, in a monthly report, or as directed by the Energy Division Director.
- e. 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 major capital expenditures 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).

- f. SCE and SDG&E shall each track all expenditures in excess of those removed pursuant to § 455.5 in a separate subaccount of SONGS OMA. The recovery of amounts booked in this memorandum subaccount shall be requested through a formal application filed by each utility with the Commission; and
- g. SCE and SDG&E shall each file a monthly status report with the Commission's Energy Division, with service on the service list. The monthly report shall include an operational update for the units, description of any Nuclear Regulatory Commission actions, estimated replacement energy and capacity costs, estimated other

operational expenses, estimated foregone revenues due to lost sales of excess energy, and any other relevant information that either utility believes is relevant and which may impact the Commission's consideration of safe and reliable service at just and reasonable rates, including any additional information directed by the Energy Division Director.

h. SCE and SDG&E shall, within 45 days of the date of this order (unless changed by the assigned Commissioner or Administrative Law Judge), each serve proposed testimony. The testimony shall state each utility's proposed rate adjustments, pursuant to Public Utilities Code § 455.5, due to the outages at San Onofre Nuclear Generation Station Units 2 and 3, inclusive of a clear showing of the amount of SONGS costs in current rates, the amount to be removed, the effective date, and any other information necessary for the Commission to make an informed decision to fully implement a just and reasonable rate adjustment pursuant to Pub. Util. Code § 455.5.

5. The preliminarily scope of issues is as stated in the body of this order.

6. The category of this proceeding is ratesetting. This determination may be appealed under the procedures stated in Rule 7.6 of the Commission's Rules of Practice and Procedure.

7. It is preliminarily determined that hearing is needed.

8. Unless changed by the assigned Commissioner or Administrative Law Judge, the schedule stated in the body of this order and summarized in Attachment B is adopted. It is the Commission's intent to resolve this proceeding within 18 months of the date the Scoping Memo is issued.

9. The Executive Director shall perform service of this order on each person on the official service list. The official service list for this proceeding (*see* Attachment C) is composed of everyone on the service lists for: Application (A.)

11-04-006, A.10-11-015, A.10-12-005, A.09-04-009, Rulemaking (R.) 12-03-014, R.11-10-023, A.11-04-001, A.12-04-001, A.11-08-002, A.12-08-001, A.11-06-003, A.11-09-022, A.12-04-003, A.12-10-002, and A.11-05-011. The official service list shall also include the City of Riverside. Southern California Edison Company and San Diego Gas & Electric Company, as respondents to this proceeding, are entered into the party category. State service participants from prior service lists are continued in the state service category for this proceeding. All others are included in the information only category for this proceeding. Persons may seek party status by oral motion at the prehearing conference or hearing, by written motion, or as directed by the Administrative Law Judge.

10. A person expecting to file an intervenor compensation claim for participation in this proceeding shall file a notice of intent to claim intervenor compensation no later than 30 days after the date of the prehearing conference, or as otherwise directed by the Administrative Law Judge.

11. *Ex parte* communications in this proceeding are subject to the restrictions and reporting requirements stated in Article 8 of the Commission's Rules of Practice and Procedure (Rule 8.1, *et seq.*).

This order is effective today.

Dated October 25, 2012, at Irvine, California.

MICHAEL R. PEEVEY President TIMOTHY ALAN SIMON MICHEL PETER FLORIO CATHERINE J.K. SANDOVAL MARK J. FERRON Commissioners Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 151 of 191 I.12-10-013 COM/MF1/sbf

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### ATTACHMENT A

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### BEFORE THE PUBLIC UTILITIES COMMISSION OF THE FILED 12-07-12 04:59 PM

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STATE OF CALIFORNIA

Order Instituting Investigation on the Commission's Own Motion into the Rates, Operations, Practices, Services and Facilities of Southern California Edison Company and San Diego Gas and Electric Company Associated with the San Onofre Nuclear Generating Station Units 2 and 3.

Investigation 12-10-013 (Issued November 1, 2012)

### SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) NOTICE OF EX PARTE **COMMUNICATION**

### DOUGLAS K. PORTER WALKER A. MATTHEWS III

Attorneys for SOUTHERN CALIFORNIA EDISON COMPANY

> 2244 Walnut Grove Avenue Post Office Box 800 Rosemead, California 91770 Telephone: (626) 302-6879 (626) 302-3990 Facsimile: E-mail: walker.matthews@sce.com

Dated: December 07, 2012

### BEFORE THE PUBLIC UTILITIES COMMISSION OF THE

### STATE OF CALIFORNIA

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Order Instituting Investigation on the Commission's Own Motion into the Rates, Operations, Practices, Services and Facilities of Southern California Edison Company and San Diego Gas and Electric Company Associated with the San Onofre Nuclear Generating Station Units 2 and 3.

Investigation 12-10-013 (Issued November 1, 2012)

### SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) NOTICE OF EX PARTE COMMUNICATION

Pursuant to Rule 8.3(c)(2) of the Rules of Practice and Procedure of the California Public Utilities Commission (Commission), Southern California Edison (SCE) respectfully submits this notice that an ex parte communication took place on Tuesday, December 4, 2012, between Russell G. Worden, Director, SONGS Strategic Review at Southern California Edison and Administrative Law Judge (ALJ) Melanie Darling. The communication was telephonic, initiated by ALJ Melanie Darling, and Mr. Worden returned her phone call at approximately 11:45 am, with the conversation lasting approximately 15 minutes.

The discussion addressed procedural issues for providing notice for planned public participation hearings for the above-captioned proceeding. Mr. Worden also briefly addressed the following topics: (1) SCE's current work with Mitsubishi Heavy Industries (MHI) the designer and fabricator of the SONGS Replacement Steam Generators (RSGs); (2) the timing of the RSG capital cost filing pursuant to the Commission's decision approving new steam

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generators; and (3) access to SCE documents as well as Nuclear Regulatory Commission documents from the NRC websites. No materials were used during the communication.

Respectfully submitted,

DOUGLAS K. PORTER WALKER A. MATTHEWS III

/s/ Walker A. Matthews III By: Walker A. Matthews III

Attorneys for SOUTHERN CALIFORNIA EDISON COMPANY

> 2244 Walnut Grove Avenue Post Office Box 800 Rosemead, California 91770 Telephone: (626) 302-6879 Facsimile: (626) 302-3990 E-mail: walker.matthews@sce.com

December 07, 2012

### Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 156 of 191



MD2/sbf 12/10/2012

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

Order Instituting Investigation on the Commission's Own Motion into the Rates, Operations, Practices, Services and Facilities of Southern California Edison Company and San Diego Gas and Electric Company Associated with the San Onofre Nuclear Generating Station Units 2 and 3.

Investigation 12-10-013 (Filed October 25, 2012)

### ADMINISTRATIVE LAW JUDGE'S RULING REQUESTING ADDITIONAL TESTIMONY

On October 25, 2012, the Commission initiated this Order Instituting an Investigation (OII) to consolidate and consider issues raised by the extended outages of Units 2 and 3 at the San Onofre Nuclear Generating Station (SONGS). Pursuant to Pub. Utils. Code §455.5, the Commission will undertake to determine whether to reduce the rates of Southern California Edison Company (SCE) and San Diego Gas & Electric Company (SDG&E).

The OII required that SCE and SDG&E provide initial testimony (1<sup>st</sup> Testimony), no later than December 16, 2012, on the question of whether the Commission should reduce each utility's rates and, if so, by how much.<sup>1</sup> The Commission intends to approach this inquiry in stages due to the potential wide

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<sup>&</sup>lt;sup>1</sup> The OII was issued on November 1, 2012, and the testimony is due 45 days thereafter.

scope and quantity of information necessary to ensure that ratepayers pay just and reasonable rates, in light of the extended outages at SONGS.

The Commission will initially gather information in the form of testimony from both SCE and SDG&E about the actual expenses each incurred in 2012 related to SONGS. SCE and SDG&E shall serve additional testimony (2<sup>nd</sup> Testimony) within 30 days of the date of this ruling which responds to the following questions:

- 1. A copy of any report issued by the Nuclear Regulatory Commission (NRC) or its staff that addresses the cause(s) of the outage, other than the July 18, 2012 NRC report attached to the OII;
- 2. A copy of any reports (including attachments) provided by any outside consultants retained to assist with the utility's investigation of the cause(s) of the Outage;
- 3. The type and quality of fuel used by the SONGS units,
- 4. If applicable (e.g., if the units are in any way fuel- or interconnection-limited), describe any limitations on the implications an outage in any one unit may or may not have on the total output of the entire facility;
- 5. For the last five years, whether or not there were any scheduled outages, and if so, how many and providing, for each one, the date it commenced, its duration (in days), and the purpose of each such outage;
- 6. For the last five years, whether or not there were any unplanned outages, and if so, how many and providing, for each one, the date it commenced, its duration (in days), and the purpose or cause of each such outage;
- 7. For periods of time other than those during an outage identified above, were there any periods of time during which this plant, or any unit of this plant, experienced any limitations or restrictions on its capacity or output, other than for economic dispatch purposes, such that its capacity or output was limited or restricted to a level of less than

90% of its nominal rated capacity or output and, if so, how many occasions and providing, for each occasion, the date it commenced, its duration, and the reason for such limitation or restriction on capacity or output;

- 8. SCE's original SONGS Units 2 and 3 Operation & Maintenance (O&M) budget for the last five years;
- 9. The actual SONGS Units 2 and 3 O&M recorded expenses for the last five years;
- 10. SCE's original SONGS Units 2 and 3 capital budget for the last five years;
- 11. The actual SONGS Units 2 and 3 recorded capital spending for the last five years; and
- 12. 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.
- 13. Provide an MS Excel spreadsheet showing quantities and costs for purchased uranium, and its fabrication and enrichment, in side-by-side columns, left to right, with the columns labeled for the relevant years and months, for:
  - each fuel type used during 2011-2012;
  - data for 2013, by month, January through December; and
  - the annual total for 2012.
- 14. Identify the number of nuclear fuel purchase contracts open during 2011 and 2012, and provide the terms and conditions of the contracts related to any costs or savings arising from the extended outages of Units 2 and 3.
- 15. Provide in a single MS Excel, or equivalent and compatible spreadsheet, data for both SONGS units. Beginning on a new row for each SONGS unit, provide:
  - a short, readily identifiable, label or name for each unit (e.g., "SONGS 2" and "SONGS 3");

- its California Independent System Operator (CAISO) rated capacity, for each unit, in Megawatt (MW), as of January 1, 2012, in an MS Excel number format;
- percentage, in MS Excel percentage format, of the capacity of the units, to which the respective co-owners are entitled, as of January 1, 2012;
- the nameplate rated capacity, for each unit, in MW, as of December 31 of 2012;
- percentage, in MS Excel percentage format, of the capacity of the units to which the respective co-owners are entitled, as of December 31 of 2012; and
- the average availability factors for each unit over the last five years.
- 16. Identify any methodology which you believe would provide a better estimate of, or proxy for, the cost of replacement energy for the current SONGS outages, than using the hour-ahead average energy prices published by the CAISO for locations in your service territory (less any appropriate avoided costs, if any), and justify your recommendation.
- 17. Identify any publicly-available source of hour-ahead energy prices, available for every hour of every day of the current outages, if any, which you believe would better represent hour-ahead (when appropriate) replacement energy costs in your service territory than the hour-ahead energy prices published by the CAISO, and justify your recommendation. Provide any such hour-ahead energy prices, for every hour of every day of the current outages, in an MS Excel-compatible spreadsheet.
- 18. Identify any publicly-available source of day-ahead energy prices, available for every hour of every day of the current outages, if any, which you believe would better represent day-ahead (when appropriate) replacement energy costs in your service territory than the day-ahead energy prices published by the CAISO, and justify your

recommendation. Provide any such day-ahead energy prices, for every hour of every day of the current outages, in an MS Excel-compatible spreadsheet.

- 19. Describe the objective circumstances, if any, in which the utility can enter into bilateral energy procurement contracts that reliably and predictably incur lower total procurement costs for replacement energy than by relying on CAISO, or other Regional Transmission Organization-based public markets.
- 20. Identify the methodology, if any, which you believe would readily and reliably provide a good estimate of, or proxy for, the actual costs avoided during the current outages, and justify your recommendation.
- 21. Does the utility believe that it can meet a reasonable manager and/or prudence standard, in its management of SONGS regarding the current outages, and does the utility believe it currently employs an appropriate program of internal audits and controls regarding SONGS operations, including for outages?
- 22. Other than Sarbanes-Oxley testing, did the utility actually perform any internal audit regarding any aspect of SONGS administration within the last five years? If yes, please specify when, the standards under which such internal audit was conducted, the areas addressed, a brief summary of results and a copy of any report of such internal audit.
- 23. Provide the daily energy production for each SONGS unit from December 1, 2010, through December 31, 2012, in the following format: in an MS Excel spreadsheet, date in MS Excel date format in the first column, daily energy production of Unit 2 in the second column, and daily energy production of Unit 3 in the third column; with daily energy production entered in consistent units.
- 24. Provide any nuclear notifications and/or cited or non-cited nuclear violations associated with the current outages.

25. Provide a copy of the Confirmatory Action Letter issued to SCE by the NRC on March 27, 2012, concerning the SONGS outage, and SCE's response.

SCE and SDG&E may prepare testimony jointly or separately. SCE and SDG&E shall post their written Testimony in this OII on their respective company websites to provide access to the information by parties and the public, subject to non-disclosure agreement if warranted. DRA and other parties may serve Reply Testimony on or before January 29, 2013 addressing the 1st and 2nd rounds of Testimony that SCE and SDG&E have been directed to serve in the OII and this ruling. SCE and SDG&E may serve Rebuttal Testimony on or before February 13, 2013.

### IT IS RULED that:

1. Southern California Edison Company (SCE) and San Diego Gas & Electric Company (SDG&E) shall prepare and serve testimony in response to the questions set forth above in this ruling no later than January 9, 2013, and publicly post the testimony on their respective company websites.

2. Division of Ratepayer Advocates and all other parties may serve Reply Testimony on or before January 29, 2013 addressing the 1st and 2nd rounds of Testimony served by SCE and SDG&E. Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 163 of 191

I.12-10-013 MD2/sbf

3. SCE and all parties may serve Rebuttal Testimony on or before February 13, 2013.

Dated December 10, 2012, at San Francisco, California.

/s/ MELANIE M. DARLING Melanie M. Darling Administrative Law Judge Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 164 of 191

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Message

From:	Peevey, Michael R. [michael.peevey@cpuc.ca.gov]
Sent:	1/23/2013 11:22:40 PM
То:	Michael.Hoover@sce.com
Subject:	RE: Lobbying

I will have to play by ear. Most unlikely as I will be there Sunday-Tuesday nights and I am committed already to two of the nights. But, look me up at NARUC.

-----Original Message-----From: Michael.Hoover@sce.com [mailto:Michael.Hoover@sce.com] Sent: Wednesday, January 23, 2013 3:12 PM To: Peevey, Michael R. Subject: Lobbying

Sounds like you and Bruce had a good lunch. How about a good old fashion NARUC dinner in DC at Citronelle - that's lobbying! I can make any night work.

:=

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

Order Instituting Investigation on the Commission's Own Motion into the Rates, Operations, Practices, Services and Facilities of Southern California Edison Company and San Diego Gas and Electric Company Associated with the San Onofre Nuclear Generating Station Units 2 and 3.

Investigation 12-10-013 (Filed October 25, 2012)

And Related Matters.

Application 13-01-016 Application 13-03-005 Application 13-03-013 Application 13-03-014

### SOUTHERN CALIFORNIA EDISON COMPANY'S (U 338-E) LATE-FILED NOTICE OF EX PARTE COMMUNICATION

J. ERIC ISKEN WALKER A. MATTHEWS, III RUSSELL A. ARCHER Southern California Edison Company 2244 Walnut Grove Avenue Post Office Box 800 Rosemead, CA 91770 Telephone: (626) 302-6879 Facsimile: (626) 302-3990 E-mail: Walker.Matthews@sce.com

### HENRY WEISSMANN

Munger, Tolles & Olson LLP 355 South Grand Avenue, 35th Floor Los Angeles, CA 90071 Telephone: (213) 683-9150 Facsimile: (213) 683-5150 E-mail: *Henry.Weissmann@mto.com* 

### Attorneys for SOUTHERN CALIFORNIA EDISON COMPANY

Dated: February 9, 2015

Southern California Edison (SCE) respectfully submits this late-filed Notice of Ex Parte Communication. On or about March 26, 2013, former SCE Executive Vice President of External Relations, Stephen Pickett, met with then-President Michael Peevey at the Bristol Hotel in Warsaw, Poland in connection with an industry event. To the best of Mr. Pickett's recollection, the meeting lasted approximately 30 minutes. Mr. Pickett recalls that Ed Randolph, Director of the Energy Division, also was present for some or all of the meeting.

The meeting was initiated by Mr. Peevey, who had requested an update on the status of SCE's efforts to restart San Onofre Nuclear Generating Station (SONGS) Unit 2. Mr. Pickett provided the requested update. Thereafter, in the course of the meeting, Mr. Peevey initiated a communication on a framework for a possible resolution of the Order Instituting Investigation (OII) that he would consider acceptable but would nonetheless require agreement among at least some of the parties to the OII and presentation to and approval of such agreement by the full Commission. Mr. Pickett believes that he expressed a brief reaction to at least one of Mr. Peevey's comments. Mr. Pickett took notes during the meeting, which Mr. Peevey kept; SCE does not have a copy of those notes.

An ex parte notice was not filed at that time because it was believed that (a) Mr. Pickett's update on SONGS restart efforts was permissible and not reportable, and (b) based on Mr. Pickett's recounting of the conversation, the substantive communication on a framework for a possible resolution of the OII was made by Mr. Peevey to Mr. Pickett, and not from Mr. Pickett to Mr. Peevey. However, based on further information received from Mr. Pickett last week, while Mr. Pickett does not recall exactly what he communicated to Mr. Peevey, it now appears that he may have crossed into a substantive communication. While SCE believes that it is not clear cut whether Rule 8.4 requires this meeting to be reported, SCE provides this notice.

- 1 -

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Respectfully Submitted,

Date: February 9, 2015

J. ERIC ISKEN WALKER A. MATTHEWS RUSSELL A. ARCHER HENRY WEISSMANN

<u>/s/ Henry Weissmann</u> By: Henry Weissmann

Attorneys for SOUTHERN CALIFORNIA EDISON COMPANY Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 170 of 191

### Goldthrite, Cody

From:	Les.Starck@sce.com
Sent:	Wednesday, May 29, 2013 7:35 AM
To:	mp1@cpuc.ca.gov; catherine.sandoval@cpuc.ca.gov; mike.florio@cpuc.ca.gov;
	mark.ferron@cpuc.ca.gov; cap@cpuc.ca.gov
Cc:	EFR@cpuc.ca.gov; Lindh, Frank; pac@cpuc.ca.gov
Subject:	SONGS Press Release: SCE Exercised Responsible Oversight for Replacement Steam
-	Generators at the San Onofre Nuclear Plant
Attachments:	SCE Press Release 5-28-13 FINAL .pdf

Commissioners, FYI, attached is SCE's press release released yesterday regarding SONGS.

### SCE Exercised Responsible Oversight for Replacement Steam Generators at the San Onofre Nuclear Plant

ROSEMEAD, Calif., May 28, 2013 — Letters released today by <u>Southern California Edison</u> (SCE) demonstrate that it exercised responsible oversight of the vendor of the <u>San Onofre nuclear plant</u> replacement steam generators before any designs were completed or approved.

SCE is restating its position after allegations from U.S. Sen. Barbara Boxer at a press conference this afternoon regarding correspondence from SCE to Mitsubishi Heavy Industries (MHI), the manufacturer of the replacement steam generators. SCE provided the November 2004 correspondence referenced by Sen. Boxer and a June 2005 letter from SCE to MHI to the <u>Nuclear Regulatory Commission</u> (NRC) in April in connection with ongoing NRC proceedings.

"In response to Sen. Boxer's statement, we believe that the determination for restart must be made based on technical merits, through the established nuclear regulatory process," said Pete Dietrich, SCE senior vice president and chief nuclear officer.

"SCE's own oversight of MHI's design review complied with industry standards and best practices." He added. "SCE would never, and did not, install steam generators that it believed would impact public safety or impair reliability."

The <u>November 2004</u> and <u>June 2005</u> letters have also been provided to parties involved in a <u>California Public Utilities</u> <u>Commission</u> investigation and are now posted online.

These letters emphasize the importance of careful attention to the design of the steam generators. Recognizing that SCE was not the designer of the steam generators and that there were limitations on the assistance SCE could provide, the letters identify a number of design issues that SCE asked MHI to focus on to ensure that design flaws were not inadvertently introduced.

SCE took numerous steps to ensure that MHI appropriately addressed these concerns, including design review meetings, executive oversight meetings, and meetings of many other groups of SCE and MHI personnel.

"We take very seriously our responsibility to ensure we protect the public's health and safety," Dietrich said. "These documents demonstrate the type of careful oversight that SCE exercised during the replacement steam generator project and also served to establish our expectations of MHI."

In the November 2004 letter, SCE emphasized the care that would be needed during the design phase because of the differences between the new and old units. These differences—which were intended to improve the overall performance of the new units—were permitted under the NRC's 50.59 process, which allows changes to a nuclear facility if certain criteria are met. Contrary to Sen. Boxer's suggestion, Section 50.59 does NOT require that replacement equipment be

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"like for like" or identical to the equipment being replaced.

Instead, the very purpose of the regulation is to permit certain types of design changes. In general, a licensee may make a change to the design of a licensed facility without prior NRC approval if the change does not require a change to the plant's NRC-approved technical specifications or if the change would not change the facility "as described in the safety analysis report." This report is the official description of the nuclear plant that was approved by the NRC in the initial licensing, as updated throughout the life of the plant.

SCE advised the NRC that the San Onofre steam generators contained a number of different features from the previous design. In fact, safety evaluations prepared by the NRC in connection with amendments to the San Onofre license associated with the steam generator replacements described the most important of those changes in detail. At no time did SCE hide the differences from the NRC, nor did it seek to mislead the NRC concerning the applicability of Section 50.59 to the project. Any suggestion that seeks to draw from the November 2004 letter a contrary conclusion is simply incorrect and relies on the fundamental error of viewing Section 50.59 as applying to identical, or "like for like" replacements.

A leak occurred in one of the San Onofre steam generators in January 2012, and both units have remained shut down since then. The NRC has determined that the problems in the steam generators were associated with errors in MHI's computer modeling, which led to underestimation of thermal hydraulic conditions in the generators.

The San Onofre nuclear plant is the largest source of baseload generation and voltage support in the region and is a critical asset in meeting California's clean energy needs. Both units at the plant are currently safely shut down. Unit 2 was taken out of service Jan. 9, 2012, for a planned outage. Unit 3 was safely taken offline Jan. 31, 2012, after station operators detected a leak in a steam generator tube.

More information is available at www.edison.com/SONGSupdate and at www.SONGScommunity.com. San Onofre is jointly owned by SCE (78.21 percent), San Diego Gas & Electric (20 percent) and the city of Riverside (1.79 percent). Follow us on Twitter (www.twitter.com/SCE) and Facebook (www.facebook.com/SCE).

### **About Southern California Edison**

An Edison International (NYSE:EIX) company, Southern California Edison is one of the nation's largest electric utilities, serving a population of nearly 14 million via 4.9 million customer accounts in a 50,000-square-mile service area within Central, Coastal and Southern California.

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### Goldthrite, Cody

From:	Peevey, Michael R. <michael.peevey@cpuc.ca.gov></michael.peevey@cpuc.ca.gov>
Sent:	Wednesday, June 05, 2013 10:40 AM
То:	Ron.Litzinger@sce.com
Subject:	RE: Letter of Appreciation for Patricia Flores from Magis Capital

Thanks for being attentive to the matter. And, by the way, Ted filled me in on the state of SONGS. Sounds like we will be kept pretty busy.

From: <u>Ron.Litzinger@sce.com</u> [Ron.Litzinger@sce.com] Sent: Wednesday, June 05, 2013 10:31 AM To: Peevey, Michael R. Subject: RE: Letter of Appreciation for Patricia Flores from Magis Capital

Our team has re-engaged with Dynegy. I have asked to provide my routine updates on progress to put proper attention on the matter. I received my first last night--will likely read through it tonight.

 From:
 "Peevey, Michael R." <<u>michael.peevey@cpuc.ca.gov</u>>

 To:
 "<u>Ron.Litzinger@sce.com</u>" <<u>Ron.Litzinger@sce.com</u>>,

 Date:
 06/05/2013 10:18 AM

 Subject:
 RE: Letter of Appreciation for Patricia Flores from Magis Capital

Thanks, Ron. You have truly reached out. And, how about that Dyengy matter (Morro Bay) I mentioned to you a few weeks ago?

From: <u>Ron.Litzinger@sce.com</u> [Ron.Litzinger@sce.com]
Sent: Wednesday, June 05, 2013 9:48 AM
To: Janar Wasito
Cc: Phason, Douglas; Peevey, Michael R.
Subject: Re: Letter of Appreciation for Patricia Flores from Magis Capital

thank you--appreciate the feedback

 From:
 Janar Wasito <<u>iwasito@magiscapital.com</u>>

 To:
 ron.litzinger@sce.com,

 Cc:
 "mp1@cpuc.ca.gov" <mp1@cpuc.ca.gov>, "Phason, Douglas" <douglas.phason@cpuc.ca.gov>

 Date:
 06/05/2013 08:39 AM

 Subject:
 Letter of Appreciation for Patricia Flores from Magis Capital

Ron,

I would like to thank you and SCE for giving my firm, a CPUC registered Diverse Business Enterprise (DBE), access to your supply and procurement process through the diligent follow up work of Patricia Flores in particular. Through attending the CPUC supplier diversity events, we have been able to find business opportunities that would otherwise be closed to our minority- and Veteran-owned firm.

Best, Janar

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From:	Ron.Litzinger@sce.com
Sent:	Wednesday, June 12, 2013 4:34 PM
To:	Berberich, Steve
Cc:	Wallerstein Barry (bwallerstein@aqmd.gov); Felicia Marcus
	(felicia.marcus@waterboards.ca.gov); Edson, Karen; Peevey, Michael R.
	(michael.peevey@cpuc.ca.gov); Picker, Michael; Niggli, Michael; Weisenmiller,
	Robert@Energy (Robert.Weisenmiller@energy.ca.gov);            stephen.pickett@sce.com
Subject:	Re: Loss of SONGS Task Force
Steve Pickett, for us	
Steve Pickett. for US	

Subject: Loss of SONGS Task Force

The governor has asked for a 90 day report on how reliability will be maintained with the permanent loss of SONGS. In discussions with Mike Peevey, Mike and I agreed that the best approach would be to form a task force from the PUC, CEC, ISO, SCE, SDG&E, SCAQMD and the Water Board to address a number of issues including the following:

- What mix of resources and assets would best meet reliability needs at the lowest cost and with least regrets for long term system planning?

What near term, mid term and long term actions should be taken to replace San Onofre energy and voltage support?

What conventional, distributed generation could be contingency permitted and sited?

- How can we solve the loss yet minimize the amount of replacement power emissions?

- What OTC plants should be moved on for repower and which ones should be considered for compliance date extensions?

- How can demand response, energy efficiency and other emerging technologies play a role in in minimizing conventional generation solutions?

The ISO will take the lead in getting the task force coordinated and Neil Millar, our head of system planning, will be the lead on our end. Please let me know who from your organization will participate in the task force. We anticipate the initial meeting to take place in Folsom at the ISO with subsequent meetings in S. California. Finally, I propose that we have monthly meetings with Michael Picker of the governor's office and agency and utilities heads to monitor progress of the task force. As always, I welcome comments and alternative suggestions for moving forward.

Best regards,

Steve

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The foregoing electronic message, together with any attachments thereto, is confidential and may be legally

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STATE OF CALIFORNIA

EDMUND G. BROWN JR., Governor

PUBLIC UTILITIES COMMISSION LEGAL DIVISION 505 VAN NESS AVENUE SAN FRANCISCO. CA 94102-3298 ID 94-3031353



Michael Aguirre 444 West C Street Suite 210 San Diego, CA 92129

### Re: Records Request re San Onofre CPUC Reference No.: PRA #0924

Dear Mr. Aguirre:

You ask the California Public Utilities Commission (Commission) for the following:

all communications between President Peevey and any agent, officer, or employee of Southern California Edison regarding the settlement of the proceedings pending before the PUC regarding San Onofre, the payment for the 4 replacement steam generators, the payment for replacement power, the costs of maintenance and operations. A spokesperson for SCE has stated President Pevey has called for a settlement of the pending proceedings. Please provide any written record that would explain how the SCE spokesperson would know what President Pevey said in that regard.

Also please provide any communications between any agent, officer, or employee of SCE and President Pevey regarding SCE's announcement and decision it would be closing the San Onofre plant.

The Commission records responsive to your request, which I obtained from President Peevey's office, are attached.

I hope this is helpful.

Very truly yours,

Fe) Harris

Fred Harris Staff Counsel

Encls.

68613742



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### Catherine Ohaegbu

Subject: Location:	Post SONGS Strategy Dinner California Club - 538 S. Flower St, Los Angeles - Private room on 3rd floor
Start: End: Show Time As:	Mon 7/8/2013 6:00 PM Mon 7/8/2013 9:00 PM Tentative
Recurrence:	(none)
Meeting Status:	Accepted
Organizer: Required Attendees:	Berberich, Steve mp1@cpuc.ca.gov; 'Mary Nichols'; bwallerstein@aqmd.gov; Weisenmiller, Robert@Energy (Robert.Weisenmiller@energy.ca.gov); Michael Picker; 'Marcus Felicia - State Water Resources Control Board (felicia.marcus@waterboards.ca.gov)'; 'michael.rossi@gov.ca.gov'

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Message

Stephen.Pickett@sce.com [Stephen.Pickett@sce.com] From: 9/29/2013 5:31:45 PM Sent: Peevey, Michael R. [michael.peevey@cpuc.ca.gov] To: Re: London? Subject: Great. I'll be there. Sent from my Blackberry ---- Original Message -----From: "Peevey, Michael R." [michael.peevey@cpuc.ca.gov] Sent: 09/29/2013 04:21 PM GMT To: Stephen Pickett Subject: Re: London? Sure. Make it 5:30 at The American Bar at the Stafford. See you then. Sent from my iPad On Sep 29, 2013, at 8:52 AM, "Stephen.Pickett@sce.com" <Stephen.Pickett@sce.com> wrote: > Hi Mike. I get to London about noon tomorrow (Mon 9/30). If you're still here tomorrow will 6:00 at the Stafford work for a drink? I'm meeting some friends for dinner at 8:30. > Sent from my Blackberry > > > ----- Original Message -----> From: "Peevey, Michael R." [michael.peevey@cpuc.ca.gov] > Sent: 09/29/2013 03:47 PM GMT > To: Stephen Pickett > Subject: London? > > If coming, meet us at Stafford Hotel at 6 today.

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### Case 3:14-cv-02703-CAB-NLS Document 16-2 Filed 02/25/15 Page 185 of 191

From:	Sabina Ysaguirre/SCE/EIX [Sabina.Ysaguirre@sce.com]
To:	Peevey Michael R. [michael.peevey@cpuc.ca.gov]; Sabina Ysaguirre/SCE/EIX [Sabina.Ysaguirre@sce.com]
Subject:	Meeting with President Peevey RE: To present Southern California Edison's concerns regarding the Proposed
Subject.	Decision issued by ALIs Darling and Dudney on November 19th, 2013.
Location:	President Peevey's office, Room 5218
Start:	12/4/2013 11:00:00 PM
End:	12/4/2013 11:30:00 PM
Show Time A	is: Busy

Recurrence: (none)

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### Appointment

From:	Ann Davey/SCE/EIX [Ann.Davey@sce.com]
То:	Ann Davey/SCE/EIX [Ann.Davey@sce.com]; fohreraj@gmail.com; LEGIONARY44BC@ICLOUD.COM;
	mp1@cpuc.ca.gov; Stephen E Pickett/SCE/EIX [Stephen.Pickett@sce.com]
CC:	nuria.gonzalez@cpuc.ca.gov
Subject:	Dinner Meeting (Mike Peevey, Al Fohrer, Bob Foster & Steve Pickett)
Location:	California Club, 538 South Flower, Los Angeles (Dinner will be served in the 3rd Floor Bar; Reservations under "Al
Location.	Fohrer")
Start:	12/14/2013 2:00:00 AM
End:	12/14/2013 4:00:00 AM
Show Time A	s: Tentative

Recurrence: (none)

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March 2014









### California Public Utilities Commission

Improved Monitoring of Balancing Accounts Would Better Ensure That Utility Rates Are Fair and Reasonable

Report 2013-109



The first five copies of each California State Auditor report are free. Additional copies are \$3 each, payable by check or money order. You can obtain reports by contacting the California State Auditor's Office at the following address:

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Elaine M. Howle State Auditor Doug Cordiner Chief Deputy

March 4, 2014

2013-109

The Governor of California President pro Tempore of the Senate Speaker of the Assembly State Capitol Sacramento, California 95814

Dear Governor and Legislative Leaders:

As requested by the Joint Legislative Audit Committee, the California State Auditor presents this audit report concerning the California Public Utilities Commission's (commission) oversight of utility balancing accounts of entities it regulates.

This report concludes that the commission lacks adequate processes to provide sufficient oversight of utility balancing accounts to protect ratepayers from unfair rate increases. State law directs the commission, whenever it authorizes any rate change that includes costs passed on to customers, to require utilities to establish a balancing account. A balancing account is a tracking mechanism used to ensure that a utility recoups from ratepayers costs the commission has authorized and that ratepayers do not pay more than they should. If a balancing account has a balance—indicating an over- or under-collection from ratepayers—the utility will generally seek periodically to adjust future rates to either refund or recoup the balance. State law requires the commission to review semiannually certain balancing accounts; however, it does not otherwise require the commission to review all balancing accounts. Currently, the commission only reviews some balancing accounts when a utility requests to incorporate the balance in that account into future rates as a surcharge or a credit. This practice does not ensure that the commission adequately reviews balancing accounts to protect ratepayers from unreasonable rates. Although the commission relies on the Office of Ratepayer Advocates (Ratepayer Advocates)-an independent office within the commission-to review energy utility balancing accounts, this reliance is misplaced because Ratepayer Advocates is not required to review all energy utility balancing accounts. Ratepayer Advocates primarily focuses on balancing accounts that energy utilities include in formal proceedings, which resulted in it reviewing only 58 percent of the value of large energy utilities' balancing accounts active during 2009 through 2011. It did not review other balancing accounts with a value of \$37.6 billion during this period.

Given that balancing accounts directly affect rates that a utility charges ratepayers and given the broad authority the commission has to inspect and audit utilities' books, accounts, and records, we believe that the commission should use a systematic process that ensures a review of all those balancing accounts that can have the most impact on ratepayers. However, the commission lacks the necessary information, such as the size of a balancing account and the last time it was reviewed, to determine which balancing accounts it should review. In addition to not providing adequate oversight over balancing accounts, the commission has not always complied with a requirement to audit utilities' books and records according to the schedule prescribed by state law. Also, for over three decades, it has not provided the results of these audits to the California State Board of Equalization (Equalization) for tax assessment purposes, as required by state law. Although Equalization believes that this requirement is no longer appropriate, neither Equalization nor the commission has sought to change the law.

Respectfully submitted,

laine M. Howle\_

ELAINE M. HOWLE, CPA State Auditor