Case No: I.12-10-013
Exhibit No: A4NR-1
Witness: Rochelle Becker

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	)	I.12-10-013 (Issued November 1, 2012)

PREPARED DIRECT TESTIMONY OF

ROCHELLE BECKER
EXECUTIVE DIRECTOR

ALLIANCE FOR NUCLEAR RESPONSIBILITY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA
MARCH 29, 2013

TABLE OF CONTENTS

PREPARED DIRECT TESTIMONY OF

ROCHELLE BECKER, EXECUTIVE DIRECTOR

ALLIANCE FOR NUCLEAR RESPONSIBILITY ("A4NR")

Q: Please state your name and business address for the record.

A: My name is Rochelle Becker, and my business address is: Alliance for Nuclear Responsibility, P.O. Box 1328, San Luis Obispo, CA 93406-1328.

Q: Are your professional qualifications included in your testimony?

A: Yes, my professional qualifications are contained in Appendix A to my testimony.

Q: Was your testimony prepared by you or under your direction?

A: Yes, it was.

Q: Insofar as your testimony contains material that is factual in nature, do you believe it to be correct?

A: Yes, I do.

Q: Insofar as your testimony contains matters of opinion or judgment, does it represent your best judgment?

A: Yes, it does.

Q: Does this written submittal complete your prepared testimony and professional qualifications?

A: Yes, it does.

I. PURPOSE OF THIS TESTIMONY.

The purpose of my testimony is to respond to the January 28, 2013 Scoping Memo and Ruling of Assigned Commissioner Florio and Administrative Law Judge Darling, particularly issues 1 and 2 that were identified for I.12-10-013's Phase 1,[1] in order to assist the Commission with the conduct of its Investigation. Specifically,

- the reasonableness of consequential actions and expenditures by Southern California Edison ("SCE" or "Edison") in response to the steam generator failures; and
- whether 2012 SONGS-related expenses recorded in the SONGSMA are reasonable and necessary.

My testimony identifies seven salient facts which I believe loom large in evaluating Edison's 2012 conduct, and points the Commission to important documents it should review in completing Phase 1 of its Investigation.

II. SCE's ROOT CAUSE ASSESSMENTS RECKLESSLY TRIVIALIZE MAJOR IMPAIRMENT OF THE NEW SONGS STEAM GENERATORS.

[1] Scoping Memo, p. 3.

Despite the unprecedented rate of occurrence at San Onofre, SCE's Unit 2 and Unit 3 Root Cause Assessments[2] (provided in response to A4NR's data requests) brush away indications of wear at the anti-vibration bars (10,855) and the tube support plates (3,314) even though they account for more than 94% of all of the wear indications (and 92% of the affected tubes) identified in the Root Cause Assessments.[3] Fixated on the mystery force of fluid elastic instability ("FEI") and in-plane vibration, Edison is blithely dismissive of the more customary out-of-plane vibration it attributes ambiguously to "turbulence induced vibration." As Edison's discussion of this phenomenon in all four steam generators puts it:

> *… the wear is caused by turbulence induced vibration. The wear rate from this mechanism is lower than that associated with FEI and, based on industry OE* [i.e., operating experience]*, decreases over time…**<u>These tubes do not require additional causal analysis</u>**.*[4] (emphasis added)

Similarly, with respect to tube-to-support-plate wear, Edison is equally cavalier: because this wear is attributed to the mundane "turbulence induced vibration" which is postulated to decrease over time, "**<u>(n)o additional causal analysis will be performed</u>** for tube-

---

[2] Accessible in the redacted form in which SCE provided them to A4NR at http://www3.sce.com/sscc/law/dis/SongsOIIDocLibrary.nsf/formDocument.xsp?documentId=DFC2A84FB85621D188257B0C00764607&action=openDocument

[3] To place these numbers in appropriate context, it is valuable to consult the data analysis of total wear indications performed by UC Santa Cruz instructor Daniel Hirsch and his student, Dorah Shuey:

> • *The median number of steam generators tubes nationally showing wear after one cycle of operation is – FOUR. San Onofre Unit 2 had 1595 damaged tubes, approximately 400 times the median; San Onofre Unit 3 had 1806.*
>
> • *The median number of indications of wear on steam generator tubes nationally after one cycle of operation is – FOUR. San Onofre Unit 2 had 4271, greater than a thousand times more. San Onofre Unit 3 had 10,284.*
>
> • *The median number of steam generator tubes that were plugged after one cycle of operation is – ZERO. San Onofre Unit 2 had 510; Unit 3 had 807.*

Daniel Hirsch and Dorah Shuey, "FAR OUTSIDE THE NORM: The San Onofre Nuclear Plant's Steam Generator Problems in the Context of the National Experience with Replacement Steam Generators," September 12, 2012, p. i. This document is accessible at http://committeetobridgethegap.org/pdf/CBG-SanOnofreReport.pdf

[4] SCE's "Root Cause Evaluation: Unit 3 Steam Generator Tube Leak and Tube-to-tube Wear," Condition Report: 201836127, Revision 0, May 7, 2012, p. 14.

to-TSP wear..."[5] (emphasis added) The suggested substitute for this refusal to perform causal analysis: "increased monitoring of tube wear during mid-cycle outages."[6]

I have no quarrel with the forensic logic of making a priority of understanding the type of wear (i.e., tube-to-tube) which actually caused the tube to burst in Unit 3 and triggered the January 31, 2012 radiation release. Nor do I question the attention devoted to the tube-to-retainer-bar wear, which prompted all 188 tubes intersecting the Unit 2 retainer bars to be plugged -- with 24 of them "stabilized" in order to ensure that all 188 "will not sever due to continued vibration."[7]

But for Edison to stop there, with 92-94% of the instances of extraordinary tube wear inadequately explained and no better remedy than restart-and-reinspect, is imprudent behavior.[8] Just making it to the next inspection cycle is hardly a substitute for proper stewardship of an $813 million investment[9] which is supposed to last until at least 2022. The steam generators came with 20-year warranties and assertions that they had 40-year useful lives. What reasonable manager would be so indifferent to such widespread degradation of

---

[5] *Id.*
[6] *Id.*
[7] NRC Augmented Inspection Team Report 05000361/2012007 and 05000362/2012007 ("AIT Report"), July 18, 2012, p. 11. The Commission made this document Attachment 1 to this proceeding's Order Instituting Investigation.
[8] The apathy of the SCE "root cause" assessments for this more pervasive tube degradation may reflect a strategic indifference toward the AIT Report's causal tree trunk of all SONGS tube wear: "a combination of unpredicted, adverse thermal hydraulic conditions" and steam generators "not designed with adequate thermal hydraulic margin", as well as computer modeling which understated actual flow rates by factors of 3X or 4X. *Id.,* pp. 2, 50. Arguably, Edison's quality assurance team had a duty to detect and prevent these gross errors in design.
[9] The $813 million figure is quoted from SDG&E's April 14, 2004 Verified Complaint for Declaratory Relief filed against SCE in San Diego County Superior Court (Case No. 828441). Among other things, the Complaint accused Edison of low-balling the cost of the project by neglecting to include project financing costs of $133 million in the $680 million budget it originally filed with the CPUC for the Steam Generator Replacement Project. The $680 million amount was subsequently reduced by the Commission to $671 million, with presumably some accompanying reduction in financing costs.

expensive, purportedly high quality, new equipment?[10] Does the presumed ability to simply pass the costs of defective equipment through to captive ratepayers also degrade the business judgment standard? I am absolutely certain that no member of Edison's senior management would be so accepting of comparable defects in a new automobile purchased with his own money.

III. SCE's UNIT 2-AT-70% PLOY APPEARS MORE A §455.5[11] CLOCK RESET THAN A COHERENT PLAN TO RESTORE EVENTUAL COMMERCIAL OPERATION.

There is no better way to describe the time and effort Edison has put into its ballyhooed desire to conduct a five-month operating test at 70% for Unit 2 than as an expensive, diversionary path to nowhere. Nowhere in the thousands of pages of self-justification Edison has commissioned is there a compelling linkage to eventual operation of Unit 2 at full capacity. Nowhere is there an attempt to justify the economics of operating Unit 2 over the long-term at only 70%. Nowhere is there any explanation of how even a successful Unit 2 test run might somehow enable a restart of Unit 3. Edison's schizophrenic assertions in recent weeks that 70% is full power, or that Unit 2 can operate at 100% (though steam generator tubes would burst after 11 months), or that perhaps a license amendment will get the plant online by this summer ("safety-has-no-timeline" apparently having outlived its credibility shelf life),

---

[10] As Edison notoriously explained in its July 13, 2012 press release, "The majority of this wear is related to support structures. The nature of the support structure wear is **<u>not unusual in new steam generators and is part of the equipment settling in.</u>**" (emphasis added) This document is accessible at http://www.edison.com/pressroom/pr.asp?id=7967

[11] Cal. Pub. Util. Code §455.5.

intensifies the air of commercial unreality.

Somebody in Rosemead must be looking at the economics. As Credit Suisse recently reported, the economics of existing nuclear plants face some daunting cost trends going forward: "Sustained cost inflation at 3-5% per year is a reasonable expectation, **leading most plants to generate negative cash margins (fuel + O&M + maintenance capex) against standard off-peak power price benchmarks.**"[12] (emphasis added) And that's when they're operating! If Edison needs help with this arithmetic, it should consult the hundreds of thousands of budget-conscious moms walking up and down the aisles of grocery stores in the SCE service territory:

- first, you take the $992 million identified as the SONGS 2012 revenue requirement in the SCE and SDG&E testimony in this proceeding. Adjusting for Riverside's 1.8% ownership share, you get a total 2012 revenue requirement of $1,010,000,000.
- second, you assume that both Unit 2 and Unit 3 are restored to full operation and achieve 90% capability factors for their 2,246 MW. That means production of 17,707,464 MWh for the year.
- third, you spread that $1,010,000,000 over the 17,707,464 MWh and come up with $57.04 per mWh or about 5.7¢ per kWh.
- fourth, you adjust your assumptions to reflect the lack of a pulse beat in Unit 3. If only Unit 2 operates, even with a 90% capacity factor its production cost is about 11.4¢ per kWh.

[12] Credit Suisse, "Nuclear … The Middle Age Dilemma?" February 19, 2013, p. 7. Notably, Credit Suisse defines "off-peak" as 50% of all dispatch hours. This report is accessible at http://www.wecc.biz/committees/BOD/TEPPC/SPSG/Lists/Events/Attachments/485/Credit%20Suisse%20Nuclear%2019Feb13.pdf

- fifth, you adjust your assumptions again because you just can't see how Unit 2 ever gets above 70% -- whether restricted by license amendment, or managerial fear of the shakes – even if the five-month test is successful. That results in a cost of about 14.7¢ per kWh.

So, without even addressing the "sustained cost inflation at 3-5% per year" which Credit Suisse says is a reasonable expectation, this dog just doesn't hunt. If Credit Suisse is right, and the plant is out-of-the-money 50% of the time when it's operating perfectly, how often is that the case when its production cost doubles to 11.4¢ per kWh? What about 14.7¢ per kWh?

Based on the information Edison itself has provided in this proceeding,[13] the average cost during 2012 at the SP 15 trading hub was a hair over 3.0¢ per kWh[14] and there were only six days in the entire year when prices exceeded 5.7¢ per kWh -- and only one day when they exceeded 7¢![15]

Regardless whether SCE's 70% restart machinations have any motive more worthy than a reset of the §455.5 clock, even the back-of-the-envelope analysis above should establish that nothing less than restoration of both SONGS units to full operation is likely to come remotely

[13] Edison's response to a TURN data request provides SP 15 prices from Platts: "TURN-SCE-002 Q.07.a Response," February 26, 2013. This document is accessible at http://www3.sce.com/sscc/law/dis/SongsOIIDocLibrary.nsf/formDocument.xsp?documentId=EDDBCCCED9D28C3788257B20006FAA52&action=openDocument

[14] Edison quantifies this as $30.20 per MWh from January 9 (the start of Unit 2's scheduled outage) to December 31, 2012, "TURN-SCE-002 Q.13.b Response," February 25, 2013. This document is accessible at http://www3.sce.com/sscc/law/dis/SongsOIIDocLibrary.nsf/0/1E96C6D5DEF8243288257B1E0061D03E/$file/TURN-SCE-002%20Q.13.b%20Response.pdf

[15] The only periods of potential 2012 cost-effectiveness, had both SONGS units operated at 90%, were 16-hour blocks between 6 a.m. and 10 p.m. that cleared above $57 per MWh: August 9, $66; August 15, $61.25; August 16, $62.75; October 1, $73.25; October 2, $62.75; October 17, $58.

close to commercial reasonableness. Even that mirage would have been cost-effective in only 96 hours during 2012, slightly more than 1% of the hours in the year!

IV. SCE KNOWS THAT REPLACING THE BROKEN STEAM GENERATORS WOULD TAKE TOO LONG TO BE A PRACTICAL BUSINESS SOLUTION.

Does anyone seriously think that John Bryson would have accepted delivery of a new Lexus if, before its first maintenance cycle was complete, it exhibited the mechanical deterioration discovered in the SONGS steam generators in 2012? I expect that he would have told the dealer that he paid for a new car and, as a result, was entitled to a car in new condition. I doubt that he would have tolerated a run-around from the dealer's service department that he should just accept that half the engine's cylinders wouldn't be functional for some indefinite, but extended, period of time. Or that he should experiment with low power operation in the one-half of the cylinders that might be made to work. I'm confident it wouldn't have taken him long to say, "Replace this #@&*%#8+@* car!"

By what logic should a utility's investments, made on behalf of its customers and with the full expectation that such costs will be passed on to customers, be regarded any differently?

If it only takes the back of an envelope to determine that partial repair is not a viable option, one need not stare at the calendar too long to conclude that "Replace these #@&*%#8+@* steam generators!" doesn't work any better. Characteristically, it took Edison more than a year to disclose this publicly, but the February 26, 2013 Form 10-K filed by Edison International finally did:

> *SCE has also been engaged in the analysis of what repairs, if any, could be undertaken to restore the steam generators on both Units to their originally specified capabilities safely, and has been advised by MHI that a possible course of action would be replacement of significant portions of the steam generators, a process that could take more than five years.*[16]

Businesswise, "more than five years" is a show-stopper. Whether measured from February 26, 2013 or from the forced outage date of January 31, 2012, even the most optimistic assumptions (i.e., free replacements taking precisely five years) would only leave between four and five years of "used and useful" operation before license expiry. For a project which originally was barely breakeven assuming amortization over 11-12 years of "used and useful" operation and a much higher forecast of natural gas prices, there is no way the shorter amortization period with updated gas prices can pencil out. Even assuming that SONGS could be mothballed for "more than five years" and its specialized workforce somehow kept in cryovac storage, it's difficult to envision Ted Craver seeing this as an opportune time to pitch the EIX Board of Directors on the business merits of extending the SONGS licenses.

V. ONLY SCE's UNFETTERED ACCESS TO RATEPAYER MONEY HAS ENABLED THIS FLOUNDERING REGULATORY SHELL GAME.

[16] Edison International Form 10-K, February 26, 2013, p. 26. This filing is accessible at http://services.corporate-ir.net/SEC.Enhanced/SecCapsule.aspx?c=85474&fid=8654098

If Unit 2's 70% low power operation scenario is a dog that will not hunt, and the free replacement of the four damaged steam generators is a business strategy that will not pencil, why do we persist in pointless melodrama? Wouldn't it be better to accept the reality that the irreparable damage to the steam generators means SONGS isn't likely to come back, and that a better expenditure of ratepayer funds would be directed at promptly attempting to shore up SONGS-related weaknesses in the Southern California grid?

In my opinion, this paralyzing stagnancy exists for one reason only: Edison isn't spending its own money. Economics literature abounds with discussion of "moral hazard" and the disinhibiting effects of using other people's money when the actor believes that no liability will attach to him. Edison's conduct of the entire steam generator replacement project – bolstered by its confidence that all costs will be passed through to ratepayers – seems destined for a prominent place in the text books, and no episode is likely to attract more attention than the meandering repair/replacement "path to nowhere" since the January 31, 2012 shutdown. The Commission should demand that Edison prove the reasonableness of its post-shutdown costs by establishing their clear nexus to an eventual restoration of SONGS to economically viable operation. This charade will quickly end once Edison shareholders are truly at risk for these expenditures.

Edison's propaganda fog could lead one to believe that it is trying to preserve an economically cost-effective generating asset, but even the back-of-the-envelope arithmetic and quick calendar glance immediately turned this premise to pipedream once the extent of damages and the timeline for replacement were known. While customers expect their utility to be focused on providing reliable and affordable electricity, Edison may be motivated by a more reflexive business instinct. If Edison can get the $699.4 million[17] it has requested for its share of the replacement steam generators put into rate base, it can more than double its existing $545 million[18] rate base investment at SONGS. To do this, it needs to keep the music playing a bit longer.

VI. THE NRC WARNED SCE ABOUT MITSUBISHI IN 2004, AND SDG&E VEHEMENTLY DISPUTED THE WISDOM OF PROLONGING SONGS' LIFE.

Assessing the reasonableness of Edison's actions and expenditures after the January 31, 2012 shutdown unavoidably requires some knowledge about what Edison knew at the time. Without exhaustively dwelling on subject matter intended for later phases of this proceeding, the Commission should keep uppermost in mind two overriding facts: 1) the NRC had placed SCE on notice in 2005 about concerns with Mitsubishi Heavy Industries; and 2) SDG&E had voiced exceptional reservations from 2002 to 2004 about the wisdom of the steam generator replacement and extending SONGS' life beyond 2012 or 2013.

In response to an A4NR data request, Edison provided heavily redacted copies of the minutes of meetings of the San Onofre Board of Review ("SOBOR"). Even with the sanitizing tendency often seen in recorded minutes, the portions of SOBOR minutes made public by Edison reflect some remarkable moments of candor. I urge the Commission to review them in

[17] SCE-06, Table IV-5, p. 15.
[18] SCE-01, Table III-2, p. 13.

their entirety in unredacted form before making final decisions in any phase of this proceeding. Regarding the SOBOR meeting of August 5, 2005, Edison originally redacted all of page 2 of the minutes. After SDG&E (in response to a separate A4NR data request) expressed its view that this redaction had been made in error, Edison turned over the following previously redacted paragraphs from page 2:

> *Steam Generator fabrication has been contracted with Mitsubishi Heavy Industries in Japan. The design is similar to Arkansas 2 and Fort Calhoun replacements. SCE has requested California Public Utilities Commission approval for ratepayer funding of the replacement. Their ruling is expected at the end of 2005. The SONGS 2 steam generator replacement is scheduled for fall of 2009. The SONGS 3 steam generator replacement is scheduled for fall of 2010.* ***<u>The only comment the NRC had.</u>*** (sic) ***<u>was regarding oversight at the Mitsubishi shop. They were assured that we have considerable oversight in this area.</u>***
>
> ***<u>This information on the meeting with the NRC was provided for co-owner awareness.</u>***[19] (emphasis added)

The SOBOR minutes are even more remarkable for the detail they provide of SDG&E's strong conviction that replacing the original steam generators at SONGS was a bad idea. The unredacted portion of the minutes of the October 30, 2002 meeting reports the following:

> *Mr. Avery / SDG&E noted that marginal cost per kilowatt-hour for SDG&E is the deciding issue on steam generator replacement.* ***<u>SDG&E doesn't want to build rate base in SONGS. They have zero rate base now.</u>*** *They understand the difficulties in not replacing steam generators, but* ***<u>are not convinced that SONGS should operate beyond 2013.</u>***[20] (emphasis added)

---

[19] SOBOR Minutes, August 5, 2005, p. 2. Edison has not yet posted on its I.12-10-013 documents web site its supplemental response containing the unredacted paragraphs.

[20] SOBOR minutes, October 30, 2002, p. 3. This document is accessible as IDOCS_19845621_2.PDF at http://www3.sce.com/sscc/law/dis/SongsOIIDocLibrary.nsf/formDocument.xsp?documentId=1314DDA363E05391
88257B02005FEE4F&action=openDocument

The unredacted portion of the minutes of the SOBOR meeting of May 16, 2003 conveys a deepening opposition by SDG&E:

> *The impact to the transmission system if SONGS is shut down because of steam generators needs to be carefully considered.* ***SDG&E indicated that their customers might actually incur transmission system benefits, if SONGS was shut down.*** [21] (emphasis added)

Climactically, the unredacted portion of the minutes of the July 21, 2003 meeting describes a turning point:

> *Mr. Avery noted that their decisions* [to oppose steam generator replacement] *were based on 6 - 8 scenarios that they looked at which indicate that* ***this investment would not be in the best interest of their customers.*** *Extended operation of SONGS increases the real cost to their customers of Decommissioning. They are open to stepping out of their SONGS ownership or selling their share of SONGS.* ***They do not want to continue taking the nuclear risk into the future****. They are comfortable operating the existing steam generators as long as they last, and allowing the units to be decommissioned once the steam generators are no longer viable to be operated. Mr. Avery noted that* ***SDG&E wants to explore a date certain for plant shutdown.*** *Mr. Avery stated that if SCE elects to replace steam generators and thereby extend the life of the units, then* ***SDG&E would entertain an offer from SCE to buy SDG&E's ownership share.*** [22] (emphasis added)

For reasons that have never been made public, SDG&E ultimately recanted its opposition, embraced the steam generator replacement project, and to this day retains its 20% ownership interest in SONGS. What prompted that radical change in position is not necessarily relevant to Phase 1 of this proceeding, but a full understanding of the basis for (a) SDG&E's

---

[21] SOBOR minutes, May 16, 2003, p. 7. This document is accessible as IDOCS_19845896_2.PDF at http://www3.sce.com/sscc/law/dis/SongsOIIDocLibrary.nsf/formDocument.xsp?documentId=1314DDA363E0539188257B02005FEE4F&action=openDocument

[22] SOBOR minutes, July 21, 2003, p. 2. This document is accessible as IDOCS_19845898_2.PDF at http://www3.sce.com/sscc/law/dis/SongsOIIDocLibrary.nsf/formDocument.xsp?documentId=1314DDA363E0539188257B02005FEE4F&action=openDocument

original opposition, as well as (b) the NRC's warning about oversight of Mitsubishi Heavy Industries, most certainly is. What-did-they-know-and-when-did-they-know-it has become an investigative cliché, but proper assessment of Edison's 2012 expenditures requires awareness of this context.

VII. EDISON's MANAGEMENT SPENT 2012 IN A GOLD-PLATED FANTASY WORLD, IMMUNIZED FROM PERSONAL PERFORMANCE METRICS.

A random survey of SCE customers would probably show a consensus that 2012 was a pretty tough year for Edison: relentless international publicity about its inoperative nuclear plant; repeated warnings of the prospect of rolling blackouts as a result; the bankruptcy of its Edison Mission Energy subsidiary and an associated $1.5 billion impairment charge in November; a multiple murder shooting tragedy in one of its offices; a lengthy delay in its General Rate Case. Thanks to the Commission's longstanding generosity in calculating its cost of capital, however, Edison has been inoculated from adversity. The overpowering strength of its dividend stream has made its shareholders impervious to bad luck or bad management, and indifferent to distinguishing one from the other.

This carnival atmosphere spews from the March 15, 2013 Edison International proxy statement, and why shouldn't it when the stock price outperformed the Philadelphia Utility Index by 13.9% in 2012 (albeit undershooting the S & P 500 by 4.2%)? Many of the corporate governance elite who sit on boards at companies like EIX long ago realized that distinguishing causation from correlation was not their cup of tea and retreated to ambiguous performance criteria. When the formulae don't produce the desired result, it's ok to make adjustments that re-create a Garrison Keillor world where all the women are strong, all the men are good looking, and all the children are above average. What other explanation can there be for the target-shifting sorcery described in the EIX proxy statement for 2012 executive compensation?

> *Performance on the 2012 financial goal for EIX, measured primarily by consolidated core earnings and weighted 60% at target, is shown below. In February 2012, the Committee set the threshold level of consolidated core earnings, below which no incentive would be paid, at $528 million, and set target and maximum scores at $757 million and $923 million in consolidated core earnings, respectively.*
>
> *These original threshold, target, and maximum levels were set under the assumption that losses at EME would be included in consolidated core earnings. However, EME has been deconsolidated from EIX's financial results and is accounted for as discontinued operations. As a result, EME is classified as non-core for purposes of EIX's 2012 consolidated core earnings.*
>
> *In February 2013, the Committee adjusted the 2012 threshold, target, and maximum levels of consolidated core earnings to exclude EME's results. The adjusted threshold, target, and maximum levels are $939 million, $1,168 million, and $1,334 million, respectively. EME's 2012 losses through the date of deconsolidation were lower (i.e., better) than the budgeted target, so the adjustment of the threshold, target, and maximum levels to exclude EME's losses resulted in a lower financial performance score than if EME's losses had been included and the original threshold, target, and maximum levels had been applied. For purposes of scoring financial performance, the Committee also reduced the actual consolidated core earnings from $1,278 million to $1,245 million by excluding certain deferred tax adjustments.*[23]

While stereotype would cast the CEO's Board cronies as manipulating his performance scores upward to produce the desired pay raise, the Edison Wonderland which Ted Craver has created relies on moving the goal posts further back to avoid turning a lavish increase into a spectacle of plunder. This financial engineering produces much more appealing optics. And qualitative targets aren't entirely exempt from Orwellian doublespeak:

[23] EIX Proxy Statement, March 15, 2013, p. 29.

Key factors contributing to above-target scores were:

• Strategic Initiatives: Achieved an outcome from SCE's 2012 General Rate Case that was in line with strategic goals. Achieved significant cost savings for SCE customers through initiatives to further the strategy of providing electricity at affordable rates. Entered into an agreement with EME and a majority of its senior unsecured noteholders (subject to bankruptcy court approval) in furtherance of strategy to resolve uncertainties and reduce business risks.

• People and Culture: Exceeded goals for addressing results of work environment reviews.[24]

.

So is there any surprise, in a year when Edison managed to incapacitate its primary utility-owned generation asset; throw its competitive generation subsidiary into bankrupt deconsolidation; and terrify the second largest region in the US economy with fear of a destabilized electricity grid, that Ted Craver would be gifted by a nominally independent Board of Directors with a 6% increase in total compensation to the princely sum of $11,490,586? Not bad, considering that Edison ratepayers only had to shoulder a 5.1% rate increase to afford Mr. Craver's services. Or that the cost-of-living adjustment provided to Social Security recipients, disabled veterans, and other beneficiaries of federal entitlements amounted to 1.7%.

I should add that in 2011 – the 2012 amount has not been reported yet – Mr. Craver also enjoyed the benefit of a tax-free expense account of $334,271.81,[25] but I feel almost churlish in calling attention to such small amounts.

My larger point is this: in searching for a solution to the fiasco at San Onofre, reliance on the current financial motivation of Edison's management would be wildly misplaced. They have channeled one of the most generous dividend streams in the utility industry – a product

[24] *Id.*
[25] SCE, General Order No 77-M 2011 Annual Report, Section 1.a.

entirely of this Commission's creation – to immunize themselves from any of the "turbulence induced vibration" which their squalid 2012 performance would ordinarily be expected to create. Born-on-third-base-and-thought-he-hit-a-triple doesn't begin to do justice to this self-congratulatory hubris. Fainted-at-the-plate-and-thought-he-hit-a-homerun is more accurate.

VIII. ABANDONING SONGS WOULD BE INCONSEQUENTIAL TO EIX's STOCK PRICE.

The flipside of the massive dividend machine which Commission policy has created at Edison is recognition of how little difference SONGS actually represents in terms of shareholder value. If there was any doubt about this among the quantitatively-challenged, the cat was let out of the bag last September in a report by the respected International Strategy and Investment Group LLC ("ISI"). The ISI report focuses on the demise of Edison Mission Energy, but in the course of discussing the SONGS outage makes clear that the nuclear plant is such a small portion of SCE's rate base (even assuming the broken steam generators enlarge it to $1.2 billion), that losing SONGS entirely would not have a material impact on earnings potential:

> *If SCE were unable to return both units to service, the facility could be written off – reducing rate base by up to $1.2bn and earnings power by ~$0.18/share in the next GRC (rates in 2015). This would impact our valuation by around $3/share.*[26]

The ISI report quotes a price for EIX on the day before its publication of $44.47. Six months later, EIX closed at $50.71. Under these circumstances, $3 seems a small levy for

[26] ISI, "Edison International (EIX) Significant Catalysts Between Now & Year-End, Target Remains $49/Share," September 13, 2012, p. 2. This report is accessible at http://www.isigrp.com/main/assets/pdfs/01-pu.pdf

shareholders to absorb for Edison's mismanagement of (and, as subsequent phases of I.12-10-013 will likely establish, responsibility for) the SONGS outage. And even this projected $3 impact on valuation cynically assumes that the Commission rubberstamps SCE's application to forcibly thrust $699.4 million of unusable steam generators into rate base. The Commission needs to think long and hard about when the music should stop.

IX. CONCLUSION.

In Phase I of this proceeding, Edison bears the burden of proving by a preponderance of the evidence that all of its 2012 actions relating to SONGS were reasonable and that it deserves to recover all of its 2012 SONGS-related expenditures from ratepayers. For a plant which was neither used nor useful for virtually the entire year, this was always going to be quite difficult. Compounding this burden is the unavoidable reality that Edison could have quickly determined, and probably did, that there is no reasonable prospect for restoring either Unit 2 or Unit 3 to cost-effective operation during their existing licenses. The Commission should not allow Edison to throw ratepayer money down this rathole. These resources are better directed to healing the wound to grid reliability that the SONGS steam generator debacle has caused.

APPENDIX A

QUALIFICATIONS OF ROCHELLE BECKER

Rochelle Becker is an internationally recognized nuclear activist who has been engaged with California electric utility issues for 35 years. Since the late 1970s, she has appeared before the CPUC, the NRC, the California Energy Commission, the California Coastal Commission, the Legislature and Congress on matters affecting the state's nuclear power plants. In 2005, she co-founded and became Executive Director of the Alliance for Nuclear Responsibility having served for the previous 25 years as a spokesperson for the San Luis Obispo Mothers for Peace. She is a member of the California State Water Resources Control Board's Review Committee for Nuclear Fueled Power Plants.

A graduate of the University of San Francisco, she is also a former President of the Board of Directors of TURN. Ms. Becker was instrumental in gaining the support of California's Attorney General and the County of San Luis Obispo for federal court appeals of NRC decisions concerning the Diablo Canyon Nuclear Power Plant and has been sought out for consultation by NRC Chairmen Allison Macfarlane and Gregory Jaczko. She was an ardent supporter of Senator Sam Blakeslee's AB 1632 concerning seismic reassessments of the Diablo Canyon and San Onofre plant sites, and an active participant in the California Energy Commission proceedings surrounding it.

She has testified before the Commission in many previous proceedings.