Report of Malfeasance and Institutional Corruption at the California Public Utilities Commission

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Malfeasance at CPUC Threatens Security of the People of California

2007 San Diego Fire
Caused by SDG&E Equipment

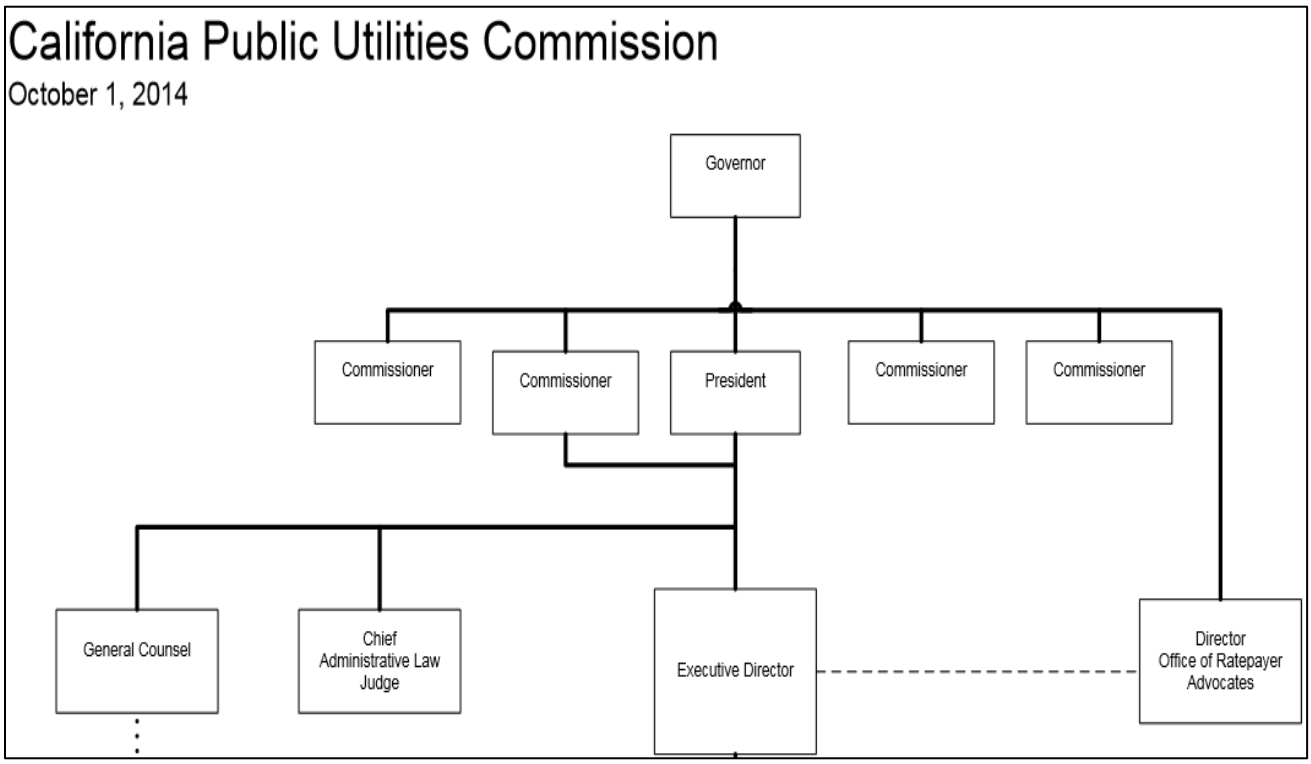
2010 San Bruno Fire Caused by PG&E Gas Lines

2011 Fukushima nuclear plant

San Onofre: Disaster Waiting to Happen

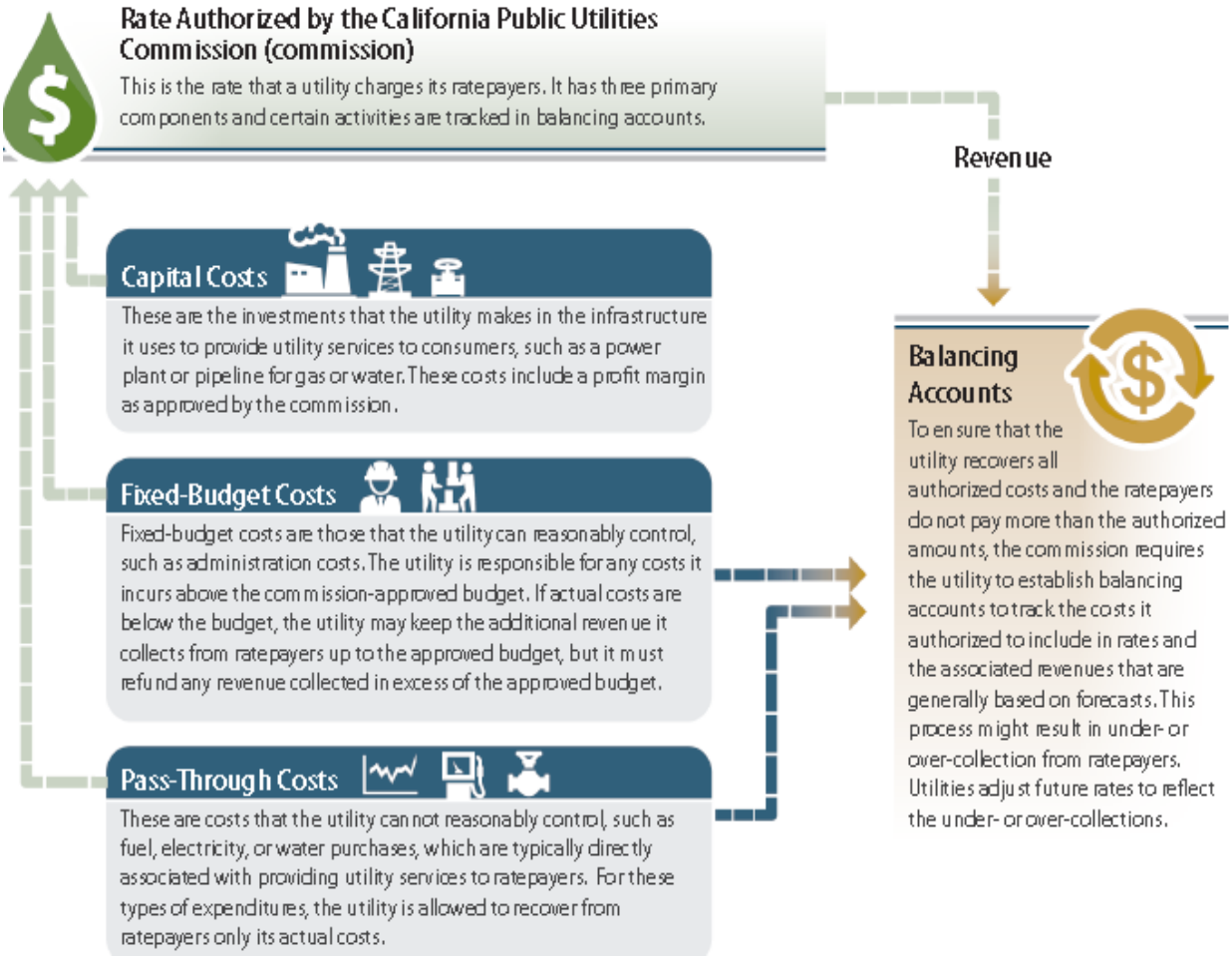
INTRODUCTION

This report is written with the hope of inducing the people of California to action. Malfeasance has spread into the bone marrow of California government. The malfeasance of California's government is illustrated by the corruption at the California Public Utilities Commission (CPUC), which operates under the Governor of the State of California.



The CPUC has 1,000 staff positions and a budget of $1,332,214,000. Under Public Util. Code § 431, the CPUC annually determines a fee to be paid by "every electrical, gas, telephone, telegraph, water, sewer system, and heat corporation and every other public utility providing service directly to customers or subscribers and subject to the jurisdiction of the Commission to produce a total amount equal to that amount established in the authorized CPUC budget for the same year,

including adjustments for increases in employee compensation and an appropriate reserve to regulate public utilities.[1] The rate structure is explained:

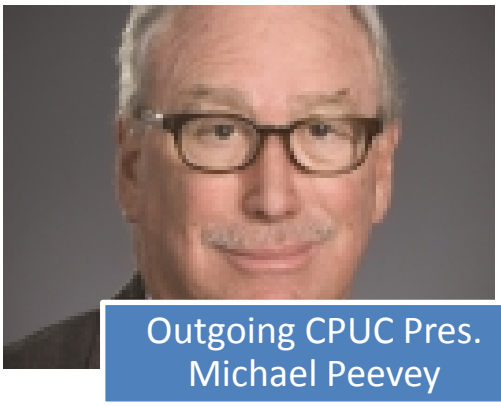


In addition, the CPUC has set up seventy energy programs and several nonprofits, discussed infra.

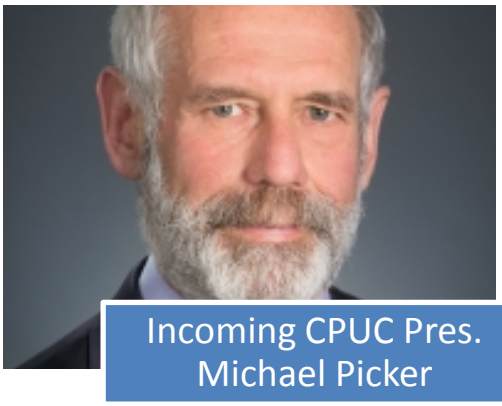
[1] Less the amount to be paid from special accounts or funds pursuant to Section 402, reimbursements, federal funds, and any other revenues, and the amount of unencumbered funds from the preceding year.

CHANGING OF THE CPUC GUARD

Michael Peevey, President of the CPUC, was forced to step down in the face of a judge-fixing scandal. Another CPUC Commissioner has been exposed by his own emails to have been compromised by the utilities he is charged with regulating. As with Peevey, Michael Picker was a principal in a lobby firm known as Lincoln Crow Strategic Communications from 2001-2009. Governor Brown appointed Picker to the CPUC in January 2014. Picker voted with Peevey on matters before the CPUC approving the collusive San Onofre settlement.



Outgoing CPUC Pres. Michael Peevey



Incoming CPUC Pres. Michael Picker

The corruption and malfeasance identified in this report is integral to the ways and means the CPUC has come to operate. The departure of Peevey does not cleanse the bad practices; it may, in fact, create the false impression and diminish the energy behind CPUC reform. Californians spend more than $47 billion annually for services from industries regulated by the PUC[2] ($13,000,000,000 from the investor-owned electricity utilities). The people of California's safety must be maintained and the CPUC must ensure the utilities use customers' funds for their intended purposes. The CPUC must begin again to honor its purpose of protecting the people of California from unreasonable rates. Cal Pub. Util Code § 451.

[2] 8660 Public Utilities Commission 2014 budget at GG2.

STORM WARNINGS SHOW THE CPUC CANNOT BE TRUSTED TO PROTECT THE PEOPLE OF CALIFORNIA

The safety concerns are heightened in the case of San Onofre where tons of nuclear waste will be stored indefinitely.[3] High-level wastes are hazardous to humans and other life forms because of their high radiation levels that are capable of producing fatal doses during short periods of direct exposure.[4] High level radioactive (or nuclear) waste results from the fuel used by reactors to produce electricity.[5] Separated High-level waste and spent fuel rods from nuclear power plants must be handled and stored with great care since they contain the highly-radioactive fission products, plus uranium and plutonium.[6] Nuclear fuel rods are ceramic pellets of uranium oxide (UO2), about the size of a finger joint, stacked and sealed inside a long metal tube (cladding) about as big around as a Sharpie pen. The space between the pellets and cladding is filled with helium.[7]

ACTION MUST BE TAKEN

The failure of the CPUC to protect ratepayers in the San Diego fire, San Bruno explosion, and San Onofre radiation leak and plant closure are "storm warnings" that the CPUC cannot be counted on to protect the people of California. The people of Okuma, Fukushima, Japan paid dearly for the failures of Japanese

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[3] http://www.kpbs.org/news/2014/may/12/del-mar-councilman-testifies-senate-hearing-decomm/

[4] http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/radwaste.html

[5] http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/radwaste.html

[6] http://www.nrc.gov/reading-rm/doc-collections/fact-sheets/radwaste.html

[7] "Spent fuel" refers to fuel used in a commercial nuclear reactor that has been removed because it can no longer economically sustain a nuclear reaction. Burnup refers to the uranium consumed in the nuclear reaction. It is expressed in gigawatt-days per metric ton of uranium (GWd/MTU)—a measure of how long a fuel rod is in the core and the power level it reaches. "High burnup fuel" is in the reactor core for longer than "low burnup fuel."

regulators when the Tōhoku earthquake and tsunami struck their city, knocked out the Fukushima Daiichi nuclear power plant operated by Tokyo Electric Power Company (TEPCO):

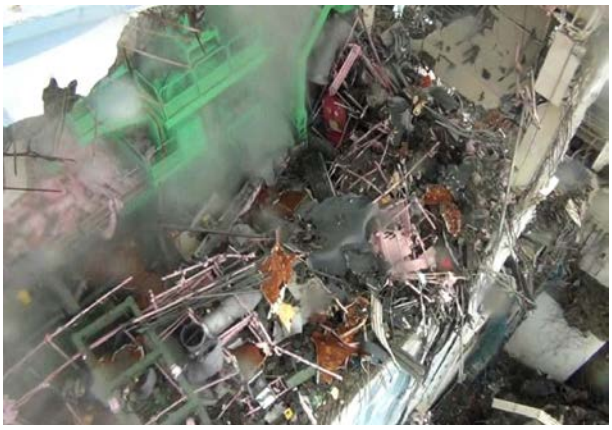
Following the earthquake, a 15-metre tsunami disabled the power supply and cooling of three Fukushima Daiichi reactors, causing the nuclear accident on 11 March 2011. All three cores at the nuclear station largely melted in the first three days. A Japanese commission faulted the government, regulators, and TEPCO for not anticipating and preventing the crisis at the Fukushima Daiichi Nuclear Power Plant.[8] The destruction of the Fukushima plant resulted in massive radioactive contamination of the Japanese mainland.

In November 2011, the Japanese Science Ministry reported that long-lived radioactive cesium had contaminated 11,580 square miles (30,000 sq km) of the land surface of Japan. Some 4,500 square miles – an area almost the size of

[8] http://www.districtenergy.org/blog/2012/07/08/commission-concludes-fukushima-accident-was-manmade/

Connecticut – was found to have radiation levels that exceeded Japan's allowable exposure rate.[9] All of the land within 12 miles (20 km) of the destroyed nuclear power plant, encompassing an area of about 230 square miles (600 sq km), and an additional 80 square miles (200 sq km) located northwest of the plant, were declared too radioactive for human habitation. All persons living in these areas were evacuated and the regions declared permanent "exclusion" zones. [10]

Fukushima Before Disaster



Fukushima After Disaster

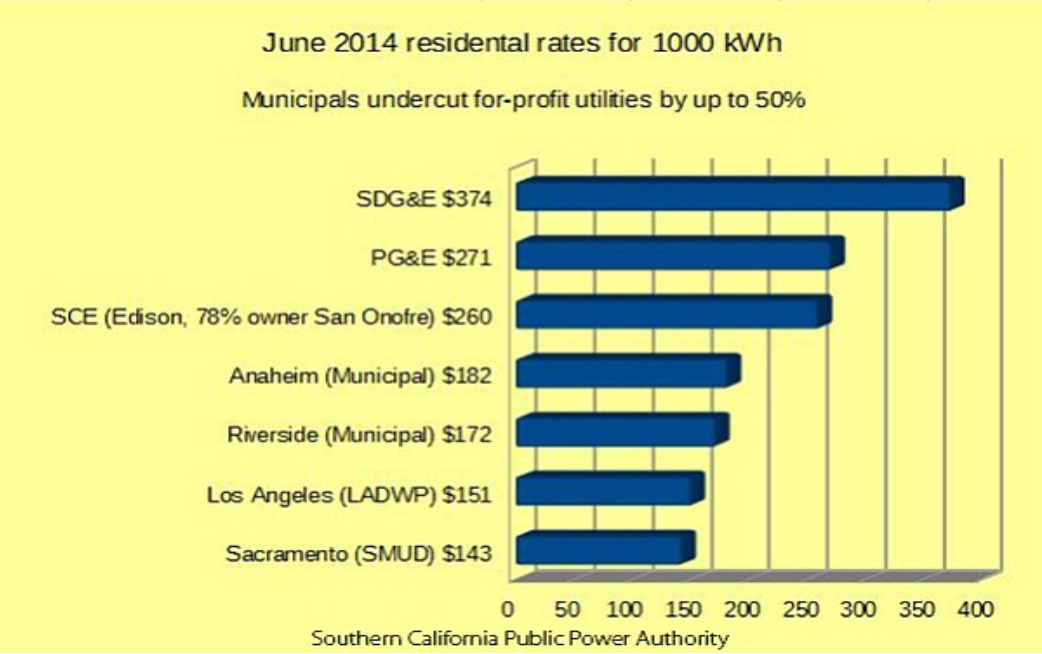
The people of California cannot ignore the "storm warnings" showing the CPUC has failed its duty to protect ratepayers from unreasonable rates. CPUC imposed rates on ratepayers, but then failed those funds were used to fix pipes, clear brush, obtain reliable steam generators instead of one that have not been used for their intended purposes.

[9] The exposure rate was 1 mSV (millisievert) per year About a month after the disaster, on 19 April 2011, Japan chose to drastically increase its official "safe" radiation exposure levels from 1 mSv to 20 mSv per year – 20 times higher than the US exposure limit. This allowed the Japanese government to downplay the dangers of the fallout and avoid evacuation of many badly contaminated areas.

[10] http://www.psr.org/environment-and-health/environmental-health-policy-institute/responses/costs-and-consequences-of-fukushima.html

RATEPAYERS CHARGED UNREASONABLE RATES

Customers of utilities the CPUC "regulates" pay amongst the highest rates in the nation and more than their fellow citizens who buy their electricity from publicly owned utilities:



Rates have consistently gone up while electricity consumption has remained constant. Between 2009 and 2013, rates for investor-owned utility customers went up 19.16% between 2009 and 2013. In 2013, the investor-owned utilities charged ratepayers the greater part of $13,000,000,000; this was up from $10,373,000 (19.16%).

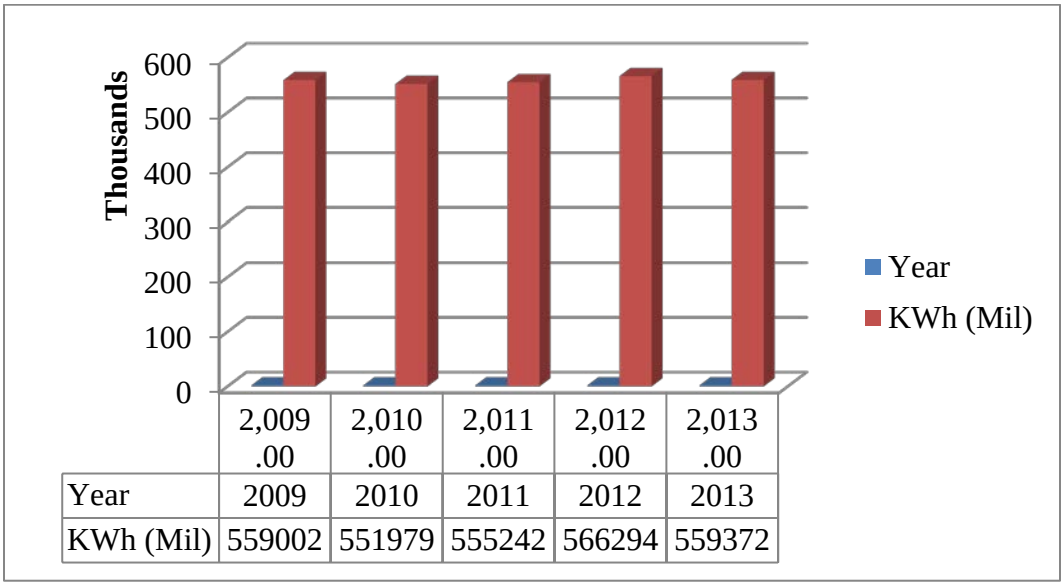
Table II-2
2013 Authorized Electric General Rate Case Revenue Requirements ($ Million)

	PG&E	SCE	SDG&E
Operations and Maintenance	$1,947	$2,272	$659
Depreciation	$1,099*	$1,222	$274
Return on Rate Base	$1,246	$1,465	$300
Taxes	$734	$712	$207
Attrition **	$295	$358	$40
Total	**$5,321**	**$6,029**	**$1,481**

2009 General Rate Case Revenue Requirements (000)

	PG&E	SCE	SDG&E
Operations and Maintenance	$1,827,122	$1,853,119	$445,646
Depreciation	$1,019,254	$1,106,992	$285,756
Return on Rate Base	$909,993	$1,066,918	$246,799
Taxes	$617,138	$819,612	$176,474
Total	**$4,373,507**	**$4,846,641**	**$1,154,675**

Even as rates utility rates increased by almost 20% for utilities, the consumption of electricity in California remained constant:



	2,009.00	2,010.00	2,011.00	2,012.00	2,013.00
Year	2009	2010	2011	2012	2013
KWh (Mil)	559002	551979	555242	566294	559372

This report examines the CPUC's decision to make ratepayers pay for the San Onfore nuclear power plant after it was permanently knocked out of service by Edison executives' decision to obtain and deploy defective steam generators. The generators failed after less than 1 year of joint-use. The CPUC authorized Edison to charge customers the greater part of $5,000,000,000 over the decade for a plant that has not—and will not—produce any more electricity. Worse, the CPUC is supporting Edison's current plan to leave 1,631 tons—3.6 million pounds—of life-threatening nuclear waste stored on the ocean shore in North County San Diego. This will make San Diego one of the nation's largest nuclear waste dumps.

The table below illustrates the magnitude of the waste:

THE SAN ONOFRE NUCLEAR WASTE INDEX

Total amount of spent fuel on site : 1631 tons

Amount of spent fuel currently stored in pools: 1099 tons

Amount of spent fuel in dry casks : 430 tons

Number of spent fuel rods generated by 44 years of reactor operations: 926,836

Amount of radioactivity in the spent fuel rods: 484 million curies

Amount of spent fuel to be stored in cooling pools: about 73 percent

Number of times the radioactivity in SONGS's cooling pools
exceeds that in 177 waste tanks at the notorious Hanford , Wash., site: nearly 3

Percentage of radioactivity in SONGS' waste that is Cs-137, the most risky form: 43

Number of times the radioactivity in Cs-137 at SONGS
exceeds all that released in atmospheric nuclear weapons tests: 6

Number of times it exceeds that released at Chernobyl: 89

Southern California Edison (Edison) was paid money for defective San Onofre steam generators. Later reports will examine the CPUC's conduct in the San Bruno explosion caused by PG&E gas lines. PG&E was paid ratepayer money to fix them, but failed to do so. This is no different than the ratepayer money awarded to SDG&E, despite the SDG&E equipment-caused 2007 San Diego fire. In each case, the CPUC granted rate increases—to buy new steam generators, to fix worn gas pipes, and to clear fire risk brush, but in each case the utilities failed to properly use ratepayer funds for their intended purpose. In each case, the CPUC blocked its own investigations into utility executive wrongdoing.

CPUC MALFEASANCE AT SAN ONOFRE

One clear and unequivocal lesson arises from each of these disasters: the CPUC currently constituted cannot be trusted with the safety or security of the people of California.

In January 2004, a state-set mechanism expired that had allowed Edison to recover about 4 cents per kilowatt hour to pay San Onofre operating costs, including the plant's fuel and fuel financing costs, and incremental capital expenditures. Any money left over was passed on to shareholders. (Nucleonics Week 21 November 2004) In 2004, Edison embarked upon a scheme to obtain ratepayer funds though the CPUC to pay up front for new and more potent steam generators at its San Onofre Nuclear station before they were shown to be "used and useful."[11] Under CPUC President Michael Peevey, the CPUC approved the new steam generator project in December 2005.

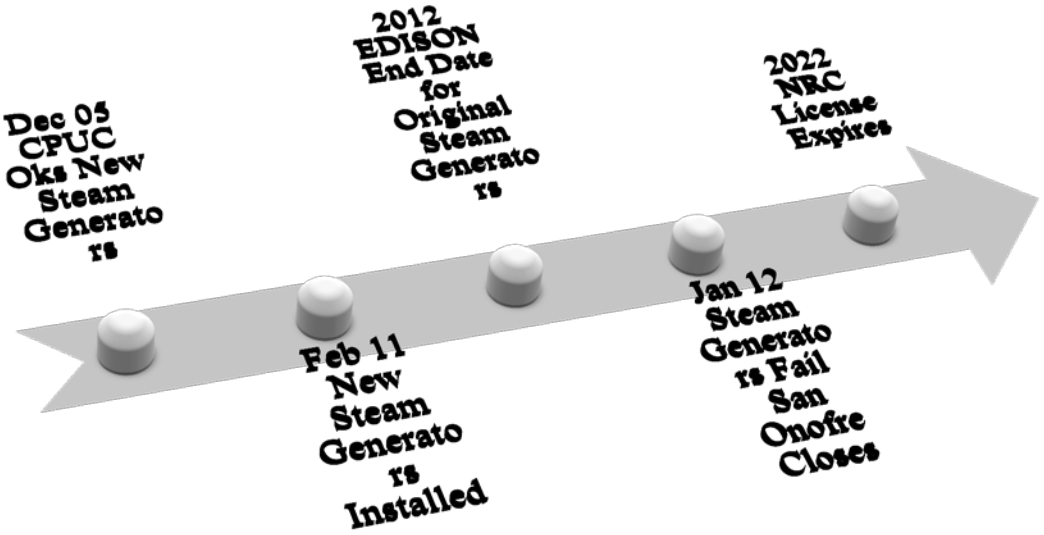
Peevey, a former Edison executive, had an extensive and long-term involvement in San Onofre. It was Peevey who defended Edison when a CPUC staff report recommended Edison "be barred from charging their customers for $723 million of the cost of units 2 and 3 at the San Onofre nuclear power plant." In

[11] In any decision establishing rates for an electrical or gas corporation reflecting the reasonable and prudent costs of the new construction of any addition to or extension of the corporation's plant, when the commission has found and determined that the addition or extension is used and useful, the commission shall consider a method for the recovery of these costs which would be constant in real economic terms over the useful life of the facilities, so that ratepayers in a given year will not pay for the benefits received in other years. Cal. Pub. Util. Code § 454.8; 8 Energy L. J. 303 (1987)

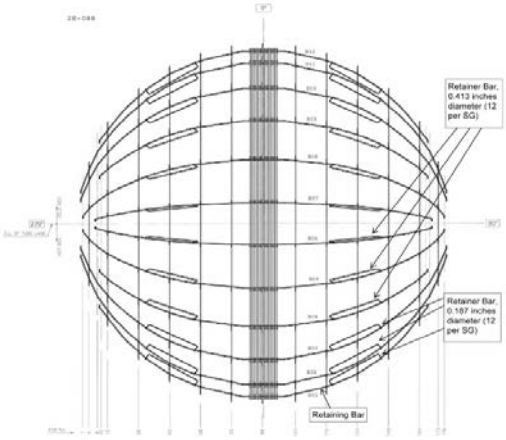
1970, Edison "estimated that the two units would cost $437 million and be placed in operation in 1975 and 1976. Unit 2 began operation in 1983, and Unit 3 in 1984, at a combined cost of $4.5 billion (10 times the original estimate), according to a 8 May 1985 Wall Street Journal report. Peevey, then a Senior Vice President at E Edison, defended the San Onofre overcharges:

> We knew there was going to be some disallowance but were shocked at the magnitude," said Michael Peevey, senior vice president of Southern Californian Edison. "We believe it is totally unjustified."

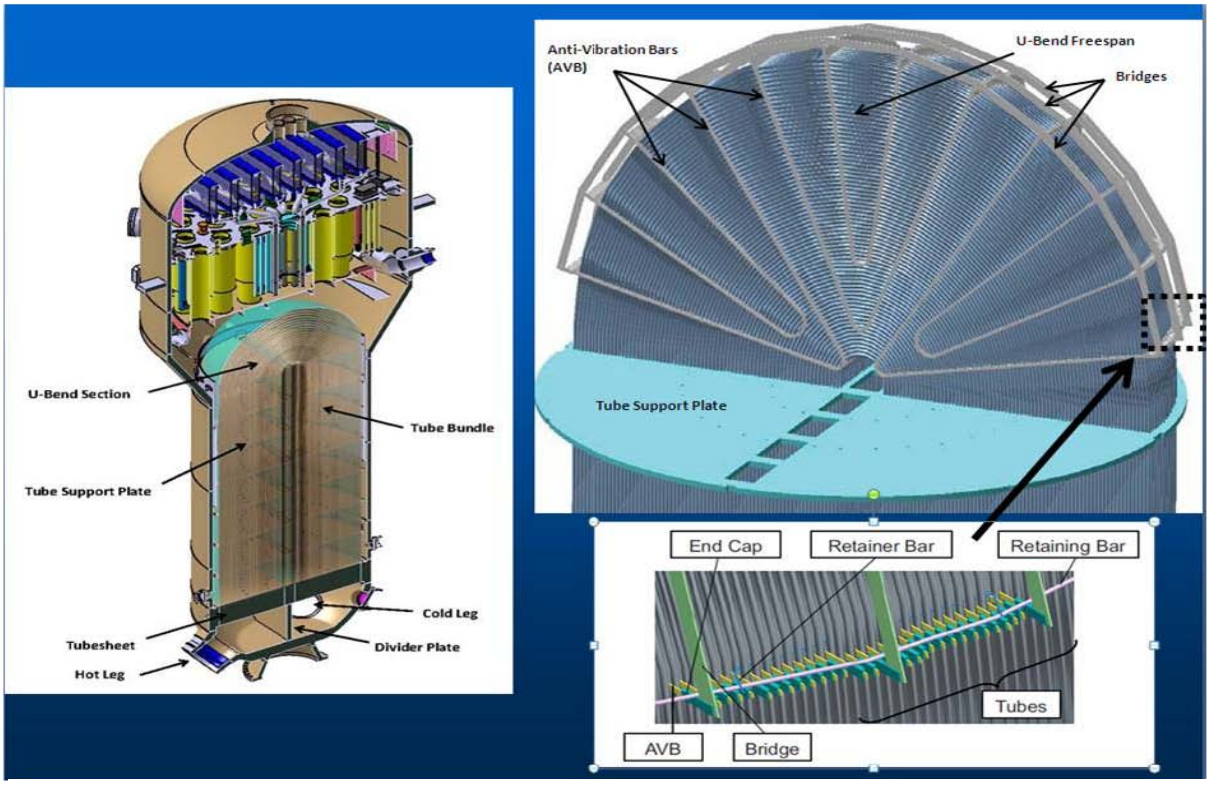
On 7 June 2006, Edison notified the Nuclear Regulatory Commission (NRC) of its intent and timeline to replace Unit 2 and Unit 3 steam generators under 10 CFR 50.59. (NRC Office of Inspector General Report San Onofre p. 7) The new steam generators were supposed to extend San Onofre for another 13 years (2009-2022). EDISON set a 21.4% plugging level as the technical end-of-life of the original steam generators (OSGs). The San Onofre worst-case forecast indicated that the 21.4% plugging level could be reached **as early as 2012**. (20 March 2012 Atomic Power Review, p. 1) The NRC license for San Onofre expires in 2022.



The Edison briefing document given to the NRC indicated there would be no associated "power uprate." (NRC Office of Inspector General Report San Onofre, p. 7) But the new steam generators (with new turbines) was a power uprate—they produced 48 more megawatts of power —enough to support about 31,000 average-sized homes.[12] The new generators differed in design from the original steam generators: each had 9,727 tubes, which 377 more tubes than the originals, depicted here:

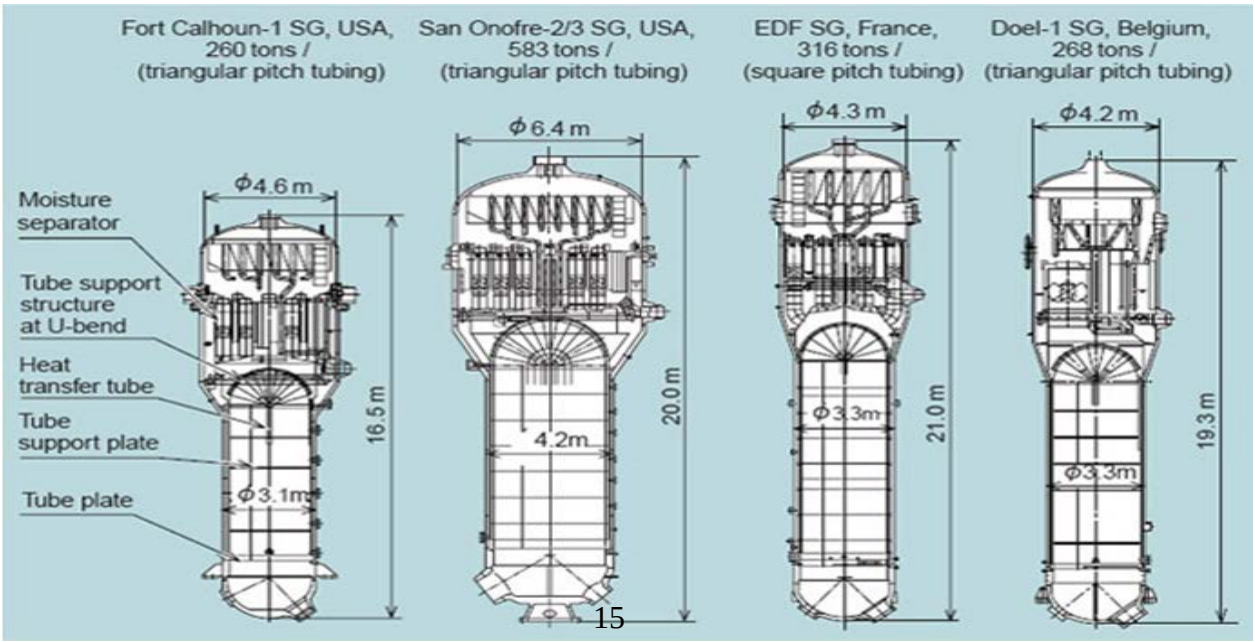


[12] To increase the power output of a reactor, typically more highly-enriched uranium fuel and/or more fresh fuel is used. This enables the reactor to produce more thermal energy and therefore more steam, driving a turbine generator to produce electricity.

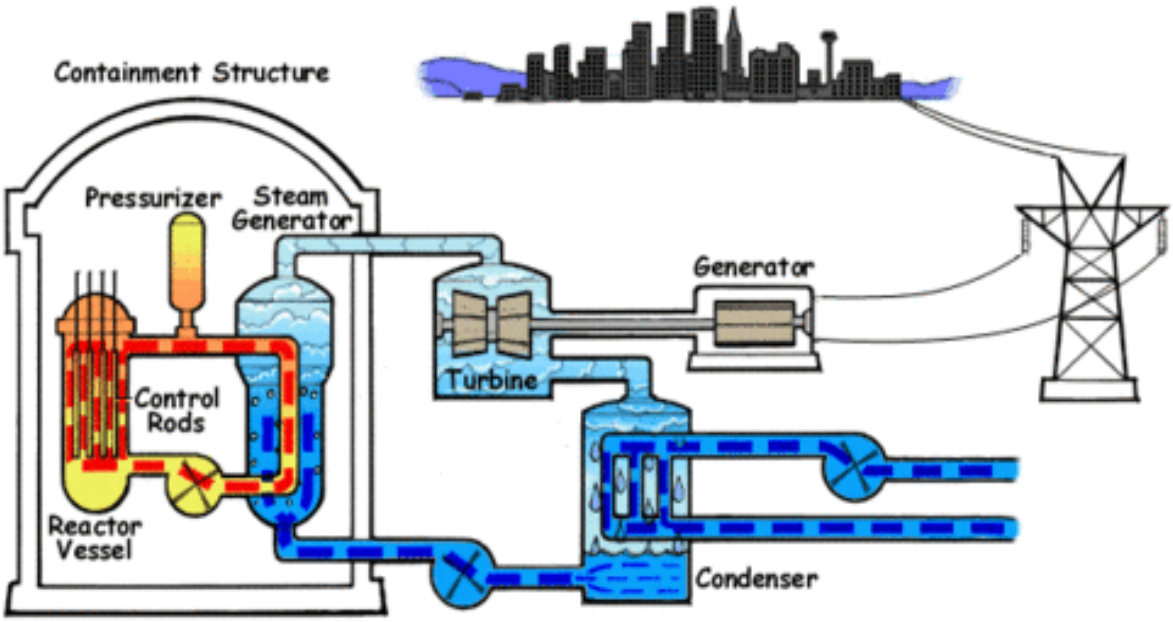


To evade a safety review of Edison's experimental design with an unprecedented tube increase, it eliminated the critical anti-vibration safety bars.

At 65 feet long, 23 feet wide and 621 tons in weight, the new steam generators were twice as big as those in most nuclear plants:



As shown in the following illustration, the steam generators produced steam, which turned turbines that generated electricity, as depicted below:



The two new turbines (costing ratepayers at least $78,000,000) worked with the new steam generators to produce 48 more megawatts than the original steam generators. [13] Their installation was aborted when the steam generators failed in January 2012.[14]

Neither used nor useful, the aborted turbine installation cost ratepayers $78 million.

[13] See testimony by Edison Witness Perez, Transcript pp. 514-515.
[14] ORA Report on the Results of Operation of Edison GRC Test Year 2012.

The new generators were designed and fabricated between 2004 and 2010. An immediate issue was whether Edison would obtain a safety license amendment from the NRC which would provide safeguards against Edison deploying and operating defective steam generators.

> Nuclear power reactors are licensed based on a given set of requirements, depending primarily on the type of plant. This set of requirements is called the plant's "licensing basis." A principal licensing basis document is the plant's final safety analysis report (FSAR). The FSAR and the plant's NRC license and associated technical specifications are the principal regulatory documents describing how the plant is designed, constructed, and operated. The FSAR is also a key reference document used by NRC inspectors during both plant construction and operation, and it must be sufficiently detailed to permit the staff to determine whether the plant can be built and operated without undue risk to public health and safety.
> **
>
> If any of the criteria in 10 CFR 50.59 are not met (i.e., the change involves modification to the technical specifications or involves one of the eight criteria), the license holder must apply to NRC for a license amendment and obtain NRC's approval before implementing the change. (NRC Office of Inspector General Report San Onofre pp. iii-iv)

Two engineers who worked on the new steam generator project for Edison and its manufacturer, Mitsubishi Heavy Industries (MHI)—Boguslaw Olech and Tomoyuki Inoue—admitted avoidance of NRC approval was a major premise of the RSG project: “At SONGS, the major premise of the steam generator replacement project was that it would be implemented under the 10 CFR 50.59 rule, that is, without prior approval by the US Nuclear Regulatory Commission (USNRC).” (January 2012 NEI, Article p. 2)

The CPUC refused to examine the question of whether Edison crossed over the line and went from avoidance, to evasion, of § 50.59 even before the "AVB Design Team recognized that the design for the SONGS RSGs resulted in higher steam quality (void fraction) than previous designs" but did not implement "changes in design to reduce the void fraction" because the potential changes "could impede the ability to justify the RSG design under the provisions of 10 C.F.R. 50.59." (MHI Root Cause Report p. 22)

There is substantial evidence supporting the need for a careful investigation into whether Edison officials knowingly violated § 50.59 and were operating the steam generators at San Onofre in violation of the safety law when the replacement steam generators (RSGs) failed.

Former NRC Deputy Regional Administrator Elmo Collins explained that the design, as built, was fundamentally flawed and would not have been approved under any conditions. The new design was unacceptable because of adverse thermal-hydraulic conditions and inadequate upper tube structure support. (NRC Office of Inspector General Report San Onofre p. 24) On 23 December 2013, the NRC found EDISON had failed "to verify the adequacy of the thermal-hydraulic and flow-induced vibration design of the Unit 3 replacement steam generators, which resulted in significant and unexpected steam generator tube wear and loss of tube integrity on Unit 3 Steam Generator after 11 months of operation. (NRC Office of Inspector General Report San Onofre p. 9)

The design of the new steam generators was substantially different than the original. The largest in the industry, the original generators major design shortcoming proved to be tube wear, particularly in the U-bend region, requiring them to be replaced much sooner than stipulated by their design service life. (20 March 2012 Atomic Power Review, p. 1) The new design not only failed to correct

that shortcoming – it added to the likelihood of wear and malfunction by the significant increase in tubes and failure to eliminate vibration of those tubes.

Edison elevated its evasion of submitting the design of the RSGs to the NRC to the highest value, even over safety. (20 March 2012 Atomic Power Review, p. 2) The RSG design requirements and improvements had to be solved so they could be installed under the § 50.59 rule. (20 March 2012 Atomic Power Review, p. 2) This artificial requirement admittedly presented many challenges for the Edison and MHI project teams. (20 March 2012 Atomic Power Review, p. 2)

There were fundamental design changes that warranted taking the new steam generators out of the § 50.59 license exemption. For example, the stay cylinder supporting the tubesheet had to be eliminated. (20 March 2012 Atomic Power Review, p. 2) Removing the stay cylinder allowed for installation of more tubes than there were in the original steam generators. (20 March 2012 Atomic Power Review, p. 2) Thus, the replacement generators had 377 more tubes than the originals. The replacement generators did not have a stay cylinder supporting the tube sheet; they had a broached tube design rather than an "egg crate" tube support. (13 May 2013 US NRC Atomic Safety and Licensing Board pp. 3-4) Moreover, there were substantial changes in the Anti-vibration bars in the U Bend region (AVB), with the single major challenge here was control of the AVB thickness and flatness, and tube-to AVB gap size:

> **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.

Edison officials learned these facts during the new steam generator design phase (2004-2010). Edison executives and engineers conducted meetings with MHI at which technical and production issues associated with the new steam generator design and fabrication were discussed.[15] Edison and MHI held formal and working meetings at SONGS, at MHI facilities in Japan, and at MHI subcontractor facilities. These meetings were held at both the working and executive levels. Technical issues were generally discussed at Design Review Meetings ("DRMs"), Technical Review Meetings, Executive Oversight Meetings, and Anti-Vibration Bar ("AVB") Meetings. Meeting minutes were generally prepared after these meetings and exchanged between Edison and MHI. Edison had appointed a committee to look into installing new steam generators as early as October 2001. (NRC Office of Inspector General Report San Onofre pp. 6-7)

The Edison key players who worked on San Onofre were engineers and executives, depicted on the following page:

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[15] http://www.songscommunity.com/docs/minutes/White_Paper-Summary_of_Key_Issues_Raised_During_Design_Oversight_Meetings_with_MHI_Final.pdf

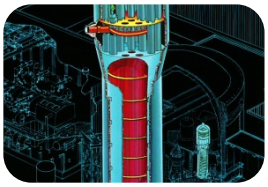
Alan J. Fohrer
Edison CEO

Harold Ray SO
Chief Nuclear
Officer -2006

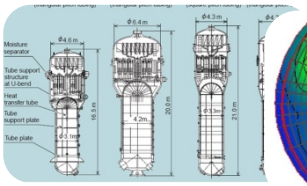
Michael P. Short
SO VP

Mike.Wharton
Proj Manager

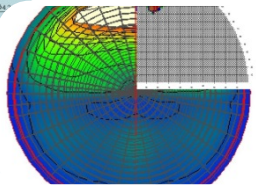
Peter Dietrich SO
Nuke Office



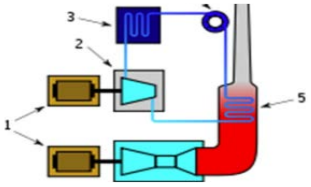
Mehrdad Hojati
SO Design Engineer



Dwight Eugene
Nunn Edison VP



Craig Harberts
RSG Manager



Jonathan McGaw
Edison Nuclear
Engineer

Boguslaw J. Olech
Edison Nuclear
Engineer

The Anti-Vibration Bar Design Team, recognizing that the design for the SONGS replacement steam generators (RSGs) resulted in higher steam quality (void fraction) than previous designs, considered making changes to the design to reduce the void fraction. But, each of the considered changes had unacceptable consequences and the AVB Design Team agreed not to implement them. Among the difficulties associated with the potential changes was the possibility that making them could impede the ability to justify the new design under 10 C.F.R. § 50.59. Even though "SCE is not expert in steam generator design or fabrication," it chose not to submit to an NRC license amendment:

The new steam generators were installed in 2010 and 2011. The Unit 2 RSGs were delivered to SONGS in February 2009 and installed during a refueling outage between September 2009 and April 2010. The Unit 3 RSGs were delivered to SONGS in October 2010 and installed during a refueling outage between October 2010 and February 2011. (Root Cause Report p. 8/64)

PUC APPROVES NEW STEAM GENERATORS WITHOUT FINDING THEY ARE "USED AND USEFUL"

The four CPUC Commissioners who approved the new San Onofre steam generators in December 2005 (Decision 5-12-040) were:

Michael Peevey	Geoffrey F. Brown	John A. Bohn	Susan P. Kennedy

Gray Davis appointed Susan P. Kennedy and Peevey to the CPUC in December 2002. Kennedy served on the CPUC from 2003-2006. She was then appointed chief of staff to Governor Schwarzenegger in December 2005. Governor Schwarzenegger appointed Bohn to the CPUC in May 2005. Commissioner Geoff Brown was San Francisco's long-time elected Public Defender.

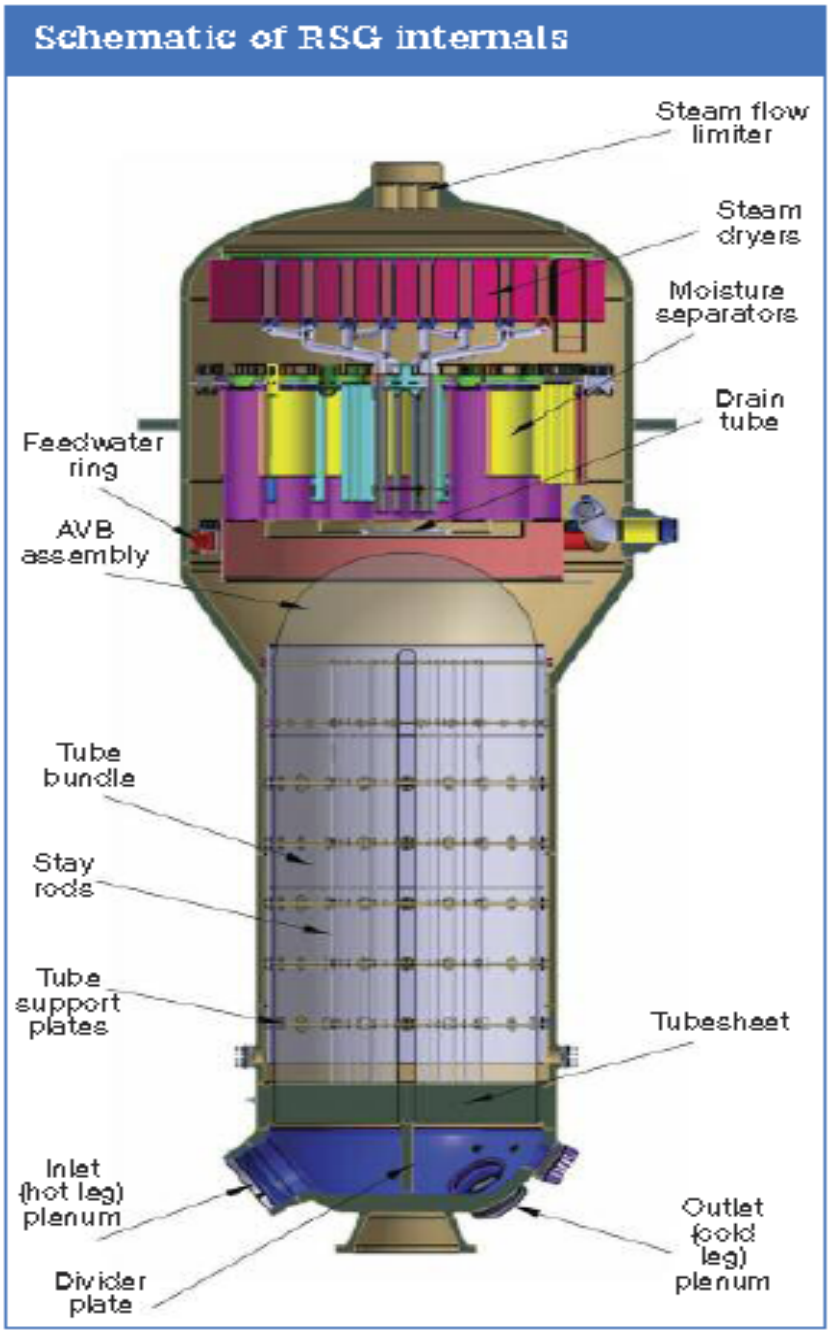
The new generators installed were in 2011; they failed within a year, ending any further production of electricity at the plant in January 2012. Edison convinced the CPUC that because the cost of the new steam generators represented 5% of Edison's rate base, the project was too "large amount to place at risk of cost recovery" on Edison shareholders. Edison claimed "it is essential for SCE to seek, and the Commission to grant, pre-approval of (San Onofre 2 and 3 new generators):

> Pre-approval of (San Onofre) 2 & 3 SGRP (steam generator replacement program) means that the Commission finds it reasonable for SCE to replace (San Onofre) 2 & 3 steam generators as described in this Application. While the Commission will retain its full

> authority, at the completion of SGRP, to review the reasonableness of SCE's construction expenditures and practices, pre-approval means that the Commission may not disallow construction costs, CFC, and Removal and Disposal Costs or their recovery in rates on the ground that SONGS 2 & 3 SGRP was itself unreasonable.

On 31 January 2012 "At 1505 PST, Unit 3 entered Abnormal Operation Instruction S023-13-14 'Reactor Coolant Leak' for a stream generator leak exceeding 5 gallons per day. At 1549 PST, the leak rate was determined to be 82 gallons per day. At 1610 PST, a leak rate greater than 75 gallons per day with an increasing rate of leakage exceeding 30 gallons per hour was established and entry into S023-13-38 'Rapid Power Reduction' was performed. (On 12 June 2013, Edison certified to the NRC that Edison had permanently ceased operations at San Onofre. (12 June 2013 Edison Certification)

The NRC determined there was a "failure to verify the adequacy of the thermal-hydraulic and flow-induced vibration design of the Unit 3 replacement steam generators, which resulted in significant and unexpected steam generator tube wear and the loss of tube integrity on Unit 3 Steam Generator 3EO-88 after only 11 months of operation.[16]



It was determined that all four new generators experienced higher than expected tube wear comprised of: (i) tube to tube wear in the tube free-span sections between the Anti-Vibration-Bars (AVBs) located in the U-bend region; (ii) tube to AVB wear, observed at discrete tube to AVB intersections; (iii) tube to Tube Support Plate (TSP) wear; and (iv) retainer bar to tube wear. (Root Cause Report 6/64)

[16] http://pbadupws.nrc.gov/docs/ML1335/ML13357A058.pdf

Unit 2 steam generator tubes also experienced high levels of tube degradation: [17]

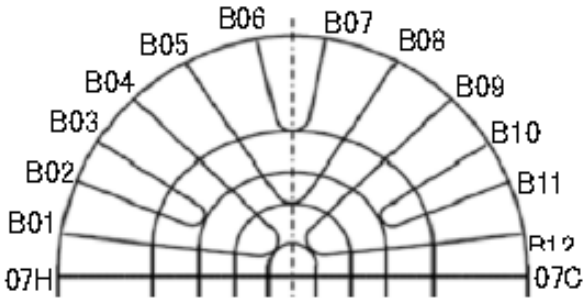
SONGS Unit 2 Steam Generators

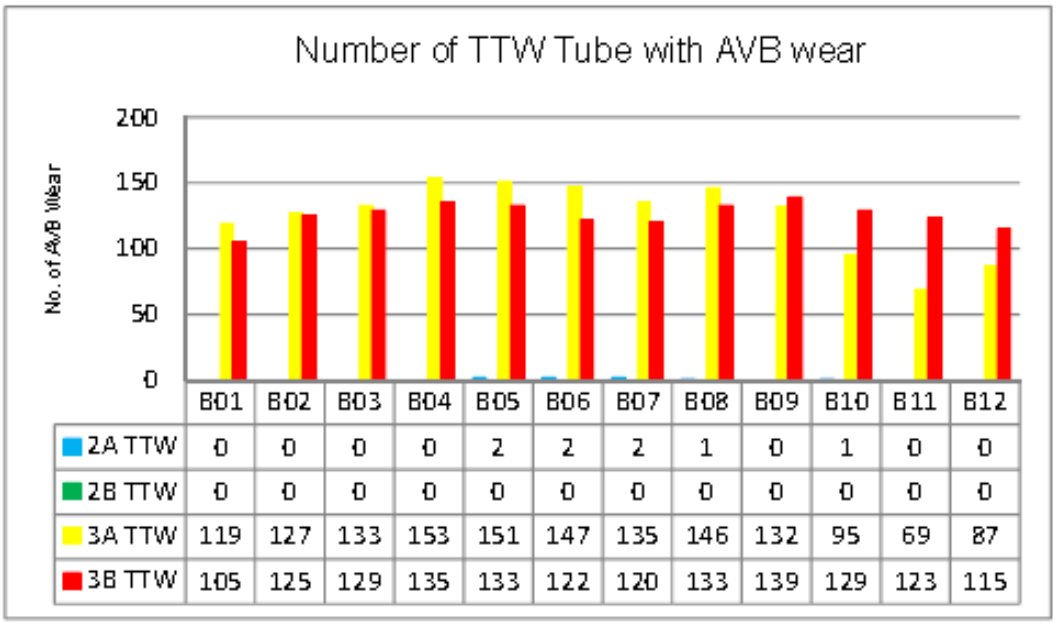
Wear Depths Summary

Steam Generator SG2E88 (Through-Wall Wear)	Anti-Vibration Bar	Tube Support Plate	Tube-to-Tube Wear	Retainer Bar	Foreign Object	Total Indications	Tubes with Indications (out of 9727 total per SG)
≥ 50%	0	0	0	1	0	1	1
35 - 49%	2	0	0	1	0	3	3
20 - 34%	86	0	0	0	2	86	74
10 - 19%	705	108	0	0	0	813	406
< 10%	964	117	0	0	0	1081	600
TOTAL	1757	225	0	2	2	**1984**	**734***

Steam Generator SG2E89 (Through-Wall Wear)	Anti-Vibration Bar	Tube Support Plate	Tube-to-Tube Wear	Retainer Bar	Foreign Object	Total Indications	Tubes with Indications (out of 9727 total per SG)
≥ 50%	0	0	0	1	0	1	1
35 - 49%	0	0	0	1	0	1	1
20 - 34%	78	1	0	3	0	82	67
10 - 19%	1014	85	2	0	0	1101	496
< 10%	1499	53	0	0	0	1552	768
TOTAL	2591	139	2	5	0	**2737**	**861***

[17] Root Cause Report Supplemental Technical Evaluation Report 48/68.





	B01	B02	B03	B04	B05	B06	B07	B08	B09	B10	B11	B12
2A TTW	0	0	0	0	2	2	2	1	0	1	0	0
2B TTW	0	0	0	0	0	0	0	0	0	0	0	0
3A TTW	119	127	133	153	151	147	135	146	132	95	69	87
3B TTW	105	125	129	135	133	122	120	133	139	129	123	115

The CPUC in November 2014 decided to make ratepayers pay more than $3,300,000,000 for the inoperative plant including:

- Base Plant –.$622,000,000
- Nuclear Fuel Investment $487,000,000.
- Completed Construction Work In Progress (“Completed CWIP”) $370,000,000.
- Cancelled Construction Work In Progress (“Cancelled CWIP”) $155,000,000
- Materials & Supplies (M&S) $99,000,000

CPUC officials worked with Edison to construct a decision that allowed Edison to continue to charge up to $5 billion for the next decade for San Onofre. The CPUC estimated the financial burden on ratepayers; they will pay $3,300,000,000.

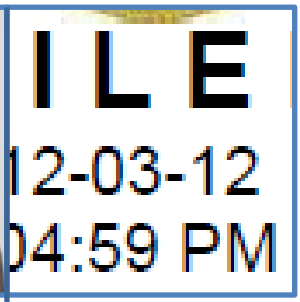
The CPUC claims these charges are for recovery of the **undepreciated net investment in San Onofre "assets"** (*e.g.*, Base Plant). The CPUC is also making ratepayers pay a 2.95% rate of return. (Final Decision p. 3) The CPUC claims ratepayers will be receiving "refunds" and "credits" of $1,400,000,000. However, the so-called "refunds" are to come through a refund "mechanism" that makes it difficult if not impossible for ratepayers to determine they received an actual benefit.

The CPUC delayed, paused, and then stopped any investigation into whether Edison acted reasonably, and whether the plant remnants are used and useful for ratepayers. The CPUC also killed its own investigation into who and what was responsible for the plant's failure after the CPUC's own expert laid out a cogent investigative plan. Our investigation has uncovered the "delay, pause, and stop" plan to relieve Edison of any investigation into its conduct. The CPUC plan did not even permit ratepayers to determine the names of those involved in the decision-making under question.

On 19 December 2005, the CPUC allowed Edison to charge ratepayers for new generators so long as Edison sumitted an application to put them in rates six months after San Onofre returned to commerical operation. The plant returned to commerical operation in February 2011, which required EDISON to file its application to put the new generators in rates by August 2011. However, on 13 April 2011, Edison told the CPUC it would not file to put the generator costs in rates until June 2012. No such application was filed.

However, the *timing* of the filing was discussed with CPUC Administrative Law Judge (ALJ) Melanie Darling on 4 December 2012. The CPUC Energy Division staff discussed Edison filing the application before the Prehearing Conference on 8 January 2013 in the Investigation case announced by the CPUC in November 2012. However, Edison declined to file in January 2013.

On 30 November 2012, Edison's Les Starck and Mike Hoover gave the "pause and delay" plan to Commissioner Florio advisor, Sepideh Khosrowjah. Three days later (3 December 2012), Edison filed with the CPUC its pause and delay plan.

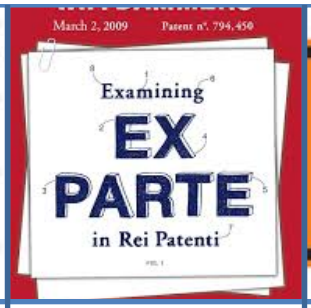
			
15 Dec 05 CPUC Decision says Edison to file to put new generator costs in rates 6 months after Comercial Operations	EDISON Les Starck at 30 Nov 12 Gave Florio (staff) Ex Parte EdisonPause and Delay Plan at CPUC in SF	Sepideh Khosrowjah (Florio) at 30 Nov 12 Received Edison Ex Parte: the Pause and Delay Plan	3 Dec 12 Edison Files Pause and Delay Plan with CPUC

The next day, 4 December 2012, ALJ Melanuie Darling called Edison's Russell G. Worden (head of the San Onofre Strategic Review Project) to discuss the timing of Edison's new steam generator cost application.

4 Dec 2012 ALJ Darling Phoned EDISON Russell G. Worden about "timing" of steam generator cost filing.

4 Dec 2012 Russell Worden Returned call to ALJ Darling about "timing" of steam generator cost filing

Edison waited until 6 December 2012 to file the notice of its Ex Parte (private) 30 November 2012 meeting with Commissioner Florio's office. On 7 December 2012, Edison filed the notice of ALJ Darling's Ex Parte phone call to Edison. On 10 December 2012, ALJ Darling issued a ruling adopting Edison's Pause and Delay Plan.

		
6 Dec 12: Edison "Late Filed" Notice of 30 Nov 12 Pause and Delay Ex Parte with Florio (staff)	7 Dec 12: Edison Filed Notice of ALJ Darling 4 Dec 12 Ex Parte phone call about the timing of Edison new generator cost filing	10 Dec 12: ALJ Darling issued Ruling adopting Edison Pause and Delay Plan

On 21 February 2013, ALJ Darling denied a motion to set a hearing on whether Edison acted reasonably, stating it would be disorderly and premature. On 1 December 2013, the CPUC's hired expert issued an investigative plan to find who and what caused the generators to fail. On 25 November 2014, the CPUC killed all investigations.

21 Feb 13: ALJ Rules

The Decision did not set a date to put costs in rates, describing it as premature and disruptive to hold hearings now

Eureka (cry of joy upon discovery)

CPUC admitted in 25 Nov 14:

Final Decision not getting to the "cause of the damage" and ruled "No further reasonableness review of (generator) costs is required."

The CPUC and Edison used conflicting numbers and fuzzy math in favor of Edison and against ratepayers. For example, when it came to deciding whether Edison spent more than $680,000,000 on the new steam generator project (the automatic trigger for a reasonableness review), the CPUC adopted Edison's contention that the replacement steam generators' total cost was $612.1 million in 2004 dollars. (Decision 14-11-040 p. 29)

In the decision approving the project, the CPUC found the new steam generators were "cost-effective" at $680,000,000 ($569,000,000 for the new steam generators and $111,000,000 for removal and disposal of the old ones). (Decision 05-12-040) Under the settlement agreement, the CPUC found the value of stopping collection for the new steam generators as of 31 January 2012 to be

$1,000,000 (Decision 14-11-040 p. 2-3) The CPUC found the value of the settlement to ratepayers was $1,450,000,000 ($420,000,000 of which was from reducing Edison's rate of return). The CPUC found the primary result of the settlement is ratepayer refunds and credits of approximately $1.45 billion. (Decision 14-11-040 pp. 2-3)

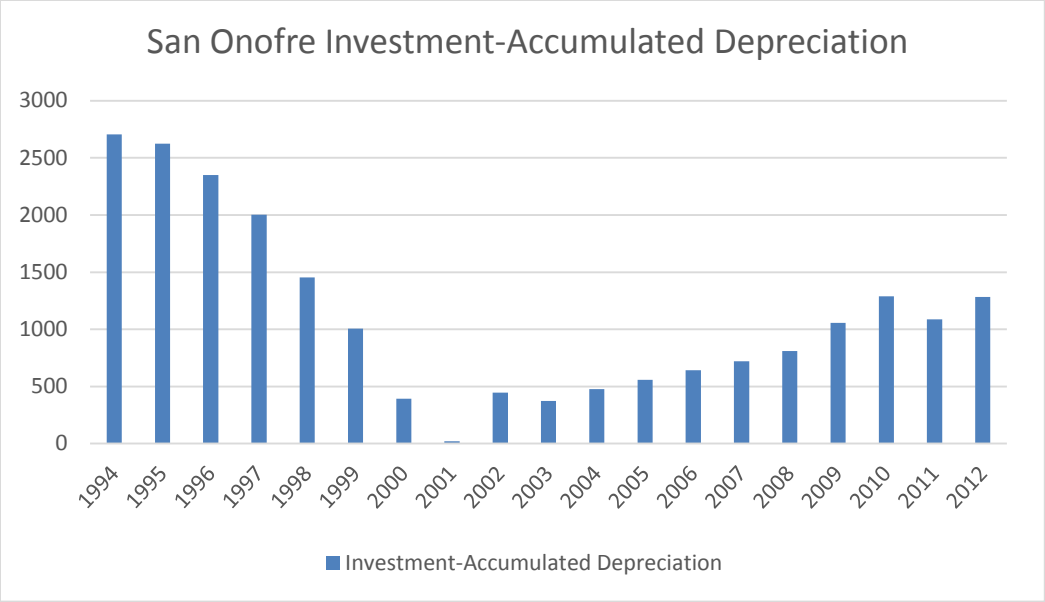
Ratepayers were given less than three hours to conduct an evidentiary hearing into the proposed settlement on 16 May 2014. At the hearing Peevey was asked but refused to answer whether he was in communication with Edison President Ron Litzinger.

Emails obtained under the Public Records Act show Edison executives to were in regular contact with Peevey—each had the other's personal cell phone and spoke on the weekends. Edison reported San Onofre revenue requirement for 2011-2014 of almost $2,000,000,000, of which $361,000,000 was for the new generators even though they were idle:

Year	**General Revenue Requirement**	**New Steam Generator Revenue Requirement**	**Total**	**Source**
2012	$498,087,000	$115,239,000	$613,326,000	2 Dec 2013 Edison Monthly Report
2013	$504,253,000	$130,722,000	$634,975,000	30 Oct 2014 Edison Monthly Report
2014	$545,950,800 [18]	$115,770,000[19]	$661,720,800	2 Dec 2014 Edison Monthly Report
Total	**$1,548,290,800**	**$361,731,000**	**$1,910,021,800**	

[18] Estimated based on year to date.
[19] Estimated based on year to date.

EDISON had recovered the costs of Units 2 and 3 from 1996 and had fully recovered its investment by 2003:



PEEVEY FORCED TO RESIGN

CPUC President Michael Peevey was forced off the CPUC when his *quid quo pro* practices at the CPUC were made public by victims of CPUC malfeasance, beginning with the CPUC's efforts to conceal SDG&E's wrongdoing in connection with the catastrophic October 2007 fires in San Diego. Awareness of corruption was heightened by the September 2010 San Bruno gas explosion and the San Onofre nuclear power plant radiation leak in January 2012.

The CPUC is a constitutional office of the State of California (Art. 12) controlled by the Office of Governor. Peevey was appointed to the CPUC in 2002 along with Susan P. Kennedy. He was forced to resign in a CPUC judge-fixing scandal arising out of an effort to cover-up wrongdoing in the San Bruno fire explosion case. The CPUC awarded PG&E $5,000,000 to repair gas lines running underground through the City of San Bruno. PG&E failed to make the repairs and

in September 2010, a deadly explosion and fire killed eight people and devastated a neighborhood in San Bruno.

PG&E was indicted for obstructing the federal government investigation into PG&E's conduct in failing to fix the gas pipes. After the CPUC staff recommended the CPUC fine PG&E $2,500,000,000, Peevey obstructed the CPUC review of PG&E's request for additional rates which consumers feared would be used to pay the fine. Embarrassing emails to and from Peevey and his staff showed Peevey helping to fix which judge would hear PG&E's $6,000,000,000 rate increase application. [20] The San Bruno explosion was horrific:

[20] http://www.justice.gov/sites/default/files/usao-ndca/legacy/2014/07/30/PG%26E%20-%20Superseding%20Indictment.pdf

The San Bruno investigation dragged on for four years until September 2014 when the Commission finally levied a $1.4 billion fine against PG&E.[21] The matter remains tied up in litigation.

Under Peevey, the CPUC derailed its investigation into the SDG&E equipment that started two of the 2007 fires in San Diego. (Decision D.10-04-047) CPUC staff determined SDG&E was in violation of General Order 95, Rules 31.1[22] and 38[23] at the time of the fires. As in the case of San Bruno, the CPUC under Peevey imposed a fine but bestowed a rate increase large enough to absorb the penalty. (D1112023; Petition 07-11-007) Angry ratepayers were able to stop a CPUC plan to allow SDG&E to recover $463,000,000 in costs from the fires caused by SDG&E equipment. Over 500,000 people were evacuated; 300,000 acres were charred; and 1,300 buildings were destroyed.

[21] PG&E is under indictment for the judge-shopping conduct. http://www.justice.gov/sites/default/files/usao-ndca/legacy/2014/07/30/PG%26E%20-%20Superseding%20Indictment.pdf

[22] Rule 31.1 requires Electrical supply systems shall be designed, constructed, and maintained … to enable the furnishing of safe, proper, and adequate service.

[23] Establishes Minimum Clearances of Wires from Other Wires.

Peevey rose up in the utility-lobby sector. Prior to joining the CPUC, Peevey was as an Edison lobbyist. Peevey enjoyed gifts from big utilities. Just after his appointment in 2003, it was disclosed Peevey took a $2,134 gift from San Francisco Airport, over which the CPUC exercised regulatory authority in the form of free parking at the SF airport.[24] In July 2013, NBC news in San Francisco reported Peevey had accepted $165,000 in free travel from nonprofits and special interests in the prior six years.

Peevey's emails produced in response to a Public Records Act request show he was in regular communication with Edison executives. They met in bars, dined from coast to coast and overseas, and talked on weekends. Peevey "skipped" a Commissioner only meeting to lunch privately with Edison's management. Emails show Peevey gave insight on Edison's public relations response to a Los Angeles Times negative story. Peevey shared VIP tickets for sporting events with Edison's Senior Vice President. Peevey promised his Edison cronies to hold off on proceedings involving Edison.

Peevey, as CPUC President, expanded the lobby function to create extended lobby junkets. For example, a few months after the San Bruno gas explosions caused by natural gas pipes PG&E failed to maintain (even after it had been given ratepayer funds to make needed fixes), Peevey embarked on a 12-day travel-study excursion, with stops in Sevilla and Barcelona, Spain – all sponsored by the California Foundation on the Environment and the Economy (CFEE). Peevey served as a CFEE official before joining the CPUC. Peevey's wife, California Sen. Carol Liu (D-Glendale), was along for the trip. Two other state senators, several members of the state Assembly, CPUC Commissioner Nancy Ryan, and a host of representatives from the energy industry attended too. High-ranking executives of

[24] See, California Code of Regulations, Title 2, Sec. 18730.

the State's investor-owned utilities also participated, including Fong Wan, the Senior Vice President of energy procurement for PG&E.[25]

In 2013 under Peevey's reign, the three major electric utilities spent more than $6,000,000 (PG&E $2.2M; Edison $2.41M, Sempra $1.33M) to influence the CPUC and legislative policies.[26]

On 2 May 2013, NBC in San Francisco reported Peevey had ignored the call to answer tough questions by state senators in Sacramento and instead decided to attend a conference at an exclusive Napa resort and a reception at an upscale winery in St. Helena, both of which were captured on hidden camera by the NBC Bay Area Investigative Unit.[27]

Peevey had served as an Edison executive (SCECorp) from 1984 to 1993, and served as its president for 3 years (1990 to 1993). From 1993 to 1995, he served as a public affairs consultant for Winner & Associates, a public relations firm that works on a variety of political issues and public scandals. (Edison later hired Winner & Associates to deal with fallout from the California energy crisis.) In 1995, Peevey started New Energy Ventures, an energy provider that competed in California's newly deregulated market. He sold New Energy Ventures in 2000.

Peevey started TruePricing, a technology company that built software for large organizations to track and bring down energy costs. At the same time, he served on the boards of directors at Excelergy Corporation, a Massachusetts energy software company, and Electro Rent Corporation, which rents computer equipment. Peevey chairs the boards of directors of the California Emerging Technology Fund and the California Clean Energy Fund; both are nonprofit

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[25] http://www.sfbg.com/2011/05/24/secret-life-michael-peevey
[26] https://www.opensecrets.org/lobby/indusclient.php?id=E08
[27] http://www.nbcbayarea.com/investigations/LEGALPeeveys-Priority--205838301.html

collaborations between regulators and energy providers. On December 31, 2002, California Governor Gray Davis reappointed Michael R. Peevey to the CPUC and designated him as President. On the same day, Governor Davis appointed Susan P. Kennedy to serve as a CPUC Commissioner. (SCE 8-K 2003)

On 18 December 2014, the CPUC held its last session with Peevey presiding as President. Peevey orchestrated the meeting so supporters of Peevey's way of doing business at the CPUC took up the public comment period to praise Peevey. Who were these people who came forward to give character testimonials for Peevey? They comprise part of a network of special interests benefiting from the largess Peevey created for special interest groups while at the CPUC.

One group of Peevey defenders came from nonprofits, which the CPUC supports. Susan Wright McPeak, a long-time Bay Area politician, spoke for Peevey. Wright McPeak heads the California Emerging Technology Fund (CETF) established as a non-profit corporation pursuant to orders from the CPUC in approving the mergers of SBC-AT&T and Verizon-MCI in 2005. As a condition of approval of the mergers, AT&T and Verizon were required to contribute to CETF a total of $60 million over 5 years "for the purpose of achieving ubiquitous access to broadband and advanced services in California, particularly in underserved communities, through the use of emerging technologies by 2010." AT&T will contribute $9 million per year and Verizon will contribute $3 million per year. The CPUC also directed that at least $5 million should be used for telemedicine projects. Peevey served as Chairman of the California Emerging Technology Fund.

Five of the speakers were former CPUC Commissioners who served with, and were supportive of, CPUC favoritism towards utilities and against ratepayers. Another speaker was Gwen Moore, who served in the California Assembly from 1978 to 1994, part of which time Peevey was an Edison executive and lobbyist.

Peevey retired from Edison in 1993. Gwen Moore headed the Assembly Utilities and Commerce Committee. A 12 January 1989 LA Times article reported that Assemblywoman Gwen Moore (D-Los Angeles), whose office was raided in August by the FBI as part of its Capitol sting operation, had been elected majority whip by her fellow Democrats. A source close to Assembly Speaker Willie Brown (D-San Francisco) said the action was to let people know that "we have confidence" in Moore.

PEEVEY Speakers in "GROUP 1":
CPUC, Former CPUC Officials

Susan P. Kennedy CPUC Approved San Onofre

Timothy Alan Simon CPUC Commissioner

Diane M. Grueneich CPUC Commissioner

Paul Clanon CPUC Ex. Director

Dr. Nancy E. Ryan CPUC Commissioner

Rachelle Chong CPUC Commissioner

Gwen Moore Cal Assembly Member

SunneWright McPeak (CPUC AT&T)

A second group of Peevey supporters were made up of utility executives, utility investors, and those funded by utilities. One speaker from this group was Dan Adler Managing Director, CalCEF and President, CalCEF Ventures. Peevey served as CalCEF (California Clean Energy Fund) Chairman. CalCEF is a coalition of investors, utility industry players, and former government officials dedicated to advancing clean energy. Mason Wallrich, a former PG&E executive, also spoke from CalCEF.

Two other speakers came from the "Energy Efficiency Center" (EEC) at the University of California, Davis: Executive Director Ben Finkelor and Advisory Board Member Ralph Cavanaugh (also with the Natural Resources Defense Council). Peevey Chairs the EEC. The EEC was established out of the PG&E bankruptcy settlement with $30 million. The EEC represents that it expects "to deliver market-based financial returns to its investors and positive environmental and economic returns to California, with a focus on PG&E's service territory."[28]

Under Peevey, settlements with regulated utilities were crafted to create non-profit corporations. In July 2013, California legislators debated whether to take away the PUC's authority to create nonprofits with funds from settlements.[29]

CONCLUSION

Storm warnings require the people of California to act. They must demand fundamental reforms at the CPUC. The new President can either ratify and extend corruption at the CPUC, or break with the past to reinstate the CPUC to its Constitutional mission of providing customers with just and reasonable rates.

The public cannot have confidence the CPUC will protect their interests while Edison establishes one of the largest nuclear waste sites in the world in North County San Diego (3.6 million pounds of nuclear waste).

[28] http://eec.ucdavis.edu/about/sponsors-page/

[29] http://www.sfgate.com/bayarea/article/Budget-tightens-oversight-on-California-PUC-4646033.php