Twelve Reasons to Retire San Onofre

A Statement from the Angeles Chapter of the Sierra Club

The California Public Utilities Commission and the U.S. Nuclear Regulatory Commission are currently wrestling with the future of the San Onofre nuclear power plant. The Public Utilities Commission has the lead role on economic and financial issues and The Nuclear Regulatory Commission has the lead role on safety and design issues.

While this division of responsibility is clear and logical, it leads to a disjointed decision-making process that does not reflect the multi-layered problems, difficulties and hurdles facing San Onofre. In combination these issues create a challenge of immense complexity and raise fundamental concerns about efforts to resuscitate this aging and deeply troubled power plant. The issues include:

1. **Computer modeling by Mitsubishi did not predict serious defects with its steam generator design.** Faulty computer modeling by Mitsubishi Heavy Industries failed to predict the behavior of new steam generators. Mitsubishi had no representative present at the Nuclear Regulatory Commission technical hearing on November 30, raising concerns about the degree to which the company will assist in design changes or cover the cost despite $175 million in its liability exposure.

2. **The steam generators system failure is unprecedented and still unexplained.** Decades of nuclear power plant development and operation provided no guarantee against the breakdown of steam generator hardware at San Onofre. This lack of reliable, mature technology caused NRC special project team manager Art Howell to state at the November 30 hearing that the entities involved must "take a sober and introspective look at why that is."

3. **Operating a restarted Unit 2 under partial power may be impacted negatively by failures and shutdowns in the facility housing it.** Unit 1 is permanently decommissioned. Unit 3 is shut down and cannot operate without extensive repairs. The utility considers only Unit 2 a candidate for restart. The operating environment would be in a partly disabled, partly shut down plant that is only one-third active at partial power.

4. **The costs per kilowatt and in total for partial operation may exceed those for full operation.** At least one expert analysis concluded that partial operation – in this case, Unit 2 only – would be more expensive than full operation, on a per kilowatt hour basis and possibly in total cost. Even Unit 2 is not proposed by the utility to be restarted at full power but at 70 percent.

This raises issues of per kilowatt-hour cost as well as the possibility of unique operational risks that full-power operation has not revealed.

5. **Workforce instability may impact plant safety and reliability.** The utility is in a dispute with its largest union over its announced intention to lay off 700 workers. Why have ratepayers been covering the cost of a large workforce for ten months in an idle plant? That said, why is the utility proposing to terminate experienced employees prior to a restart that may require them for safety as well as operations? Would it expect to quickly rehire them if the NRC approves a restart several months in the future?

6. **Sabotage exposure may increase costs for enhanced security.** If confirmed by the FBI, recent evidence of damage to equipment would suggest attempted sabotage. This possibility is to be deplored and is a reminder that nuclear plants require enhanced security which adds to operating costs.

7. **The plant's tidewater location exposes it to earthquake and tsunami risks.** The Fukashima disaster is a reminder of the hazard created by San Onofre's tidewater location in a zone of multiple earthquake fault-lines – a combination of conditions that would almost certainly be avoided in locating any power plant today.

8. **Attempting to evacuate more than 8 million people from the local area would create unmanageable gridlock if a crisis occurred.** More than 8 million people live within 50 miles of San Onofre – nine times the population density of Fukashima. Realistically, any attempt to rapidly evacuate the area would involve unmanageable gridlock, creating a severe operational challenge for area agencies. San Onofre's highly urbanized location would almost surely not be selected for a nuclear plant today.

9. **Personal injury liability exposure would increase in a restart due to the level of known risks and concerns.** Public expressions of opposition to renewed operations at San Onofre have been widespread and intense since the radiation leak in January 2012 and the subsequent discovery of unprecedented wear in the metal tubes for both generators. Even if the restart led initially to no emergency, it would cause an immediate and continuing heightened stress level for area residents. If a perceived or actual catastrophic event subsequently occurred, the utility's exposure to personal injury suits based on both physical and psychological factors could be vastly greater than before this problem became known.

10. **Rear-guard action to keep the plant going neglects development of forward-looking alternatives to meet regional energy demands.** Insistence by the utility on continued operation of San Onofre comes despite its level of operating disability and its disturbing vulnerability to technology

problems. It also runs counter to worldwide trends regarding the future of nuclear power and serves as a negative statement on encouraging development of alternative renewable energy capacity. Opponents of restart fear "opportunity-cost" – the neglect of potentially better ways to strengthen the regional power grid. They believe "It's time to move on."

11. **Regulators have put retroactive ratepayer rebates on the table that would offset utility revenue from a recently approved rate structure.** On November 29, the California Public Utilities Commission approved a new rate structure for the utility that is lead operator at San Onofre. This follows the PUC's October 25 action initiating an investigation into the San Onofre shutdown. Retroactive ratepayer rebates could be required if the utility is found to have wrongly charged the public for costs since the plant ceased producing power. The new rate structure is likely to be a baseline against which any rebates would be applied, creating a risk for the utility of a revenue offset against these new rates.

12. **Costs of operation could easily outweigh investor return expected from keeping part of the plant open, preventing cost recovery.** Given the weight of evidence cited above, why would the utility seek to restart rather than retire San Onofre? The answer may be found in the notion that the existing investment must be recovered through revenues generated by future operations. But given the multiple sources of risk, any of which would generate further costs, the attempt to keep San Onofre going could easily prove a classic case of throwing good money after bad. If the ratepayer subsidy ends, the utility will be forced to face this fact.

The hurdles cited above are likely to make the attempt to restart the San Onofre nuclear generators not worth the effort. It is time to move on to more promising alternatives to assure the region's energy capacity and environmental safety.

Glenn Pascall, Chair
San Onofre Task Force
gpascall@att.net

George Watland
Conservation Program Coordinator
george.watland@sierraclub.org

Sierra Club Angeles Chapter
3435 Wilshire Blvd. Suite 320
Los Angeles, CA 90010-1904
phone: 213.387.4287
www.angeles.sierraclub.org

12/13/2012