

February 26, 2015

Hon. Kamala D. Harris
Attorney General
1300 I Street, 17th Floor
Sacramento, California 95814

Attention: Ms. Ashley Johansson
Initiative Coordinator

Dear Attorney General Harris:

Pursuant to Elections Code Section 9005, we have reviewed the proposed statutory initiative related to the generation of nuclear power in California (A.G. File No. 15-0001).

BACKGROUND

The Role of California's Nuclear Power Generation

California's electricity supplies are generated by several energy sources, including natural gas, nuclear fission, wind, solar, and hydropower. Approximately 9 percent of the state's electricity is generated by nuclear power plants (inside and outside of the state), most of which comes from the only nuclear power plant operating in California—the Diablo Canyon Nuclear Power Plant (Diablo Canyon) in San Luis Obispo County. Diablo Canyon is owned by Pacific Gas and Electric (PG&E), which is one of California's three large investor-owned utilities (IOUs). (A second nuclear power plant—San Onofre Nuclear Generating Station in San Diego—was permanently shut down in 2013 after a water leak was detected in one of the reactor's tubes.)

Unlike some energy sources, such as wind and solar that serve as an intermittent source of energy, nuclear power provides “base load” energy, meaning that it generally provides a relatively uninterrupted, reliable power source. In addition to generating power that is used to provide electricity to consumers, some of the power generated at Diablo Canyon supports power flows through some of the state's major transmission lines. Because nuclear power plants generally produce power around the clock, portions of California's electricity transmission system have been engineered with the Diablo Canyon's production capacity and output in mind.

California's “Moratorium” on New Nuclear Power Plant Development

Since 1976, state law has allowed the permitting of new nuclear power plants in the state only if the California Energy Resources Conservation and Development Commission (known as the California Energy Commission or CEC) determines that the federal government has identified and approved a demonstrated technology for:

- The construction and operation of nuclear fuel rod reprocessing plants.
- The permanent disposal of high-level nuclear waste.

In effect, these two conditions have created a moratorium on the construction of new nuclear power plants in California as neither of these conditions has been met. Accordingly, no new nuclear power plants have been constructed in California in over 35 years. (State law specifically exempted Diablo Canyon from these new requirements. Because no permanent disposal site for nuclear waste is now available in the United States, these facilities temporarily store their nuclear waste on site, either in water or in “dry case” cement casings.)

Potential Risks Associated With Nuclear Power Generation

Nuclear power plants present potential safety and security risks generally not associated with other types of energy-generating facilities. Unlike other types of power plants, each nuclear power plant contains large quantities of radioactive material which, if released—through natural disaster, human error, or malicious intent—may cause widespread public harm. As a result, these plants are subject to extensive federal and state regulatory requirements pertaining to their safe operation, security, mitigation of their potential environmental impacts, and the establishment of emergency response procedures in the event of any mishap at a nuclear facility.

PROPOSAL

This measure immediately prohibits the generation of nuclear power in the state until such time as the CEC finds, and the Legislature affirms, that the federal government has identified and approved a demonstrated technology for:

- The construction and operation of nuclear fuel rod reprocessing plants.
- The permanent disposal of high-level nuclear waste.

The measure would result in the immediate shut down of Diablo Canyon. The plant would remain shut down until such time as the conditions outlined above were met.

FISCAL EFFECTS

Fiscal Effects Dependent on Certain Factors

When the Conditions Might Be Met. As noted earlier, this measure halts the operation of nuclear power plants in California until such time as the CEC determines, and the Legislature affirms, that certain conditions have been met. Thus, the fiscal effects of this proposed initiative would depend in part upon when a federally approved technology exists for the construction and operation of nuclear fuel rod reprocessing plants and for the permanent disposal of high-level nuclear waste. It is our understanding that it is unlikely the conditions allowing the resumption of nuclear power generation in the state would be met for at least many years.

Replacement Power. According to energy planners, some traditional natural gas plants (inside and outside the state) likely have sufficient capacity to replace the electricity currently provided by Diablo Canyon at least in the near term. However, upgrades to the transmission and

distribution system could be needed in order to support replacement power. The magnitude of such upgrades remains uncertain.

Economic Impacts Could Affect State and Local Revenues and Costs

This measure could have significant effects on the California economy which, in turn, could impact both state and local government revenues and costs.

Increased Costs for Electricity. This measure could result in an increase in electricity rates due to an overall reduction in the state's supply of electricity. The long-term impact of the measure on electricity rates would depend on the costs for replacement power and the extent to which upgrades to the transmission and distribution system are needed to support replacement power.

The increases in electricity rates under these circumstances could affect state and local government revenues and costs. First, they could negatively impact the California economy which, in turn, could translate into a loss of revenues to the state and local government. Tax revenues received by governments are affected by business profits, personal income, and taxable sales—all of which, in turn, are affected by what individuals and businesses pay for electricity. Increases in electricity rates due to the measure would also directly increase state and local government costs since they are large consumers of electricity.

State Could Be Held Liable to Compensate Utilities for Investment Losses. Under current state law, IOUs are generally allowed to recover costs associated with their capital investments through the ratemaking process. If this measure were enacted and resulted in the shutdown of Diablo Canyon, it is possible that ratepayers might have to compensate PG&E for some portion of its investment loss, which would increase electricity rates. It is also possible that either a federal or state court could find that the measure's required shutdown amounts to a "taking" of private property and as such would require "just compensation for any uncompensated capital costs," which could total more than \$2 billion. However, the state's potential liability in this area is uncertain.

Reduced State and Local Financial Exposure From Potential Nuclear Emergencies

Under this measure, state and local governments could avoid potential future costs and loss of revenues that they might otherwise incur in the event of a major release of radioactivity into the surrounding environment from the nuclear power plant. Major releases of radioactivity into the environment from nuclear power plants have rarely occurred. In part, this is likely due to the regulatory requirements affecting their security and safe operation as well as building standards designed to help plants withstand major natural disasters. In the event that such a release of radioactivity did occur, experts in this field indicate that it could result in major direct governmental costs for emergency response and lost governmental revenues due to widespread economic disruption.

The immediate shutdown of Diablo Canyon under the measure could therefore reduce some of the exposure of the state and nearby local governments to the substantial costs and lost revenues that could otherwise result from a major release of radiation. However, this measure

may not alleviate all of the financial exposure to the state and local governments because the current lack of permanent storage options for nuclear waste means that all nuclear waste will remain stored on site at the plant even if its operations were shut down until the federal government approves an alternative storage site.

These potential avoidable impacts could collectively amount to billions of dollars. The financial exposure of state and local governments to such costs would, however, be offset to some extent by federally mandated liability insurance requirements on the nuclear industry as well as potential federal financial assistance in the event of a major emergency. These state and local fiscal impacts, however, could still be major.

Summary of Fiscal Effects

We estimate that this measure could have the following major fiscal effects:

- Potential impacts on state and local finances in the form of decreased revenues and increased costs due to possible electricity price increases and state liabilities. The magnitude of these impacts are uncertain, but could be significant, depending in part on the need for system upgrades for replacement power and whether the state is liable for investment losses.
- Potential avoidance of major future state and local government costs and lost revenues in the rare event of a major nuclear power plant incident.

Sincerely,

Mac Taylor
Legislative Analyst

Michael Cohen
Director of Finance