

November 3, 2011

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

Attention: Ms. Dawn McFarland  
Initiative Coordinator

Dear Attorney General Harris:

Pursuant to Elections Code Section 9005, we have reviewed a proposed ballot initiative to halt the generation of nuclear power in California pending certain actions by the United States Government (A.G. File No. 11-0042).

## **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 16 percent of the state's electricity is generated by nuclear power plants, the majority of which comes from two nuclear power plants currently operating in the state—the Diablo Canyon Nuclear Power Plant (Diablo Canyon) in San Luis Obispo County and San Onofre Nuclear Generating Station (SONGS) in San Diego County. Both of these plants are owned primarily by investor-owned utilities (IOUs). The IOUs, in turn, are subject to regulation of their electricity rates by the California Public Utilities Commission.

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. Because nuclear power plants generally produce power around the clock, large portions of California's electricity transmission system have been engineered with the two nuclear power plants' production capacity and output in mind. The Diablo Canyon Power Plant represents a significant generation resource and supports power flows through some of the state's major transmission lines. The SONGS is considered by the operator of a large portion of the state's electricity grid to be an integral part of the Southern California transmission system and, therefore, necessary to ensure access to reliable electricity for a majority of Californians.

## **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) is able to find 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 plants have been constructed in California in more than 30 years. (State law specifically exempted Diablo Canyon Power Plant and SONGS 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 initiative prohibits the generation of nuclear power in the state, including by existing power plants, 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.

If approved by the voters, the initiative would in effect prevent the Legislature from overturning the current moratorium law, absent further action by the voters, and immediately shut down the operations of the Diablo Canyon Power Plant and SONGS until such time as the conditions outlined above could be met.

## FISCAL EFFECT

### Fiscal Effects of This Measure Highly Uncertain

*Federal Preemption and Other Legal Issues.* Our analysis of this measure indicates that there are serious questions as to future actions by the federal government agencies that regulate nuclear power and energy markets, or by the courts, that could prevent the provisions of this measure from taking effect. So-called federal preemption of this initiative measure could occur because federal energy authorities could potentially require that one or both of the nuclear plants continue to be operated for a period of time—contrary to this measure—to ensure that reliable access to electricity is maintained in California while the necessary infrastructure to provide replacement power is being built. It is also possible that either a federal or state court would prevent the measure from going into effect on the basis that the measure’s required shutdown of nuclear power plants amounts to an unconstitutional “taking” of private property without just compensation. For the purpose of making our fiscal estimates, we have assumed that all provisions of the measure would take effect and become operative if approved by the voters.

*Uncertainty About the Timetable for Obtaining Replacement Power.* If this measure were not preempted by federal authorities or the courts, its ultimate fiscal effect would nonetheless be highly uncertain because some important factors are difficult to predict. One critical factor is the time required to build new electricity generation plants and transmission lines to replace the generation lost due to the immediate shutdown of the state’s two nuclear power plants. The state’s electricity authorities have stated that, under current statutory and regulatory provisions, it would take many years to replace the electricity generating capacity of at least one of the two nuclear plants due to the current complexity of siting power plants and transmission lines. We have been advised that, in particular, state and federal air quality and other environmental laws would make siting and building new power plants and transmission lines a potentially lengthy process.

*Uncertainty Over When the Conditions of the Initiative Might Be Met.* As noted earlier, this measure halts the operation of nuclear power plants in California until such time that the CEC determines, and the Legislature affirms, that certain conditions have been met. Thus, the fiscal effects of this proposed initiative would depend upon when, if ever, 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. In any event, if this measure were enacted, it is unlikely that the conditions allowing the resumption of nuclear power generation in the state would be met for at least many years.

### Economic Impacts Could Affect State and Local Government Revenues and Costs

This measure would affect the California economy and, in turn, affect both state and local government revenues and costs.

*Disruptions to Electricity System.* Because the state’s two nuclear facilities are integral parts of the state’s electricity grid, their operation is currently necessary to ensure reliable access to electricity in California, particularly in light of regulatory constraints faced by potential sources

of replacement power. We are advised by the California Independent System Operator, the independent, public-benefit corporation that manages a large part of California's electricity grid, that closing the two nuclear facilities would impede reliable access to electricity in the state. In particular, the loss of the SONGS plant would reduce the capacity to deliver electricity in the Los Angeles Basin area to below state and local standards for reliability. As a result, the risk of rolling blackouts would be increased significantly in that area. The frequency and duration of rolling blackouts would depend on various factors including, but not limited to, electricity demand and weather conditions. Such disruptions to the electricity grid would have negative impacts on the California economy, including loss of economic output, reduced productivity, loss of jobs, and reduced purchases of goods and services, leading to reduced household and business income.

The magnitude of these economic impacts would depend on when and to what extent the lost sources of electricity could be replaced. If rolling blackouts continued for several years, as new electricity plants and transmission lines were built, the resulting economic loss could be substantial, potentially in the tens of billions of dollars annually. In order to minimize the length and frequency of major economic disruptions resulting from this measure, it is probable that the state would take emergency action to speed up the process to establish replacement power. Thus, it is likely that any major economic losses resulting from the measure would occur in the near term.

***Increased Costs for Electricity.*** This measure would likely result in an increase in electricity rates for several reasons. First, the reduction in the state's supply of electricity that would result from this measure would put upward pressure on wholesale electricity prices at least for many years until replacement sources came on line and could be fully integrated into the electricity grid. If and when the lost nuclear sources were fully replaced, electricity rates might still be higher than otherwise. This is because the electricity rates paid by consumers might reflect both (1) continued recovery by the IOUs of their investment in the nuclear power plants as well as (2) the new investments the IOUs would make in developing replacement sources of electricity.

The increases in electricity rates under these circumstances could eventually be very significant and could affect state and local government revenues and costs. First, they could negatively impact the California economy which, in turn, would likely 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. Also, the effect of all of these changes in the energy marketplace would potentially increase both the revenues collected through rates and the costs of electricity provided by local government agencies, such as municipal utilities.

***Impact on State and Local Government Finances.*** If this measure were enacted and led to the shutdown of Diablo Canyon and SONGS, the resulting cumulative impacts of the economic disruptions and price increases on state and local government finances—decreased revenues and increased costs—would potentially be in the billions of dollars annually.

## Other Impacts

***State Could Be Held Liable to Compensate Utilities for Investment Losses.*** Under current 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 and SONGS, the courts could require the state, rather than IOU ratepayers, to compensate those utilities for some or all of their investment losses resulting from their closure. These losses could total more than \$4 billion if the plants were permanently closed. However, the state's potential liability in this area, if any, is highly uncertain.

***Reduced State and Local Financial Exposure From Potential Nuclear Emergencies.*** This measure potentially allows state and local governments to avoid 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 a California nuclear power plant. However, this measure may not alleviate much 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 two California plants for the foreseeable future, even if the operations of the plants were shut down.

Major releases of radioactivity into the environment from nuclear 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 unlikely 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 under the measure of the two nuclear power plants currently operating in the state could therefore reduce some of the exposure of the state and local governments in the vicinity of an affected nuclear generation plant to the substantial costs and lost revenues that could otherwise result from a major release of radiation. These potentially 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 significant.

## SUMMARY

In summary, if this initiative is not preempted by the actions of federal authorities or the courts, it would have the following major fiscal effects:

- Likely major impacts on state and local finances in the near term in the form of decreased revenues and increased costs, potentially in the billions of dollars annually, due to near-term disruptions in the state's electricity system and ongoing electricity price increases. The magnitude of these impacts would depend on the frequency and duration of rolling blackouts.

- Potential major state costs to compensate utilities for investment losses resulting from the mandated shutdown of their nuclear power plants.
- Potential avoidance of significant future state and local government costs and lost revenues in the rare event of a major nuclear plant incident.

Sincerely,

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Mac Taylor  
Legislative Analyst

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