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INDEPENDENT
ENERGY
PRODUCERS
ASSOCIATION

March 16, 2015

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California Public Utilities Commission
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California Energy Commission
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Felicia Marcus, Chair
State Water Resources Control Board
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Re: Clean Energy Economy/Cross-Sector Planning

Dear Chair Nichols, President Picker, Chair Weisenmiller, President Berberich, and Chair Marcus:

Governor Brown has proposed three ambitious goals to be accomplished within the next 15 years: increase from one-third to 50 percent our electricity derived from renewable resources; reduce today's petroleum use in cars and trucks by up to 50 percent; and, double the efficiency of existing buildings and make heating fuels cleaner. The Independent Energy Producers (IEP) generally supports these initiatives and looks forward to working with the state agencies in meeting these goals through integrated planning and near-term infrastructure investment.

The Energy Principals Group has done a tremendous job in addressing a number of critical public policy challenges including: GHG reduction, implementation of the Renewable Portfolio Standard, the closure of SONGs and the retirement of once-through cooling generation, while ensuring overall electric grid reliability. Going forward, the Governor's new policy goals

will require timely, coordinated action among a number of state agencies and private entities that historically have not been involved in energy planning and infrastructure development. The challenge will be to identify opportunities and implement policies encouraging cross-sector actions and investments across the California economy that will actually reduce GHG emissions. Yet, challenges that require innovative solutions also provide unique opportunities.

The goal of meeting 50 percent of California's electricity needs with renewable resources presents a very good example of challenges turning into opportunities. Many of the new resources needed to meet this goal will be wind and solar which are "intermittent" in nature, i.e. they generate power subject to the availability of the wind and sun. On the other hand, these resources have many advantages: zero GHG emissions and near zero marginal production costs. Some parties have raised concerns regarding "over-generation" from too much solar energy production occurring during certain hours of the day at various times of the year. However, rather than being a problem, this clean low-cost energy production may be a practical solution fostering not only a vibrant California energy economy, but powering the growth of other sectors of the California economy while meeting the low carbon energy goals.

For example, clean electric generation offers a significant opportunity to help achieve the Governor's goal of reducing petroleum use in cars and trucks by 50 percent. Currently, the transportation sector constitutes 38% of California's carbon foot-print and represents a significant emissions reduction challenge. On the other hand, California's electric sector constitutes only 20% of California's carbon footprint. Moreover, while in-state generation meets 70% of California's electric generation needs, in-state generation represents only 9% of the state's total carbon emissions. The remaining 30% of California's electrical demand is met through imports that represent 11% of the total carbon footprint. In other words, California's generation fleet is relatively clean today and will become increasingly cleaner over time. Accordingly, the 50 percent renewable initiative presents an opportunity to power the production of clean alternative fuels to meet the transportation sector goals, either through the direct charging of electric vehicles or the powering of hydrogen fuel production.

Similarly, this clean electric generation could be a potential source of power to develop new, local water resources. Climate change and the related drought are bringing uncertainty to California's water supply as our population continues to grow. Clean low-cost renewable energy should be considered as a critical power source for expanding California's water supply infrastructure. Strategically sited desalination facilities could produce a new source of water at a local level, while potentially freeing up existing water for other uses. Electricity is one of the key operational costs related to a desalination plant. During periods of over-generation, the real time price of energy is zero, or even negative. The power requirements of the desalination units could act as a sponge absorbing this low/zero cost energy, while providing clean, low cost power to operate the desalination unit. A preliminary analysis suggests that 15 desalination plants would absorb over 30% of the over-generation forecast to occur by 2030 under the 50 percent renewable requirement. Moreover, these plants would supply an additional amount of water meeting 12% of the state's current public water demand; meet 3% of current irrigation needs; or, equal 37% of the current deliveries from the state water project.

Repurposing clean energy into other sectors of the economy will allow for economic expansion while displacing direct petroleum use and creating new sources of local water. Certainly other energy intense industries also may benefit from this mid-day low cost energy if

given the opportunity. We urge the Energy Principles Group and the appropriate water agencies to move quickly and place on your respective agendas consideration of the potential beneficial nexus between water and power created by the Governor's initiatives and the risk of prolonged drought. Specifically, we recommend the following:

- Convene a workshop soon to discuss ideas for how best to align the water and power infrastructure needs of tomorrow, and how best to achieve these outcomes in a timely and cost-effective manner.
- Integrate into your long-term planning today the clear beneficial nexus between water and power needs of the future.
- Integrate into your long-term planning the benefits of using clean California electrical generation in the transportation sector to support direct electric charging and the production of hydrogen fuel.

I look forward to hearing from you regarding this unique opportunity.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jan Smutny-Jones', with a long horizontal stroke extending to the left.

Jan Smutny-Jones
Chief Executive Officer
Independent Energy Producers Association (IEP)