INDEPENDENT ENERGY PRODUCERS

February 22, 2012

Daniel W. Hancock, Chairman
Little Hoover Commission
925 L Street, Suite 805
Sacramento, CA 95814

Dear Chair Hancock:

The Independent Energy Producers Associations ("IEP") appreciates the opportunity to participate in the Little Hoover Commission's public hearing addressing energy costs and electric system reliability in light of a public policy objective to achieve 33% penetration of renewable electricity by 2020. Formed in 1982, IEP is the largest and oldest trade association of non-utility generators in California. Our members own and operate 26,000 MWs of electric generation in the state and include solar, wind, geothermal, biomass, cogeneration, and natural gas generation technologies. IEP's members are developers and investors of the new generation that California needs to meet public policy objectives while maintaining grid reliability.

A study of California's energy procurement and development activities must consider two very important factors which determine the need for new resources as well as define the parameters for the procurement of new resources. First, California enacted a series of laws designed to reduce statewide carbon dioxide emissions that impact the generation of electricity. AB 32 (2006), the "Green House Gas Reduction" legislation, requires reducing carbon emissions to 1990 levels by 2020 and to further reduce them to 90% of 1990 levels by 2050.

In addition, the Emission Performance Standard contained in SB 1368 (2006) discouraged the development of new coal generation in the west by precluding new, long term contracts with resources that emit over 1100 lbs of carbon dioxide per megawatt hour of delivered energy. As a result, several planned coal development projects in the west were abandoned after the passage of SB1368. These two laws have had a profound effect shifting the California generation fleet to renewable energy resources and modern, efficient, low carbon natural gas technologies.

The second major factor driving the need for new generation development is the need to replace our aging "Eisenhower Era" energy infrastructure, including a vintage fleet of generators relying on out-dated and inefficient boiler technology. These generators originally burned oil as a fuel and were built along the then, largely rural coast in the 1950's and early 1960's. Today, some of these facilities still provide important generation to the load centers that have grown up around them. However, they face new regulatory pressures to significantly modify their infrastructure and eliminate "Once-Through-Cooling" technology over the next few years. Replacing or repowering these facilities to meet today's newer environmental standards, while meeting air quality constraints in the South Coast Air Quality Management District and maintaining overall electric grid reliability, will be a significant challenge.

In addition to investment in new generation infrastructure, the utility transmission and distribution systems are being modernized (e.g. Smart Meters costing around $4 billion) to address the growing demand for Distributed Generation and electric vehicles. Obviously, all of this investment comes at a cost. The regulatory and market challenge is modernizing the infrastructure in a manner that is consistent with California's policy objectives while meeting high reliability standards at affordable rates. This can best be done by adhering to three principles:

- Create a balanced portfolio of energy resources using a robust competitive market.
- Direct the procurement process toward effective and efficient portfolio management.
- Ensure transparency as a means to promote competition and accountability.

The California Market Dichotomy

California presents one of the most challenging markets in the world in which to invest and develop electrical generation resources. California's policies, politics, and demographics are constantly changing; developers face a myriad federal, state, and local siting hurdles. Moreover, development in California is costly --- the additional cost of building in-state versus out-of-state may be 50% or more; yet, for reliability purposes, the bulk of energy serving California must be generated locally in-state.

That said, California does have quite a success story demonstrating that generation can be built here. Since 2001, over 16,000 MWs of new and/or "repowered" electric generation, mostly modern natural gas facilities have come on-line through the siting process at the California Energy Commission. An additional 6,000 MWs of CEC jurisdictional generation capacity are under or soon to be under construction. Furthermore, 2500 megawatts of new renewable generation has been built to meet the Renewable Portfolio Standard requirements. Overall, this is quite an accomplishment given a statewide peak demand of 65,000 MWs. But, as a practical matter, we still have a lot of existing resources that are older technologies, less efficient, and primed to be repowered and/or replaced. So, a lot more investment needs to be done.

Below are some strategies for achieving the 33% California Renewable Portfolio Standard ("RPS"), while simultaneously ensuring that energy is affordable and reliable. These are based on consistent policy, clarity in renewable product procurement, robust competition for specific renewable products and a transparent market.

Barriers to Development

a) **Consistent Public Policy.**

California's RPS policy and commitment to modernizing the infrastructure presents real opportunities for the development of new generation. However, inherently unstable public policy makes investors wary. Not only does it create a narrow "window of opportunity" to develop a project before policy changes, but it heightens the "risk premium" to develop projects. For example, since 2003, the California RPS has undergone a major legislative re-write every 2-3 years. Stability in the rules and process is important because as a practical matter, it takes 5-7 years, or longer, to bring online a new generation asset; it takes 7-10 years

to develop new transmission. Constantly changing public policies puts projects at risk to investors which comes with an economic impact.

b) **Creating Better Pathways to Completion for Viable Projects**

We need to do a better job of separating the "wheat from the chaff" as it relates to project development, because too many non-viable projects delay and complicate planning and siting processes. The phenomenon of "queue clogging" is particularly harmful if many of the projects are not particularly viable from a technology, financing, or interconnection perspective. Currently, federal law requires open, non-discriminatory access to the transmission system. This "open access" policy is welcome, but it does have side effects. For example, because anyone can propose a project to be interconnected to the electric grid, currently the CAISO has approximately 70,000 MWs in its generation interconnection queue, all of which need to be studied from a grid interconnection perspective. However, 70,000 MWs is much more than is needed to meet California's 65,000 Mw demand. A "clogged" interconnection queue equates to a more costly and time-consuming interconnection study process; complicating and delaying important transmission planning needed to interconnect new generation. Ultimately, these effects increase costs to consumers. The CAISO, to its credit, has been focused on reforming this for a year or so. However, more can be done particularly by other parties.

To help ensure that there are more viable projects brought to the table and they are considered more fully, I offer a few thoughts:

i. Identification of Preferred Resource Areas.

Separating the "wheat from the chaff" requires sending to the marketplace better signals, *earlier* as to the state's preference regarding preferred geographic locations for new generation development. Currently, the state has an Energy Action Plan and discrete legislation such as the RPS sending signals regarding the "What." We have the CPUC's Long-Term Procurement Proceeding ("LTPP") providing information regarding the "When" (subject to limitations noted herein). We don't have policy preferences related to the "Where" which would help inform and make more viable projects based on their physical location and access to the electric grid. Perhaps it is time for federal, state, and local siting authorities, with stakeholder input, to identify "state-preferred" geographic zones in which to consider siting new generation, whether it is natural gas, renewable, or an alternative fuel.

Equally important, policymakers should reform CEQA so that projects developing in any such Identified Preferred Zones would face a significantly streamlined CEQA review. If this were the case, developers would begin testing the opportunities in such zones. On the other hand, developers with projects located outside such zones would have a better understanding of the desirability of their project before entering the interconnection queue and a better assessment of their competitiveness in utility procurement solicitations. As a result, non-viable projects would be more likely to withdraw from the interconnection queue and/or have lower expectations of success in competitive RFOs all else being equal. This outcome could be a win for buyers, sellers, and consumers.

ii Importance of "Least-Cost/Best–Fit" When Selecting Resources. The RPS statute prescribes a "least-cost/best-fit" methodology for selecting and contracting with RPS resources. Conceptually, "least-cost" drives down customer costs. "Best-fit" should select viable projects with relatively few impacts on the grid. However, all too often the utilities have over-emphasized "least-cost" relative to "best-fit." As a result, projects that are not viable from a financing, technology, and/or integration perspective are selected while relatively more viable projects at a marginally higher cost may go wanting in the procurement process. If selected projects have a low probability of becoming interconnected to the grid, the public and policymakers will have a false sense of what it takes to actually achieve the policy initiatives.

Policy-makers should direct the utilities to re-calibrate their LCBF bid evaluation mechanism so as to make more comparable the relative weight of "project viability" versus cost. Furthermore, the bid evaluation factors should be made transparent so that developers can consider the relative weights of the various bid evaluation factors, and proceed to develop projects that maximize their opportunity to be selected in a competitive solicitation.

Impact of Renewable Resources on Grid Reliability

Some parties have raised concerns about the impact of intermittent resources on the overall reliability of the electric grid. This is due to the variability of wind and the impact of cloud cover on solar photo-voltaic (PV) generation. However, a number of studies have indicated that grid reliability does not become an operational concern until intermittent renewable penetration nears 22-25% of energy sales. While California does have a goal of 33% renewables by 2020, currently the in- statewide penetration of intermittent resources such as wind and solar is only about 3.5% (2010) of total sales. In reality, the bulk of renewable energy delivered to consumers today derives from baseload renewable resources such as in-state geothermal and biomass generation facilities. Consequently, the intermittency issue is manageable. The CAISO has indicated that they can manage the 20% RPS under the existing system and protocols. In addition, they have initiated a study process to determine grid needs to support the 33% RPS. In a preliminary study, the CAISO has indicated that 4600 MWs of load following and ramping requirements may be needed, which can be met with natural gas generation.

Two other issues are relevant in the discussion of intermittency and the grid. First, the larger the footprint of a balancing authority, the less intermittency is an issue. Wind and cloud activity vary geographically. Therefore, balancing a system over a greater area has benefits. Second, renewable energy detractors focus on the unique attributes of intermittent technologies as problems, primarily because they often generate off-peak and/or at night. However, even at these times wind can be a valuable asset, either displacing fossil generation serving homes or providing clean energy to charge electric vehicles. Moreover, it is inaccurate to say that we need more natural gas-fired generation to support the renewables. As a practical matter, natural gas generation is on the margin in California and, but for the renewables, its use would expand. What's really happening is that when renewables operate they are "backing down" gas generation which would otherwise run and, therefore, avoiding the costs associated with operating that type of resource.

What is occurring is a change in the *use* of natural gas electric generation due to the expected increasing penetration of renewables. Specifically, the use is changing from combined cycle, intermediate/baseload applications to more dispatchable, peaking applications. This change does not create a reliability problem per se, but it does require better foresight and planning when procuring resources generally and RPS resources specifically. Certainly, a proper application of a "least-cost/best-fit" bid evaluation methodology used to select winning bidders would capture this impact. The evaluation might reveal, for example, that it's cheaper to take a baseload RPS product (e.g. biomass, geothermal) over an intermittent resource because of the additional energy and capacity benefits. Concerns over the impact of intermittency that we hear today are symptomatic of a weakness in the application of the LCBF bid evaluation, rather than a sign of the weakness of the intermittent technologies themselves.

Potential Capacity Shortage

While presently I do not share the concerns of parties regarding the reliability impacts of increasing RPS penetration as these can be mitigated, I do have a concern regarding the reliability implications of current procurement practices, particularly in light of statewide water policy. Currently, load-serving entities under the jurisdiction of the Public Utilities Commission are required to show they are resource adequate one year in advance, and they have some authority to contract with existing resources up to five years. On the other hand, when procuring new resources, the CPUC looks out to determine need expected in 10 years, and then authorizes the utilities to contract typically for new/repowered resources on a 10 year term (non-renewable/fossil), 12 years (CHP), or 20 years (renewables). From a procurement perspective, this approach leaves a "capacity gap" in the 5-10 year timeframe. This is particularly troubling given that the state Water Resources Control Board is moving over the next 5-10 years to eliminate Once-thru-Cooling ("OTC") that has been available to generators for decades. This change in water policy will require soon significant new investment in generation infrastructure in the South Coast region. The lack of any medium term capacity contract makes it increasingly difficult for generators to prepare for the effective implementation of this policy in 5-10 years.

Given the long lead-time to build new generation infrastructure or repower old, I recommend that the energy agencies investigate now the resource needs in the 5-10 year time horizon, and act on those findings so that the utilities and the generation community can be positioned properly to compete to meet these needs during that timeframe while maintaining overall grid reliability.

Transparency as a Market Regulator

Finally, I'd like to address what I view as a critical area for review and reform; namely, the lack of transparency in the planning and procurement mechanisms applied today. This includes a lack of transparency as to what the utilities need and when; a lack of transparency as to where the state and utilities prefer resources to be located geographically; a lack of transparency regarding the criteria for selecting one resource over another; and, a general lack of transparency as to what is paid for the resource. The ostensible reason for this lack of transparency is to protect consumers from the exercise of market power. However, I find this reason suspect, particularly given the robust competition in California today. For example, a recent Renewable RFO had over 91,000 MWs of bids submitted. This market is not threatened by a shortage of competition where misuse of information can be used to manipulate the price.

On the other hand, the lack of transparency risks failure in achieving statewide policy objectives such as the RPS; undermines maintaining a stable and reliable electric grid during a period of changing policy and electricity demand; and, most importantly, risks achieving these policy goals and maintaining the electric grid at the lowest possible cost to consumers. The lack of transparency has a myriad of intended or unintended consequences:

- It fosters speculative bidders in the RFO process, which wastes energy agency resources and delays decision-making.
- It fosters speculative transmission and/or distribution interconnection requests, thereby clogging those queues and undermining effective transmission planning and development.
- It creates the condition for "emergency procurement" to maintain grid reliability and/or meet policy prescriptions (e.g. RPS).
- It increases costs to consumers, as the "risk premium" for developing projects in California grows and grows.
- It undermines investment, as the costs of delay and uncertainty overwhelms investors.

Thank you for considering these initial comments. I look forward to working with the Little Hoover Commission on this critical issue.

Respectfully submitted,

Jan Smutny-Jones
Executive Director

Cc: Eugene "Mitch" Mitchell, Vice Chair
Katcho Achadjian, Assembly-member
Victoria Bradshaw
Marilyn C. Brewer
Virginia Ellis
Alyson Huber, Assembly-member
Loren Kaye
Michael J. Rubio, Senator
David A. Schwarz
Jonathan Shapiro
Mary Wyland, Senator
Stuart Drown, Executive Director