

**Comments of the Natural Resources Defense Council**  
**On the November 7, 2012 California Integrated Energy Policy Report (IEPR) Update Workshop**  
**Docket No. 12-IEP-1A**  
**Submitted December 3, 2012**

The Natural Resources Defense Council (NRDC) is a national non-profit organization of lawyers, scientists and environmental specialists dedicated to protecting public health and the environment. Founded in 1970 NRDC serves more than a million members supporters and environmental activists with offices in New York, Washington, D.C, Los Angeles, San Francisco, Chicago and Beijing. More than 200,000 NRDC members reside in California.

NRDC commends Commissioner Peterman on a concise, helpful IEPR update that properly identifies and addresses the major challenges facing the state with regard to integrating large amounts of renewable power, energy efficiency, and demand side resources including demand response to reduce the carbon dioxide emissions of our state's electricity sector. The IEPR recommendations on meeting supply and system stability and reliability challenges related to the outage of the San Onofre Nuclear Generating Station (SONGS) is especially salient and NRDC expects to contribute significantly to identifying and meeting long term supply and system needs related to possible prolonged outages at SONGS. NRDC believes the IEPR properly explores the evolving role of natural gas from a baseload to a flexibility resource in complementing renewable energy resources in meeting system supply and reliability needs.

NRDC strongly agrees with the emphasis the IEPR places on relying upon the state's loading order, and on considering transmission at both the bulk electricity and distribution scales, to both facilitate the development of more distributed generation and take full advantage of demand response and other demand side management approaches to meet and balance load and generation.

We are generally supportive of the IEPR's framework and recommendations and offer the following suggestions, comments and recommendations:

**1. Identifying and prioritizing geographic areas for renewable development.**

NRDC strongly supports the establishment of additional renewable energy zones, especially those which capture system and related environmental benefits such as taking advantage of retired agricultural lands or other sites significantly contaminated or disturbed, and/or which enable a better or more effective use of new or existing transmission and energy storage infrastructure. We strongly believe that the Central and Imperial Valleys provide great opportunities to site renewable generation and transmission upgrades that have few environmental conflicts, increase system reliability generate economic activity in financially challenged parts of our state, and afford greater geographic diversity to the renewable energy mix that eases the integration challenge posed by variable generation.

With regard to distributed generation, zoning could help identify needed distribution system upgrades, and facilitate strategies for load serving entities to better take advantage of distributed generation (DG) and make it more visible and manageable. DG Zones that can function as islanded microgrids could allow for operational visibility for CAISO and facilitate greater penetration of distributed renewable resources. Zones can also permit better utilization of localized fast ramping resources such as combined heat and power (CHP) engines that could serve an additional purpose of load management and ancillary service provider. The interface between the electricity distribution system and the bulk electricity grid has great potential to

smooth renewable energy integration and we believe managing it in a more coordinated and mutually supportive manner is becoming inevitable.

## **2. Evaluating costs and benefits of renewable projects.**

NRDC supports the recommendations proposed in the IEPR for this subject area. The focus on the value – as opposed to simply the price – different generation sources provide to the state’s electrical system is an important principle. A mix of generation resources can provide geographic and temporal diversity as well as improved operational efficiency that enables the state to more securely integrate in-state and out-of-state renewable energy resources. This concept is currently and explicitly being utilized in recent CPUC decisions regarding renewable generation procurement (Abengoa and BrightSource Energy PPAs) and will thus be reflected in transmission planning decisions being made at CAISO and regionally at the Western Electricity Coordinating Council (WECC) and ultimately in generation portfolios used to identify transmission solutions as part of FERC’s Order 1000 regional and interregional planning and cost allocation processes.

We also agree that the state needs to address expected increased penetration of plug-in vehicles, with regard to system demands *and* benefits, as well as supporting effective rate structures that incent and capture these benefits and enhance the operation of the electrical system.

## **3. Minimizing interconnection costs and time at both the transmission and distribution levels.**

NRDC agrees with the recommendations in this section and urges that in addition the CEC – perhaps through the PIER program – study cooperatively with other state and regional entities such as the University of Wyoming, NREL, and others, the value of uncorrelated variability from geographically and temporally diverse regional renewable energy generation sources which may reduce state integration costs.

We strongly agree with the action item: *Provide input on environmental and land-use attributes of out-of-state renewable resources to CPUC in support of the 2014 LTPP process.* We recommend coordinating with WECC’s Transmission Expansion Planning Policy Committee to provide input on both generation and transmission assumptions.

We applaud the recommendations in this section that emphasize the ability to meet flexibility needs from all resources, including demand side resources.

The recommendations on regional coordination are robust and include many of the same measures recommended by NREL, WGA, DOE and WECC’s Variable Generation Subcommittee (such as improving balancing area coordination). Because California has the West’s only Independent System Operator, it is extremely important for California renewable integration and external market opportunity development that congruent operational capabilities be adopted across the region. The Energy Imbalance Market (EIM) proposed by state public utility commissioners is an important tool for developing market congruence across the region. It is not the only tool, however; and the CEC, CPUC and CAISO should also seek to coordinate with the development of the Northwest Power Pool (NEPP) EIM and related measures. According to the NWPP: *“In order to better evaluate these (variable resource integration) issues and potential solutions, 22 utility organizations in the Northwest Power Pool area established a new Market Assessment and Coordination Committee (MC). The MC will evaluate a range of options to meet*

*the region's growing operational challenges, including enhanced bilateral sub-hourly markets and a centralized energy imbalance market. By the end of 2012, the MC will produce a recommendation outlining the best strategy for addressing these needs while respecting existing benefits and investments already made by Northwest market participants."*

Given California's historic and existing seasonal energy exchanges with the Northwest, access to quality resources and the need for enhanced coordination, the evolving NWPP process has great significance. The NWPP is also considering ways to make its EIM proposal expandable and compatible with other similar proposals in the West. There is a possibility that CAISO, which already possesses the technology, staff and experience at operating an EIM, could become the market operator for one or both (NWPP and the PUC commissioners') proposals.

**4. Promoting incentives for projects that create in-state jobs and economic benefits.**

The recommendations in the section are sound, but we suggest that the Commission and CPUC study and create incentives for renewable energy and transmission projects being proposed or under development in other parts of the West to utilize products manufactured or assembled in California. A procurement preference for wind farms meeting other criteria the state needs (such as lower cost, higher capacity factors, dynamic schedules, and providing uncorrelated variability or temporal diversity) and which would, for example, use turbines manufactured in-state might produce a very significant number of jobs in California, even if the project was physically constructed elsewhere.

**5. Promoting and coordinating existing financing and incentive programs for critical stages in the renewable development continuum.**

Financing for renewable energy projects is becoming limited because of increased uncertainty that projects will be approved or completed or their power distributed to markets in time to meet contractual obligations. Project costs increase without federal investment and production tax credits. Many of the measures identified in other parts of the IEPR, including zoning renewable development areas based on low-conflict attributes; providing incentives for well-sited projects in terms of expedited permitting and other inducements; better coordinating transmission planning and approval for lines supporting renewable energy zones all enhance the security of private investment. Prominent members of private equity investment firms have publicly supported the renewable energy zoning approach (as established in BLM's Solar Programmatic Environmental Impact Statement for example) for just these reasons. The value of establishing and supporting good geographic zones (for both large scale and distributed generation projects) cannot be overstated.

In conclusion, NRDC thanks Commissioner Peterman and the CEC staff for this useful and insightful IEPR update.

Respectfully submitted,



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NRDC