

# DOCKET

11-IEP-1A

DATE	FEB 01 2012
RECD.	FEB 01 2012

## BEFORE THE CALIFORNIA ENERGY COMMISSION

In the matter of,

Preparation of the  
2011 Integrated Energy Policy Report  
(2011 IEPR)

Docket No. 11-IEP-1A

NOTICE OF BUSINESS MEETING  
RE: Adoption of Lead Commissioner  
Final 2011 IEPR

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### COMMENTS OF DISTRIBUTED ENERGY CONSUMER ADVOCATES ON THE NOTICE TO CONSIDER ADOPTION OF LEAD COMMISSIONER FINAL 2011 INTEGRATED ENERGY POLICY REPORT

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February 1, 2012

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NOTICE TO CONSIDER ADOPTION OF LEAD COMMISSIONER FINAL 2011  
INTEGRATED ENERGY POLICY REPORT**

Pursuant to the Lead Commissioner's January 25<sup>th</sup>, 2012 notice, Distributed Energy Consumer Advocates (“DECA”) respectfully submits these comments on the 2011 Integrated Energy Policy Report (“IEPR”).

**I. Introduction**

DECA is a nonprofit education and advocacy organization whose members consist of existing and potential residential and small commercial producer-consumers of electricity. DECA appreciates the opportunity to comment on behalf of its members and their customer classes. In doing so DECA hopes to help the Commission improve California's energy policies that affect electricity consumers who are interested and willing to invest directly in a range of infrastructure and demand-side management mechanisms to control their own energy

investments. DECA believes policy decisions that support customer choice around energy investments represent some of the best decisions that can be made in transforming both the consumption and production of energy. Accordingly DECA limits its comments here predominantly to those area that affect residential consumer adoption of distributed generation and demand-side energy investments.

DECA recognizes that this report is the result of a great deal of work by Commission staff, workshop participants, and commenters. While DECA comments here on the content of this report, the focus of these comments is on actions the Commission and its partner agencies can and should take in response to this report and in production of subsequent reports.

## **II. Discussion**

### **A. Residential and small scale commercial distributed generation investments are among the most effective localizable green jobs producing mechanism.**

DECA supports the Commission's job creation efforts and Governor Brown's Clean Energy Jobs Plan and believes that residential energy infrastructure investment presents a great opportunity to localize those effort in communities where the benefits are most needed. DECA believes residential distributed generation programs should be coordinated to target localized capacity and ancillary service needs. These needs, in particular those related to increased geographic resolution of load and load modifiers and targeted OTC retirement-driven local area needs provide an excellent opportunity for coordination with Governor Brown's Clean Energy Jobs Plan.<sup>1</sup> This coordination should examine areas of current weakness in residential distributed generation programs targeting low income and muti-unit apartment buildings to maximize the benefits of targeted procurement efforts.

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<sup>1</sup> OTC issues are addressed in greater detail in section C, below.

In addition to their obvious grid reliability benefits, OTC retirement-driven targeted residential and small commercial distributed generation programs have the opportunity to address a wide range of social justice issues associated with communities near California's least efficient power plants. The issues include job creation, air quality, and increased access to the benefits of energy produced at zero marginal cost. Localized distributed generation has the potential to increase the ability for low or no emissions solutions such as the use of synchronous condensers or capacity banks to address some of the OTC related grid reliability concerns that are not adequately being considered in the state's OTC efforts.

**B. DECA supports the increased geographic resolution of the impacts of demand growth, energy efficiency, demand response, and distributed generation.**

DECA asserts that too often in both policy debates and infrastructure planning efforts the potential contributions of small scale residential investments in energy infrastructure are discounted and treated as homogeneous monoliths. This failure to account for what mechanisms distributed generation and related demand-side actions can and do contribute to system needs creates market imbalances that pervert the state's policy goals. The IEPR correctly helps move the state toward quantifying the contributions of these resources.<sup>2</sup> What needs to be done concurrently with this research is quantifying the *potential* for Distributed Generation (“DG”) and similarly small scale investments to address system needs, in particular those related to integration of variable energy resources on the grid.

Such analysis will allow programs focused on residential customers to bring more to the

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<sup>2</sup> Lead Commissioner Final 2011 Integrated Energy Policy Report, p.126.

table with their investments. As an example, a recognition that there is a localized need for reactive power can be met in part by the California Solar Initiative or an equivalent program encouraging or requiring AC inverters in that particular location to provide vars. For a very small cost compared to the total cost of a residential PV system AC inverters can be designed to switch between circuitry that supplies vars or not based on a remotely generated signal.<sup>3</sup> All the elements of this technology exists now, but policy makers are not adequately considering how to incorporate them into planning efforts. Accordingly, the Commission should treat the IEPR as a vehicle for furthering the quantification of DG in an integrated electric system to facilitate targeted DG procurement policies at the CPUC and elsewhere.

**C. The IEPR should specifically examine the ability of targeted distributed generation to address the grid reliability needs raised by OTC-driven retirement.**

DECA generally agrees with the characterizations of distributed generation in the IEPR report. In particular DECA supports the assertion that the amount of capacity allotted to behind the meter DG should be addressed as well as the work toward consensus and establish definitions and methodologies as described in Renewable Energy Development section of the report.<sup>4</sup> DECA believes the IEPR should help the Commission and its sister agencies to examine the ability of targeted DG procurement to address grid reliability needs raised by OTC compliance-based retirements. Targeted DG procurement (and quantification of existing DG's characteristics) are not currently adequately captured in the state's OTC planning efforts.

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3 See the work of J. Lai at Virginia Polytechnic ([https://solarhighpen.energy.gov/project/virginia\\_polytechnic\\_institute\\_and\\_state\\_university](https://solarhighpen.energy.gov/project/virginia_polytechnic_institute_and_state_university)) and A. Maknouninejad at the University of Central Florida ([http://www.floridaenergy.ufl.edu/wp-content/uploads/S2-PV-Ali-Var-Paper-\\_Final3.pdf](http://www.floridaenergy.ufl.edu/wp-content/uploads/S2-PV-Ali-Var-Paper-_Final3.pdf)) as foundational examples.

4 Lead Commissioner Final 2011 Integrated Energy Policy Report, p.129.

**D. The IEPR should examine a broader interpretation of demand response than currently considered.**

Demand Response (“DR”) and in particular the aggregation of residential demand response remains an underutilized tool in energy policy planning. DECA believes the opportunities of electricity consumers are currently limited by a too-narrow definition of demand response. Transformative technologies such as electric vehicles and plug in hybrids are greatly increasing the power of residential electricity consumers to have a meaningful effect on both the consumption and production of electricity on the grid.

A quantification of DR that fails to capture the ability to change the time and amount of both consumption and production of electricity by residential customers distorts prices in the market and negatively effects rate-based policies designed to change consumption patterns. The ability to optimize the duration and rate of electric vehicle charging in response to grid operational needs should be coordinated with rates to encourage the adoption of electric vehicles and plug in hybrids. Similarly a “regulation down” ISO need can be met with domestic lighting or other controllable load in homes. While such policies may directly benefit residential distributed energy infrastructure investors, the potential of such a perspective shift has a much broader scope. As an example DECA highlights the benefits of considering the ability of turning street lights on early and off late to smooth morning and evening ramps. Current demand response policy would simply view such an action as an increase in demand rather than demand that is responsive to system needs, yet streetlights remain an untapped source of load that, because of the large number of them and their wide geographic dispersion, can provide finely attenuated and localized grid support.

