DOCKET
11-IEP-1G
DATE May 09 2011
RECD. May 13 2011

California Energy Commission

IEPR Committee Workshop

Distributed Generation – Getting to 12,000 MW by 2020

May 9, 2011 – 9:30 AM

Hearing Room A

AGENDA

Introduction

Suzanne Korosec, IEPR Lead

Opening Comments

Chair Robert Weisenmiller, Presiding Member
Commissioner Karen Douglas, Associate Member
Commissioner Carla Peterman, Presiding Member of Renewables Committee

Panel 1: Developing Interim and Regional Targets for 12,000 MW by 2020

Panel Moderator: Heather Raitt

Michael Picker, Office of the Governor
Aaron Johnson, Pacific Gas and Electric Company
Gary Schoonyan, Southern California Edison
Jim Avery, San Diego Gas and Electric Company
Jim Shetler, Sacramento Municipal Utility District
Jeanne Clinton, California Public Utilities Commission
Noah Long, Natural Resources Defense Council
Nicole Capretz, Environmental Health
Bill Gallegos, Communities for a Better Environment
Heather Sanders, California Independent System Operator
Mary Leslie, Los Angeles Business Council
Bill Powers, Powers Engineering

Discussion of European Experience Integrating Large Amounts of Distributed Generation

Christian Hewicker, KEMA

Public Comment

Lunch Break

Discussion of European Experience Integrating Large Amounts of Distributed Generation (cont'd)

Panel 2

Moderator: Heather Raitt

Jon Carruthers, Pacific Gas and Electric Company
Robert Woods, Southern California Edison
Bill Torre, San Diego Gas and Electric Company
Dave Brown, Sacramento Municipal Utility District
Heather Sanders, California Independent System Operator
Carl Lenox, SunPower
David Korinek and Christian Hewicker, KEMA

Discussion of "Developing Renewable Generation on State Property, Installing Renewable Energy on State Buildings and Other State-Owned Property"

Staff presentation

Heather Raitt, California Energy Commission

Outside Parties

KEMA: European Experience, Renewables on Government Property
Julia Donoho, Sonoma County

How Research Development and Demonstration can Help Advance Distributed Generation[1]

Staff presentation

Linda Spiegel, California Energy Commission

Panel 3

1. **Jan Kleissl**, University of California San Diego: How geographic smoothing and forecasting can help high penetration of distributed generation
2. **Roland Winston**, University of California Merced: Improved economics with advanced technology
3. **James I. Zoellick**, Schatz Energy Research Center, Humboldt State University: Energy, Greenhouse Gas Emission and Economic Impact Modeling of Local Renewable Generation: Case study for Humboldt County
4. **Bill Torre**, San Diego Gas and Electric Company: SDG&E R&D Involving Distributed Generation
5. **Peter Evans**, New Power Technologies: Interconnection/grid connection and other utility roles in advancing distributed generation – sweet spots on the distributed generation grid

Public Comment

Adjourn

[1] *Note: energy **s**torage**, s**mart grid and microgrids will be discussed at separate workshops.*

Attachment
Request for Comments

The IEPR Committee requests that parties address the following in the panel discussions and public comment portions of the workshop and in written comments. The questions are organized by topic in the workshop. **Written comments are due** to the Energy Commission by 5:00 p.m. on **May 23, 2011**. Please see the workshop notice for instructions on how to submit written comments: http://www.energy.ca.gov/2011_energypolicy/notices/2011-05-09_workshop_notice.pdf

I. Developing Interim and Regional Targets for 12,000 MW by 2020

1) Please suggest a methodology for setting interim and regional targets building to the 12,000 MW goal by 2020. Considerations to address include: state and local policies, the capability of the distribution system, economics, and resource availability. To aid discussion, staff has identified the following options for parsing out the goal:
    - Set targets for each load serving entity or county.
    - Set targets per sector, for example, residential, commercial, public, or other.
    - Set separate targets for installations that serve on-site load and for projects that produce energy for wholesale.
    - Set targets by utilities' portion of coincident peak.
    - Set targets based on resource potential and/or best use of the distribution system.
2) Related to the above question, some utilities have noted in the California Public Utilities Commission's Rule 21 Working Group and its Renewable Distributed Energy Collaborative (Re-DEC) that up to 15 percent of peak load for individual circuits could reliably interconnect with minimal system upgrades. Other utilities have said that individual circuits could handle distributed generation additions for up to 50 to 100 percent of minimum load. Could a 15 percent of peak load or 50 to 100 percent of minimum load penetration rate be implemented statewide? If so, how much renewable capacity would be installed per utility?
3) Please provide comments on any methodologies discussed at the workshop. Indicate whether you support or oppose a particular approach and the rationale for your position.
4) Should the state create incentives or penalties to ensure achievement of targets? If so, please suggest program design and implementation.
5) If the state established regional targets, should there be options to trade allocation requirements? If so, how should this be implemented?

6) What are the near-term and long-term actions needed to achieve 12,000 MW by 2020?

II. Discussion on European experience integrating large amounts of DG[2]

7) How are the European electrical distribution systems similar to or different from California?

8) What challenges have European countries encountered from integrating distributed renewables that are applicable to California, what actions did they take to address the challenges, and what lessons are applicable to California?

9) As California builds out its distribution system, what lessons can be learned from the European experience?

III. Discussion of "Developing Renewable Generation on State Property, Installing Renewable Energy on State Buildings and Other State-Owned Property"

10) Please provide comments on the staff report and on lessons learned from the European or local experience that may be applicable to California.

IV. How Research Development and Demonstration (RD&D) can Help Advance Distributed Generation

11) What is the role of RD&D in advancing distributed generation and helping achieve the Governor's *Clean Energy Jobs Plan* and other current and future state policy goals such as the Renewable Portfolio Standard and AB 32?

12) Please comment on the maturity of distributed generation technologies. Which technologies or components should RD&D efforts focus on to address some of the barriers for advanced DG deployment?

13) Are currently existing technologies and tools enough to power facilities with nearly 100 percent renewables in a technically and economically feasible manner? What are some emerging technologies that may be able to reduce costs when produced at scale?

14) What issues impede the deployment of distributed generation technologies in utility distribution territories that RD&D can help address? If so, please identify the issue and how RD&D can help in a manner that benefits both the utilities and customers.

15) What other future research direction, focus, strategies or initiatives may be recommended for PIER to undertake so that RD&D can better help advance DG?

[2] Parties interested in this panel discussion are also encouraged to address question 2.