Notice of Staff Workshop on Peer Review of Lawrence Livermore National Lab (LLNL) Energy Storage and Demand Response Evaluation Methodology

California Energy Commission staff will conduct a Staff Workshop to review the assessment of the Lawrence Livermore National Laboratory (LLNL) methodology to evaluate energy storage and demand response under 33 percent Renewables by 2020 scenarios in California.

June 16, 2014
10 A.M.
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
1st Floor, Hearing Room A
Sacramento, California
Wheelchair Accessible

Remote Access Available by Computer or Phone via WebEx™
(Instructions below)

Background

Implementation of California's goal of 33 percent renewable energy by 2020 may increase the variability and uncertainty in electricity generation for the state's grid operator. Demand response programs and energy storage were identified as potential solutions to mitigate this variability and uncertainty, and to provide operating flexibility. Lawrence Livermore National Lab (LLNL) developed a modeling system to estimate the value of storage and demand response to minimize variability and uncertainty using high performance computing (HPC). HPC has the capability to explore the value for energy arbitrage, load following and regulation; improve modeling of variability and uncertainty; and evaluate a significant number of options to identify the most cost-effective solutions. The resulting LLNL's study could be a building block for researchers to conduct further studies on the subject and a baseline for a more capable model. However, there is a need to conduct a peer review of the project methodology to ensure it is sound and the conclusions are logical. Also, there is a need to understand next steps in assessing the value of storage and demand response in California and whether a HPC model can help in this assessment.

The Commission staff has engaged a team of experts in stochastic production cost modeling, PLEXOS, KERMIT, storage and demand response valuation, renewables integration, and supercomputing to peer review the LLNL study. These experts are

experienced individuals from technical support contractor Det Norske Veritas - Germanischer Lloyd (DNV GL), Energy and Environmental Economics, National Renewable Energy Laboratory, Argonne National Laboratory, Pacific Northwest National Laboratory, California Independent System Operator, and Sandia National Laboratory. Consequently, this review process will consist of an independent desktop review of the study by the experts, a workshop to discuss methodologies and findings, and a final report on the LLNL methods as well as recommendations for next steps using HPC to assess the value of storage and demand response in California.

Public Comment

Oral comments: Staff will accept oral comments during the staff workshop. Comments may be limited to 5 minutes per speaker.

Public feedback should focus on the following:

- Advice and comments on the LLNL study;
- Advising Energy Commission staff on opportunities to gain synergies in research study efforts; and
- Facilitating the effective transfer and use of research study results

Written comments: Written comments will be accepted at the workshop. Additionally, written comments can be submitted to Steve Ghadiri by 5:00 p.m. on June, 20, 2014. Written comments will be also accepted at the workshop, however, the Commission may not have time to review them before the conclusion of the meeting. For additional information, see Standing Order re: Proceedings and Confidentiality Procedural Requirements for Filing, Service, and Docketing Documents with the Energy Commission, available at: www.energy.ca.gov/commission/chief_counsel/docket.html.

Additionally, written comments may be posted to the Energy Commission's website. Please note that your written and oral comments, attachments, and associated contact information (e.g. your address, phone, email, etc.) become part of the viewable public record. This information may become available via Google, Yahoo, and any other search engines.

The Energy Commission encourages comments by e-mail. Please include your name and any organization name. Comments should be in a downloadable, searchable format such as Microsoft® Word (.doc) or Adobe® Acrobat® (.pdf). Please indicate "Peer Review of LLNL Study" in the subject line. Send comments to:

Steve.Ghadiri@energy.ca.gov

Public Adviser and Other Commission Contacts

The Energy Commission's Public Adviser's Office provides the public assistance in participating in Energy Commission proceedings. If you want information on how to

participate in this forum, please contact Alana Mathews at PublicAdviser@energy.ca.gov or (916) 654-4489 (toll free at (800) 822-6228).

If you have a disability and require assistance to participate, please contact Lou Quiroz at lquiroz@energy.ca.gov or (916) 654-5146 at least five days in advance.

Media inquiries should be sent to the Media and Public Communications Office at mediaoffice@energy.ca.gov or (916) 654-4989.

If you have questions on the subject matter of this meeting, please contact Steve.Ghadiri@energy.ca.gov or (916) 327-1623.

Remote Attendance

You may participate in this meeting through WebEx, the Energy Commission's online meeting service. Presentations will appear on your computer screen, and you may listen to audio via your computer or telephone. Please be aware that the meeting may be recorded.

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Availability of Documents

Documents and presentations for this meeting will be available online at:
www.energy.ca.gov/research/notices/

May 29, 2014

Laurie ten Hope
Deputy Director

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LLNL Project Peer Review Workshop

Energy Storage and Demand Response for Renewable Integration in California to review the Methodology and Results

Monday, June 16, 2014
10:00 AM—3:45 PM
California Energy Commission, Hearing Room A
1516 9th Street, Sacramento, California

Agenda

1.	Introductions	10:00	Mike Gravely, Energy Commission
2.	LLNL Presentation Methodology and Project Objectives	10:15	Tom Edmunds, LLNL
3.	Peer Review Report	11:00	Ralph Massielo, Der Norske Veritas (DNV GL)
4.	Peer Review Comments Energy and Environmental Economics (E3), DNV GL Argonne National Lab (ANL), Lawrence Berkeley National Lab (LBNL), National Renewable Energy Lab (NREL, Pacific Northwest National Lab (PNNL)	11:20	Moderated by Ralph Massielo , DNV GL
	Lunch Break	12:00	
5.	Peer Review Comments ANL, LBNL, NREL, PNNL (Continued)	1:15	Moderated by Ralph Massielo, DNV GL
6.	Public Questions/ Comments	2:30	Public
7.	Recommendations /Next Steps	3:15	Mike Gravely
8.	Closing Remarks	3:30	Mike Gravely