In the matter of:	)	RE: Workshop on Renewable
	)	Energy Forecasting: Opportunities
Renewable Energy Forecasting	)	to Improve Forecast Quality, Costs
_____	)	and Utility
	)	

Notice of Staff Workshop

Workshop on Research Needs for Renewable Energy Forecasting

California Energy Commission staff will conduct a workshop on solar and wind energy forecasting and load forecasting. This workshop will discuss forecasting tools and methods and how those are being used today; research and development needs; and solutions to address anticipated operational needs of utilities and balancing authorities. This workshop will provide a forum for feedback from different experts, stakeholders, and the public on the opportunities to improve forecast quality, cost, and usefulness in California. Representatives from the California Independent System Operator (California ISO), investor owned utilities (Pacific Gas and Electricity Company - PG&E; Southern California Edison - SCE; and San Diego Gas and Electricity - SDG&E), other balancing authorities such as Sacramento Municipal Utility District (SMUD) and Los Angeles Department of Water and Power (LADWP), California Public Utilities Commission and solar, wind and load forecasting researchers and developers are expected to participate in this workshop. Also, feedback or suggestions gathered from stakeholders during this workshop will be used to guide implementation of forecasting research projects and to prepare and refine funding initiatives to be included in the Electric Program Investment Charge (EPIC) 2018-2020 Triennial Investment Plan.

The workshop will be held on:

Tuesday, January 17, 2017
Beginning at 9:00 a.m.
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
First Floor, Rosenfeld Hearing Room
Sacramento, California
Wheelchair Accessible

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

Background

In California, all retail sellers of electricity are required to serve 33 percent of their load with renewable energy by 2020 and 50 percent by 2030. Solar and wind energy is expected to represent the bulk of this increase. This increased penetration of variable renewable generation in the state's electricity portfolio will require comprehensive and accurate wind and solar energy forecasts that can be used by balancing authorities and utilities to plan and manage resources. Accurate generation and load forecasts will minimize costs and renewable curtailment without over-relying on backup generation with greenhouse gas emissions; help reduce operating and maintenance costs; increase reliability of the power system; and inform decisions for future development.

Energy Commission-funded research projects on renewable energy forecasting focus on improving the tools and methods for different applications and needs. Examples include addressing technological gaps in the forecasting of direct normal irradiance, plan of array irradiance and solar power generation; integrating solar forecasting tools with the operation of controllable, non-critical distributed energy resources; improving solar forecasts to create enhanced net-load forecasts, and applying these enhanced forecasts to reduce scheduling errors for utilities and the California ISO; and improving the accuracy of prediction of short-term wind ramps in the Tehachapi Pass Wind Resource Area. However, gaps remain in ensuring that forecasting solutions are addressing future needs in the most cost-effective method given the high penetration of renewables.

In addition, distributed energy resources (DERs) like energy efficiency, distributed solar, and demand response are becoming more prevalent and are expected to increase rapidly in the next five years as costs decrease and software is developed to better manage and coordinate the DERs to improve their value to the grid and provide additional revenue sources to DER owners and aggregators. However, grid operators currently have little data on DER energy production and DER effects on load.

The workshop will include a staff presentation on the summary of current solar and wind forecasting efforts funded by the Energy Commission and two panel sessions to be followed by a public comment session. The first panel session will discuss forecast quality, forecasting research needs, and future trends. The second panel will discuss anticipated forecasting needs and applications, developing future solutions that link closely to electricity system operations, sensor networks to improve forecasting, and costs of sensing and forecasting. The workshop will provide an opportunity for the public and stakeholders to comment and contribute their expertise on the technological advancements and R&D needs to make renewable energy forecasting more reliable, accurate, less costly to implement, and more widely used to support California's renewable energy goals.

Public Comment

Oral comments. Staff will accept oral comments during the workshop. Comments may be limited to three minutes per speaker. Any comments may become part of the public record in this proceeding.

Written comments. Written comments will be accepted at the workshop. Additionally, written comments can be submitted via e-mail to Rizaldo Aldas by 5:00 p.m. on January 27, 2017. Please note that written and oral comments, attachments, and associated contact information (e.g., address, phone, email) 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 include the name of the workshop in the subject line. Send written comments to Rizaldo.Aldas@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 the Public Adviser, Alana Mathews, at PublicAdviser@energy.ca.gov or (916) 654-4489, or 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 Rizaldo Aldas at Rizaldo.Aldas@energy.ca.gov or (916) 327-1417.

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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If you have difficulty joining the meeting, please call the WebEx Technical Support number at 1-866-229-3239.

Availability of Documents

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

Laurie ten Hope
Deputy Director

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