

CALIFORNIA ENERGY COMMISSION1516 Ninth Street
Sacramento, California 95814Main website: www.energy.ca.gov

In the matter of,)	Docket No. 11-IEP-1D
)	
Preparation of the)	NOTICE OF STAFF WORKSHOP
2011 <i>Integrated Energy Policy Report</i>)	
_____)	

Staff Workshop on Improving Techniques for Estimating Costs of California Generation Resources

In support of the *2011 Integrated Energy Policy Report (2011 IEPR)*, the California Energy Commission (Energy Commission) staff will conduct a workshop to gather public feedback, examine current best practices, and review the lessons learned from other generation cost models to form the basis for a comprehensive review of how the Energy Commission analyzes and estimates current and future generation costs. This work is overseen by the Energy Commission's IEPR Committee, Chair Robert Weisenmiller, Presiding Member, and Commissioner Karen Douglas, Associate Member. Although this is a staff workshop, Commissioners may attend and participate.

The workshop will be held:

MONDAY, MAY 16, 2011
Beginning at 9 a.m.
CALIFORNIA ENERGY COMMISSION
1516 Ninth Street
First Floor, Hearing Room A
Sacramento, California
(Wheelchair Accessible)

Remote Attendance and Availability of Documents

Internet Webcast - Presentations and audio from the meeting will be broadcast via our WebEx web meeting service. For details on how to participate via WebEx, please see the "Remote Attendance" section towards the end of this notice.

Purpose

The purpose of this workshop is to receive public comments on how the Energy Commission can improve its approach to analyzing and estimating current and future generation costs. Energy Commission staff will also seek to integrate lessons learned and examine the best practices from publicly available models and sources. The Energy

Commission staff is seeking recommendations on the most effective steps for gathering technology cost driver information that served as the input data set for the *2009 IEPR* Cost of Generation Model. Staff will integrate this information into a comprehensive revision of its approach to analyzing and estimating current and future costs of new generation resources.

Energy Commission staff is currently conducting an assessment of the fundamental attributes that are included when estimating the cost of building and operating different electricity generation technology resources. Since the direct costs of construction and operation do not capture all of the system, environmental, or other relevant attributes, a broader comparative cost analysis may be appropriate. Such an analysis would require consideration of the generation services and value that each technology provide to the electricity system, how the unit would operate in the system and affect the dispatch of other facilities, and the overall effect on total system costs. Environmental implications, system diversity, and reliability are also vital factors for resource planning studies. Staff would like stakeholder recommendations on what additional factors should be considered, in conjunction with direct construction and operation cost estimates, to provide a cost analysis that is relevant in today's rapidly changing technological environment. This is particularly important when considering the selection of intermittent renewable generation options and the infrastructure requirements for integrating these resources into the California electricity system.

It is also important to construct estimates of future costs on the best available data on current costs and trends. Staff is seeking input on the best available sources and data collection practices from the state's major utilities, conventional and renewable generation developers, and other interested parties in this process. Several organizations that have developed different cost of generation estimates will present an overview of their models and engage in a panel discussion on improving generation cost studies in general, and the Energy Commission's approach in particular.

The workshop agenda includes a number of questions for stakeholders to consider. Please provide a written response to any and all questions for which you have information that may help advance cost of generation studies. If any party has or is aware of different cost of generation models that the Energy Commission may consider, please provide a copy of the model and any supporting documentation.

Background

Levelized costs are useful for evaluating the financial feasibility of a generation technology and for developing screening curves to compare different technologies. Since most studies involving new generation require an assessment of costs, accurate and readily available cost of generation estimates are essential for any resource planning study. There are numerous studies that provide cost estimates for individual generation technologies, but it is difficult to compare the merit of these different estimates without understanding the underlying modeling algorithms and data input assumptions. Since plant characteristics, capital costs, plant operations, financing

arrangements, and tax assumptions (deductions and credits) can vary, these different assumptions will produce significantly different cost estimates. It is, therefore, important to have a consistent and current set of assumptions to be able to compare the costs of each generation technology. It is also important to recognize that the numerous variations with these input assumptions will result in range of cost estimates for each technology.

Energy Commission staff prepared the *Comparative Cost of California Central Station Electricity Generation Technologies* Report (publication # CEC-200-2009-017-SF), in support of the *2009 IEPR*. The report includes the cost assumptions for 21 central station generation technologies: 6 gas-fired, 13 renewable, nuclear, and coal-integrated gasification combined cycle. The Energy Commission staff used the generation technology characterizations to update the cost estimates for plants that may be developed by merchants, investor-owned utilities, and publicly owned utilities. All levelized costs were developed using the Cost of Generation Model.

The staff report can be found on the Energy Commission's website at:
www.energy.ca.gov/2009publications/CEC-200-2009-017/CEC-200-2009-017-SF.PDF.

The Cost of Generation Model can be found at:
www.energy.ca.gov/2010publications/CEC-200-2010-002/count/CEC_COG_Model_Version_2.02-4-5-10x.php.

A user's guide to operate the model can be found at:
www.energy.ca.gov/2010publications/CEC-200-2010-002/count/click1.php.

Workshop Participation and Written Comments

Energy Commission staff is seeking active participation and comments from utilities, generators, other state agencies, and other stakeholders. The Committee encourages interested parties to present their views either orally at the workshop or through written comments.

Written comments are encouraged before the workshop; final written comments should be submitted no later than 5 p.m. on **May 31, 2011**. Comments submitted before the workshop will be used to facilitate the discussion. Please include the docket number "**Docket #11-IEP-1D Reliability**" in the subject line or first paragraph of your comments.

All filings in the IEPR proceeding may now be done electronically. Please send your comments in either Microsoft Word format or as a Portable Document File (PDF) by electronic mail to [docket@energy.state.ca.us] or send them on a Compact Disc to:

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 11-IEP-1D
1516 Ninth Street
Sacramento, CA 95814-5512

Please include your name or organization's in the name of the file. Signatures may be indicated on electronic copies by embedding a scanned signature graphic, "Original signed by" or similar words, or a scanned copy of the signature page may be appended to the electronic file.

A hardcopy original may also be submitted to the Dockets Unit during the workshop comment window. All written materials relating to this workshop will be filed with the Dockets Unit and become part of the public record in this proceeding.

Public Participation

The Energy Commission's Public Adviser's Office provides the public assistance in participating in Energy Commission activities. If you want information on how to participate in this forum, please contact the Public Adviser's Office at (916) 654-4489 or toll free at (800) 822-6228, by FAX at (916) 654-4493, or by e-mail at [PublicAdviser@energy.state.ca.us]. If you have a disability and require assistance to participate, please contact Lou Quiroz at (916) 654-5146 at least five days in advance.

Please direct all news media inquiries to the Media and Public Communications Office at (916) 654-4989, or by e-mail at [mediaoffice@energy.state.ca.us].

If you have questions on the technical subject matter of this forum, please contact Al Alvarado by e-mail at [aalvarad@energy.state.ca.us] or (916) 654-4749. For general questions regarding the IEPR proceeding, please contact Lynette Green, IEPR project manager, by phone at (916) 653-2728 or by e-mail at [lesterno@energy.state.ca.us].

The service list for the *2011 IEPR* is handled electronically. Notices and documents for this proceeding are posted to the Energy Commission website at [www.energy.ca.gov/2011_energypolicy/index.html]. When new information is posted, an e-mail is sent to those on the energy policy e-mail list server. We encourage those who are interested in receiving these notices to sign up for the list server through the website [www.energy.ca.gov/listservers/index.html].

Remote Attendance

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

Computer Log-on with Telephone Audio:

1. Please go to [https://energy.webex.com] and enter the unique meeting number: **928 585 112**
2. When prompted, enter your name other information as directed and the meeting password: **CEC@051611** (Please note that password is case sensitive.)

Teleconference:

After logging in on the computer, an AUDIO CONFERENCE BOX will offer you the choice of phone connections:

1. TO HAVE WEBEX CALL YOU BACK: Type your area code and phone number and click "Call Me".
2. TO CALL INTO THE TELECONFERENCE: Use the drop-down box to select "I will call in" and follow the on-screen directions.
3. INTERNATIONAL CALLERS: Click on the "Global call-in number" link in part (2) above
4. TO LISTEN OVER THE COMPUTER: If you have the needed equipment and your computer is configured, click on "Use Computer Headset" and then "Call Using Computer" to use VoIP (Internet phone)

TELEPHONE ONLY (NO COMPUTER ACCESS): Call 1-866-469-3239 (toll-free in the U.S. and Canada) and when prompted enter the unique meeting number: **928 585 112**. International callers can select their number from [<https://energy.webex.com/energy/globalcallin.php>].

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

Mail Lists: energy policy, electricity, renewable, 33 by 2020