

DOCKETED

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**IN THE MATTER OF:****Modeling Tool to Maximize Solar + Storage****Docket No. 19-MISC-04**

RE: Staff Workshop to Discuss the Solar + Storage Modeling Tool

NOTICE OF STAFF WORKSHOP

California Energy Commission staff, in consultation with Energy and Environmental Economics, Inc. (E3), will present and discuss the cost-effectiveness results produced by the Solar + Storage Modeling Tool for an ongoing Electric Program Investment Charge (EPIC) funded project. Energy Commission staff and E3 will also provide a hands-on demonstration and training for stakeholders who are interested in using the tool. The Solar + Storage Modeling Tool evaluates the benefits of solar, storage, and other distributed energy resources (DERs) and estimates the value proposition of the integrated systems based on their expected optimal operations, location on the grid, market prices, and other characteristics. This is the second of three workshops on the Solar + Storage Modeling Tool.

**August 19, 2019
10:00 a.m.**

**Warren-Alquist State Energy Building
1516 Ninth Street
1st Floor, Charles R. Imbrecht Hearing Room
Sacramento, California 95814
(Wheelchair Accessible)**

Remote access is available by computer or phone via WebEx.™
(Instructions below.)

Agenda

The workshop will present and discuss the cost-effectiveness results produced using the Solar + Storage Modeling Tool in a separate, ongoing EPIC-funded project. The EPIC funded project is led by Humboldt State University Sponsored Programs Foundation and aims to address key market barriers to deploy a solar and storage technology system at the Blue Lake Rancheria gas station and convenience store located in Blue Lake, CA. The tool was used to examine the cost-effectiveness of the solar and storage devices installed at the pilot site.

In addition, the workshop will provide a presentation and an in-depth training for stakeholders who are interested in using the tool. E3 will demonstrate the tool and guide

stakeholders through the process of creating inputs, analyzing the cases, and viewing the final results.

Staff is seeking input on:

1. Is the tool intuitive to use? Which part(s) of the tool do you want to be more user-friendly?
2. Which capabilities of the tool are most useful and compelling?
3. What essential features or capabilities is the tool missing to be most useful to you?
4. Are the tool's assumptions, default values, and results accurate and appropriate for each use case?
5. Does the tool and analysis capture the revenue streams you examine in your own project development or evaluation process? If not, what is missing?
6. Which results and outputs do you find to be the most useful?
7. For which regulatory proceedings or policy discussions could the tool provide useful insights?

The primary audience for this workshop includes representatives focused on solar + storage project development evaluation, including utilities, project developers, storage vendors, and policy makers.

Background

California leads the nation in installed solar rooftop systems and is home to advanced technology companies designing and manufacturing the battery storage, communication controls, and electric vehicles that comprise the emerging smart grid. Solar is a great resource, but it is already hitting high penetration limits on distribution systems. The California Independent System Operator had projected that further increases will make integration challenging. As the penetration of solar increases and technology costs decrease, opportunities will arise to increase the benefits of solar by shaping its output with battery storage, advanced controls on electrical consumption, and other DERs. To capture the value from these technologies and to provide a stable long-term value proposition to accelerate their development and deployment, grid planners and operators need to integrate the capabilities these technologies provide into the planning and operations of the electricity grid.

At the June 13, 2019, workshop, the Energy Commission and its consultants introduced the Solar + Storage Modeling Tool developed by E3 under EPIC agreement EPC-17-004, "*Enhanced Modeling Tools to Maximize Solar + Storage Benefits.*" This tool will enable investor-owned utilities (IOUs) to incentivize customer use of DERs through their tariffs and programs and align this use with the needs of the electricity grid. By incentivizing the provision of grid services from DERs, IOUs can avoid buying those services from other providers, reduce fuel burn, avoid investments in new generation

capacity, and defer investments in new transmission and distribution infrastructure, leading to lower electricity costs to ratepayers.

Public Comment

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

Written comments: Written comments must be submitted to the Docket Unit by **5:00 p.m. on September 8, 2019**. Written comments will also be accepted at the workshop; however, the Energy Commission may not have time to review them before the conclusion of the meeting.

Written and oral comments, attachments, and associated contact information (e.g. address, phone number, email address) become part of the viewable public record. This information may also become available via any Internet search engine.

The Energy Commission encourages use of its electronic commenting system. Visit <https://efiling.energy.ca.gov/Ecomment/Ecomment.aspx?docketnumber=19-MISC-04>, which links to the comment page for this docket. Enter your contact information and a comment title describing the subject of your comment(s). Comments may be included in the "Comment Text" box or attached in a downloadable, searchable Microsoft® Word (.doc, .docx) or Adobe® Acrobat® (.pdf) file. Maximum file size is 10 MB.

Written comments may also be submitted by email. Include docket number 19-MISC-04 and Modeling Tool to Maximize Solar + Storage in the subject line and send to docket@energy.ca.gov.

If preferred, a paper copy may be submitted to:

California Energy Commission
Docket Unit, MS-4
Re: Docket No. 19-MISC-04
1516 Ninth Street
Sacramento, CA 95814-5512

Public Adviser and Other Commission Contacts

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Please direct requests for reasonable accommodation to Yolanda Rushin at Yolanda.Rushin@energy.ca.gov, or (916) 654-4310 at least five days in advance.

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

Questions on the subject matter of this meeting should be directed to Liet Le at Liet.Le@energy.ca.gov or (916) 327-1450.

Remote Attendance

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Availability of Documents

Documents and presentations for this meeting will be available at https://ww2.energy.ca.gov/research/mod_tool_max_solar_storage/

Dated: July 30, 2019 at Sacramento, California

Laurie ten Hope
Deputy Director
Energy Research and Development Division

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