

December 6, 2016

CA Public Utilities Commission  
Energy Division  
Attention: Energy Efficiency Branch  
505 Van Ness Avenue, 4<sup>th</sup> Floor  
San Francisco, CA 94102-3298



**Advice Letter 17-E-A**

**Re: Supplement to Request for Approval of MCE Seasonal Savings Pilot Program**

Marin Clean Energy (“MCE”) filed Advice Letter (“AL”) 17-E on August 18, 2016, which requested approval of MCE’s Seasonal Saving Pilot Program. On September 16, 2016 the California Public Utilities Commission (“Commission”) staff notified MCE that it had suspended AL 17-E while working with MCE to develop additional details related to the Evaluation, Measurement, and Verification (“EM&V”) plan. MCE now submits this supplemental filing to update the EM&V plan for its Seasonal Savings Pilot Program.

**Effective Date:** December 12, 2016

**Purpose**

Commission staff suspended MCE AL 17-E and worked with MCE to finalize the EM&V plan for MCE’s Seasonal Savings Pilot Program. This advice filing supplements MCE’s AL 17-E filed on August 18, 2016 and provides the EM&V plan developed with Commission Staff.

**Background**

The purpose of a pilot project is to test a new and innovative concept, partnership, or program design that is intended to address a specific area of concern or gap in existing programs.<sup>1</sup> The Commission articulated ten criteria for proposed pilots in D.09-09-047.<sup>2</sup> The Energy Efficiency Policy Manual restates those criteria.<sup>3</sup> MCE plans to launch the Seasonal Savings Pilot Program, an innovative program designed to investigate the potential cost-effective savings in utilizing smart thermostat technology to remotely modify set points on Heating, Ventilation, and Air Conditioning (“HVAC”) equipment. MCE engaged with Energy Division through the ideation process to address each of the criteria in MCE’s pilot program design. The results of that process

---

<sup>1</sup> D.09-09-047 at p. 48.

<sup>2</sup> D.09-09-047 at p. 48-49.

<sup>3</sup> Energy Efficiency Policy Manual, Section XII.12 at p. 8-9.

with some additional implementation details of the MCE Seasonal Savings Pilot Program were provided in AL 17-E as Attachment A: MCE Seasonal Savings Pilot Plan.

### **Revisions to AL 17-E's Attachment A: MCE Seasonal Savings Pilot Plan**

This supplemental AL revises the MCE Seasonal Savings Pilot Plan submitted to the Commission as Attachment A to AL 17-E. Specifically, this supplemental AL replaces the language in Section 13 of the MCE Seasonal Savings Pilot Plan with the language provided in Attachment 1, below.

Under the revised pilot plan, Det Norske Veritas Germanischer Lloyd (“DNV GL”) will serve as an independent consultant to support the EM&V work for MCE’s Seasonal Savings Pilot Program. In this role, DNV GL will coordinate with Nest and other Investor Owned Utilities (“IOU”) to collect the data necessary to conduct EM&V activities. The plan leverages work on Seasonal Savings programs between MCE and IOUs to generate richer insights into the success of the program. In part, DNV GL will coordinate with IOUs to collect Advanced Metering Infrastructure (“AMI”) data to conduct billing analysis. The revised EM&V plan also involves a Statewide Seasonal Savings working group made up of stakeholders that will create a post-season measurement and verification (“M&V”) survey that will be hosted by a third party M&V firm.

### **Funding for the Pilot**

As MCE indicated in its AL 17-E, MCE intends to fund the MCE Seasonal Savings Pilot Program out of MCE’s existing single family program budget.

### **Notice**

MCE respectfully requests a waiver of the protest period to enable expedient approval of the pilot and launch of the pilot this winter. MCE notes that no protests were received related to MCE AL 17-E.

If the protest period is not waived, anyone wishing to protest this advice filing may do so by letter via U.S. Mail, facsimile, or electronically, any of which must be received no later than 20 days after the date of this advice filing. Protests should be mailed to:

CPUC, Energy Division  
Attention: Tariff Unit  
505 Van Ness Avenue  
San Francisco, California 94102  
E-mail: [EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)

Copies should also be mailed to the attention of the Director, Energy Division, Room 4004 (same address above).

In addition, protests and all other correspondence regarding this advice letter should also be sent by letter and transmitted via facsimile or electronically to the attention of:

Michael Callahan  
Regulatory Counsel  
MARIN CLEAN ENERGY  
1125 Tamalpais Avenue  
San Rafael, CA 94901  
Phone: (415) 464-6045  
Facsimile: (415) 459-8095  
E-mail: [mcallahan@mceCleanEnergy.org](mailto:mcallahan@mceCleanEnergy.org)

and

Beckie Menten  
Energy Efficiency Director  
MARIN CLEAN ENERGY  
1125 Tamalpais Avenue  
San Rafael, CA 94901  
Phone: (415) 464-6034  
Facsimile: (415) 459-8095  
E-mail: [bmenten@mceCleanEnergy.org](mailto:bmenten@mceCleanEnergy.org)

There are no restrictions on who may file a protest, but the protest shall set forth specifically the grounds upon which it is based and shall be submitted expeditiously.

MCE is serving copies of this advice filing to the relevant parties shown on the R.13-11-005 service list. For changes to this service list, please contact the Commission's Process Office at (415) 703-2021 or by electronic mail at [Process\\_Office@cpuc.ca.gov](mailto:Process_Office@cpuc.ca.gov).

### **Correspondence**

For questions, please contact Michael Callahan-Dudley at (415) 464-6045 or by electronic mail at [mcallahan@mceCleanEnergy.org](mailto:mcallahan@mceCleanEnergy.org).

/s/ Michael Callahan

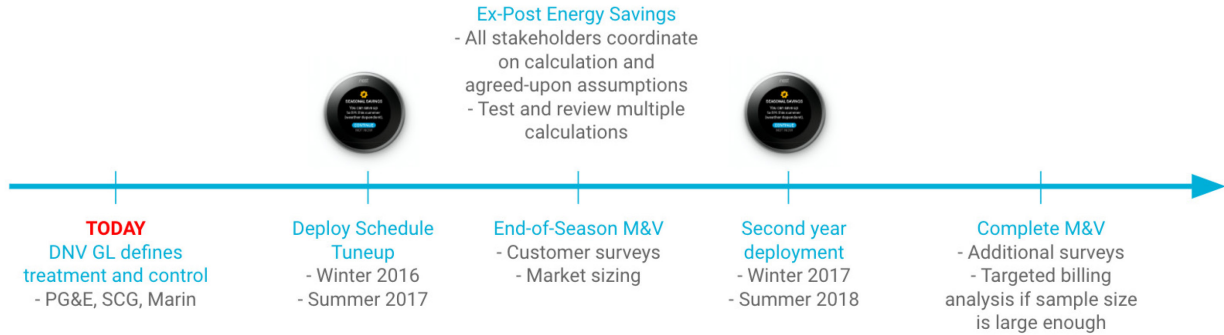
Michael Callahan  
Regulatory Counsel  
MARIN CLEAN ENERGY

cc: Service List R.13-11-005

**Attachment 1:  
California Seasonal Savings Evaluation Plan**

# California Seasonal Savings Evaluation Plan

November 22, 2016



## Evaluation Plan Steps

1. Treatment and control group randomization by DNV GL.
  - a. **Timing:** to be completed prior to the deployment of the Seasonal Savings program to end-use customers.
  - b. Nest provides DNV GL with customer identification number list and sample quotas for each group (by zip code and/or climate zone).
  - c. DNV GL does randomization to the treatment and control groups and returns data to Nest.
  - d. This step to be completed for Pacific Gas and Electric Company (PG&E), Southern California Gas Company (SCG), and Marin Clean Energy (MCE) program deployments.
2. Statewide Seasonal Savings working group creates post-season Measurement and Verification (M&V) survey to be deployed to customers via email (email from Nest, survey hosted by third party M&V firm; sample used for this same step by Energy Trust of Oregon in Summer 2016 included below).

nest

## How'd it go?

This past summer, Nest worked with Energy Trust of Oregon to offer you Seasonal Savings.

And we want to know: Did you try it? How'd it go?

Tell us with a quick 5-minute survey. We'll use your insights to make these programs better and easier for you next season. Energy Trust will enter you into a drawing to win one of five [Nest Cams](#) after completing the survey. You need to be a legal U.S. resident, and at least 18 years old to enter the drawing. [Read the drawing rules here.](#)

[TAKE OUR SURVEY](#)



© 2016 Nest Labs, Inc. 3400 Hillview Ave. Palo Alto, CA 94304  
[Unsubscribe](#) | [Edit Preferences](#) | [Privacy Policy](#)

- a. Nest to provide DNV GL with draft survey instrument that will be used to get customer feedback and also to get as much customer identification as possible.
- b. Note: To clarify, this survey form and results should be hosted by an M&V consultant, not by Nest. Nest will simply facilitate the delivery of the survey link to customers via an email.
- c. Statewide team provides survey results to DNV GL (if they aren't running the survey itself).
- d. Assessment of market/install base size
  - i. Nest provides DNV GL with counts of customers by zip code
  - ii. DNV GL reviews data to see if a verification scheme, via random dialing telephone surveys, is feasible:

1. DNV GL samples on zip code, primarily focusing on high-penetration zip codes, but also looking at a few of the lower penetration zip codes.
  2. DNV GL develops a short telephone survey to assess Nest ownership.
  3. DNV GL conducts a fairly large telephone survey that employs random digit dialing to validate Nest penetration estimates. This survey wouldn't be a true validation of the Nest customer population, but would at least provide evidence that Nest counts provide a reasonable estimate of population size.
  4. Note: There is a need to ensure that, given device counts, this method will work. Should also include relevant study of third party market research on this product space, which is plentiful.
- e. DNV GL validates that customers are in service territory.
3. Methods for converting Heating, Ventilation, and Air Conditioning (HVAC) runtime reduction to energy savings.
  - a. **Timing:** *to be completed in parallel with program launch and prior to ex-post savings estimates are made*
  - b. Nest to provide documentation on conversion from runtime to therms for initial estimates.
  - c. DNV GL to review for adequacy (in parallel to program deployment, recommend that ex ante team review this piece, as it includes engineering calculations that the ex ante team has expertise in).
  - d. Full statewide working group determine what updates need to be made to calculation methodology and assumptions.
  - e. Note: Program Administrators will either claim no savings for this program or will consider savings via an ex-post savings claim.
4. Preliminary program analysis
  - a. After completion of Winter and Summer seasons, Nest provides data and preliminary analysis.
  - b. DNV GL suggests that analysis should include all pilot customers and control, and a separate analysis should be conducted – if possible – on the customers who have self-identified themselves via the email survey above.
5. Nest provides data and analysis code to DNV GL for verification.
  - a. DNV GL reviews Nest work and potentially reruns Nest models plus variants to probe on the run time estimates and to verify/adjust the Nest analysis.
  - b. Note: There is a need to ensure proper privacy and contractual protections are in place before any detailed data sharing can begin.

### **Billing Analysis (if data set is large enough)**

1. Large sample points and significantly more customer participation could enable a billing analysis.
2. Note: All statewide parties and program participants agree that a billing analysis will not be valuable until the customer response is large enough to warrant such an analysis. A billing analysis performed on too small a subset will not offer a realistic result.
3. However, the billing analysis would mainly serve to provide an independent analysis of per-home savings that can be compared against the ex-post approach of using a runtime analysis, combined with engineering calculations, to estimate savings.
4. Steps for potential billing analysis:
  - a. For all identified customers, DNV GL requests an extract of Advanced Metering Infrastructure (AMI) data (hourly for electricity, daily for natural gas) from PG&E and SCG. Customer identification comes from multiple sources:
    - i. Nest follow up surveys that request customers to identify themselves
    - ii. PG&E customer list from thermostat study (TBD)
    - iii. Customer lists from rebated Nest thermostats (TBD)
  - b. The utilities provide requested data to DNV GL
  - c. DNV GL merges AMI data with customer information (collected for all residential customers from the IOUs as part of general evaluation activities) and weather data (also collected for general evaluation work).
  - d. Note: Data sharing must comply with necessary data sharing contractual agreements.
  - e. DNV GL conducts a standard billing analysis using the billing data provided for identified Nest customers.

### Key Issues identified by DNV GL to be addressed by above plan

- Determining unit savings
- Identifying accurate population counts to expand savings to
- Identifying participants



# CALIFORNIA PUBLIC UTILITIES COMMISSION

## ADVICE LETTER FILING SUMMARY ENERGY UTILITY

MUST BE COMPLETED BY LSE (Attach additional pages as needed)

Marin Clean Energy

Utility type:

ELC       GAS  
 PLC       HEAT     WATER

Michael Callahan

Phone #: 415-464-6045

E-mail: [mcallahan@mceCleanEnergy.org](mailto:mcallahan@mceCleanEnergy.org)

### EXPLANATION OF UTILITY TYPE

ELC = Electric      GAS = Gas  
PLC = Pipeline      HEAT = Heat      WATER = Water

(Date Filed/ Received Stamp by CPUC)

Advice Letter (AL): 17-E-A

Subject of AL: Supplement to Request for Approval of MCE Seasonal Savings Pilot Program

Tier Designation:  1  2  3

Keywords (choose from CPUC listing):

AL filing type:  Monthly  Quarterly  Annual  One-Time  Other \_\_\_\_\_

If AL filed in compliance with a Commission order, indicate relevant Decision/Resolution: D.09-09-047

Does AL replace a withdrawn or rejected AL? If so, identify the prior AL \_\_\_\_\_

Summarize differences between the AL and the prior withdrawn or rejected AL<sup>1</sup>: \_\_\_\_\_

Resolution Required?  Yes  No

Requested effective date: December 12, 2016

No. of tariff sheets:

Estimated system annual revenue effect: (%):

Estimated system average rate effect (%):

When rates are affected by AL, include attachment in AL showing average rate effects on customer classes (residential, small commercial, large C/I, agricultural, lighting).

Tariff schedules affected:

Service affected and changes proposed<sup>1</sup>:

Pending advice letters that revise the same tariff sheets:

**Protests and all other correspondence regarding this AL are due no later than 20 days after the date of this filing, unless otherwise authorized by the Commission, and shall be sent to:**

CPUC, Energy Division  
Attention: Tariff Unit  
505 Van Ness Ave.,  
San Francisco, CA 94102  
[EDTariffUnit@cpuc.ca.gov](mailto:EDTariffUnit@cpuc.ca.gov)

Utility Info (including e-mail)  
Marin Clean Energy  
Michael Callahan, Regulatory Counsel  
(415) 464-6045  
[mcallahan@mceCleanEnergy.org](mailto:mcallahan@mceCleanEnergy.org)

<sup>1</sup> Discuss in AL if more space is needed.