PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Agenda Item#17
Agenda ID 16096

ENERGY DIVISION **RESOLUTION E-4900 (Rev.1)**
December 14, 2017

R E S O L U T I O N

Resolution E-4900. Consideration of appropriate metrics for determining the long-term viability of energy efficiency financing pilots in general, and residential energy efficiency loan program (REEL) in particular, pursuant to Decision 17-03-026.

PROPOSED OUTCOME:
- Adopts metrics as tools to contribute to the determination of the long-term viability of energy efficiency finance pilots.

SAFETY CONSIDERATIONS:
- There is no direct effect on safety. However, energy efficiency measures installed due to available financing will, in the short run, lead to improved comfort and indoor air quality for customers. In the long run, financed energy efficiency measures will reduce harmful pollutants and greenhouse gas emissions, which will positively impact health and help to mitigate climate change.

ESTIMATED COST:
- There is no immediate cost impact to the adoption of metrics for assessing energy efficiency finance pilots.

SUMMARY

Pursuant to Commission Decision (D.) 17-03-026, Ordering Paragraph 8, this draft Resolution establishes metrics to assess the performance of the energy efficiency finance pilots and their long-term viability.

BACKGROUND

In Decision (D) 12-05-015, the Commission envisioned a long-term goal of developing new, scalable, and leveraged financing products to overcome the first cost of energy efficiency upgrades and induce customers to participate in projects that produce deeper energy savings than would be achieved utilizing mostly traditional program approaches such as audits, rebates, and access to consumption data.[1]

In D.12-11-015, the Commission approved up to $75.2 million[2] of ratepayer funds for innovative and new energy efficiency financing pilots. However, the actual design of the energy efficiency financing pilots was deferred to a later Decision.

D.13-09-044 implemented and expanded incentives for financing options for energy efficiency improvements across all market sectors.[3] Relevant Commission directives included in this decision include:

- The allocation of $65.9 million to launch selected pilots designed to test whether incentives stimulate markets to attract private capital, through investment of limited ratepayer funds.[4]
- Authorization for the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA) to establish a "hub" for the finance pilots. The hub is called the California Hub for Energy Efficiency Financing (CHEEF).[5]
- A focus on the goal of expanding access to financing instruments by key customer segments, in particular customers underserved by existing energy efficiency financing and programs.
- Leveraging of limited ratepayer energy efficiency funds for credit enhancements, such as a loan loss reserve, to provide incentives to

[1] D. 12-05-015, pp. 112-13.
[2] D. 12-11-015, Table 7, pp.66-67.
[3] D. 13-09-044, p.2.
[4] Id., OP 1.
[5] Id., pp.15-17.

lenders to extend or improve credit terms for energy efficiency projects.
- Testing whether transitional ratepayer support for credit enhancement can lead to self-supporting energy efficiency finance in the future.[6]

D.17-03-026 addressed a number of issues related to the energy efficiency pilot programs, including:

- Each pilot will continue in operation until such time as the Commission makes a determination about its permanent status (i.e. continue as a full-scale program, modify, or close).[7]
- The CPUC staff has a role in the mid-point review process for each pilot, as well as in the overall evaluation of the pilots, including the setting of metrics for use in evaluating the pilots.[8]
- The metrics selected by staff need not be numerous, but should focus on the definition of success for each of the pilots beyond just customer uptake or number of transactions, with an ultimate focus on value-added toward achieving energy savings.[9]
- Each pilot may then be evaluated against the evaluation criteria identified in the financing EM&V roadmap, as well as the metrics suggested by staff and ultimately adopted by the Commission.[10]
- For the pilots, the Commission will commence evaluation efforts after one year of operation, and begin a full evaluation after two years.[11]
- After July 2018, and following evaluation results, Commission staff will put forth a recommendation to the full Commission in the form of a

[6] Id.
[7] D. 17-03-026, p.3.
[8] Id., p.14.
[9] Id., p.27.
[10] Id.
[11] Id., p.26.

resolution, recommending the long-term status of the CAEATFA-administered residential pilot (REEL).[12]

Related Workshops

As directed by D.17-03-026, Commission staff held a workshop on May 19, 2017 to hear from parties and discuss potential metrics for assessing the performance of the energy efficiency financing pilots, especially the REEL. The May 19, 2017 workshop also covered the Evaluation, Measurement, and Verification (EM&V) Roadmap to complement the discussion of metrics.

Also directed by D.17-03-026, Commission staff held a mid-point review workshop for the REEL on August 2, 2017 during which metrics for assessing energy efficiency financing pilots in general, and the REEL in particular, were further discussed by parties.

NOTICE

Notice of this proposed resolution was made by publication in the Commission's Daily Calendar. A copy of this proposed resolution was also served on the R.13-11-005 service list.

DISCUSSION

D.13-09-044 set broad goals and objectives for energy efficiency financing pilots. Thereafter, certain provisions of this decision were modified by subsequent Commission decisions addressing unanticipated challenges, while testing new approaches to streamlining the implementation and design of the pilots. The most recent of these decisions, D.17-03-026, directed Commission staff to select metrics to measure the success of pilots and support future decisions related to the long-term disposition of the pilots.

[12] Id., pp.28-29.

At the metrics and EM&V roadmap workshop held on May 19, 2017, stakeholders discussed goals of the pilots and related metrics. At the mid-point review workshop for the REEL held on August 2, 2017, parties further discussed measures to better assess energy efficiency financing pilots and the REEL. Presentations by CAEATFA, the investor-owned utilities (IOUs), an EM&V contractor, and marketing, education, and outreach (ME&O) contractor supported the consideration of energy efficiency financing metrics.

Attachment 1 contains a table of the four goals we adopt for these energy efficiency financing pilots along with their corresponding metrics. Three goals come directly from D.12-05-015, which envisions a long-term goal of developing financing products that are new, scalable, leveraged, and able to support energy efficiency upgrades."[13] The fourth goal, reaching underserved communities, reflects a shared priority that cuts across many of the Commission's proceedings and also stems from discussions in the workshops, with parties, and among Commission staff. Each of the above goals is tied to a set of corresponding metrics.

The purpose of these energy efficiency pilots is to find out whether this kind of financing can induce Californians to capture energy savings that otherwise would have been missed on a large enough scale to contribute significantly to the State's ambitious energy and climate goals, as well as to benefit the pilots' participants through energy and bill savings. The measures of scale and energy savings in Attachment 1 are intended to shine light on whether the financing pilots can attain those goals. To expand to an ambitious scale, this kind of initiative will need to attract private funds. The measure of whether the pilots can attract private capital to leverage their results is intended to shine a light on that need.

These metrics apply to the REEL, which is the only CHEEF pilot to have launched at the time of this resolution. It is the intention of this resolution that these metrics be considered as optional for the assessment of future pilots that

[13] D. 12-05-015, pp. 112-13.

may be launched based on the experience and lessons learned from using them to assess the REEL. Depending on the scope and participants of future not-yet-launched energy efficiency financing pilots, and based on lessons learned through the use of the pilots in Attachment 1, additional or substitute metrics can be contemplated for assessing future pilots.

Measures like the ones in Attachment 1 related to underserved and hard-to-reach communities will be suited to residential or small commercial energy efficiency financing pilots, but not to large commercial financing pilots. Therefore, if future pilots target other kinds of communities, they may need different metrics. Measures specific to future energy efficiency pilots will be chosen after the launch of those pilots and following consideration of the goals of those pilots.

CAEATFA, contractors working on EM&V, Energy Division, and the IOUs already collect data related to these measures, and those data-collection efforts will continue to be important to understanding the results of the energy efficiency financing pilots.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments. Comments on this resolution were received in a timely manner from CAEATFA, the Southern California Gas Company, Pacific Gas & Electric, and Southern California Edison. Based on the comments, a clarification was made to ordering paragraph 2 of this resolution to confirm that some of the data required for the financing metrics will be gathered by EM&V contractors rather than by CAEATFA. In addition, one metric was removed from the resolution at the suggestion of commenters, three of the metrics were modified, and the definition of “self-supporting” was clarified.

FINDINGS

1. D.12-11-015 approved up to $75.2 million of ratepayer funds for innovative and new energy efficiency financing pilots.[14]

2. D.13-09-044 further defined the design of the energy efficiency pilots and implemented and expanded financing options for energy efficiency improvements.[15]

3. D.17-03-026 addressed a number of issues related to the energy efficiency pilot programs, and gave the Energy Division staff a role in setting metrics for use in evaluating the pilots.[16]

4. Attachment 1 of this Resolution contains metrics for use in assessing the results of energy efficiency financing pilots.

THEREFORE IT IS ORDERED THAT:

1. The performance metrics presented in Attachment 1 will be used by the Commission along with other considerations to assess the results of the Residential Energy Efficiency Loan pilot, and may be used to assess other pilots launched in the future. The findings of this measure-based analysis shall be included along with other considerations in determinations of the disposition of the pilot(s).
2. The Residential Energy Efficiency Loan pilot implementer, the California Alternative Energy and Advanced Transportation Financing Authority, shall continue to collect the data required to provide the metrics presented in Attachment 1 to the Commission and the public, excluding those that will be handled instead by Evaluation, Measurement, and Verification contractors, shall continue to take steps to enhance its gathering of data,

[14] D. 12-11-015, Table 7, pp.66-67.
[15] Id., pp.15-17.
[16] Id., p.14.

and shall participate in Evaluation, Measurement, and Verification studies done by contractors to assess the energy efficiency financing pilots.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on December 14, 2017; the following Commissioners voting favorably thereon:

TIMOTHY J. SULLIVAN
Executive Director

Attachment 1

In Guidance Decision D.12-05-015, the Commission envisioned a long-term goal of developing new, scalable, and leveraged financing products to overcome the first cost of energy efficiency upgrades and induce customers to participate in projects that produce deeper energy savings than would be achieved utilizing mostly traditional program approaches such as audits, rebates, and access to consumption data.[17] Therefore, the following goals and metrics are selected for assessing the results of financing pilots:

Goal	Metric	Comments
The financing tool is scalable	Number of loans made by the pilot, with breakdown by: • Growth in the number of loans on a month-by-month basis over the lifetime of the pilot • Total amount of financing generated by the pilot • Geographic distribution of loans, including ability to reach new regions of the state especially those with large underserved populations	Data should be presented to show whether these financing tools can reach a significant and growing number of Californians
The financing tool is leveraged by private capital and support	Private capital participation in the pilot, as measured by: • Number of financial institutions participating in the pilot, and types of	Data should be presented to indicate whether these financing tools can become partially or entirely

[17] D. 12-05-015, pp. 112-13.

	• financial institutions participating (such as credit unions) • Amount of private capital attracted	self-supporting, that is can reach a point where they depend less or do not depend on the use of ratepayer funds
The financing tool reaches underserved Californians who would not otherwise have participated in EE upgrades	Analysis of participants in the pilot, according to: • Credit scores of loan participants reported on an aggregate basis • Length of time allowed for applicants to pay back the loans • Percentage of participants deemed "underserved" as measured through CalEnviroScreen data, area median income, or other poverty statistics • Whether participants would have qualified for existing private energy efficiency loan programs at interest rates and terms that they can afford or would accept	The "counterfactual" of whether participants would have taken loans from elsewhere for the same upgrades is difficult to demonstrate, but best efforts should be made to provide data showing that hard-to-reach communities were reached – and analysis done by EM&V contractors can also be consulted Lower-income participants may prefer longer loan pay back periods, so the length of time allowed for repayment may offer a proxy for ability to reach low-income communities
The financing tool produces energy savings	Energy savings that resulted, as measured: • Through customer meter data provided by the	Energy Savings will be calculated by EM&V contractors not by pilot administrators.

	utilities via Energy Division data request (customer privacy must be maintained) • Through Normalized Metered Energy Consumption (NMEC) analysis, as an option • Comparison of energy savings from other loan programs to that of the pilot, if possible to assess through Evaluation, Measurement, & Verification studies (EM&V)	NMEC analysis has not previously been applied to the analysis of financing pilots, and is considered an option here to be used if it can add to the understanding of the results of the pilots