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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Investigate and Design Clean Energy Financing Options for Electricity and Natural Gas Customers.	RULEMAKING 20-08-022 FILED PUBLIC UTILITIES COMMISSION AUGUST 27, 2020 SAN FRANCISCO, CALIFORNIA

COMMENTS OF RECURVE ANALYTICS, INC. ON ORDER INSTITUTING RULEMAKING TO INVESTIGATE AND DESIGN CLEAN ENERGY FINANCING OPTIONS FOR ELECTRICITY AND NATURAL GAS CUSTOMERS

I. Introduction

Recurve is an industry leader in meter-based demand flexibility. Recurve tracks changes in energy consumption due to program interventions for both individual buildings and aggregate to support resource planning and facilitate performance-based transactions. We encourage and support market-based solutions for decarbonization.[1] We commend the CPUC for taking on this issue in a cross-cutting way, an approach we hope to see replicated for other essential barriers across DER deployment for the state.

California is at a critical time of transition. As the order clearly expresses, the numerous initiatives to address consumer financing issues are well intended, but they do not demonstrate the kind of efficient, streamlined delivery needed for scale. This story is true for most of the CPUC proceedings directed at decarbonization in California. The time has come to recalibrate the myriad of historical policies and well-intentioned initiatives to ensure that all are properly

[1] M. Golden, A. Scheer, C. Best. *Decarbonization of electricity requires market-based demand flexibility,* The Electricity Journal Volume 32, Issue 7, August–September 2019, 106621 *Available at:* https://www.recurve.com/blog/the-secret-plan-for-decarbonization-how-demand-flexibility-can-save-our-grid

valuing demand flexibility resources to support a reliable, decarbonized grid and can tap into private investment of all kinds.

Recurve sees a robust path forward for scaled investment in demand flexibility resources through market-based decarbonization. Financing at the scale of the problem is key to this vision. However, it is also contingent on the Commission adopting a consistent valuation framework, monitoring meter-based impacts, and embracing market-driven structures that simplify delivery by providing clear price signals and fair compensation to enable innovation and spur investment.

Three components of the order are highlighted below for the Commission and other stakeholders as they consider options for designing consumer financing for clean energy:

1. Include consideration of **project financing mechanisms** (i.e., aggregator or flexibility purchase agreements) that would be complementary to customer financing options.
2. Ensure that **performance tracking** is considered for each model reviewed in this proceedings specifically how it will :
    a. inform investment decisions in the market by building actuarial evidence;
    b. ensure consumer investments are returning value to consumers, and not shifting the financial burden to already vulnerable populations
    c. reveal the impact of financing enabled investments on the load forecast;
3. **Ensure that private investments are not penalized** in the cost-effectiveness and valuation structures used in any Commission proceedings.

II. Include Consideration of Complementary Financing Mechanisms

The list of consumer financing options identified in the order is long and represents a relatively strong history of tackling customer financing challenges. It is wise, however, that the Commission recognizes that it is not an exhaustive list:

> *Within the scope of this proceeding will be any mechanism that provides a financing option to a customer investing in energy equipment behind the meter. p. 31*

Neither a single consumer finance strategy nor a brilliant hybrid of all of those listed in the order can address the core issue of scaled investment needed for distributed energy resources.

We believe that enabling project financing, a typical path for financing power purchase agreements, should be a primary strategy in the state because it will support the scale of investment needed to decarbonize. It also provides the flexibility for aggregators to tap consumer financing streams (e.g., on-bill financing), and complement these with capital investments from other sources.

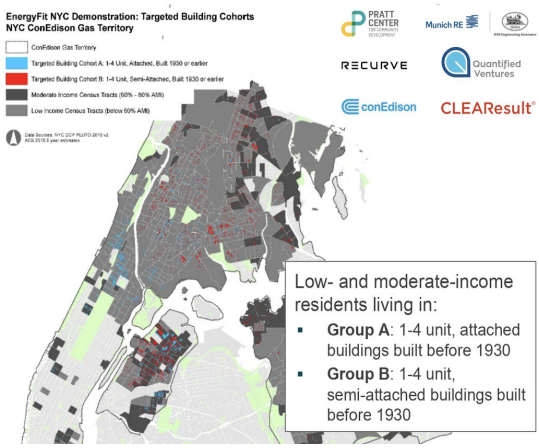
Expanding the scope to consider such complementary financing mechanisms will also assist the Commission in breaking down existing regulatory silos. It will also ensure the Commission doesn't create new silos between scaled project investment in DERs to meet grid needs and customer investments to meet private needs.

> *The purpose of this proceeding is to provide a venue for investigating and designing mechanisms that can help customers finance all of the energy investments they might wish to make on their properties, without artificial barriers, such as those caused by regulatory rules related to funding source. p. 30*

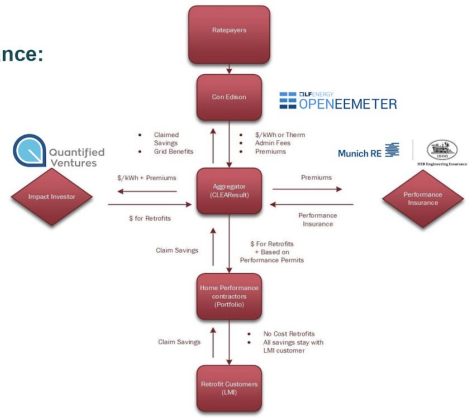
Aggregators paid to deliver grid impacts can also design financing schemes and attract capital that synergizes with customer needs and/or support discrete customer segments. State agencies and utilities need not carry the full burden of innovation to design "the" perfect financing mechanism, instead engage a wide range of market actors to bring quality products and services forward.

The EnergyFit Low Income Pay for Performance Demonstration approved by the New York Department of Public Service through a Reforming Energy Vision Demonstration project is one example of how this complementary financing could work. In this model, the utility pays for the energy savings delivered by a third party vendor partnering with an outcomes-based financing firm that invests in health, environment, and social impacts. The energy impacts are validated independently and enable multiple sources of funding to merge to amplify the community's beneficial outcomes. Similar projects are being considered in California, but are plagued by issues of incrementality.

EXAMPLE: [ConEd EnergyFit Low Income Pay for Performance - NY REV Demo](#)
Using Private Capital to Provide Low Income Energy Efficiency



Project Finance:
The long-term financing of projects based upon projected cash flows rather than the balance sheets of its sponsors.



III. Monitoring and Tracking Impacts at the Meter

We are very encouraged to see that the Commission recognized the importance of tracking performance in the order:

> *To help ensure long-term programmatic success, it will likely be necessary to track data on the performance of energy projects and provide some ratepayer funding to reduce risks, in order to show the financial industry that there is a large and viable market in California for financing energy projects. p. 31*

However, we'd like to emphasize that it is not just "likely" it is absolutely necessary. We respectfully request that the Commission include performance tracking for all financing pathways considered in this proceeding. Performance tracking is possible now. Data can be made accessible to a wide range of actors in secure formats, and will inevitably accelerate investments by providing a consistent and transparent reference point on what can deliver.

Hourly load impacts, measured via open-source, transparent Normalized Metered Energy Consumption (NMEC) methods must be the basis for understanding impacts of financing and other investments on changes in energy consumption.[2] When executed with documentation of compliance, they can provide revenue grade calculations for settlement for the customer, to

[2] CalTRACK methods and the OpenEEmeter python code base are available without restriction to monitor changes in energy consumption resulting from DER interventions. Recurve is currently using CalTRACK and the OpenEEmeter to monitor On-Bill Financing for an investor owned utility in CA, Green Bank investments in the northeast, as well as several pay for performance distributed energy resource initiatives in CA and around the country.

ensure benefits are delivered, actuarial information to build portfolio investments for the future, and how financing programs and initiatives may affect overall load forecasts and grid needs.

IV. Encouraging Private Investment

One of the most important statements in the order was the recognition of the need to amplify and encourage private investment:

> *In addition, ultimately our goal is not to rely solely on ratepayer sources of funding to help encourage customers, potentially through their contractors, to make more comprehensive investments in their buildings. The most successful long-term strategies are likely to involve the use of a small amount of ratepayer support, coupled with a much larger amount of private capital provided by financial institutions. p. 31*

This principle is sorely lacking in other parts of the Commission's portfolio of actions to decarbonize. This issue is most acute in the energy efficiency portfolio, where the limits of current costs tests to support external investment are revealed in stark terms. Last fall, a comprehensive paper on the issues of the Total Resource Cost (TRC) test was published wherein the TRC's biggest flaw was revealed: it discourages co-investment in energy efficiency.[3,4]

Straightforward, logical programs like on-bill financing or home upgrades that leverage external capital are hobbled within utility programs because they illogically hamper portfolio cost-effectiveness. As economic recovery initiatives emerge after the COVID-19 pandemic and recognized in this proceeding's goals, the importance of leveraging external resources for investments in infrastructure is essential. A cost test that discourages this kind of collaboration will mean California's customers (participant ratepayers and non-participant ratepayers) will miss out on an important opportunity.

This proceeding's goal of amplifying private investment is in jeopardy if this incongruent test is not fixed. We are hopeful that the Commission will take up the issue of a comprehensive reassessment of the valuation structures, but in the meantime, the CPUC should immediately

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[3] *Evolving Cost-Effectiveness Policy and Tools to Enable Modern Energy Efficiency and Demand-Side Management*, Adam Scheer, 2019. Available at this link: https://www.recurve.com/blog/rethinking-cost-effectiveness-to-meet-the-needs-of-the-modern-grid

[4] *Why a Bandage Fix for Cost-Effectiveness Testing Isn't Enough*, Posted by Adam Scheer, Jake Millette, Olivia Patterson, and Julie Michals, Advanced Energy Perspectives https://blog.aee.net/why-a-bandage-fix-for-cost-effectiveness-testing-isnt-enough

retire the TRC for energy efficiency and utilize the PAC as the primary cost-effectiveness test for resource DSM programs.[5]

IV. Conclusion

Recurve Analytics, Inc. appreciates the opportunity to comment and respectfully requests the Commission to consider the issues raised herein.

Dated: October 5, 2020

Respectfully submitted,

/s/ Carmen Best

Carmen Best
Director of Policy & Emerging Markets
Recurve Analytics, Inc.
Tel: 608-332-7992
E-mail: carmen@recurve.com

[5] Cost-Effectiveness Adjustments: How Effective Have States Been At Recreating the PAC? Luke Nickerman and Richard Aslin, Pacific Gas and Electric 2014 ACEEE Summer Study on Energy Efficiency in Buildings https://www.aceee.org/files/proceedings/2014/data/papers/8-1084.pdf