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BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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OPENING COMMENTS OF THE NATURAL RESOURCES DEFENSE COUNCIL (NRDC) ON THE ORDER INSTITUTING RULEMAKING REGARDING CLEAN ENERGY FINANCING

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Pursuant to Rule 6.2 of the California Public Utility Commission's ("Commission" or "CPUC") Rules of Practice and Procedure, the Natural Resources Defense Council (NRDC) respectfully submits these comments on the Order Instituting Rulemaking to Investigate and Design Clean Energy Financing Options for Electricity and Natural Gas Customers ("Order" or "OIR") issued September 4, 2020.

I. Introduction

NRDC is supportive of the Commission's intent to examine options that encourage larger-scale and deeper clean energy investments at customer sites, along with options for combining multiple sources of funding and leveraging ratepayer funds with private financing to support these more comprehensive investments. We offer the following comments on proceeding scope and issues to be considered:

- The Commission should more clearly identify what has been learned from past Commission financing efforts and present these findings in a public workshop.
- The Commission should prioritize capital deployment to customer segments that are historically undeserved by private capital markets and should seek input from stakeholders outside the activities of this regulatory proceeding.
- In considering how to best fill financing gaps for the residential market, the Commission should examine the key attributes of the existing building stock and the experience of the populations residing in California.
- The Clean Energy Finance proceeding should be technology agnostic.

- The Commission should consider the policy reforms necessary to enable seamless project co-funding from multiple sources of public funds in addition to private capital sources.
- The Commission should clarify that tariffed on-bill (TOB) investments behind the customer meter are within scope for this proceeding.
- The Commission should set in motion a due diligence process to inform the possible development of a TOB program design.

II. Comments on the Clean Energy Financing OIR

A. The Commission should more clearly identify what has been learned from past Commission financing efforts and present these findings in a public workshop.

The OIR describes at a high-level the long and active engagement by the Commission on various forms of financing to support clean energy choices for both residential and nonresidential customers. However, the OIR does not provide enough detail on the lessons learned from these experiences to guide, and ideally narrow, the focus of this new proceeding. What has worked well that the Commission should do more of? Where do gaps in the need for financing remain? Which markets and subsectors are already well-served by commercial financing options and do not require additional assistance? The findings described in the OIR seem insufficient to guide this proceeding and/or appear contradictory. For example:

- The *PY 2014 Finance Residential Market Baseline Study Report* (March 2016) found that "one-third of homeowners completed energy-related upgrades in the last two years, but only a small fraction of them (one-quarter) used any type of financing," and "Contractors are aware of energy-efficient financing options, but only a small portion promote them directly." This would seem to imply that financing may not actually be needed. But the report apparently concludes "The opportunity for financing to help fund and grow energy-related projects in the near future is significant."[1]
- The *Residential Energy Efficiency Loan Assistance Pilot-Impact Evaluation (January 2020)* found that "Lending does not appear to

[1] OIR, page 17-18.

be going to customers with poor credit scores" but also that "REEL is successful reaching underserved communities."[2]

NRDC recommends a public workshop that dives into the experience with clean energy financing in California to date, with the purpose to identify the most productive ways to focus the efforts of this proceeding.

B. The Commission should prioritize capital deployment to customer segments that are historically undeserved by private capital markets and should seek input from stakeholders outside the activities of this regulatory proceeding.

California has established the ambitious climate protection goal of achieving full carbon neutrality by 2045. If we are to reach the state's policy objectives, there must be robust participation of California's low- and moderate-income (LMI) and renter households. Additionally, as signatories to the *Equitable Building Electrification* framework pointed out, Environmental and Social Justice (ESJ) communities "…are likely to be left using gas if market forces are the primary driver of electrification."[3]

In its opening statement, the Commission expresses the intent to examine options to assist electricity and natural gas customers with investments in residential and commercial buildings and at industrial and agricultural sites designed to decrease energy use, reduce greenhouse gas (GHG) emissions, and/or produce clean energy to support customers' onsite needs. While it goes without saying that all sectors will need to participate in reducing emissions for California to reach its climate goals, the *need* for financing is not evenly distributed.

Certain customer segments face particular challenges to access capital for clean energy investments. For example, multiple residential sector studies have documented the challenges facing low- and moderate-income households and renters due to low credit scores, low levels of home equity, cash flow constraints, or landlord/tenant split incentives.[4] Split incentives also pose

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[2] OIR, page 20.

[3] Miller, Carmelita, Stephanie Chen, Lisa Hu, and Isaac Sevier. *Equitable Building Electrification: A Framework for Powering Resilient Communities*. Greenlining Institute and Energy Efficiency for All, 2019. http://greenlining.org/wp-content/uploads/2019/10/Greenlining_EquitableElectrification_Report_2019_WEB.pdf

[4] See for example the following studies:

barriers to small and medium businesses that lease their facilities. Multi-family affordable housing providers encounter unique challenges for adding debt to already complex capital stacks.[5] Other customer segments may face different challenges. Addressing barriers to capital deployment will expand the addressable market for solution providers, creating jobs faster and in more places that need investment the most.

Given the diversity of the customer population and the multitude of capital-related market barriers, the Commission should prioritize select customer segments for consideration. Higher priority should be given to those customer segments that face structural barriers to market participation, with lower priority given to segments with ready access to capital. The Commission should make it a high priority to develop solutions accessible to residential customers who are low to moderate-income, renters, and/or living in disadvantaged, underserved, or vulnerable communities. Importantly, these solutions must not be limited to financing. These populations will benefit most from direct subsidies and other policy action, and financing should be seen as a secondary or complementary offering that stretched public dollars further where this is feasible.

Additionally, the signatories to the *Equitable Building Electrification* framework, outline a five step process for engaging Environmental and Social Justice (ESJ) communities in planning future clean energy investments.[6] NRDC encourages the Commission to pursue an outreach strategy modeled on these recommendations and incorporating lessons learned from the San Joaquin Valley proceeding in order to better understand how the Commission can best support

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- Evergreen Economics. *Needs Assessment for the Energy Savings Assistance and the California Alternate Rates for Energy Programs,* Vol. 1 of 2. Southern California Edison Co., CALMAC ID: SCE0396.01, 2016. www.calmac.org
- Scavo, Jordan, Suzanne Korosec, Esteban Guerrero, Bill Pennington, and Pamela Doughman. *Low-Income Barriers Study, Part A: Overcoming Barriers to Energy Efficiency and Renewables for Low-income Customers and Small Business Contracting Opportunities in Disadvantaged Communities*. California Energy Commission, Pub. no. CEC-300-2016-009-CMF, 2016. https://efiling.energy.ca.gov/getdocument.aspx?tn=214830

[5] Elkind, Ethan N., and Ted Lamm. *Low-Income, High Efficiency: Policies to Expand Low-Income Multi-Family Energy Savings Retrofits*. University of California, Center for Law, Energy & Environment, 2019. https://www.law.berkeley.edu/research/clee/research/climate/energy-efficiency/limf-energy-savings-retrofits/

[6] Miller, Carmelita, Stephanie Chen, Lisa Hu, and Isaac Sevier. *Equitable Building Electrification: A Framework for Powering Resilient Communities*. Greenlining Institute and Energy Efficiency for All, 2019. http://greenlining.org/wp-content/uploads/2019/10/Greenlining_EquitableElectrification_Report_2019_WEB.pdf

ESJ communities in transitioning away from fossil fuels. This must include community outreach and engagement beyond the regulatory activities of this proceeding.

C. In considering how to best fill financing gaps for the residential market, the Commission should examine the key attributes of the existing building stock and the experience of the populations residing in California.

The residential sector in California is not a monolith, nor are low-income households. Over 12 million people—nearly a third of all Californians—live in low-income households, defined as having 80 percent or less of a region's median income. Of these, about 77 percent are considered "rent-burdened" which means 30 percent or more of their income is spent on housing costs like rent or mortgage plus utility bills. There are significant differences in the financing options that may be accessible and appealing for different populations. For example, the 5.6 million low-income people living in multifamily buildings are largely renters and will have to both contend with the role of the property owner and the complication of many multifamily buildings having shared hot water or heating systems. Whereas, the 6.4 million low-income people living in single family homes tend to own their homes and have more control over decision-making but are still extremely burdened by mortgages and tend to be *more* burdened by energy costs than those living in multifamily buildings. Below are sample graphics from a recent NRDC analysis of 2018 Census Data.[7] We encourage the Commission to consider this data when identifying the varying needs of different residential populations.

[7] Rayef, Reem. *Housing Equity & Building Decarbonization in California*. NRDC analysis completed August 2020. Available here: https://www.nrdc.org/experts/merrian-borgeson/understanding-cas-low-income-housing-stock-electrify-it

Fig 8. Low Income Occupancy By Building Type

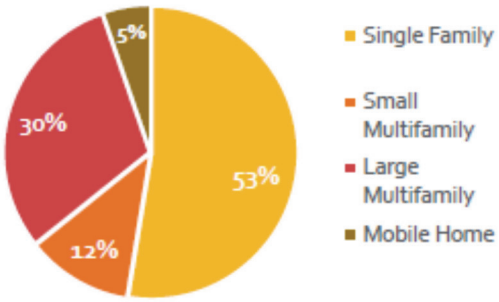


Fig 9. Low Income Occupancy By Climate Zone

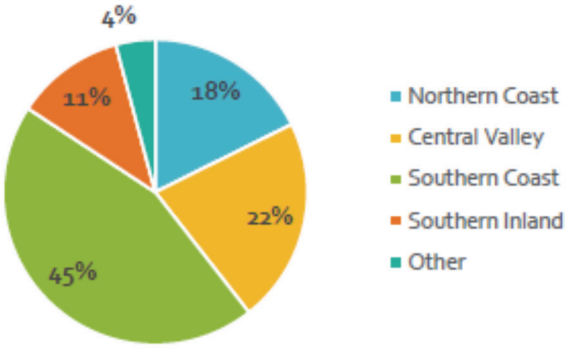


Fig 10. Low Income Occupancy By Tenure Status

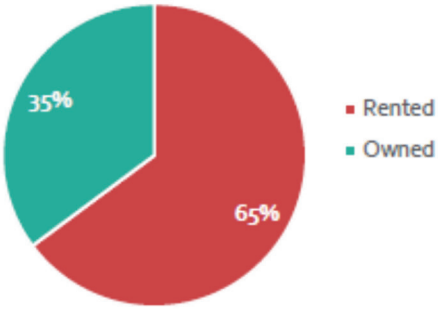
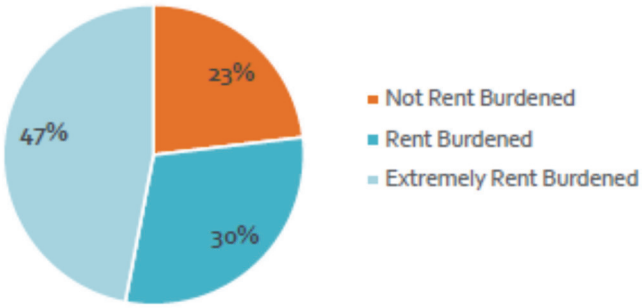


Fig 11. Low Income Occupancy By Rent Burden



D. The Clean Energy Finance proceeding should be technology agnostic.

There is no need to select technology winners and losers is this proceeding. For purposes of developing inclusive financing solutions, it is sufficient to specify a set of performance criteria. NRDC recommends that the Commission focus on a short list of criteria:

- Public investment per ton of avoided GHGs less than a threshold price per ton
- Ratio of Program Administrator benefits and costs greater than 1.0
- Ratio of private to public investment greater than a minimum threshold
- No new investment in fossil-fueled equipment

Any combination of technologies that can be taken to market and financed under terms that meet or exceed these metrics should be included.

E. The Commission should consider the policy reforms necessary to enable seamless project co-funding from multiple sources of public funds in addition to private capital sources.

The *Accessible Financing* white paper published by the Building Decarbonization Coalition (BDC) discusses the need to combine multiple values streams to mobilize investment and the potential to integrate public funding and financing. The white paper also addresses the need to facilitate combined public funding sources, particularly for low income programs. The white paper makes the following recommendations, which NRDC supports:

1. Explore opportunities to **standardize and streamline program requirements** across programs and technology investments. Alternatively, for programs with incompatible or inconsistent delivery channels, designate a single program as the lead service provider of choice and authorize or require related programs to co-fund benefit delivery through the designated program.[8]
2. Work towards **structural alignment** across program administrators and investment siloes. The Commission has shown movement in this direction, for example, through its call for more integrated energy efficiency and demand response services, and its specific request that the next low-income multi-family program for 2021-2026 coordinate with low income solar and demand response programs.
3. **Focus on Performance** as a way of simplifying program quality assurance and quality control procedures that otherwise micromanage installation processes. New Advanced Measurement and Verification methods that leverage smart meter data are bringing this objective within reach.[9]
4. Continue parallel **Market Transformation investments** that focus on commercializing new technologies, developing supply chain capacity, raising consumer awareness, and accelerating the decline in technology cost curves. Market Transformation program costs should be allocated to all ratepayers, not just tariffed on-bill or decarbonization program

[8] The San Joaquin Valley Proceeding (CPUC proceeding R.15-03-010) offers instructive examples for aligning multiple program funding sources to support an integrated program outcome.

[9] See for example the open-source CalTRACK methods, which have been embedded in multiple Pay-for-Performance programs. https://www.caltrack.org/

participants.[10]

The Commission should consider solutions that minimize customer transaction costs, including hassle and search costs as well as financial soft costs. At a minimum, the Commission should avoid adopting requirements that impose additional transaction cost burdens on participants.

The Commission should also consider how existing regulatory requirements either facilitate or hinder private capital deployment. For example, the Total Resource Cost (TRC) test includes all customer costs but only a portion of the benefits customers receive. This asymmetrical treatment means that the test effectively penalizes program administrators for leveraging private capital. This is because the TRC includes private capital as a cost, but does not include the customer non-energy benefits associated with these private costs. Encouraging customer co-pay (i.e., private capital) would lower the TRC of this program and could lead to the program administrator having to cut the program rather than scale it. The goal should be to capture as many energy savings as possible with as direct incentive funding as possible. This is only feasible if private capital is encouraged. To give an example: a customer may want to invest in better windows because of their noise dampening ability but be unable to afford them. A program could provide an incentive commensurate with the energy benefits associated with these efficient windows to induce the customer to adopt them. However, the TRC will account for the total cost of these windows, program costs, incentives, and customer costs, but not account for the non-energy noise dampening benefit that drove the customer to invest in these windows. The role of the TRC in limiting both public and private investments should be critically examined.

F. The Commission should clarify that tariffed on-bill investments behind the customer meter are within scope for this proceeding.

The BDC white paper lays out a policy roadmap for deploying tariffed on-bill (TOB)

[10] The important role for market transformation strategies is evidenced by the recent CPUC BUILD and TECH decision in the Decarbonization proceeding R.19-01-011. The Commission speaks to the need for parallel efforts to provide financing, coordinate across programs (e.g. efficiency, demand response, electrification, solar, self-generation, and wildfire rebuilding), and address the lack of current markets to monetize full grid and climate values. CPUC Decision D.20-03-027, adopted March 26, 2020.

investments to address the unique barriers facing these customer segments.[11] NRDC supports the inclusion of tariffed on-bill investment in the scope for the proceeding and recognizes that it is included among the options described in the definitions section of the Order.

Further clarification is needed regarding the status of TOB within the proceeding scope. While TOB is listed as being within scope on page 32, the more general authorizing language is that "...the scope of this proceeding will be any mechanism that provides a financing option to a *customer* [emphasis added] investing in energy equipment behind the meter." It should be clarified that TOB is not a customer investment in the traditional sense; it is a utility investment at a specific site, with site-specific cost recovery. The investment and cost recovery mechanism is tied to the location, not the utility account holder. TOB thus shares some attributes of utility-owned microgrids, which the OIR explicitly excludes from the proceeding scope on page 28. In the case of utility-owned microgrids, the Commission excludes them from the proceeding scope on the grounds that "...[f]inancial and operational aspects of utility-owned assets are subject to specific rules and oversight consistent with the utilities' status as regulated entities. Furthermore, the barriers to financing utility-owned assets are usually different from those facing individual customers." Given that TOB is also a utility investment mechanism, it would be helpful for the Commission to clarify the distinction between TOB and utility-owned microgrids that would lead the former but not the latter to be within scope.

Additionally, the OIR offers Tariffed-Based Recovery (TBR) as a synonym to TOB. While the term "Tariffed On-Bill" is in widespread usage by ACEEE, Southeast Energy Efficiency Alliance, NARUC, and numerous state regulators, to our knowledge the term TBR was coined in the Transportation Electrification Framework and has never been applied in this way outside of a CPUC proceeding. In the interest of clarity of nomenclature that is consistent industry-wide, we recommend the Commission use the term "Tariffed On-Bill".

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[11] Mast, Bruce, Holmes Hummel, and Jeanne Clinton. *Towards an Accessible Financing Solution: A Policy Roadmap with Program Implementation Considerations for Tariffed On-Bill Programs in California*, June 2020. https://tinyurl.com/BDC-AccessibleFinancing

G. The Commission should set in motion a due diligence process to inform the possible development of TOB program design.

While the BDC *Accessible Financing* white paper offers guidance on a number of implementation issues of importance for TOB programs, the white paper is primarily a policy paper. Several issues require further investigation prior to full-scale program implementation, particularly risk-management issues for utilities, capital providers, and consumers. The Commission should set in motion a due diligence process to inform the possible development of TOB program design. For example:

Economics and Cost Allocations

1. Conduct economic potential study encompassing full span of potential decarbonization investments on the customer side of the meter; quantify expected societal benefits from promising decarbonization packages; incorporate current assumptions about future rate increases, transition to time-of-use (TOU) rates, net energy metering (NEM), and CARE discounts into customer economic analysis
2. Analyze financial implications of assigning indirect costs (e.g., cost of capital, program administration, measurement and verification (M&V), loss reserves) to participating customers versus ratepayers
3. Investigate information system requirements and associated capital investments to support customer billing under different risk-reward allocation scenarios
4. Assess market potential for decarbonization packages offering attractive customer economic benefits; incorporate analysis of customer-specific Advanced Metering Infrastructure (AMI) data to inform customer segmentation and estimate potential investment contributions from customer energy cost savings; estimate supporting incentive and customer co-pay requirements, including landlord co-pays for rental housing retrofits.

Financial and Legal Risks

5. Perform risk assessments, including perspectives of current and successor customers, ratepayers, IOUs and other prospective program sponsors, energy services companies and other private-sector service providers, and capital providers
6. Identify consumer protection mechanisms that balance costs, risks, and rewards, and authorize mechanisms to mitigate the potential for above-normal costs to ratepayers from unpaid bills (e.g. reserve funds).

7. Investigate options for source capital, supported by strong assurances of repayment
8. Evaluate potential jurisdictional issues that could be brought up around liability and property law; determine appropriate legal framework for ownership of investment assets

Roles and Responsibilities for Program Offerings

9. Articulate possible roles for POUs and CCAs
10. Establish ground rules for program sponsors to obtain access to customer-specific gas and electricity consumption, including whole-building consumption data for multifamily facilities
11. Authorize third parties to take on responsibility for customer utility bill payments as a potential consumer risk mitigation strategy

III. Conclusion

NRDC supports for the Commission's intent to examine options that encourage larger-scale and deeper clean energy investments at customer sites and encourages the Commission to narrow the focus of this proceeding in order to make progress on these important topics.

Dated October 5, 2020

Respectfully submitted,

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