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Docket Number:	16-OIR-02
Project Title:	SB 350 Barriers Report
TN #:	213845
Document Title:	Comments of Environmental Defense Fund on Study of Barriers and Solutions to Energy Efficiency, Renewables and Contracting Oppor
Description:	N/A
Filer:	Larissa Koehler
Organization:	Environmental Defense Fund
Submitter Role:	Public
Submission Date:	9/29/2016 3:38:27 PM
Docketed Date:	9/29/2016

September 29, 2016

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 16-0IR-02
1516 Ninth Street Sacramento, CA 95814-5512

RE: Comments of Environmental Defense Fund on *Study of Barriers and Solutions to Energy Efficiency, Renewables and Contracting Opportunities Among Low-Income Customers and Disadvantaged Communities*

Introduction

Environmental Defense Fund (EDF) appreciates the opportunity to comment on the California Energy Commission (CEC) draft staff report entitled *Study of Barriers and Solutions to Energy Efficiency, Renewables and Contracting Opportunities Among Low-Income Customers and Disadvantaged Communities*, dated September 9, 2016. This study was motivated by requirements in Senate Bill (SB) 350 to assess the challenges faced by disadvantaged communities (DACs) to access all forms of renewable energy and energy efficiency generated in California. The study sets the right tone by emphasizing the transition toward a clean energy economy is a "…momentary pause in a march that is already in progress. It is a chance for reflection and reassessment...to develop solutions for how California can achieve greater energy equity of efficiency and renewable technologies within low-income households, ensuring that all Californians enjoy the same opportunities to consume and conserve energy."[1] As California embarks on a path to source at least half of its power from clean energy resources, and double savings from its energy efficiency programs, it is imperative that the state's new energy infrastructure is fairly and affordably accessed by all Californians. To that end, we want to commend the CEC for their deliberate and purposeful engagement with communities, local providers, and advocates from across the state and for soliciting the input of stakeholders throughout the process.

[1] California Energy Commission, *A Study of Barriers and Solutions to Energy Efficiency, Renewables, and Contracting Opportunities Among Low-Income Customers and Disadvantaged Communities,* Draft Staff Report at 3 (Sep. 9, 2016).

Comments on Questions Posed by the CEC

As part of this process, the CEC asked stakeholders for comment on three questions on the study's findings and potential areas of focus. EDF has provided responses to these questions below.

Are there important barriers that are not identified in the study?

Key Barrier 1 - Universal Broadband Access & Data Access

Households across the country are increasingly reliant on reliable and affordable broadband to meet daily needs and actively engage with society. Overcoming the digital divide has been a key economic and community development aspiration of local, state, and federal administrations. Yet, as quickly as broadband has spread, tremendous growth is still needed to meet the universal standard.[2] The California State Association of Counties estimates that nearly 30% of the state does not have broadband access that meets federal standards.[3] This is concentrated in rural areas and urban pockets, and correlated with income, age, disability, and language.[4]

Arming everyday consumers with real-time information about how they consume energy (i.e., giving them intelligence on when they use, how much devices are using, and why they are using more or less due to factors like weather) will transform every citizen from a user to a prosumer – individuals capable of responding in real time to real-time information and signals (like peak pricing) to make the best energy decisions for themselves. This will help them consume less, adjust and understand personal behaviors and budget more effectively, lower bills, and open pathways to drive consumption to times when the supply is cleanest. However, empowering customers with this information relies on expansive penetration of advanced metering infrastructure (AMI) and the digital broadband infrastructure that will enable those meters to function as two-way information hubs. California has done a tremendous job in deploying smart meters, but to fully maximize the power of cleantech innovation and integrate affordable distributed energy resources (DERs) and the growing sophistication of mobile sensor technologies and data pulled from all communities, it is critical to invest in broadband infrastructure in order to enhance access to clean energy solutions.

Related to the impact universal broadband access will have on clean energy deployment in disadvantaged communities is the importance of ensuring that the data obtained via AMI is readily and easily accessible to customers, utilities, and new market participants who are

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[2] Jason Furman and R. David Edelman, *Unlocking the Promise of Broadband for All Americans,* https://www.whitehouse.gov/blog/2016/07/15/unlocking-promise-broadband-generate-gains-all-americans.

[3] Lloyd Levine, *How Bad Is the Digital Divide in California,* California State Association of Counties, http://www.cetfund.org/files/160907_CSAC_Blog1.pdf.

[4] For example, Stockton has one of the highest rates of dial-up users of all large cities in the country, largely concentrated in its rural regions. *Stockton has one of the highest rates of dial-up internet use in the country – Central Valley Business Journal,* Central Valley Business Journal (Sep. 6, 2016). http://www.cetfund.org/files/160906_CVBJ.pdf

bringing innovation to the energy services market at a rapid pace. Options like Share My Data[5] are good foundations to build upon, but it is important to ease restrictions (while maintaining important security and private protocols) so that third parties, mapping specialists, and advocates can collect and analyze information to inform policy and market innovations that reflect the behaviors and assets of both residential and small commercial business customers.

Key Barrier 2 - Demonstrating Sufficient Income and Credit Worthiness

Though credit worthiness is mentioned on page 32 of the report, it is worth reemphasizing that while many low income households do struggle to gain access to credit, there are also many who will decline the effort altogether for multiple reasons. For example, at the August 12th workshop on this study, California Public Utilities Commission (CPUC) staff explained that undocumented residents may not be inclined to participate in any program that requires them to submit documentation for review of any sort. For those that do seek access to capital through credit, low-income households are systematically disqualified for lack of sufficient income, credit history, or collateral-like property ownership. To address these barriers, it will be important to seek solutions that do not depend on income qualification or a minimum level of credit-worthiness.

Tariffed on-bill financing (OBF) provides a utility with a means to bypass the barriers embedded in any process to prove or disprove a person's credit-worthiness, allowing all customers to participate regardless of income, credit score, or renter status. Roanoke Electric Cooperative serves several persistent poverty counties in North Carolina, and when it offered very low interest loans for energy efficiency upgrades to 1,000 high-use customers, fewer than 0.5% succeeded in securing the loan. When that same utility switched to offer a tariffed on-bill investment program based on the Pay As You Save® (PAYS®) system, no more background checks for creditworthiness were required, and the program was oversubscribed from the start. This experience indicates that not only is access to credit a barrier, but a procedural requirement that a customer must be able to prove good credit is a barrier.[6]

Key Barrier 3 – Marketing, Education & Outreach

Getting the message out on available, cost-effective resources is essential, but not the only step. Utilities and state government agencies need to better engage partners and local community-based organizations (CBOs), who have established trust and relationships with DACs and can often function as a better messenger. The engagement process implemented for this study was a good first step. Eastside Sol (which EDF developed and implemented in partnership with a

[5] Pacific Gas & Electric, *Share My Data,* https://www.pge.com/en_US/residential/save-energy-money/analyze-your-usage/your-usage/view-and-share-your-data-with-smartmeter/reading-the-smartmeter/share-your-data/share-my-data.page?WT.mc_id=Vanity_sharemydata.

[6] Marilynn Marsh-Robinson, *Rural Electric Cooperatives Improve Energy Efficiency with On-Bill Financing,* Environmental Defense Fund (Mar. 9, 2016), http://blogs.edf.org/energyexchange/2016/03/09/rural-electric-cooperatives-improve-energy-efficiency-with-on-bill-financing/?_ga=1.98443420.244667039.1463505421.

number of leading CBOs in Los Angeles) is an example of effective engagement: rather than solely relying on utilities and agencies to provide messaging, the event utilized arts, music, and culture – along with trusted community partners -- to spread information about important clean energy resources and solutions.[7]

Key Barrier 4 – Defraying Soft Costs and Ensuring Customer Protections

California has taken steps to address the "soft costs" of residential clean energy solutions, notably with Assembly Bill (AB) 2188, which requires municipalities to develop an expedited permitting process for rooftop installations.[8] Soft costs by some estimates are at least 30% of an installation cost and with the hardware price dropping that administrative percentage is bound to increase. For this reason, it is important to ensure the effectiveness of and compliance with this law. Soft costs for DACs will help reduce the financial barriers to entry for rooftop, but it is also imperative to provide comprehensive customer education, a customer energy "bill of rights," industry standards, and corporate recognition and awareness that can guard against predatory behavior by certain solar and clean energy providers that could benefit from exploiting DAC markets.[9]

Are there important solutions that are not identified in the study?

The study does an admirable job of inventorying a number of strategies that can address barriers to access of clean energy solutions. We would like to emphasize the importance of two of those solutions, as well as highlight one solution that was not identified.

EDF has recognized the success of tariffed on-bill investment programs offered by utilities using the PAYS® system.[10] Critically, OBF can be designed to overcome challenges of low credit scores and split incentives between renters and landlords. EDF has seen successful tariffed on-bill programs deployed among rural communities in the Southeast, South, and Midwest, where the programs were developed and implemented by cooperatives.[11] These cooperatives are able to tie the investment in cost-effective energy efficiency upgrades to the meter, which results in lower bills for the customer and avoided costs for the utility as well. It is important to

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[7] Jorge Madrid, *Eastside Sol Celebrates Community, Culture, and Clean Energy in Los Angeles,* Environmental Defense Fund (Sep. 15, 2016), http://blogs.edf.org/energyexchange/2016/09/15/eastside-sol-celebrates-community-culture-and-clean-energy-in-los-angeles/.

[8] Assembly Bill 2188 (Muratsuchi) (2014).

[9] Julia Pyper, *Are Rooftop Solar Companies Doing Enough to Protect Consumers?* Greentech Media (Sep. 24, 2015), http://www.greentechmedia.com/articles/read/Are-Rooftop-Solar-Companies-Doing-Enough-to-Protect-Consumers?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+GTM_Solar+%28GTM+Solar%29&utm_content=Google+Feedfetcher&lang=fr.

[10] Roanoke Electric Cooperative, *Sharing Insights of Our Experience with Pay As You Save (PAYS),* http://www.roanokeelectric.com/content/PAYS; Ouachita Electric Cooperative, *HELP PAYS (Pay As You Save – Energy Efficiency Program),* https://www.oecc.com/help.

[11] Some programs in this category include How$mart™ offered by Midwest Energy in Kansas, Upgrade to $ave offered by Roanoke Electric in North Carolina, HELP PAYS® offered by Ouachita Electric in Arkansas, and How$mart KY offered by multiple distribution utilities in the Eastern Kentucky Power Cooperative service area.

distinguish between on-bill programs that are based on loans and those that involve no loan. EDF has had experience working with partners on both types of programs, and the tariffed on-bill program design is more inclusive of customers in low-income market segments. Bringing a mechanism to push upgrades in rental housing has the added benefit of making those properties more marketable in vulnerable areas and areas of underinvestment.

Community solar is also highlighted in the study. EDF believes strongly that community solar concepts are a powerful mechanism for addressing many of the upfront physical and economic challenges traditional rooftop solar poses for low-income households. However, community solar itself is a broad term, and variations ranging from leasing to pay-as-you-go to ground-lot models abound. It is important to recognize that community solar needs to be customized to the local assets and physical realities of DACs and that a community and provider should have the flexibility to design a system that fits with their needs, while benefiting from any available incentives or benefits.

One solution that should be added was a project recently pioneered by the Los Angeles Department of Power and Water (LADWP). The utility approved a roll-out plan for a first-in-the-nation set of equity indicators that will help build public awareness and transparency around the need for fair and equitable distribution of clean energy resources in the LADWP service area. In August, the LADWP Board voted to adopt and design a set of equity indicators and will push LADWP to adopt equity as a metric around which the utility's performance will be reported and measured.[12] Additionally, LADWP has agreed to ensure clean energy investments and services (e.g., solar incentives, community solar, energy efficiency) are being directed to all communities. LADWP is on track to designs a set of metrics on time (a first report on the data collected and an evaluation is set for February 2017) and offers a possible model for other utilities to be held accountable for making clean energy investments available to all.

What would you identify as high-priority recommendations the final study should include to address these barriers?

The items below reflect what EDF believes are innovative, scalable, and high-impact actions. Yet, we recognize that is not a comprehensive list and we are eager to further explore the definition of high priority with the CEC and other stakeholders. It is important to further flesh out the criteria for what would make an action high-priority because of the multi-dimensional consequences and drivers of barriers to clean energy access. For example, should priority be given to actions that have the greatest potential to reduce energy burdens? For actions that have indirect benefits of improving air quality and public health outcomes in DACs? For actions that bring private capital investment into DACs?

[12] Los Angeles Department of Water and Power, *Board of Water and Power Commissioners Approves Initiative to Ensure Equity of Water & Power Services across Los Angeles* (Aug. 16, 2016), http://www.ladwpnews.com/go/doc/1475/2875333/Board-of-Water-and-Power-Commissioners-Approves-Initiative-to-Ensure-Equity-of-Water-Power-Services-across-Los-Angeles.

- Equity indicators should be developed and applied to measure the performance of all major investor- and publically-owned utilities in the state. LADWP's experience can be viewed as a model.
- Inclusive financing in the form of tariffed OBF should receive closer consideration in California now that it has been demonstrated by utilities in multiple states where persistent poverty is a driver for adoption (e.g., Arkansas, Kentucky, North Carolina). While some water utilities in California have also demonstrated success with financing cost effective energy efficiency upgrades via a tariffed on-bill program, more engagement with utilities in the power sector would rapidly scale up both the average size of the investments and the size of the service areas where customers could exercise that option.
- Allocate specific funding to CBOs and non-governmental organization (NGOs) to create dynamic, locally-driven, and resonant strategies that will generate greater interest, leverage trust of local relationships, and garner greater opportunity and understanding for clean energy deployment in DACs and underperforming areas.
- Ensure reliable and easy access to data, which is critical for identifying energy burdens and potential interventions and innovations that can be scaled at a low-cost and developed by third parties, nonprofits, and others. To that end, identifying mechanisms that will streamline access and eliminate prohibitive barriers to data is important. Access to data is premised on the need to achieve universal broadband.
- Community solar programs, particularly those with a specific allocation or reduced price for low-income customers, may be one of the most effective ways to facilitate solar access for renters and small businesses. Pilots and support should be developed that spark growth of community solar conceptually and enable all localized models that can benefit the unique physical and economic characteristics of the community. Additionally, consideration and exploration of linking community solar with shared storage, especially in environmentally-burdened communities, should be a goal.
- The United States Department of Energy's SolSmart program is an effort to recognize leading municipalities that have taken on rooftop solar soft cost barriers with marketing and technical assistance.[13] A California-level compliment of this program with a focus on low- and moderate-income cities and communities could both help stimulate market growth and also build upon it.
- Enhancing access to clean transportation in DACs will be critical, particularly in communities that are most burdened by harmful pollution from mobile sources. This means not only ensuring that charging station infrastructure is placed in DACs, but also ensuring that rebates and incentives to defray the upfront cost of these vehicles and utilities, as well as car dealerships, are well-equipped to provide adequate marketing, education, and outreach on alternative-fueled vehicles.

[13] United States Department of Energy, *SolSmart,* http://www.gosparc.org/.

Conclusion

EDF applauds the CEC for undertaking this important study and thinks outcomes will only be strengthened by incorporating the suggestions contained herein. We look forward to collaborating and continuing to advise the CEC as this study evolves.

Sincerely,

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