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Additional submitted attachment is included below.

BEFORE THE CALIFORNIA ENERGY COMMISSION

In the matter of:	
SB 350 Barriers Report	Docket No. 16-OIR-02

COMMENTS OF THE GREEN-ENERGY EFFICIENCY FOR ALL COALITION, INCLUDING NATURAL RESOURCES DEFENSE COUNCIL, CALIFORNIA HOUSING PARTNERSHIP, ASSOCIATION FOR ENERGY AFFORDABILITY, GREENLINING INSTITUTE, AND BUILD IT GREEN, ON THE SB 350 BARRIERS REPORT

September 29, 2016

I. INTRODUCTION

The Natural Resources Defense Council (NRDC), California Housing Partnership (CHPC), Association for Energy Affordability, Greenlining Institute, and Build It Green respectfully submit these comments on behalf of the Green Rental home Energy Network (GREEN) and Energy Efficiency for All (EEFA) Coalition regarding the California Energy Commission's SB 350 Barriers Report.[1]

Our GREEN-EEFA Coalition appreciates the extensive work that went into creating this initial draft, and we provide additional comments and recommendations focused on barriers and solutions to serving low income and disadvantaged community residents living in multifamily buildings, whose tenants comprise approximately 43 percent of all low income residents in California.[2] We also support the comments submitted by Greenlining Institute, especially as regards demographic data tracking and the need for clear, actionable recommendations.

II. SUMMARY

SB 350 specifies that "On or before Jan 1, 2017, the CEC, with input from others, will develop and publish a study on barriers for low-income customers to energy efficiency and weatherization investments, including those in disadvantaged communities, as well as recommendations on how to increase access to energy efficiency and weatherization investments to low-income customers." It also sets requirements for California to generate half of its electricity from renewable energy sources and double energy efficiency in all buildings by 2030, while also substantially building the infrastructure for electric transportation.[3] Our comments focus on how the low-income multifamily sector can play a major role in achieving California's bold energy goals.

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[1] CHPC created GREEN, a coalition of over 80 affordable housing, environmental, and energy efficiency organizations working to increase access to energy efficiency resources for multifamily rental properties in California. EEFA is a national partnership dedicated to linking the energy and housing sectors together in order to tap the benefits of energy efficiency for millions of low-income families. In California, we work together with multifamily property owners and managers and numerous other partners to ensure that low-income households benefit from cleaner, healthier, and more affordable housing.

[2] Cadmus Multifamily Segment Study, p. 17. Available at: http://www.energydataweb.com/cpucFiles/pdaDocs/1000/ESA%20MF%20Segment%20Study%20-%20Volume%201%20Final%20Report%2012-04-13.pdf.

[3] See Clean Energy and Pollution Reduction Act of 2015, California Public Resources Code Section 25327(b).

In summary, our comments and recommendations include:

Financial Barriers and Solutions

A. Affordable rental properties with rent restrictions face unique financing challenge; taking on more debt, PACE, and on-bill repayment are largely unworkable.
B. On Bill Financing is the best option for owners of rent-restricted properties.
C. To be workable, on bill financing program rules require revision to ensure rent-restricted multifamily properties have access to OBF terms provided for government properties, specifically a per property limit of $250,000 with a ten-year term.

Structural Barriers and Solutions

A. We recommend programs that target low-income renters living in multifamily properties target property owners and managers first.
B. Low-income multifamily programs should holistically address naturally occurring low-income properties in addition to rent-restricted properties, with appropriate safeguards.
C. Funding and accounting for combustion safety testing and repairs is needed.
D. The state should create a plan to integrate health, safety, and building structural funding with energy efficiency programs.

Policy and Program Design Barriers/ Solutions

A. Low-income programs should refocus on reducing energy burdens and maximizing energy and bill savings.
B. The relevant governing institutions should set appropriate statewide spending, market penetration, and energy savings goals.
C. The CPUC should establish demographic goals or requirements in programs that don't exclusively serve low-income customers.
D. Streamlining program enrollment and income eligibility processes is critical.
    1. We recommend allowing categorical and comprehensive eligibility for properties where rents are restricted to affordable levels by a government agency for a period of not less than ten years.
    2. We further recommend that programs targeting low-income households all adopt a uniform income eligibility standard using Area Median Income as is done by all of the state's housing programs and by CSD in administering LIWP for large multifamily.
E. Ensure societal cost effectiveness tests and discount rates are used, with full inclusion of relevant non-energy benefits.

Ensure Long Term and Consistent Funding

A. Develop longer program cycles that recognize and support the complex nature of multifamily project design, development and implementation.
B. Provide funding stability that enables property owners to begin planning for projects that are 2-3 years out and that align with timelines for large-scale property rehabilitations that require financing through the Low Income Housing Tax Credit program.
C. Provide mechanisms to allow for rollover of unspent funds from one cycle to be put towards projects completing in future cycles.

D. Ensure extended program timelines and long-term funding is available for the LIWP multifamily program and EUC-MF programs, which provide services to affordable multifamily properties.

Community Access Barriers and Solutions

A. Create statewide and regional one stop shops to provide technical assistance and seamless delivery of services to owners and residents modeled on LIWP for large multifamily.
B. Ensure marketing, education, and outreach is appropriately tailored to customers

Tracking Success and Creating More Transparency & Oversight

A. Establish statewide equity metrics.
B. Establish feedback opportunities, via statewide and regional working groups.
C. Require program implementers to conduct annual public focus groups with low income program customers—including owners, managers, and renters.

DISCUSSION

I. Financial Barriers and Solutions

California is home to more than 500,000 multifamily rental homes affordable to lower income households. A substantial portion of these are older and significantly less energy efficient than other residential buildings and therefore represent an important opportunity for meeting the State's aggressive Green Housing Gas (GHG) reduction efforts.

Experience has shown that owners of these rent-restricted low-income properties are extremely reluctant to finance relatively small stand-alone energy efficiency improvements by taking on additional debt secured by the property for three primary reasons:

1. The financing of these properties is multilayered and complex, typically involving 6-12 public and private entities, each of whom has the right to approve changes to the property or its financing.
2. These properties were originally underwritten with maximum debt, meaning that any addition of debt typically triggers the right of existing lien holders to re-underwrite the entire project.
3. Obtaining the permission of each lien holder to add debt typically takes dozens or even hundreds of hours of staff time and may still result in a lack of approval.

As a result, funding energy efficiency retrofits for affordable rental housing via traditional loans has proven to be problematic except as part of a substantial rehabilitation of the property, which typically occurs every 15-25 years.

A. Utility Programs Necessary But Not Sufficient

Historically, the utilities in California have generally offered piecemeal programs designed and administered independently of each other resulting in confusion, inefficiencies and misalignment. For example, the California Housing Partnership Corporation (CHPC) has counted more than two dozen disparate utility programs ostensibly available to owners of low-income multifamily properties across the state. In the City of Los Angeles alone, Elevate Energy recently found that there are 28 different state and utility programs that multifamily owners must investigate individually. Even if owners are willing to commit the staff time required, experience has shown that utility incentives are generally only sufficient to pay for less than 25% of the cost of the energy conservation measures (ECMs) recommended by energy audits. This leaves owners of rent-restricted multifamily properties without the means to pay for comprehensive energy efficiency retrofits outside of waiting for the next refinancing to pay for these types of upgrades as part of a major renovation.

Furthermore, federal and state energy retrofit programs have ignored the unique retrofit needs of affordable rental properties and focused on single-family homes, the industrial sector, and commercial users. Programs available to multifamily buildings most often have taken a prescriptive, unit-by-unit approach to retrofitting complex multifamily systems. For example, Los Angeles Water and Power's (LADWP's) energy efficiency programs are divided into separate categories for Residential and Commercial customers. As a result, multifamily building owners are expected to coordinate Residential programs for in-unit improvement and Commercial programs for common area upgrades.

However in recent years, due in part to the advocacy of nonprofit housing, energy and environmental justice stakeholders, the landscape has changed to include regional, utility, and state multifamily whole-building energy efficiency programs. Examples of these programs include Energy Upgrade California Multifamily Program in IOU territories (EUC), the Regional programs through Southern California Regional Energy Network and Bay Area Regional Energy Network (BAYREN), and the new statewide Cap-and-Trade-funded Low-Income Weatherization Program (LIWP) for large multifamily, which has been authorized to spend more than $20 million statewide. Given this new and important state resource, utilities have the opportunity and responsibility to help eligible property owners leverage LIWP dollars to help pay for comprehensive retrofits that have the potential to achieve 25% energy savings or higher.

In the City of Los Angeles, LADWP and Southern California Gas (SoCalGas) for a few years have been planning to jointly offer EUC multifamily; however, this has yet to materialize and it is unclear whether owners participating in LIWP now will be able to leverage this important utility resource.

In total, the four major California Investor Owned Utilities (IOUs) budget more than $300 million per year to retrofit housing occupied by low-income households through the Energy Savings Assistance Program (ESAP). While ESAP is a potentially important funding source, ESAP currently is not generally available to pay for common area measures, and the incentive levels for the EUC MF program were set without consideration to the rent restrictions under which affordable rental owners must operate. As a result, the IOUs regularly fail to spend anywhere close to the allocated ESAP budgets.[4][5] Further, the EUC multifamily budgets are still not sufficient to meet demand.

B. More Debt is Not the Answer

Affordable rental properties with rent restrictions imposed by federal, state and local governments generally operate close to the margin without the excess cash flow necessary to cover the gap between utility incentives and the cost of the recommended energy conservation measures (ECMs). The cost of a whole-building multifamily retrofit in California can range from $3,000 to $8,000 per unit and the combined utility incentives currently available typically cover less than half the cost. As a result, owners of rent-restricted affordable properties often wait years to undergo retrofits, until there is an opportunity to finance them as part of a substantial rehabilitation.

There have been several previous attempts to finance energy efficiency retrofits using traditional property-secured loans. The most recent and comprehensive was the State Energy Program- funded Bay Area Multifamily (BAM) Fund undertaken by Enterprise Community Partners and the Low Income Investment Fund in conjunction with several Bay Area local governments in 2010-2014. Initially, there was strong interest in the program, with 54 properties

[4] Approximately $87.8 million in program funds went unspent in 2015.
[5] The CPUC is scheduled to issue a decision (A.14-11-007 et al) on the structure of the ESAP program by the end of October 2016. It is possible that this decision could result in changes that permit the use of ESAP funds to pay for common area measures at certain low-income properties.

proceeding with free energy audits. In the end, however, only four owners and six properties agreed to participate. Follow up conversations with the owners who chose not to participate revealed that owners are reluctant to take on debt secured by the property or by corporate recourse due to the difficulty involved in renegotiating lien priorities with existing lenders, investors and government sponsors, all of whom must sign off on any new liens. Lastly, owners and their financing partners are generally not willing to take on the risk of energy savings not materializing because they do not want to assume responsibility for payments that would further strain their limited financial resources. As a result, funding energy efficiency retrofits for affordable rental housing via traditional loans is problematic except as part of a refinancing for substantial rehabilitation of the property.

C. PACE is Not the Answer for Low-Income Multifamily Rental Housing

Many supporters of Property Assisted Clean Energy (PACE) financing have pointed to this as a possible solution for the multifamily affordable sector. However, PACE financings fail to meet the needs of owners of rent-restricted low-income affordable rental properties for three reasons:

1. PACE financings are clearly loans, meaning they trigger all the prohibitions about adding debt to a property without first (a) obtaining the explicit written permission of the senior lien holders, and (b) re-underwriting the property's financing unless the PACE loan is supported by an unconditional guaranty by a credit-worthy third party.

2. Because PACE loans are secured by tax liens they automatically become senior to all other lienholders' claims, meaning these lienholders are less likely to approve them without the presence of the unconditional guaranty by a credit-worthy third party.

3. PACE loans are generally more expensive than standard Community Reinvestment Act financing available in California, meaning that an owner will always be better off paying for their energy retrofit and/or renewable energy installation by simply wrapping the additional costs into the refinancing for the entire property that is already under way.

PACE's ineffectiveness in serving the low-income rental housing market is evidenced by the lack of uptake in this sector so much that not one rent-restricted affordable rental property in California has yet used PACE financing. While there are a couple of very particular types of rent-restricted properties that could theoretically benefit from PACE, it is unlikely that PACE will become a solution for more than a handful of these properties.

D. On Bill Repayment: A Financing Tool for Low Income Housing Retrofits?

On Bill Repayment (OBR), when paired with the right financing product, may offer a way to overcome energy efficiency retrofit financing constraints by providing owners with the opportunity to repay retrofit costs through charges on monthly utility bills that are not considered debt and do not trigger the same levels of review and concern by owners or their financing partners. In an OBR financing structure, IOUs authorize the addition of a line item to a utility bill so that a third-party financing source can recoup monetary advances made to the contractor or a property owner to perform the work.

The primary advantage of OBR is that repayment of retrofit costs are secured by the normal promise to repay the utility bill, which is generally the first bill paid by owners and renters alike. Further, since payments on the utility bill can be limited to the estimated amount of savings, properties can use the energy savings to finance retrofit work without increasing monthly payments, thus leaving intact covenants and other promises made by the owner regarding cash flow. One wrinkle regarding OBRs authorization in California is that this promise to pay is not currently enforceable through a shut off of utility service for non-payment.

Two conditions must be met to make OBR financing a successful tool for funding rent-restricted multifamily affordable housing retrofits in California. The first is the authority and willingness of one or more IOUs to enter into an agreement to put the repayment of the third party advance on the bill. The second condition is finding one or more capital providers able to advance funding that does not require a deed of trust or promissory note from the owner.

In late 2013, CHPC was authorized by the CPUC to test OBR financing on five properties in SoCalGas territory. While the test is still on-ongoing, preliminary results are promising indicating that OBR financing could be used to pay for a significant portion of owner stand-alone energy retrofit costs remaining after taking into consideration IOU incentives.

For owners that have recently undergone retrofits or implemented some conservation measures OBR financing may be less of an option remaining as potential savings. Many owners have already undertaken conservation initiatives for low-cost, high-savings measures across their portfolio. Although older properties may have the highest savings potential they may also require more non-energy improvements which would be covered under OBR financing. An OBR finance program will need to help owners identify candidate properties in their portfolios.

Furthermore, owners should expect to spend money on unanticipated tenant improvements that emerge during the process. Even though there are no savings to the owner and may add difficulty during rehab, this can help with getting buy in by tenants and property managers and leaves them feeling better off and more appreciated.

OBR financing provides an alternative to pay for standalone retrofits for properties with substantial owner savings, but to achieve economies of scale more work is needed to streamline the process and transaction costs. Until OBR financing is refined to provide a simple process and attractive financing terms owners or rent-restricted low-income affordable rental properties will continue to need substantially higher utility incentive amounts and technical assistance.

CHPC's test of OBR has shown that OBR will be difficult to develop as a successful financing tool for the rent-restricted multifamily housing sector due to several structural factors. First, it has proved extremely difficult if not impossible to find capital sources willing to forgo traditional collateral structures (deed of trust, promissory note, etc.) to provide financing of this type. Secondly, owners of these properties have severe challenges in persuading senior lien holders to agree additional debt of any kind outside of a refinancing, meaning that to be successful in its mission of funding energy retrofits, OBR must be structured as non-debt financing, which is not the current plan for the Master Metered MultiFamily (MMMF) OBR program that CAEATFA is designing under contract to the CPUC for release in 2017.

E. On Bill Financing is the Best Option for Owners of Rent-Restricted Affordable Housing

In contrast to OBR, On Bill Financing (OBF) offers the simplicity and clarity of adding a monthly utility tariff that is not considered additional debt to the property. OBF also has the advantage of being an existing program that several IOUs have demonstrated can be successfully used to pay for energy retrofits of various types of buildings. Why then is OBF not the answer to the quest for the elusive financing tool for the low-income affordable multifamily rental sector?

A good summary of the challenges to the current OBF program can be found in Commissioner Catherine J.K. Sandoval's Alternate Proposed Decision Revision 2 regarding On Large Investor-Owned Utilities' California Alternate Rates for Energy and Energy Savings Assistance Program Applications: "It appears that the underutilization of the OBF program among multifamily properties is the result of a lack of awareness and an unwillingness to tap into

loans of up to $100,000 with five-year payback terms" [6] CHPC's focus groups with owners have supported the conclusion that the main reason these owners have not used the OBF program is that the five-year term and $100,000 financing limits render this program virtually useless for the types of improvements with longer estimated useful lives that are required to achieve deeper savings at these complex properties.

The simple solution to this problem is to revise the rules for the OBF program to enable low-income rent-restricted multifamily housing properties to have access to the OBF terms provided for government properties, specifically an OBF per property limit of $250,000 with a ten-year term. Low-income rent-restricted multifamily housing of this type is so regulated by government agencies as to be virtually indistinguishable from properties owned directly by federal, state and local governments. Accordingly, it is fair and reasonable that these properties be provided OBF terms comparable to government properties. This change would allow these properties, which generally have limited to no ability to increase rents or cash flow to pay for even a portion of energy efficiency retrofit costs, to take advantage of ESA services and EUC incentives by providing them with a tool for paying for non-eligible but related program costs.

II. Structural Barriers and Solutions

A. We recommend low income programs target property owners and managers first.

The draft report recommends targeting renters. While we agree the rental market merits increased focus[7], the best strategy for achieving this outcome is to focus outreach and program enrollment on the owner and property manager of rental units. Targeting property owners is a nationally accepted best practice for multifamily programs and can help overcome the split incentive issue detailed in the report. We recommend low-income efficiency programs work directly with the owners as the program participant and only directly solicit tenants for in-unit measures where building owners are unresponsive.

Working through a property owner or manager will help overcome tenants' lack of trust in utilities or third parties, help streamline income eligibility enrollment processes, increase program administrative efficiencies since the owner is required to sign off on any investments made on his/her property, and also create efficiencies of scale since a single property owner often oversees a portfolio of buildings. The ESAP program currently only reaches out to tenants, and

[6] APD p. 193
[7] SB 350 Draft Study, p. 38.

as a result, owners can face situations where they have to sign 100 applications to serve 100 units in a single building.

We also recommend California consider adopting an opt-out strategy for program offerings in tenant units, modeled off of Energy Trust Oregon's Multifamily Instant Savings Opportunities (ISO) direct install program. By incorporating an opt-out policy, Oregon's program often serves an average of 85% of the units in participating multifamily buildings. Under the program, Owners sign buildings up for participation and residents are offered the opportunity to opt-out of receiving upgrades. If they do nothing, residents' units are served along with the rest of the building. Adopting this type of strategy facilitates efficient work flow by enabling the contractor to work directly with the owners, ensures that the owner is fully informed, aligns the scope of work at the property level for efficiency in installation and maintenance, and enables the program to treat the maximum possible number of homes, while still providing residents with the opportunity to opt-out if they so choose.[8]

B. Low-income multifamily programs should holistically address naturally occurring low-income properties in addition to rent-restricted properties, with appropriate safeguards.

The majority of multifamily renters live in unregulated rental housing—approximately 75%[9]--and it is critical these owners and tenants also be eligible for comprehensive energy savings programs. We recommend the SB 350 study ensure strategies exist for all eligible low-income customers.[10]

To address concerns surrounding potential rent increases, appropriate safeguards can be put into place. For minimal offerings, there should not be any risk of rent increases. However, if substantial capital investments are taking place, we recommend programs be required to adopt agreements with owners stipulating that owners will not increase rents for a set period of time in exchange for accepting a significant level of program funding. Agreements used in Massachusetts, New York, and for ARRA multifamily programs, all present good examples. In New York and Massachusetts, in addition to requiring owners to sign the agreement, program implementers send out a notice to all tenants notifying them to contact the implementer or

[8] A. 14-11-007 Testimony of Lindsay Robbins in the ESAP Proceeding, on behalf of NRDC, CHPC, and NCLC (2015).

[9]

[10] SB 350 Draft report, p. 41, suggests multifamily programs only focus on rent-restricted properties. We instead urge consideration of all eligible multi-unit properties.

governing agency if the agreement is violated. Program experience has proven these contractual agreements can be very effective, and at most, simply require a phone call from the relevant agency reminding an owner of the agreement previously signed.

C. **Funding and accounting for combustion safety testing and repairs is needed.**

Both the low-income Energy Savings Assistance program and the whole-building EUC-Multifamily programs require combustion safety testing. This adds a significant cost to the retrofit scope, which often lands on the property owner and ultimately discourages participation or results in owners avoiding scopes of work that would impact combustion appliances. We recommend combustion safety testing requirements be supported with associated funding for testing and remediation—whether or not it comes directly from energy efficiency funds. Specifically, we recommend the following:

- Create a separate budget and tracking for combustion safety testing and remediation.
- Do not include the cost of combustion testing or remediation in TRC or PAC tests, especially if the building owner is paying for it.
- Provide electrification measures as an alternative to combustion appliances. Compare the additional cost of the electric measure to the avoided cost of testing and remediation.
- Continue to include combustion safety requirements in alignment with MF HERCC protocols or BPI MF BA.

D. The state should create a plan to integrate health, safety, and building structural funding with energy efficiency programs.

One of the main challenges for owners undertaking on energy retrofit work is the expansion of scope to include non-energy work. Addressing issues of asbestos, lead, mold, deferred maintenance or structural conditions can prevent or deprioritize undertaking energy efficiency scopes of work. In weatherization programs, deferred maintenance issues must be addressed prior to weatherization. There are lead and asbestos regulations and the presence of mold has been determined to be a code violation in recent legislation.

We recommend the State identify and create a list of existing health and safety funds for lead, asbestos, mold remediation, and any other issues requiring attention before energy retrofits proceed. Resources should be developed and distributed through program implementers and streamlined in a single scope of work to the greatest extent possible. The statewide Brace and Bolt is an example of one such resource. It provides an avenue to identify and address deferred

maintenance or health and safety issues and then move back to energy efficiency retrofits. Clean Energy Works also implemented a single family pilot to install seismic retrofits and energy efficiency through one delivery channel to customers.

This cost of additional health and remediation issues should not be included in TRC or PAC tests for energy efficiency. Aligning these resources may also allow owners to undertake energy efficiency scopes of work outside large rehabs and integrate them into anticipated or planned maintenance schedules.

III. Policy and Program Design Barriers/ Solutions

A. Low-income programs should refocus on reducing energy burdens and maximizing energy and bill savings.

The draft SB 350 report comprehensively describes the higher energy burdens faced by low-income households across the state. Energy usage burdens are the portion of income spent by households on energy bills as compared to their overall income. Existing low-income efficiency programs are not currently designed or optimized for reducing energy burdens. As the draft report acknowledges, saving energy is instead viewed as a co-benefit of these programs.[11] As a result, the current ESAP program, while successful in reaching a significant portion of the state's households, has not resulted in significant bill savings, averaging only 3-9% of total household energy usage (according to the 2011 impact evaluation). And compared to the general energy efficiency programs, in a given year, the ESAP program receives between one-half to one-third the amount of funding, but achieves only 2-4% of the electricity savings.[12]

This misses a huge opportunity to reduce bills and contribute towards achieving the state's efficiency doubling and climate reduction laws. We strongly recommend the SB 350 report provide a central recommendation on this topic, specifically recommending that low-income programs contain overall energy savings and energy burden reduction goals. Setting a high-level goal will ensure programs are optimized to achieve it. We further recommend these metrics be tracked over time to assess program success at reducing bills and achieving savings.

Refocusing on energy burden reductions will also require low-income efficiency programs to provide funding for measures with significant bill and energy usage reduction potential. We recommend decision-makers ensure low-income efficiency programs are offering

[11] SB 350 Draft Study, p. 30.
[12] See California Public Utilities Commission Evaluated and Verified Energy Efficiency Savings Reports and Utility annual and monthly Energy Savings Assistance Filings.

those measures with the greatest savings.[13] In multifamily housing, hot water heating is often the greatest single use of energy,[14] yet the low-income program does not offer any incentives for water heating in multi-unit apartments. Robust audits should also be employed to identify the most impactful measures per building or household.

B. Relevant governing institutions should set appropriate long-term market penetration and energy savings goals and ensure all relevant sub-sectors are served.

Numerous jurisdictions, including Vermont, Massachusetts, Rhode Island, Connecticut, and New Zealand, have successfully set energy savings goals for low-income programs, in addition to other programmatic goals such as job quality and public health. For example, the Massachusetts Low-Income Energy Affordability Network (LEAN) program includes three main goals – participant goals (comparable to California's "households served"), kWh and therm savings goals, and achieving all cost-effective measures per building – all of which utilities have successfully met and exceeded. We recommend California's low-income programs similarly set multiple goals for energy/bill savings, all cost-effective measures per building, penetration goals, and potentially job quality and public health goals as well.

Despite the fact that governing statutes and the CA strategic efficiency plan set multiple goals for ESAP that include improving energy affordability, the ESAP program has so far only translated program penetration goals into explicit requirements that guide utility planning and budgets. To correct for this factor, energy savings goals should be added so portfolios are not exclusively designed based on serving the greatest number of households at the least cost. To this end, we strongly support the report's recommendation to set energy savings goals for each program.[15]

C. The CPUC should establish demographic goals or requirements in programs that don't exclusively serve low-income customers.

The SB 350 draft report notes that "programs that don't exclusively serve low-income customers could expand to ensure they're serving low-income customers."[16] We agree. To accomplish this, we recommend general income programs track and collect better demographic

[13] Until energy and bill savings are integral to program design, we'd caution against recommending ESAP be further scaled up. See draft SB 350 report, p. 34.

[14]

[15] SB 350 Draft Report, p. 42.

[16] SB 350 Draft Report, p. 49.

data, and consider setting targets, potentially by income, location in a disadvantaged community, or ethnic background. A 2016 study presented at the American Council for an Energy-Efficient Economy conference demonstrates that several of California's untargeted general income programs have predominantly included white high income and high educational attainment participants.[17] Reaching these underserved populations also holds large potential for increasing energy savings and improving social equity.

D. Streamlining program enrollment and income eligibility processes is critical.

We recommend allowing categorical and comprehensive eligibility for properties where rents are restricted to affordable levels by a government agency for a period of not less than ten years. We further recommend that programs targeting low-income households all adopt a uniform income eligibility standard using Area Median Income as is done by all of the state's housing programs and by CSD in administering LIWP for large multifamily. For programs targeting buildings that house low-income customers without rent restrictions, we recommend using rents below a certain threshold as an alternative to income qualifications, as is done by NYSERDA in New York and is currently being considered by the LIWP program.

E. Ensure societal cost effectiveness tests and discount rates are used, with full inclusion of relevant non-energy benefits.

Using the Total Resource Cost test alone, without energy benefits is problematic since it does not fully capture the true costs and benefits for this sector. We recommend other adjustments to traditional cost effectiveness tests and evaluations below.

1. Apply lower discount rates, such as the societal discount rate of approximately 3 percent for low-income programs.

We recommend the use of lower discount rates, such as the societal discount rate of approximately 3 percent, for cost-benefit analysis of low-income programs, such as the ESA program.[18] Discount rates are used to indicate the time value of costs and benefits, and can greatly impact the opportunities a program administrator is allowed to pursue. Currently, each utility uses its after-tax weighted average cost of capital (WACC), typically 7-8 percent, when evaluating the cost-effectiveness of ESA programs. The discount rate used should reflect the risk

[17] Marti Frank and Seth Nowak, "Who's Participating and Who's Not? The Unintended Consequences of Untargeted Programs." (2016). Available at: http://aceee.org/files/proceedings/2016/data/papers/2_542.pdf.

[18] Stamas Testimony, Exh. 32, p. 10.

associated with the investment. WACC reflects investment in power plants and utility; ***the appropriate discount rate for energy efficiency programs or low-income programs in particular should be closer to the social discount rate or toward treasury returns***."[19] (emphasis added).

Investments in efficiency carry much less risk than supply-side investments that often put customers on the hook for highly variable (and therefore risky) future costs including fuel costs and availability, and environmental regulatory costs. Furthermore, it is important to properly value energy savings in the long term in order to utilize efficiency to help California meet its 2030 goals of doubling efficiency savings in existing building and reducing greenhouse gas (GHG) emissions 40% below 1990 levels by 2030. Investments made in the next decade will have great impact on whether or not California is able to meet its long-term GHG reduction goals.

As shown in Table 4, the utilities' discount rates (after-tax WACC) are higher than states that are considered leaders in energy efficiency (e.g. Massachusetts and Vermont). Furthermore, the Office of Management and Budget (OMB) recommends that cost-effectiveness analyses use the "Treasury borrowing rate on marketable securities of comparable maturity to the period of analysis."[20] As shown in Table 4, the interest rate on a 10-year bond is 0.9% real. Therefore, a lower discount rate would be consistent with OMB's guidance.

[19] Testimony of L. Skumatz (on behalf of NRDC, NCLC, and CHPC), Exh. 42, p. 13.
[20]U.S. Office of Management and Budget, Circular A-94, Guidelines and Discount Rates for Benefit-Cost Analysis of Federal Programs, October 1992, p. 9, http://www.whitehouse.gov/sites/default/files/omb/assets/a94/a094.pdf

Table 4. Discount Rates Used In Other States and Agencies

STATE	DISCOUNT RATE
California PUC	After-tax WACC: SCE: 7.65%; PG&E: 7.66%; SDG&E: 7.36%; SCG: 7.38%[21]
California Energy Commission	3.0% real; 5.0% nominal[22]
White House Office of Management and Budget	Interest rate on 10-year Treasury Bond: 0.9% real; 2.8% nominal[23]
Maine	Current yield of long-term (10 years or longer) U.S. Treasury securities, adjusted for inflation[24]
Massachusetts	12-month average of yield from a 10-year U.S. Treasury note[25]
Vermont	Societal: 3% real[26]

2. Fully account for all non-energy benefits.

The draft SB 350 study notes that the CPUC ranks ESAP measures using four health and safety criteria.[27] While this has been recommended for ESAP by the cost effectiveness working

[21] CPUC D.12-05-015, Decision Providing Guidance on 2013-2014 Energy Efficiency Portfolios and 2012 Marketing, Education, and Outreach (May 18, 2012), available at http://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/166830.PDF

[22] E3, Time Dependent Valuation of Energy for Developing Building Efficiency Standards: 2013 Time Dependent Valuation (TDV) Data Sources and Inputs (February 2011), available at http://www.energy.ca.gov/title24/2013standards/prerulemaking/documents/general_cec_documents/Title24_2013_TDV_Methodology_Report_23Feb2011.pdf

[23] White House Office of Management and Budget, Circular A-94 Appendix C, "Discount Rates for Cost-Effectiveness, Lease Purchase, and Related Analysis," accessed May 15, 2015, available at https://www.whitehouse.gov/omb/circulars_a094/a94_appx-c

[24] Maine Public Utilities Commission, "Chapter 380: Electric Energy Conservation Programs," p. 6, available at http://www.efficiencymaine.com/docs/Chapter-380-Electric-Energy-Conservation-Programs-PUC.pdf

[25] Massachusetts Department of Public Utilities, D.P.U 11-120-A, Phase II, January 31, 2013, available at http://www.mass.gov/eea/docs/dpu/electric/dpu-11-120-a-phase-ii.pdf

[26] Synapse Energy Economics, "Energy Efficiency Cost-Effectiveness Screening in the Northeast and Mid-Atlantic States," Table 2, October 2, 2013. Available at http://www.neep.org/sites/default/files/products/EMV_Forum_C-E-Testing_Report_Synapse_2013%2010%2002%20Final.pdf

[27] SB 350 Draft Study, p. 52.

group, it has not been implemented. ESAP does, however, incorporate significant amounts of non-energy benefits. We recommend the study reference the work of Lisa Skumatz on non-energy benefits, including her several studies conducted for California's ESAP program and her 2014 report summarizing the extensive literature on non-energy benefits, including generally agreed upon values for specific attributes.[28]

We recommend ESAP continually update its non-energy benefit valuations, and other low-income efficiency programs incorporate non-energy benefits. Inclusion of NEBs in cost-effectiveness tests is important to reduce bias in the decision-making process and better direct investments in energy efficiency programs.

We recommend future non-energy benefits studies take a hybrid approach, similar to that taken in Vermont, Massachusetts, and Oregon: to use an adder to address program-invariant NEBs, and assign individual measurement of other NEBs based on either (1) a study of NEBs for the specific program or (2) estimates built up from other NEB studies with applicable measures.

3. **Ensure all cost effectiveness screens, including those that evaluate local reach codes for existing buildings, include consideration of non-energy benefits.**

Local jurisdictions have a great opportunity to develop reach codes for existing buildings. However, the cost effectiveness studies required to be submitted to the California Energy Commission to implement these reach codes is often a barrier to development and adoption.

IV. The state should ensure long-term consistent budgets and spending timelines for programs, especially for EUC-MF and LIWP.

Long-term reliable funding is critical for wide adoption and program success, especially in the low-income multifamily sector. The SB 350 draft report highlights the need for at least four years of program funding for low-income multifamily offerings. We recommend this need for longer term funding and longer term funding encumbrance deadlines be elevated. In particular, both EUC-multifamily home upgrade programs (which are popular with affordable property owners), and the Low Income Weatherization Program's multifamily program would

[28] Lisa Skumatz, "Non-energy benefits / non-energy impacts and their role & values in cost-effectiveness tests: state of Maryland." (2014). Available at: http://energyefficiencyforall.org/sites/default/files/2014_%20NEBs%20report%20for%20Maryland.pdf. See also: Skumatz, Lisa A., Ph.D., Sami Khawaja, Ph.D., and Richard Krop, 2010. "Non-Energy Benefits: Status, Findings, Next Steps, and Implications for Low Income Program Analyses in California", Skumatz Economic Research Associates, for SEMPRA Utilities, May.

see greatly increased participation through simply extending funding and timelines for expenditures over a several year period. We recommend existing or new programs:

E. Develop longer program cycles that recognize and support the complex nature of multifamily project design, development and implementation.
F. Provide funding stability that enables property owners to begin planning for projects that are 2-3 years out and that align with planned tax credit rehabilitations.
G. Provide mechanisms to allow for rollover of unspent funds from one cycle to be put towards projects completing in future cycles.
H. Provide mechanisms for owners to complete multi-phase upgrades over time.

V. Community Access Barriers and Solutions

A. Create regional one stop shops to provide technical assistance and seamless delivery of services to owners and residents in order to minimize time burdens on already resource constrained ownership entities.

Program experience shows that building owners benefit from access to people who can help navigate program offerings and provide project development and technical assistance, such as initial assessments, audits, and project support through the entire process.

A one-stop-shop model offers a full-service approach to multifamily building efficiency upgrades. It provides building owners with concierge-type services to access efficiency programs, identify contractors, manage the onsite work needed to complete the efficiency upgrades, and monitor progress. The key figure in this concierge model is the single point of contact assigned to every owner. The single point of contact coordinates a team of experts to spearhead the major building upgrades and guides busy property managers through the entire retrofit process. These individuals become trusted advisors to local building owners. The people in this function should be specialists and empowered to build relationships with local partners, such as lenders, contractors, and utility staff.

For an example of a well-functioning one-stop shop model, we recommend review of Elevate Energy's Multifamily Energy Efficiency Program, initiated in January 2008 and now in its eighth year of existence. This program is a one-stop-shop program targeting existing and mid-to-low income, affordable, and subsidized buildings in the Chicago area. The Program experiences a 43% uptake rate from initial inquiry, compared to its previous average of 20%, and has achieved 20-30% average energy savings per building, and retrofitted 600 buildings and 25,000 units with savings of approximately 6 million therms and 16 million kWh.

B. Tailored marketing, education, and outreach.

Marketing, education, and outreach (ME&O) is critical to ensure the success of one stop shops and wide programmatic participation. We recommend the CEC and CPUC coordinate on statewide efforts to educate Californians on the state's new policies and goals. ME&O should be tailored to address the unique participation barriers faced by multifamily renters and owners in disadvantaged and low income communities. These ME&O activities could also direct residents and owners to regional one stop shop services. We recommend the CEC and CPUC coordinate to ensure ME&O funding is used strategically and effectively.

We recommend that ME&O for the affordable multi-family sector be designed in collaboration with building owners, organizations that provide services to building owners and tenants, and tenants organizations (if possible), so that the ME&O strategy can be informed by the subject matter experts who best know the target audience and how to effectively reach them. While outreach for the affordable multi-family sector should be focused on building owners, it must not leave out tenants. Engaged, well-informed tenants will be more likely to consent to unit upgrades, and they will benefit greatly from energy education by learning how to make smart energy choices.

ME&O must be approached not simply as a marketing campaign, the success of which is measured by awareness and visibility, but rather as a mobilization campaign designed to move owners and tenants alike to take action. The CPUC has started down this path with its work on Statewide ME&O, and this model should be expanded to all customer-serving programs.

VI. Track Success and Create More Transparency & Oversight

A. Establish statewide equity metrics.

LADWP recently adopted equity metrics, whereby they will begin collecting and publishing data on where clean energy funding is being deployed, including associated income levels and demographics. We recommend the state consider adopting program-specific or statewide metrics as well. We agree with Greenlining Institute in recommending that these attributes include:

- Household income
- Educational attainment
- Home ownership
- Building type (single family/multi-family) and size
- Age

- Race/ethnicity
- Primary language spoken
- CalEnviroScreen decile
- County

B. Establish feedback opportunities, via statewide and regional working groups.

Ensuring there is an opportunity for input and feedback from building owners, technical experts, contractors, and program implementers will be critical to getting programs right. This type of a process has proven to result in enhanced programs. The ACEEE award-winning LEAN Multifamily Program was launched after an intensive stakeholder engagement process with the program implementers. Even following the launch of the program, stakeholders and interested parties get together through collaborative meetings twice or three times annually to resolve any outstanding issues that arise. Establishing an ongoing multifamily stakeholder working group would provide a valuable opportunity for program participants to contribute valuable feedback and recommendations.

C. Require program implementers to conduct annual public focus groups with low income program customers—including owners, managers, and renters.

Customer satisfaction and feedback should be an integral part of clean energy programs for low income customers and those in disadvantaged communities. Requiring participant focus groups will also surface recommendations that can vastly improve program offerings. Program administrators could also be evaluated based on the satisfaction of the customers they serve.

VII. Conclusion

GREEN-EEFA appreciates the opportunity to offer these comments on the Commission's SB 350 Barriers/Solutions Report, and encourages the Commission to consider our recommendations, as elaborated on above, to ensure all California residents are being served by California's clean energy economy.

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Respectfully submitted,

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