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Comments of The Donald Vial Center on Employment in the Green Economy

RE: Docket ID No. EPA-HQ-OAR-2015-0734

Clean Energy Incentive Program

Thank you for the opportunity to make comments on the U.S. Environmental Protection Agency's (EPA) proposed Clean Energy Incentive Program (CEIP) under the recently promulgated Clean Power Plan (CPP). The Donald Vial Center on Employment in the Green Economy (DVC) is a project of the University of California, Berkeley Labor Center that provides research on the emerging green economy and California and national climate change policy as it relates to labor markets, workforce development, and workforce policy. We work to promote the growth of a sustainable economy that brings together a highly-skilled workforce and creates quality, family-supporting jobs.

We welcome the inclusion of the CEIP in the CPP. We share the EPA's belief that providing an incentive for early action on renewables and on efficiency in low income communities can help ensure that investments in clean energy and efficiency are distributed in the communities with the highest barriers to deployment. In particular, we welcome the EPA's stated intention to ensure that "benefits of the final rule are shared broadly across society."

We believe states and their stakeholders have a unique opportunity through State Implementation Plans to craft the energy solutions that work best for the economy, workers, and communities of their state. We will urge the states to take advantage of the CEIP in their State Implementation Plans, as it has the potential to:

- Reduce some barriers to energy efficiency projects in low-income communities,
- Improve the public buildings and housing in low-income communities,
- Reduce energy use and expenditures for people who will most benefit,
- Provide good jobs and career paths for the people who most need them,
- Build and support a skilled, clean energy and energy efficiency workforce, and
- Reduce pollution in frontline communities

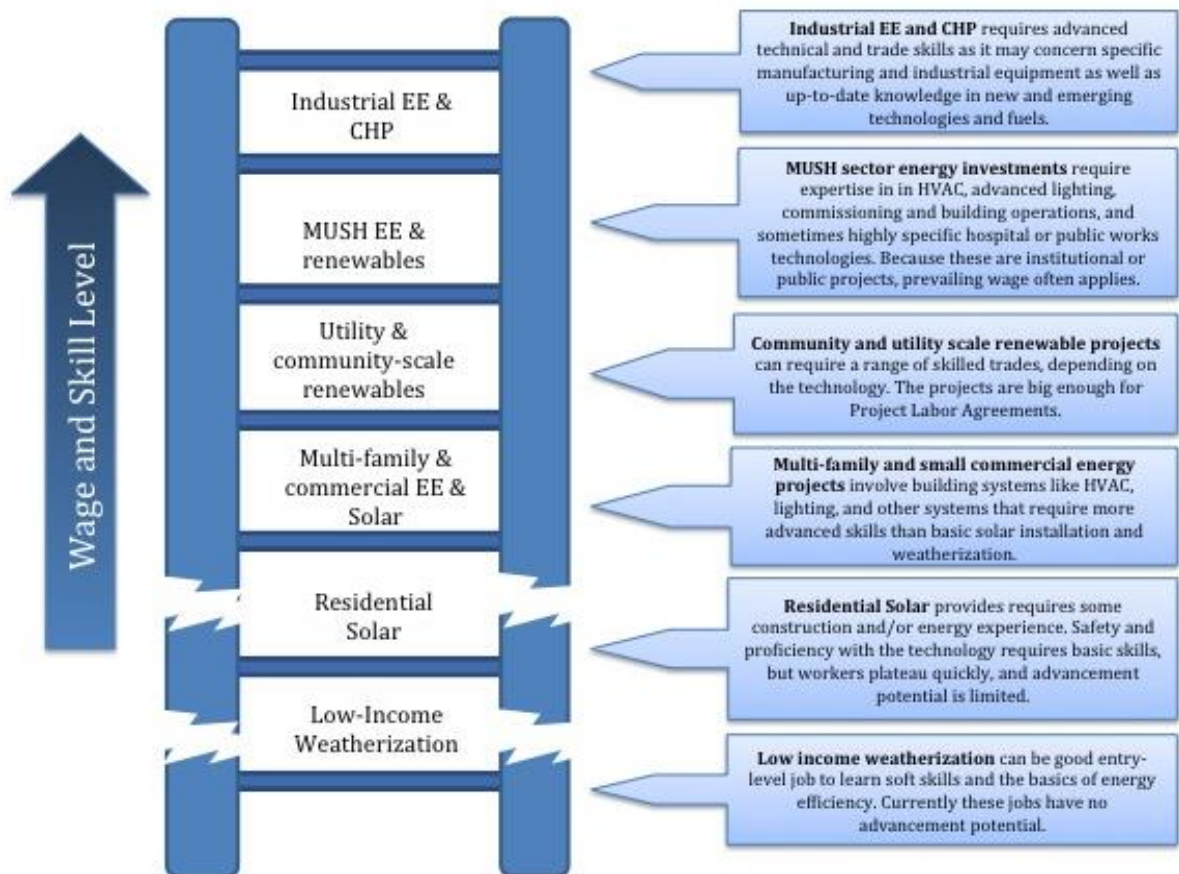
As a strategy to reward early action, the CEIP can lay the groundwork to prepare a workforce able to carry out clean energy installations and retrofits over the coming decade and beyond. To capture these benefits, the DVC urges the EPA to include the following guidelines and priorities in structuring the program.

1. Introduction

The Clean Power Plan (CPP) represents the beginning of a national effort to address climate change in the United States. Reducing carbon dioxide pollution from the power sector will transform the construction, electricity generation, transmission, and distribution, fossil fuel extraction, and manufacturing industries. The CPP final draft acknowledges the employment opportunities and challenges implicit in this transformation as well as the importance of workforce standards in the final CPP (US EPA, 2015a, 64910, 64881).

As a precursor initiative, the CEIP will set industry standards for the clean energy field. Depending on how the CEIP is designed, it will either contribute to high-road job creation and access to good jobs for disadvantaged workers who most need them or it will perpetuate a low-road employment environment. While many stakeholders feel that the delivery of services, like residential weatherization, to low-income and impacted communities is central to the CEIP’s purpose, the CEIP could also be used to reduce barriers to achieving efficiency in other sectors in low-income and impacted communities like multi-family residential, MUSH, and even industrial and commercial efficiency, improving environmental and job outcomes as well as quality of life.

Figure 1: Potential Career Ladder Created by CEIP



By clustering or bundling projects across sectors, the CEIP can support the development of good jobs and clear pathways up the career ladder into those jobs. In the residential sector, and particularly low-income weatherization, most positions are entry-level with few opportunities for advancement (see Figure 1). But if the CEIP creates energy efficiency opportunities across a range of sectors (low-income residential, multi-family, MUSH, and perhaps commercial and industrial projects with high impacts for low-income communities), then the program can ensure job openings not only for entry-level workers, but for mid- and high-skilled workers as well with advancement opportunities.

There are proven, existing models for this type of high-road economic development. Multi-year “earn as you learn” apprenticeship programs and the ability to connect workers from pre-apprenticeship programs to those apprenticeship openings is a tried and true method to move people up the career and wage ladder as they add skills (see [Avis and Zabin, 2013](#) on the Los Angeles Department of Water and Power Utility Pre-Craft Trainee Program). Apprenticeships are demand-driven training programs: when there is work, there are openings. When there is a lot of work, unions may even start new apprenticeship training centers in areas where they previously did not exist. For example, the IBEW built a new training center in Imperial County, California, in response to the significant growth in union-built renewable energy projects (Philips, 2014).

The proposed criteria and mechanisms outlined below intend to maximize the investments triggered by the CEIP in low-income and impacted communities, ensuring that that minority, low-income, and displaced workers have opportunities to enter and progress in rewarding careers in the clean energy industry, while providing critical clean energy and energy efficiency investments to improve the quality of life in low-income and impacted communities.

2. High Road Workforce standards

Capturing the jobs and economic development potential of CEIP projects is especially critical in low-income communities which have not yet received a fair share of clean energy investments, and in impacted communities facing job loss from implementation of the CPP rule.

Yet, the policies outlined below to address equity concerns, such as targeted hiring, wage standards, and project labor agreements (PLAs) appended to clean energy programs, are only one step to ensuring good job creation. These solutions also require bundling projects on a community, neighborhood, municipal, or statewide basis to create economies of scale that facilitate strong worker protections and establish community co-benefits generated through the added job opportunities (Zabin et al., 2011, 112). Accordingly we urge labor standards and “workforce inclusion” to be factors in ranking projects for all CEIP incentives as per the following recommendations:

- **Adopt labor standards such as prevailing wages, or for residential retrofit, other wage floors, and industry-recognized skill certifications**, such as graduation from a federally or state-registered apprenticeship program for workers employed by all contractors and subcontractors participating in CEIP projects.
- **Establish contractor pre-selection based on responsible contractor criteria, with provisions to facilitate participation by minority contractors.** Pre-selection can screen out contractors who have a history of code or labor law violations, and reward contractors to adhere to a set of standards (i.e. regarding worker skill, wage and benefit standards, local hire, etc.). Several energy efficiency programs use such policies to pre-qualify contractors eligible to participate in energy

efficiency programs (see [NYSERDA](#); [Clean Energy Works Portland](#)). Contractors are required to ensure the proper training and skill-set of their employees.

- **Allow no utilization of unpaid volunteer labor as it undermines paid workers and erodes a high-road work environment.** The use of volunteer labor inadvertently rewards workers who do not require compensation (because they have other sources of income) and business models that do not support the long-term vitality and resilience of low-income communities and residents.
- **Preference for or promotion of energy efficiency and clean energy products manufactured in the United States** will ensure a higher job creation and economic development multiplier.
- **Encourage adoption of a targeted hire policy, and establish paid pre-apprenticeship programs that connect workers from low-income communities to career paths in the clean energy industry, where possible, negotiated under a Project Labor Agreement.** A review of national targeted hire programs throughout the US (Herrera et al., 2014) identifies the following priorities in designing an inclusive workforce and supply chain policy:
 - Provision to hire a certain percentage of residents from the project area (local hire) and disadvantaged workers (e.g. workers recently or currently in receipt of public benefits, formerly incarcerated, formerly or currently homeless, single-parents, graduates of targeted career training programs).
 - Supplier diversity provision to encourage a percentage of supplies to be sourced from businesses owned by minority, women, LGBT, or veterans. Such a provision has been adopted by the California Public Utilities Commission (CPUC, 2015). The CPUC allows minority suppliers to register with a central operations clearinghouse that contractors can reference to meet the diversity requirements.
 - **Emphasize “targeted hire” language in all CPP implementation plans** to create a pathway into apprenticeships for construction or other mechanisms that create a link between disadvantaged workers employed in CEIP projects and career-track job opportunities in other CPP projects (see Zabin et al., 2011, 113). While energy efficiency creates new job opportunities, upward mobility depends on establishing linkages between pre-apprenticeship programs, apprenticeship programs, and journey-level positions. This language would require future CPP compliance projects to use a certain percentage of workers trained through CEIP projects, guaranteeing work for those who enter training programs at the beginning of CEIP implementation years into the future.
- **In EM&V efforts, collect data on contractor qualifications, job quality, workforce diversity, and hiring of disadvantaged workers** that can inform future program design and implementation.
- **Mandate EM&V third party inspection for EE projects and inspector certification** guidelines according to the four recommendations offered to states in the CPP (EPA, 2015a, 64910). Further, we urge the EPA to institute a competency-based program for EE EM&V. A good model is the Acceptance Testing certification used in California for Title 24 (CEC, 2015).
- **Provide training in labor standard negotiation for implementers.** For many of the implementing bodies and community groups involved with CEIP planning and design labor standards will be new and unfamiliar territory. The EPA should outline recommendations to establish Project Labor Agreements, Community Benefits Agreements, or other such contracts with a targeted hire provision on CEIP projects.

- **Encourage coordination between workforce investment boards (WIBs), unions, utilities, state environmental agencies, and community groups to connect targeted suppliers and employees with projects.** Meeting targeted hire goals will be challenging in disadvantaged communities without strong institutions to promote workforce education. Local implementing bodies that take on CEIP projects should be prepared to work with community colleges, unions, apprenticeship and pre-apprenticeship organizers, and workforce investment boards (WIBs) to ensure the availability of a trained workforce able to meet targeted hire guidelines and assist workers where needed with job training and career counseling information to help new entrants to the field on to pathways with opportunities to move up the career ladder.
- **Implementing agencies should designate a jobs coordinator or coordinating group to lead workforce placement.** This is critical in planning out a clean energy workforce development strategy that can continue to serve low-income communities into the future. Previous research carried out by the DVC for the California Investor Owned Utilities (Zabin et al., 2014, 114) regarding workforce issues in energy efficiency explained:

While most people understand the term “career ladder,” the rungs in particular industries are not always evident. In order for the lower skilled or entry-level worker to move up, he or she must understand what skills must be learned (including both soft and hard skills), where they are learned (e.g. in school or on the job), and how to build the necessary up-skilling into his or her life in terms of schedule, budget, and geography. Because the higher skilled segments of the construction industry, such as the commercial and MUSH sectors, offer far more opportunities for disadvantaged workers, understanding the career ladder is important.

Helping residents of low-income communities and disadvantaged members of society into the clean energy workforce with opportunities to move up the career ladder demands a coordinated effort to ensure workforce preparation (supply-side of the labor market) and create pathways to employment (demand-side of the labor market).

Most workers secure higher wage, skilled trades jobs through state-certified apprenticeship programs, which offer the best conduit for disadvantaged workers to move into skilled careers. Pre-apprenticeship training programs facilitate the successful entry of disadvantaged workers into apprenticeship programs. Model residential energy efficiency programs in some states use a combination of wage standards and targeted hire to improve entry-level residential weatherization and retrofit jobs and ensure that disadvantaged workers have access to these jobs (see Zabin et al., 2014, 111-114; [Clean Energy Works Portland](#); [Sierra Nevada Energy Watch](#)). These and other inclusion programs built on apprenticeship, prevailing wage standards, and targeted hire policies provide a relevant model for CEIP programs.

3. Structure for Maximum Impact

- **Low-income community criteria should not limit projects to low-income households, but must instead include commercial, industrial, and public facilities** that impact the local community and may contribute to environmental justice concerns. Many communities identified as “low-income” are concentrated in heavily industrial areas and face disproportionate exposure to toxic and criteria pollutants (Pais et al., 2014; Pastor et al., 2002, 2001). While energy assistance and weatherization provides benefits to low-income individuals, it may be that the greatest benefits to low-income communities, as a whole, are achieved from projects in non-residential sectors. Other mechanisms and incentives may exist in these sectors to reduce energy

use and address capacity and aging infrastructure, however, a variety of factors have limited such investments in low-income areas. CEIP could provide enough of an incentive to make sure these investments are made where they are most needed, thinking creatively beyond the residential sector to address needs in the public interest, including EE retrofits in schools and hospitals in low-income communities or industrial and commercial facilities where energy efficiency investments can significantly improve local air quality.

CEIP should be a launch pad for investments in low-income and impacted communities, not a landing pad. The EPA incentives are finite, and we urge a framework that incentivizes those projects which both achieve the greatest triple bottom line (environment, economy, equity) benefits (i.e. efficiency or clean energy outcomes and local air pollution reduction, investments in and benefits to communities, good job creation and development of a skilled workforce, and economic returns to the community).

With sound planning and prioritization a community or state can also enhance the total value of the portfolio of projects it undertakes through mechanisms such as bundling of smaller projects to generate larger impact and better jobs pathways, and phasing in projects in such a way that initial projects incentivized by early action allowances generate supplemental revenues that allow for expanded scale and different types of community investment. The latter option may have the added benefit of creating a more sustained jobs pipeline. The EPA's guidance should facilitate communities' ability to take advantage of these options.

The suite of project options listed below attempts to address the wide-ranging environmental issues affecting low-income communities, which face unequal barriers to accessing the clean economy and elevated health and safety risks from industrial pollution all too frequently embodied in cancer, asthma, and other respiratory illness (Miranda et al., 2011; LA Collaborative on Environmental Health and Justice, 2010). The elevated risk of disease is attributed to uneven exposure to industrial production, busy transit systems, and hazardous waste sites disproportionately located in low-income and minority communities. In fact, research from Manuel Pastor and colleagues (2001) at the University of California, Los Angeles indicates that over three decades, industrial projects presenting an environmental hazard were repeatedly sited in low-income and minority communities without the political or financial capital to protest. We agree with the EPA that emissions reductions targets in the CPP can help address these environmental justice concerns as “an important co-benefit of this rule [will...] be a reduction in the adverse health impacts of air pollution on these low-income communities and communities of color... least resilient to the impacts of climate change and central to environmental justice considerations” (US EPA, 2015a, 64670).

Yet, even as net carbon emissions are reduced, concerns of toxic and criteria air pollutants from transportation, goods distribution, and industrial production remain. The CEIP offers an opportunity to address these multiple inequities that face low-income communities. We assert this is best achieved through a holistic approach to energy efficiency that begins to change the system of toxic loading, as well as related issues in the built environment of poor quality construction and high energy bills, in each sector of the economy. Through coordinated investment in industrial, commercial, municipal, and residential energy efficiency, the varied co-benefits of pollution reduction, affordable energy, and good job creation can be realized.

We envision that the most encompassing and wide-reaching CEIP implementation plans will bundle EE projects across sectors, including industrial, commercial, municipal, and residential components as well as community renewable energy. The most impactful projects may be different in every community, so the EPA and states may want to consider the following:

- **Industrial and commercial energy efficiency (IEE) and combined heat and power (CHP)** projects are among the lowest total cost of saved energy (the cheapest “mega-watts”) and can offer significant community co-benefits through good job creation for a densely unionized workforce and good job creation (Hoffman et al., 2015; NACAA, 2015; Billingsley et al., 2014; Ryan and Campbell, 2012; Lily and Pearson, 1999). As more efficient plants burn less fuel, industrial energy efficiency installation is associated with lower toxic and criteria pollutants (Moniz et al., 2011, 105; The Delta Institute, 2002). The potential for boiler upgrades to reduce air pollution is reflected also in the final revisions to the Clean Air Act standards for boiler compliance adopted in 2015, however, this would only apply to 1% of boilers (although an additional 13% are required to adhere to certain “work practice standards, such as annual tune-ups, to minimize toxics”) (US EPA, 2015b; US EPA, 2013). For industrial systems not under EPA mandate to improve boiler efficiency, the availability of public funding to achieve EE could advance the adoption of Maximum Achievable Control Technologies. Given the disproportionate exposure of low-income and minority housing, schools, and workplaces to industrial pollution (Pais et al., 2014; Pastor et al., 2002, 2001; Zwickl et al., 2014), industrial and commercial EE has the important co-benefit of helping to ameliorate environmental justice concerns regarding air pollution. In addition, lower energy bills could improve the competitiveness or viability of businesses owned and operated in low-income areas and multiple options exist for the community to capture other financial returns on commercial and industrial EE investment through a green bank or revolving loan fund.
- **Municipal, school, hospital (MUSH) sector efficiency retrofit projects in low-income communities that preserve local services and grow local job pipelines.** MUSH sector efficiency represents mid-range cost energy savings with important co-benefits as reduced operating expenses can be turned into retained or improved community service and the projects have sufficient scale to ensure good jobs. If administered through a community revolving fund, these projects have the potential to payback and generate funds for additional project investments via performance contracts, on-bill financing, or some other mechanism. MUSH sector EE upgrades represent an investment in the safety, comfort, and healthfulness of public buildings used by all residents as well as contributing to other widespread community co-benefits of improved student performance, and good job creation (Scott et al., 2014; Irwin et al., 2011). Building upgrades contribute to “less frequent maintenance, increased equipment longevity,” and lower energy costs in the long-term (MIT CoLab, 2012, 7). These savings can be reinvested in hospitals, schools, universities, recreational facilities, municipal office buildings, and water treatment systems among others to improve access and quality of often resource-stressed public services in low-income communities.
- **Community-scale (>1 MW) renewable, distributed wind and solar generation projects such as wind and solar in low-income communities.** Under the CEIP, early action on renewable energy projects (wherever they are located) also receive early action credit, though at a different rate – and these projects may also provide important benefits to low-income communities. To best engage low-income and impacted communities in the benefits of the no- and low-carbon energy transition, states and communities may also want to consider deployment of community scale renewables in low income communities. Renewable generation costs more than most

efficiency investments, but if designed as part of an overall CEIP program, with sound labor standards, medium-scale distributed generation in low-income communities could offset utility energy bills and be a rung on the career ladder for wind and solar workers. Benefits associated with economies of scale reduce the net cost of renewable energy installation and can increase RE penetration into low-income communities. A survey of the US Department of Energy and National Renewable Energy Laboratory indicates that up to 50% of households and businesses could not host a solar project given lack of space, insufficient sunlight, or non-ownership of their building (US DOE, no date). Community RE initiatives allow for optimal project siting, decreased energy bills, local job opportunities, increased awareness of local energy, and are a visible investment into environmental and economic resiliency (US DOE, 2010, 3). A successful community renewable program designed for high-road implementation must consider community workforce or project labor agreements with contracting agencies (see *The Partnership for Working Families*, 2013).

- **Multi-family affordable housing energy efficiency retrofits.** Multi-family housing energy efficiency represents mid-cost energy savings, if managed correctly, such projects can support a high road employment environment, and the benefits of efficiency are distributed. Energy efficiency initiatives in multi-family housing have advanced less rapidly given the complex or distributed ownership structures, energy bill payment responsibility, and lack of upfront capital (ACEEE, 2015), residents of apartments and condos who are most often renters thus miss the benefits of public energy efficiency incentive programs. Establishing a structure to aid in the administration and funding of EE programs in multifamily housing could expand savings and related benefits to low-income renters in areas that are without multi-family assistance or inadequately covered (Johnson and Mackres, 2013). Bundling single and multi-family projects together and/or with commercial scale “MUSH” projects discussed below can help create the scale and scope of job opportunities necessary to create better jobs and career trajectories. Similarly, CEIP investments can be coupled with or provide models for targeted utility demand-side management or other complementary programs so that they better provide direct bill benefits to low income customers and broader benefits to the community.
- **Single-family low-income energy-efficiency and weatherization.** While this is one of the most expensive opportunities for saving energy and reducing emissions (Fowle et al., 2015), the benefits to individuals are high both in terms of cost savings and comfort. Weatherization and other energy efficiency measures for single family homes also provide visible investment in low-income communities with direct benefits to residents (US DOE, 2013). The job quality has traditionally been poor in these programs with little opportunity for advancement (Fried and Taylor, 2011; Zabin et al., 2014), but a well-designed program can overcome these challenges. Many weatherization (as well as home-solar installation) programs already recruit from disadvantaged or low-income neighborhoods. Therefore, the goal is to make these jobs better and provide opportunities for advancement up the career ladder through progressive training and job placement. For example, a program that allows workers in the entry-level positions created by weatherization programs to advance in their energy efficiency careers through built-in ladders to union apprenticeship programs (see Avis and Zabin, 2013; [Cypress Mandela, Inc. Training Center](#)).
- **Bundling projects together is another avenue to achieve economies of scale and promote good job standards.** BlocPower, a non-profit that originated in New York, “works with community leaders and institutions to assemble 4 or more non-profits, houses of worship, schools, small businesses or multi-family residences in financially underserved communities into

a “Bloc” of potential retrofits” (BlocPower LLC, 2015). This provides a case study of how other successful bundling efforts could function and possibly upscale to include larger industrial, municipal, and commercial institutions in a community EE initiative. While BlocPower does not appear to address job quality issues, such a model could be readily adapted to provide rungs up the career ladder.

4. Complementary Efforts to Improve Impact of CEIP

The CEIP provides a significant pool of early action credits or allowances nationwide, however, the potential incentive for any single state or community is modest. Therefore, the EPA and Federal Government should consider other measures to encourage communities to prioritize, leverage, create greater financial certainty around, and enhance the impact of the funding and projects enabled by the CEIP. For example, the EPA could:

- **Encourage the establishment of revolving loan funds or green banks, making initial project investments the "gift that keeps on giving,"** continually replenished by the payback from energy savings and continuous sale of associated allowances or ERCs. Numerous successful clean energy revolving loan funds and green banks have been piloted across the United States (see: Cleveland, 2013; Gergen et al., 2010). Since upfront financing will be a significant barrier (and the value of credits will remain uncertain), expanding upon these models can help make CEIP a launch pad for broader investments in impacted communities. Following from the example of SB 350 in California (CA Legislative Information, 2015), any revenue generated from such a fund should be reinvested in other projects dedicated to low-income community benefits, including pollution reduction, energy assistance, good jobs, and business opportunities, within the same state.
 - A secure system of funding through a centrally-coordinated revolving loan fund could capture the energy saving potential currently left on the table across residential, commercial, industrial, and public sectors (Fulton et al., 2012).
 - Under current conditions, performance-based contracts, often promoted in EE through Energy Savings Corporations (ESCOs) capture much of the utility-bill savings, leaving little to reinvest in the community. Revolving loan funds and green banks can help to finance larger projects, such as industrial energy efficiency, or a bundled group of community solar, commercial, municipal, or low-income EE installation. Achieving economies of scale makes projects less expensive for funders and allows for the implementation of high labor standards (Irwin et al., 2011).
 - The advantage of a revolving loan fund is that an initial investment into the community is returned and reinvested into other community projects. Not only would this distribute energy efficiency savings more widely across institutions and households in low-income neighborhoods, but it would also realize continuous job creation over the payback period on the revolving loan (Goldman et al., 2012; See Figure 1).
- **Facilitate program coordination through independent non-profit third party implementing bodies directed by local or state low-income community and relevant union representatives** and others that can provide oversight of funds and prioritization
- **Provide or encourage provision of complementary initial funding through federal grant, state bond, or other sources** to overcome the widespread barrier of lack of access to upfront capital, and uncertainty regarding the future value of allowances or ERCs.

Thank you for considering these comments and for your ongoing work to implement climate and clean energy programs. Please contact Betony Jones (510-642-0090, betony.jones@berkeley.edu) or Katherine Luke (510-642-1372, katherine.luke@berkeley.edu) if you have any questions or if we can be of assistance.

Sincerely,

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