December 15, 2015

Gina McCarthy
Administrator
U.S. Environmental Protection Agency
EPA Docket Center, Mail Code: 28221T
1200 Pennsylvania Ave., NW
Washington, DC  20460
via www.regulations.gov

Re: Comments of the Warehouse for Energy Efficiency Loans (WHEEL) program to the U.S. Environmental Protection Agency’s (EPA) to provide feedback on the design and implementation of the Clean Energy Incentive Program (CEIP) under the Clean Power Plan (CPP), Docket No. EPA-HQ-OAR-2015-0734.

Dear Administrator McCarthy,

The WHEEL program appreciates the opportunity to provide the following comments for consideration by the EPA in relation to design and implementation of the CEIP under the CPP.

**WHEEL Background**

The Warehouse for Energy Efficiency Loans (WHEEL) is an innovative, multi-state energy efficiency and renewable financing program that provides states with a flexible, affordable, and reliable energy efficiency loan option for single-family homeowners. WHEEL works in partnership with numerous state energy offices, state housing finance agencies, state treasuries, and can also work with utilities.

The program leverages private capital with public funds by an average of at least 4:1 and allows public funds to be used over and over again. The minimum loan size is $2,500 and actual loans averaged approximately $9,280 in the first securitization, smaller than many other programs require. This makes the program more accessible to low-income households and households that are interested in small-scale energy efficiency measures.

In the first (June 2015) WHEEL securitization portfolio (which included only a small subset of historical PA Keystone HELP loans), about 10% of borrowers were at or below 80% of median household income. However, looking at the Pennsylvania data going back to 2005, a more robust sample set to inform what we might expect from the program long-term, about 25% of borrowers were below 80% of median household income and 40% below 100% of median household income, despite having standard loan approval guidelines for all borrowers.
WHEEL can easily accommodate additional rate buy downs from both public sector and private entities to increase accessibility for lower-income homeowners. In addition, credit decisions can generally be made same-day, removing a barrier to homeowners choosing more energy efficient appliances in emergency situations. WHEEL’s market-based approach helps states leverage private capital and serve the bulk of the single-family residential market, including low-income homeowners and communities.

All of these features make WHEEL particularly attractive to states for inclusion in their Clean Energy Incentive Program (CEIP) plans. The following recommendations would ensure that the design and implementation of the CEIP allows for the inclusion of innovative programs such as WHEEL.

**Inclusion of Market-Based Programs**

EPA should ensure the provisions of the CEIP and the applicable EM&V rules do not exclude initiatives that leverage private capital such as the Warehouse for Energy Efficiency Loans (WHEEL) or Property-Assessed Clean Energy (PACE) programs. WHEEL states & utilities should get full credit for all of their energy outcomes (including those attributable to the private capital that the public funds leveraged) and double credit for the outcomes that benefit low-income households.

**Defining Low-Income**

*Q: What definition(s) of ‘low-income community’ should be required for eligible energy-efficiency (EE) projects?*

*Q: What criteria should be used to define eligible wind and solar projects, as well as eligible EE projects implemented in low-income communities? (e.g., by sector (residential, commercial, etc.) or by geography (where a project takes place and who benefits from it))*

Definitions of “low-income” vary widely between programs, and the definition EPA selects will have a large impact on what approaches states take to reach these families. We urge EPA to consider:

- Adopting a **flexible** definition of low-income that includes both location-based and direct income-based options
- Adopting an **income-based definition** that provides that loans to households at or below 120% of Area median income (AMI) qualify as investments in a “low-income community” for CEIP purposes. A direct income-based option would ensure that low-income households in affluent areas are not excluded from the program because of their location.
- Allowing programs to rely on **self-reported income** provided by borrowers without subjecting them to onerous income-verification processes. These processes slow down and burden the application process for loans, making it less likely that a potential customer will make the most energy efficient purchasing decision that the subsidized financing encourages. If the validation regime is too strict, contractors and homeowners are less likely to participate in the program due to the additional time burden of collecting and verifying income documentation.
For administrative simplicity, adopting a geographic definition that provides that loans made to households in census tracts with area median income at or below a similar threshold qualify as investments in a “low-income community” for CEIP purposes regardless of the actual borrower or household income. Improving building stock in a low-income community delivers community benefits such as installation jobs, stabilized occupancy, and increased disposable income for community residents.

- Allowing use of **statewide median income or, if higher, local/county median income**, when determining whether a particular loan is made to a low-income community
- Allowing participants to assume a **household of four** (for simplicity, since actual household population figures generally are not known) in applying AMI definitions

**Energy Evaluation, Measurement and Verification**

*Q: What should be the evaluation, measurement and verification (EM&V) requirements for eligible projects; the requirements for M&V reports of quantified megawatt-hour (MWh); and the requirements for verification reports from an independent verifier?*

Existing WHEEL sponsors have used a variety of EM&V methods and approaches, from opt-out utility bill verification in New York to an independent consultant estimating deemed savings in PA (See Appendices for sample findings).

Considering the small scale of individual WHEEL loans and the efficient approval process required to attract many contractors and potential customers, we recommend that EPA provide flexible options for evaluation, measurement and verification (EM&V) including the use of **deemed savings estimates** based on the measures financed, rather than requiring utility bill analysis or similar burdensome requirements. In addition, it is essential the states be permitted to marry WHEEL program data with **utility bill data** so that the states and utilities can receive credit for the market-based energy outcomes their policies have facilitated.

**Project Eligibility and Allocation of Allowances/Emission Reduction Credits**

*Q: What commencement date is appropriate for a project to qualify as eligible for the CEIP? How should ‘commence construction’ of an eligible wind or solar project and ‘commence operations’ of an eligible low-income EE project be defined?*  
*Q: What should EPA consider regarding the timing and distribution of allowances under the CEIP?*  
*Q: When should EPA allocate matching allowances or emission reduction credits (ERCs) to a state, and when should awards from these allocations be made to eligible project providers?*

WHEEL loans, like any other investment product, require certainty on the part of the borrower and issuer in order to be successful. Thus we encourage EPA to take every opportunity to ensure certainty and consistency in CEIP across participating projects.
In terms of project commencement, the most consistent definition of both “commence construction” and “commence operations” is initial disbursement of funds for the project. Using this standard will allow the issuer to know from the onset whether or not the project is eligible for CEIP credit, and will not be affected by delays on the part of the contractor or builder. It will also provide a consistent tracking mechanism for projects without requiring each contractor/borrower to report the start date of the project.

A second aspect of CEIP that affects borrower/issuer confidence is allocation of ERCs to project providers. One significant difference between solar/wind installation and energy efficiency projects is that renewable installation is relatively easy to predict – the anticipated greenhouse gas emissions avoided from a 100mw wind farm can be calculated with relative confidence before the installation occurs. Conversely, energy efficiency retrofits are less easy to predict due to non-uniform housing stock, variety in measures implemented, and other factors. If ERCs are allocated/made eligible based on post-project verified savings, a state participating in CEIP may be discouraged from launching an energy efficiency project due to the uncertainty in realized savings and therefore ERCs. Instead, a renewable installation may be more appealing due to the predictability of calculating ERCs in advance.

However, if CEIP participants are permitted to use projected savings based on historical data in similar projects to qualify for ERCs, the certainty imbalance is eliminated. States will know in advance how many ERCs an energy efficiency program is eligible for in the same way they are able to predict ERCs in renewable installations. Therefore, if EPA is sincere in its efforts to support low-income energy efficiency projects, it should consider allocating/making eligible ERCs at the time of initial disbursement of funds based on estimated energy savings.

Finally, we recommend that the party providing sponsor capital (such as the state energy office or utility) be authorized to determine the allocation of ERCs or allowances generated by the WHEEL program.

We thank you for the opportunity to comment on the design and implantation of the CEIP. Please contact us if you have any follow-up questions or wish to discuss our comments in detail.

Sincerely,

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APPENDICES: Program Information
APPENDIX 1

Below are schedules that each program sponsor agreement uses as a starting point. Each sponsor selects the measures it wishes to support on Schedule B and then provides further detail regarding its requirements on a separate schedule (Schedule D).

**SCHEDULE B**

**ELIGIBLE IMPROVEMENT CRITERIA**

A minimum of seventy five percent of the amount advanced under a Contract must be used for Eligible Improvements. WHEEL Program baseline Eligible Improvements along with Sponsor restrictions on WHEEL Program baseline Eligible Improvements are listed below. Additional requirements may apply to Sponsor Eligible Improvements (ie: specific R-values, SEER ratings, etc.), which are noted in **Schedule D Sponsor Criteria**.

<table>
<thead>
<tr>
<th>WHEEL Standard</th>
<th>Sponsor Selection</th>
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<tbody>
<tr>
<td><strong>Appliances and Fixtures</strong></td>
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<tr>
<td>Energy Star Appliances: Clothes Washers, Clothes Dryers, Dishwashers, Refrigerators, Freezers, Dehumidifiers, Room A/C, Air Purifiers, etc</td>
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<tr>
<td>Lighting and Lightbulbs</td>
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<td><strong>Heating and Cooling</strong></td>
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<tr>
<td>A/C Blower Motors (aka HVAC Blower Motor or Furnace Fan)</td>
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<tr>
<td>Central Air Conditioners</td>
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<tr>
<td>Air Sealing, Weather-stripping and Caulking</td>
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<td>Boilers</td>
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<tr>
<td>Duct Replacement and/or Sealing</td>
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<tr>
<td>Ductless Heaters and Coolers (aka Ductless Mini-Splits)</td>
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<tr>
<td>Energy Recovery Ventilation (ERV) Systems</td>
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<tr>
<td>Evaporative Coolers</td>
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<tr>
<td>Fans (Ventilating, Ceiling, Whole House, and Attic)</td>
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<tr>
<td>Fireplace, Fireplace Inserts and Fireplace Retrofits</td>
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<td>Furnaces</td>
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<td>Heat Pumps (Air-Source and Geothermal)</td>
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<tr>
<td>Heat Recovery Ventilation (HRV) Systems</td>
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<tr>
<td>Heating and Air Conditioning Package Units</td>
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<tr>
<td>Programmable Thermostats</td>
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<tr>
<td>Radiant/Hydronic Heating (Floor, Wall, Ceiling)</td>
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<tr>
<td>Water Heaters</td>
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<tr>
<td>Stoves (Pellet, Wood and Coal)</td>
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<tr>
<td><strong>Windows and Doors</strong></td>
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<tr>
<td>Windows or Storm Windows</td>
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<tr>
<td>Skylights and Daylighting Devices</td>
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<tr>
<td>Doors</td>
<td></td>
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<tr>
<td>Sunrooms</td>
<td></td>
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<tr>
<td>Window Films and Glazing</td>
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<tr>
<td>Window and Door Screens</td>
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<tr>
<td>Exterior Shading Products</td>
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<tr>
<td><strong>Air Sealing and Insulation</strong></td>
<td></td>
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</tbody>
</table>
| Audit or Blower Door Test
| Insulation (Wall, Floor, Ceiling, Attic, Siding and other)
| Roofing
| Air Sealing
| Duct Sealing and Insulation
| Piping Insulation
| Cool or Reflective Roofs
| Exterior Coatings
| **Solar, Renewable and Advanced Energy**
| Solar PV Systems
| Solar Water Heaters
| Solar Thermal Systems
| Solar Pool Heaters
| Wind Turbines
| Electric Vehicle Charging Stations
| Advanced Energy Storage Systems
| **Water Conservation Measures**
| Faucets and Showerheads, High-Efficiency
| Toilets
| Urinals
| Plumbing
| Artificial Turf
| Drip Irrigation
| Drought Resistant Plants and Gardens
| Greywater Systems
| Permeable Ground Cover
| Rainwater Catchment Systems
| Septic Systems
| Weather-Based Irrigation Control Systems
| Well Water Systems
| Water Meters
| Automatic Pool Covers
| Other Water Conservation Measures
| **Pool Equipment**
| Pool Pumps and Motors
| Pool Heaters
| **Safety and Resiliency Measures**
| Storm Doors and Storm Shutters
| Power Generators
| Carpet, Flooring, Tile
| Qualified Inspections and Retrofit Recommendations
| Earthquake Retrofits
| Mold and Asbestos Remediation
| Other Resiliency and Safety Improvements (including qualified inspections and retrofit recommendations related to such improvements)
| **Other**
| Utility Gas Line Extension
1. Managed Contractor Network. The WHEEL Program Originators, using commercially reasonable efforts, will ensure that contractors meet financial and ethical standards before being allowed to promote and offer loans. All participating contractors will be reviewed initially and on an annual basis thereafter. Standards used to review contractors include, but are not limited to:

- Minimum 3 years in business or demonstrated compensating factors
- History of financial stability and evidence of $50,000 net worth or compensating factors
- Satisfactory company and personal credit histories or compensating factors
- Satisfactory Better Business rating
- Satisfactory Customer and Trade References
- Required licensing
- Minimum insurance coverages
- Review of advertising and sales materials
- Overall reputation for a high level of service and workmanship

Loan program sponsors may elect to manage, or provide for the management, of the contractor network in lieu of a WHEEL Program Originator. The loan program sponsors must utilize the minimum criteria above to validate contractors if they elect to manage the contractor network.

In addition, loan program sponsors may elect to require that contractors meet additional standards or participate in specific training that would be beyond the WHEEL Program criteria.

2. Approved Originator/Servicer. AFC First Financial Corporation is the first approved Originator and Servicer under the WHEEL Program. The Sponsor has the right to request that additional Originators and Servicers be added to the WHEEL
Program for the Sponsor Jurisdiction. Such requests must be approved in writing by RenewFund Finance. All Originators and the Servicers must agree to comply with best practices and service levels to help assure high quality loan origination and servicing in the WHEEL Program.

3. Project Verification and Quality Assurance/Quality Control.

- Originators will provide random verification of installed work on a minimum of 5% of all loan projects.

- A loan program sponsor may elect to administer, or provide for the administration of, a more robust third-party quality assurance/quality control program for post-installation of improvement projects that includes not only verification of installed work but also inspects and validates the quality of the work. If a loan program sponsor elects to provide a quality assurance/quality control program, the WHEEL Program will coordinate with the loan program sponsor to ensure that there will not be duplication of efforts.
  
  - It is recommended that a single-measure improvement loan should be subject to post-installation Quality Assurance/Quality Control programs that provide random inspection of a minimum of 5% of all loan projects.
  
  - It is recommend that loans for more complex improvement measures, including those based upon systematic conservation activities based upon a thorough evaluation or qualifying home audit, should be subject to post-installation Quality Assurance/Quality Control programs that provide random inspection of a minimum of 10% of all loan projects.
# APPENDIX 2

## Sample Deemed Savings Data

<table>
<thead>
<tr>
<th></th>
<th>Single Measure</th>
<th>Whole House</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Loans</td>
<td>4,190</td>
<td>882</td>
</tr>
<tr>
<td>Total Loan Volume</td>
<td>$31,984,850</td>
<td>$9,708,652</td>
</tr>
<tr>
<td>Average Loan</td>
<td>$7,633</td>
<td>$11,007</td>
</tr>
<tr>
<td>Total Square Feet</td>
<td>7,765,567</td>
<td>1,842,575</td>
</tr>
<tr>
<td>Average Square Feet</td>
<td>1,853</td>
<td>2,089</td>
</tr>
<tr>
<td>Total Electric Savings (kWh)</td>
<td>9,878,952</td>
<td>6,457,076</td>
</tr>
<tr>
<td>Average Electric Savings (kWh)</td>
<td>3,128</td>
<td>7,508</td>
</tr>
<tr>
<td>Total Gas Savings (ccf)</td>
<td>257,952</td>
<td>278,242</td>
</tr>
<tr>
<td>Average Gas Savings (ccf)</td>
<td>166</td>
<td>546</td>
</tr>
<tr>
<td>Total Oil Savings (gal)</td>
<td>69,768</td>
<td>35,952</td>
</tr>
<tr>
<td>Average Oil Savings (gal)</td>
<td>103</td>
<td>290</td>
</tr>
<tr>
<td>Total Propane Savings (gal)</td>
<td>24,034</td>
<td>6,761</td>
</tr>
<tr>
<td>Average Propane Savings (gal)</td>
<td>144</td>
<td>183</td>
</tr>
</tbody>
</table>