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Clean Energy Works RFI Comments

Additional submitted attachment is included below.

CLEANENERGYWORKS
Accelerating inclusive investments for equitable solutions

California Energy Commission

Docket Unit, MS-4
Docket No. 23-DECARB-02
715 P Street
Sacramento, CA 95814

07/27/2023

Clean Energy Works Response to CEC RFI on Inclusive Utility Investment Report

1. What barriers (such as statutory, regulatory, or financial barriers) do electrical corporations, community choice aggregators, and other eligible entities face in accessing state and federal financing for inclusive utility investment?

- **Approval of a tariff** for inclusive utility investments in grid-edge upgrades that provide essential services is fundamental because it assures cost recovery on terms approved as reasonable and just by utility oversight authorities.
    - Without an approved tariff, utilities are not able to financially secure capital deployed for inclusive utility investments.
    - As presented at the CPUC Clean Energy Finance Workshop held on January 28-29, 2021, the Bay Area Regional Energy Network (BayREN) has already established a precedent and a track record among first movers in California, in particular by working with water utilities.[1] We defer to BayREN in sharing their insights experience in response to this Request For Information.
    - For investor owned utilities, CPUC has illuminated a path to an approved tariff for leading utilities through a proposed decision for Clean Energy Finance Options: R.20-08-022

[1] Clean Energy Finance Workshop, Proceeding 20-08-022, January 28-29, 2021.
Day 1 recording: https://www.adminmonitor.com/ca/cpuc/workshop/20210128/
Day 1 presentation slides:
https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/energy-efficiency/clean-energy-financing/cpuc-cef-workshop-012821_day-1.pdf
Day 2 recording (Chris Cone, BayREN; presentation begins at 1:14:40 in recording):
https://www.adminmonitor.com/ca/cpuc/workshop/20210129/
Day 2 presentation slides (Chis Cone, BayREN; slides 34-46):
https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/energy-efficiency/clean-energy-financing/cpuc-workshop_012921_day-2.pdf

- **Electric cooperatives in California can access subsidized and unsubsidized federal financing from USDA.** *No known barriers.* Municipal utilities serving rural populations may be able to use the same programs.
    - USDA's New Empowering Rural America (New ERA) program offers up to 25% of project costs in a combination of grants and loans, with a maximum award size of $970 million and a total award pool of $9.7 billion.
    - USDA's Rural Energy Savings Program (RESP) offers 0% interest loans available on a competitive basis.
    - USDA's Energy Efficiency & Conservation Loan Program (EECLP) offers Treasury rate loans available with no competition.

  These pathways have been used by multiple rural, non-profit utilities for inclusive utility investment programs, and there are no known barriers specific to electric cooperatives in California.

- **Municipal utilities can access tax-exempt municipal green bonds [in cooperation with the State Treasurer].** *While this familiar transaction path has procedural barriers embedded, it is still a possible path with no barriers specific to inclusive utility investment.* In other states, some municipalities have wondered if inclusive utility investments in grid-edge upgrades for essential utility services are private activity because the grid edge upgrades are at specific locations. Recognizing that these upgrades provide system benefits like decades of energy efficiency programs expending money for site specific energy upgrades, inclusive utility investments are not private activity because (1) they can provide essential system benefits, including the flexibility to avoid stage 3 emergencies during extreme heat and to preserve public health during public safety power shut-offs; and (2) the utility's costs for grid-edge upgrades are recovered through the terms of its tariff for inclusive utility investments.

- **Investor-owned utilities** in California face financial liabilities for igniting fires, which has motivated investors to express interest in prioritizing investments in fire risk mitigation. This may contribute to subordinating uses of corporate debt capital for other purposes, including inclusive utility investments that improve demand dexterity, improve resource adequacy, and improve affordability.
    - A **federal loan guarantee** for an investor-owned utility could help leverage capital from other sources to pay for inclusive utility investments that develop virtual power plant (VPP) capacity, which includes most types of distributed energy upgrades.[2]
        - A loan guarantee effectively transfers the risk of default on private capital from investors to the federal government.
        - One of the barriers to initially securing a loan guarantee from the U.S. Department of Energy for inclusive utility investment is scale because the minimum size is above $100 million and, currently, California has allocated less than $5 million through the TECH program for building decarbonization to support the introduction of inclusive utility investment.

[2] https://www.energy.gov/lpo/virtual-power-plants

        - PG&E's announced pursuit of a loan guarantee could be a vector for tapping this financial benefit. However, the Department of Energy may only be able to execute a few loan guarantees for virtual power plants before it is no longer considered innovative.
    - Federal funding available through intermediaries awarded a total of $20 billion nationally through the **Greenhouse Gas Reduction Fund (GHGRF)** could flow through to California through its Infrastructure Bank. If authorized by the State of California, these resources could be accessed by an investor-owned utility for purposes compatible with the scope of a GHGRF award from the EPA to reduce greenhouse gas emissions and advance equity and inclusion. This scenario could require (1) an affirmative authorization for utilities in the state to deploy funding flowing through (and leveraged by) the I-Bank to grid-edge upgrades and (2) an affirmative order from the CPUC to investor-owned utilities to make those investments on the terms of an approved tariff for inclusive utility investments, for which cost recovery is secured by the same financial security as other mainline utility investments. While Clean Energy Works is not a source of legal or legislative counsel on these arrangements, this comment is intended to note two parts to the arrangement.

- **Stackability.** Another barrier is different criteria for the use of different financial instruments or sources of financial assistance, which can prevent certain sources of support to be combined with inclusive utility investments. For example, income qualification requirements for weatherization or federal incentive funding require income verification information, yet inclusive utility investments, by design, do not require this information, and requiring it can create a barrier to participation. Similarly, tax incentives can only be claimed after the fact for those who (1) both qualify for the credit and have sufficiently high tax liability to use it; or (2) qualify for a direct payment from the U.S. Treasury. It is important that the entity that owns the upgrades has the assurance at the time of the investment decision that they can monetize any available tax credits in order to reduce or eliminate the upfront payment, which is critical to high levels of customer acceptance.

2. What barriers do electrical corporations, community choice aggregators, and other eligible entities face in implementing and administering inclusive utility investment programs?

- There are a limited number of experienced program operators in California with (1) the high-quality data analytics capability needed to accurately generate estimated savings and assess realization using meter data and (2) the organizational capacity to serve the California market at scale.

- Variability in occupant behavior and changes in behavior over time are challenging to take into account in measurement and verification of savings.

- Customer acceptance rates to an offer of an inclusive utility investment are affected by whether the upgrades are sufficiently cost effective at that site that they can be made without a copayment by the customer.
    - After all incentives available have already been applied, copayments by customers are an option to buy down the upfront cost of the upgrades to a point at which the estimated annual net savings cover the annual cost recovery.
    - Offers made with a higher copayment yield a lower rate of acceptance, which in turn yields higher program implementation costs due to the higher proportion of customers who are interested and seek site assessments but then do not participate.
    - Field conditions such as mild weather (which translates to lower heating/cooling season savings potential from energy efficiency), high project installation costs, and low gas prices all diminish the savings potential from distributed energy upgrades. This results in low levels of inclusive utility investment that can be supported by savings, leaving upgrade offers dependent on high upfront copayments at many locations unless there are other value streams, incentives, or assignable rebates that could buy down that copayment.
    - Gas rates that do not take into account the full costs undermine the economics of building electrification because the savings estimated to result from the upgrade could be too low or even negative, a condition that inclusive utility investments do not overcome.
    - Low diesel costs and low propane cost are barriers to transportation electrification of heavy duty vehicles.
    - Electric rate structures also affect the value proposition of clean energy upgrades in an inclusive utility investment program. For example, recent changes to the terms of net metering for solar PV motivate additional investment in on-site storage, which increases the total cost of the project in order to increase its value.

3. Please provide information on available state and federal inclusive utility investment programs and similar programs, if any.

What are the lessons learned from these programs?

- The United States Environmental Protection Agency (EPA)'s ENERGY STAR Inclusive Utility Investments webpage defines and characterizes key program attributes, or lessons learned from existing programs, that increase program success and protect consumers.[3]

- The Essential Elements and Minimum Program Requirements developed by the Energy Efficiency Institute, Inc. for its Pay As You Save® (PAYS®) system are the primary example of an inclusive utility investment program design and help form the foundation of the best practices identified on EPA's Inclusive Utility Investment webpage.[4]

[3] Inclusive Utility Investment. US EPA. https://www.energystar.gov/products/inclusive_utility_investment
[4] PAYS® Essential Elements and Minimum Program Requirements, Energy Efficiency Institute, Inc. https://www.eeivt.com/pays-essential-elements-minimum-program-requirements-2/

- The number of customers choosing to accept an inclusive utility investment offer for clean energy upgrades is highly correlated with the presence and size of a copayment. When an upgrade offer has no copayment (that is, the measures' installation costs can be fully recovered with a tariffed charge meeting programs requirements, such as the "80 percent rule" in the PAYS systems), customer offer acceptance rates are very high. As copayments rise, offer acceptance rates decline considerably.

- Braiding programs such as government-sponsored weatherization upgrades with inclusive utility investments can deliver more value and reduce copayments, if any.

- Some residences are not suitable for investment or installation of clean energy upgrades because it is in substandard condition. If a residence is at risk of loss of habitability during a project cost recovery period, investment would not be suitable. Similarly, specific structural problems (e.g., a faulty foundation, broken windows, a roof in need of repair) may lead to deferral from program participation because installation of upgrades is not feasible until the problems are addressed. Finally, health and safety problems (e.g., asbestos-contaminated vermiculite insulation) may also cause deferral because the installation of energy efficiency measures would exacerbate or worsen an existing health and safety risk. These problems may be more common with low-income or naturally occurring affordable housing. To reach households living in such residences, housing preservation or pre-weatherization funds are necessary to make the residence suitable for investment and installation of clean energy upgrades. A similar phenomenon is common to Weatherization Assistance Programs across the country.

- Programs based on the PAYS system by design do not require income qualification or verification to participate in or benefit from a program because doing so creates a barrier and disincentive to participate. While income could be used as a criterion for targeted, limited program benefits (e.g., buy-down of copayment (if any), buy-down of cost of capital), all utility customers in inclusive utility investment programs should be permitted to participate without need for income qualification or verification.

- In order to meet program demand, qualified program operators and engaged contractors need to be adequately staffed or able to quickly ramp up to meet high volumes of response which are typical when an inclusive utility investment program is launched. Otherwise, swift uptake by consumers can produce backlogs that adversely affect customer satisfaction and the program brand.

- Volume pricing from equipment and service installers obtained competitively by program operators delibers the benefits of economies of scale, and it is critical for achieving sufficiently low installed costs of upgrades that any remaining upfront cost is not an overwhelming barrier. Contractors have been willing to offer this volume pricing based on the assurance of volume and

referral of sold jobs (i.e. single visit, no sales and marketing overhead) rather than being referred to leads.

- Residences with high energy intensity (energy use per square foot) have a higher likelihood of having no copayment or low copayments due to the potential for higher estimated energy savings.

- Workforce training and experience are essential determinants of work quality. Apprenticeship programs and other workforce development investments are important to avoid faulty installations of distributed energy upgrades.

- For the inclusive utility investment programs based on the PAYS system, the fraction of billed charges for cost recovery that were charged off the utility balance sheet as uncollectible for on-going programs as of 2022 date was reported to be a cumulative <0.2%, lower than the prevailing charge-off rate for utility electricity service sales.[5]

- Utilities with experience have not reported having cases of disconnection for non-payment, as requested in field reports released by Energy Efficiency Institute, Inc., on the status of programs based on the PAYS system. Of note, the program operated by Midwest Energy in Kansas is not able to affordably review all accounts from the earliest years of program operation.

- Programs have the potential to undermine distributive equity if all program costs are assigned to participating customers, but the benefits or value streams generated by the upgrades are not assigned to those customers. Failure to assign these benefits to the customer may drive up costs for upgrades, increasing copayments and undermining upgrade offer acceptance rates, ultimately diminishing value of the program to both the utility and customers.

What sources of funding do these programs use?

- The 2022 PAYS Status Update from the Energy Efficiency Institute, Inc. lists the capital sources for PAYS programs. These include capital sourced from USDA Rural Utility Service programs (Rural Energy Savings Program; Energy Efficiency and Conservation Loan Program), the National Rural Utilities Cooperative Finance Corporation, community development financial institutions (CDFIs), utility conservation or energy efficiency budgets (including their use to establish a revolving fund), utility operational funds, and other private market sources of utility capital.

- The EPA Inclusive Utility Investment webpage includes a section titled "Sources of Program Capital," which lists both existing and potential capital sources, including loans from green banks, municipal bonds, and private capital backed by state or federal loan guarantees.

Please provide relevant case studies, program results, reports, and participation data if possible.

[5] 2022 PAYS® Status Update, Energy Efficiency Institute, Inc.
http://www.eeivt.com/wp-content/uploads/2022/03/2022-PAYS-Status-Update_3_29_22.pdf

- Several peer-reviewed articles on inclusive utility investment and/or the Pay As You Save system were published in the ACEEE 2022 Summer Study for Energy Efficiency in Buildings and the ECEEE 2022 Summer Study for Energy Efficiency in Buildings:

    - *Reported and Evaluated Field Experience from Pay As You Save® Building Efficiency Upgrades*[6]
        - Published in the ACEEE 2022 Summer Study for Energy Efficiency in Buildings Proceedings, this paper reports and synthesizes Pay As You Save program performance data from 23 utilities in 10 states from 2002 to 2021, highlights key program attributes and consumer protections, and characterizes the state of the field and future opportunities for inclusive utility investment.

    - *Inclusive Financial Solutions Are Imperative to Meet 100% Targets*[7]
        - Published in the ACEEE 2022 Summer Study for Energy Efficiency in Buildings Proceedings, this paper explores the mechanics and potential reach of inclusive utility investment through Pay As You Save with strong consumer protections, highlighting policy precedents (via utility commission order, legislation, and cooperative board approval) and promising developments in California, Illinois, and New York.

    - *Inclusive Utility Investment in Action: Utility Value of a Pay As You Save® Energy Efficiency Program*[8]
        - Published in the ACEEE 2022 Summer Study for Energy Efficiency in Buildings Proceedings, this paper analyzes Roanoke Electric Cooperative's (REC) Upgrade to $ave inclusive utility investment program, evaluating weather-normalized measured electricity reduction at upgraded homes, system-wide coincident peak demand reduction, utility net present value, and internal rate of return.

    - *Customer outcomes in Pay As You Save® programs*[9]

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[6] Ferguson, et al. 2022. Reported and Evaluated Field Experience from Pay As You Save® Building Efficiency Upgrades. ACEEE Summer Study on Energy Efficiency in Buildings. https://aceee2022.conferencespot.org/event-data/pdf/catalyst_activity_32471/catalyst_activity_paper_20220810190537557_8b1ee9e2_8265_48c4_b653_a4291fb7627b

[7] Hummel, et al. 2022. Inclusive Financial Solutions Are Imperative to Meet 100% Targets .ACEEE Summer Study on Energy Efficiency in Buildings. https://aceee2022.conferencespot.org/event-data/pdf/catalyst_activity_32480/catalyst_activity_paper_20220810190546575_048d8bd9_399b_4f7d_ae15_f42d83a71117

[8] Bickel, et al. 2022. Inclusive Utility Investment in Action: Utility Value of a Pay As You Save® Energy Efficiency Program. ACEEE Summer Study on Energy Efficiency in Buildings. https://aceee2022.conferencespot.org/event-data/pdf/catalyst_activity_32497/catalyst_activity_paper_20220810190546966_d6b37aa1_5eb9_4c3b_9cc4_f3084e902e93

[9] Deason, et al. 2022. Customer outcomes in Pay-As-You-Save® programs. ACEEE Summer Study on Energy Efficiency in Buildings. https://eta-publications.lbl.gov/sites/default/files/deason_aceee_2022_preprint.pdf (Note: an updated version of this report is forthcoming from Lawrence Berkeley National Laboratory.)

- Published in the ACEEE 2022 Summer Study for Energy Efficiency in Buildings Proceedings, this paper presents new analysis of the energy and financial performance of Midwest Energy's How$mart (Pay As You Save) program, comparing program features and outcomes with four other programs based on the PAYS system; it concludes those programs enable energy upgrades that reasonably balance benefits with tariff costs and have served areas with income, education, and employment levels below the national average.

- *Utility value of a pay as you save inclusive utility investment program for whole home energy efficiency and electrification upgrades*[10]
  - Published in the ECEEE 2022 Summer Study for Energy Efficiency in Buildings Proceedings, this paper analyzes Ouachita Electric Cooperative Corporation's (OECC) HELP PAYS® inclusive utility investment program, evaluating weather-normalized measured electricity reduction at upgraded homes, system-wide coincident peak demand reduction, utility net present value, and internal rate of return.

- *Toward residential upgrade savings guarantees: An AMI-based diagnostic interface*[11]
  - Published in the ECEEE 2022 Summer Study for Energy Efficiency in Buildings Proceedings, this paper introduces a pilot diagnostic tool developed for Ouachita Electric Cooperative Corporation's HELP PAYS program, which uses open standard CalTRACK methods and advanced metering infrastructure (AMI) hourly data to inform a diagnostic system aimed at guaranteeing program performance.

- *Pay as you save system of inclusive utility investment for building efficiency upgrades: Reported and evaluated field experience in the United States*[12]
  - Published in the ECEEE 2022 Summer Study for Energy Efficiency in Buildings Proceedings, this paper reports and synthesizes performance data for programs based on the Pay As You Save system from 23 utilities in 10 U.S. states from 2002 to 2021, highlights key program attributes and consumer protections, and characterizes the state of the field and future opportunities for inclusive utility investment.

[10] Bickel, et al. 2022. Utility value of a pay as you save inclusive utility investment program for whole home energy efficiency and electrification upgrades. ECEEE Summer Study on Energy Efficiency in Buildings. https://drive.google.com/file/d/1oorzlMjMu4FWecYurtE4nCfPbFFqcHY5/view?usp=share_link

[11] Goldman, et al. 2022. Toward residential upgrade savings guarantees: An AMI-based diagnostic interface. ECEEE Summer Study on Energy Efficiency in Buildings. https://drive.google.com/file/d/1I1i3lsmSW6elCJWftJxeZBkiEom6XJDD/view?usp=share_link

[12] Ferguson, et al. 2022. Pay as you save system of inclusive utility investment for building efficiency upgrades: Reported and evaluated field experience in the United States. ECEEE Summer Study on Energy Efficiency in Buildings. https://drive.google.com/file/d/19qLnmbLEdIJPYxRdx_Zixjpj4ITAXEgL/view?usp=share_link

- *100% targets mean reaching everyone: The imperative for inclusive financial solutions*[13]
  - Published in the ECEEE 2022 Summer Study for Energy Efficiency in Buildings Proceedings, this paper explores the mechanics and potential reach of inclusive utility investment through Pay As You Save with strong consumer protections; it highlights policy precedents (via utility commission order, legislation, and cooperative board approval), promising developments in California, Illinois, and New York, and examples and potential abroad.

- EPA published a case study highlighting how Midwest Energy Cooperative in Kansas braids its How$mart® program (which uses the PAYS system) with the Kansas Weatherization Assistance Program to deliver additional benefits to its customer member-owners .[14]

- EPA's Inclusive Utility Investment Resource Library lists additional inclusive utility investment resources, papers, and reports.[15]

4. What technical assistance would be most beneficial to electrical corporations, community choice aggregators, and other eligible entities to access state and federal financing for inclusive utility investment?

- Generally, we defer to electrical corporations, community choice aggregators, and other eligible entities in identifying what technical assistance would be most helpful.

- A state financial facility is a possible avenue for technical assistance to help eligible entities access state and federal financing.

- Regulatory clarity may also be helpful to eligible entities, for example approval or assurance of regulatory asset treatment for capital cost recovery in the case where a utility does not own the clean energy assets.

5. What decarbonization measures are most appropriate for existing inclusive utility investment programs?

- The most appropriate package of decarbonization measures for inclusive utility investment at a customer location is the bundle that can be reliably estimated to generate sufficient positive cash flow to make the upgrade offer attractive to the prospective participant. For a middle-income

[13] Hummel, et al. 2022. 100% targets mean reaching everyone: The imperative for inclusive financial solutions. ECEEE Summer Study on Energy Efficiency in Buildings. https://drive.google.com/file/d/1tydW3PMZygP9HbBz8IZ1xT0RZ6EyclDw/view?usp=share_link

[14] Case Study: Making Efficient Electrification Upgrades More Accessible. Leveraging Inclusive Utility Investments with the Kansas Weatherization Assistance Program. US EPA. https://www.energystar.gov/sites/default/files/asset/document/Making%20EE%20Upgrades%20Accessible%20Case%20study%20-%20Final_8_9.pdf

[15] Inclusive Utility Investment Resource Library. US EPA. https://www.energystar.gov/products/inclusive_utility_investment_resource_library

household this might mean no or low copayments (<$1,000). For a higher-income household this might mean several thousand dollars less than they would pay on the open market given the turnkey installation and installation quality control inherent in a upgrade implemented through a program based on the PAYS system.

- The cash flow from the decarbonization measures could be generated by utility bill savings resulting from upgrades that increase efficiency or weatherization or it could come from other utility or societal value streams that are quantified and applied to the project's upfront costs or cost recovery (e.g., customer enrollment in a demand response program with compensation structured to reliably produce a quantifiable revenue stream or cash flow over the full cost-recovery period).

- Existing inclusive utility investment programs have offered the following measures:
    - Air sealing
    - Duct sealing
    - Insulation
    - Efficient lighting
    - Smart thermostats
    - Electric water heaters
    - HVAC equipment, including heat pumps
    - Water efficiency upgrades
    - Customer-sited solar PV

Are measures required to be cost effective?

- All rebates, incentives, and assignable tax credits for any eligible upgrade should be applied before calculating estimated annual net savings.

- Combinations of upgrades that are estimated to generate annual net savings greater than the annual cost recovery charge should be qualified for a site to be paid by inclusive utility investment, and not combinations of upgrades that would be estimated to produce negative cash flow.

- When a combination of measures is not cost-effective within program design constraints (e.g., estimated net annual cost savings after recovery charges), a customer may choose to make an upfront copayment to reduce the remaining project cost to align with a net estimated savings requirement. Additionally, philanthropic or public funding could be used to reduce or buy-down copayments for some households to help achieve equity goals.

Should programs that access state or federal financing be required to ensure participants realize utility bill savings?

- High-quality energy auditing and utility bill-calibrated, site-specific energy and cost savings estimates should be required. Performance of installed upgrades should also be required, which should result in realized utility bill savings when pre- and post-upgrade customer behavior is similar or the same. Changed customer behavior (e.g., significantly increasing or decreasing electric load at a site) can present a challenge to bill savings compared to pre-upgrade bills, even when upgrades are performing as expected. The pilot proposed by TECH is well positioned to undertake the analytic questions related to energy and cost saving estimation, as well as realized energy and utility bill cost savings.

What, if any, consumer protections are required to improve access to financing or investment solutions?

- All customers should be advised of the availability of alternative programs that pay for the full cost of upgrades for households that meet qualifying criteria, typically income below a certain threshold.

- Any *customer* should be eligible regardless of income, credit score or renter status. Some *places* or metered locations may be disqualified if they are in disrepair, which underscores the need for housing preservation or pre-weatherization funding support (braiding with existing programs or identifying new funding sources, especially for disadvantaged communities).

- The utility or its agent (e.g., a program operator) should be responsible for ensuring the upgrades continue to function during the cost recovery period. If the upgrades fail to function through no fault of the customer, the cost recovery charges should cease until a repair or remedy is provided.

- The cost recovery charges should end when the utility's costs are recovered. No program should allow perpetual charges that do not end or require affirmative action from the customer to request for a charge to end.

- A novel consumer protection (not known in current inclusive utility investment or Pay As You Save programs) is a customer reserve fund to address the payment of overdue cost recovery charges for customers facing disconnection for non-payment of their utility bill. (See the novel customer reserve fund proposed for the TECH inclusive utility investment pilot.)

- Note: Debt offerings like GoGreen loans already include consumer protections required by the Consumer Financial Protection Bureau. Participating lenders report data that relates to enforcement of fair lending laws.

6. What statutory changes are necessary to improve access to federal funding for financing or investment solutions?

- This question may be best fielded by the the Department of the Treasury or the California Governor's Office of Business and Economic Development (GO-Biz).

- A potential challenge with accessing federal funding to finance inclusive utility investments is the availability of the direct pay option for tax credits for clean energy upgrades such as solar energy and battery storage. For instance, if the state provides the capital to finance inclusive utility investments, it will be necessary to have clarity with respect to ownership of the assets (including possible state ownership) and confirmation of eligibility to claim relevant tax credits.

7. Input on other topics welcomed

- In addition to measures focused on energy efficiency, renewable energy generation, and beneficial electrification of space and water heating equipment, inclusive utility investments can support transportation electrification upgrades, including customer-sited electric vehicle chargers (smart chargers and bidirectional chargers).

- Inclusive utility investments for batteries of electric transit buses were approved by the Michigan Public Service Commission in November 2022.[16] The tariff approved[17] for the utility DTE was based on the PAYS for Clean Transport instrument developed through the Global Innovation Lab for Climate Finance.[18]

- The utility filed again early this year an expansion of the program and called the DTE e-Fleet Battery Support Program[19] to be applied to electric school buses, refuse trucks and other commercial fleets. This design could be applied also to the charging infrastructure.

Thank you for the opportunity to contribute these comments. For more information about Clean Energy Works and our work on inclusive utility investments, please contact Matt Flaherty, Director of Building Decarbonization, matt.flaherty@cleanenergyworks.org.

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[16] Michigan Public Service Commission Approves DTE's PAYS® Pilot for Electric Transit Buses. Nov. 18, 2022. Clean Energy Works. https://www.cleanenergyworks.org/2022/11/18/dte_transit_batteries_pilot/
[17] Michigan Public Service Commission decision on DTE's proposal. November 18th 2022 Meeting. https://mi-psc.force.com/sfc/servlet.shepherd/version/download/0688y0000058ilbAAI
[18] Global Innovation Lab for Climate Finance. PAYS for Clean Transport. 2018. https://www.climatefinancelab.org/wp-content/uploads/2018/02/PAYS-for-Clean-Transport_Instrument-Analysis.pdf
[19] DTE's e-fleet Battery Support Program. Proposal for expansion filed January 2023. https://mi-psc.force.com/sfc/servlet.shepherd/version/download/0688y000006mgYIAAY