

DOCKETED

Docket Number:	22-OII-01
Project Title:	Order Instituting Informational Proceeding on Distributed Energy Resources in California's Energy Future
TN #:	243405
Document Title:	Presentation - Rapid deployment of DERs in California's Energy Future
Description:	6 - Presentation - Holmes Hummel (Clean Energy Works)
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Organization:	Clean Energy Works
Submitter Role:	Public
Submission Date:	6/2/2022 2:31:31 PM
Docketed Date:	6/2/2022



Rapid deployment of DERs in California's Energy Future: The importance of fiscally sustainable and scalable financial solutions to advance equity and inclusion

California Energy Commission Informational Proceeding on
Distributed Energy Resources in California's Energy Future (Docket No. 22-OII-01)

June 1, 2022

2022: U.S. DOE and 5 California state agencies join dozens of public and private entities to accelerate commercialization of bidirectional chargers that support vehicle-grid integration



Rima Kasia Oueid • 1st

Commercialization Executive/Senior Energy Finance & Policy Advisor

3d • Edited •

The bidirectional electric vehicle revolution has officially begun!

It was an honor to lead the development of U.S. Department of Energy (DOE) Vehicle-to-Everything MOU which builds partnerships and brings together cutting-edge resources from DOE, national labs, state and local governments, OEMs, EVSEs, and utilities to accelerate and integrate bidirectional charging into energy infrastructure. Thank you to all the signatories and our partners for the courage to accelerate adoption of EVs in a thoughtful way!

This is truly a coalition of the willing and we look forward to creating more partnerships!

<https://lnkd.in/gejjaTKb>

https://lnkd.in/g8c_RbMN

[#departmentofenergy](#)

[#electricvehicles](#) [#v2gNow](#) [#electricvehiclesarethefuture](#)

[#bidirectionalEVs](#) [#transportation](#) [#gridmodernization](#) [#resilience](#)

[#infrastructure](#) [#partnerships](#) [#v2g](#)



with You and 28 others

Imperative for 100%: Decarbonization Upgrades for Virtually Everyone, Everywhere

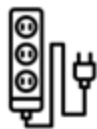
EFFICIENCY



Insulation, air sealing & duct sealing



WiFi thermostats & water heater load control switch with demand response



Advanced power strips



LEDs



Water heater wrap & pipe insulation



Low flow fixtures



AC coil cleaning



ENERGY STAR windows



Solar water heater

ELECTRIFICATION



Heat pumps



Heat pump water heater

OTHER POTENTIAL MEASURES



Induction cooktop



Automated building energy controls



Electric vehicle fleets



Community solar



Rooftop solar



ENERGY STAR Appliances



Home battery storage

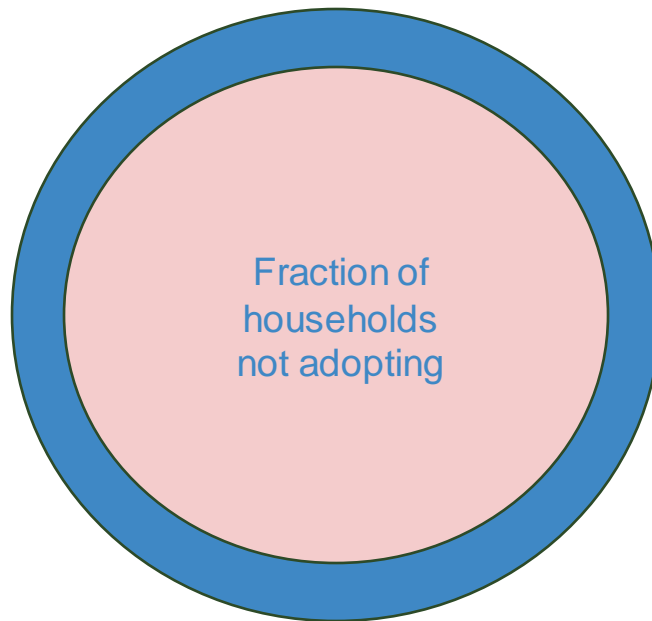


Home electric vehicle charging station

Sources: EETility, EEI, LibertyHomes, and Clean Energy Works

The pace, scale, and distribution of DER deployment is critically constrained by options for overcoming the first cost barriers. Policies for funding and financing are reaching a tiny fraction.

Fraction of households that
can be served by available
funding



Fraction of households that are
able and willing to accept debt
for clean energy upgrades

2016: SB350 charged the CEC to study barriers to efficiency and renewables upgrades in low-income communities and recommend solutions, leading to the landmark *Barriers Study*

“The CPUC should consider developing a tariffed on-bill pilot for investments in energy efficiency that targets low-income customers regardless of credit score or renter status, and that do not pass on a debt obligation to the customer.

Utilities could use the program to make energy upgrade investments and recover the cost through the bill, so long as the recovery charge is less than the estimated savings.

The Energy Commission should encourage and provide technical assistance to POUs and other load-serving entities seeking to implement a tariffed on-bill pilot.”

California Energy Commission
COMMISSION FINAL REPORT

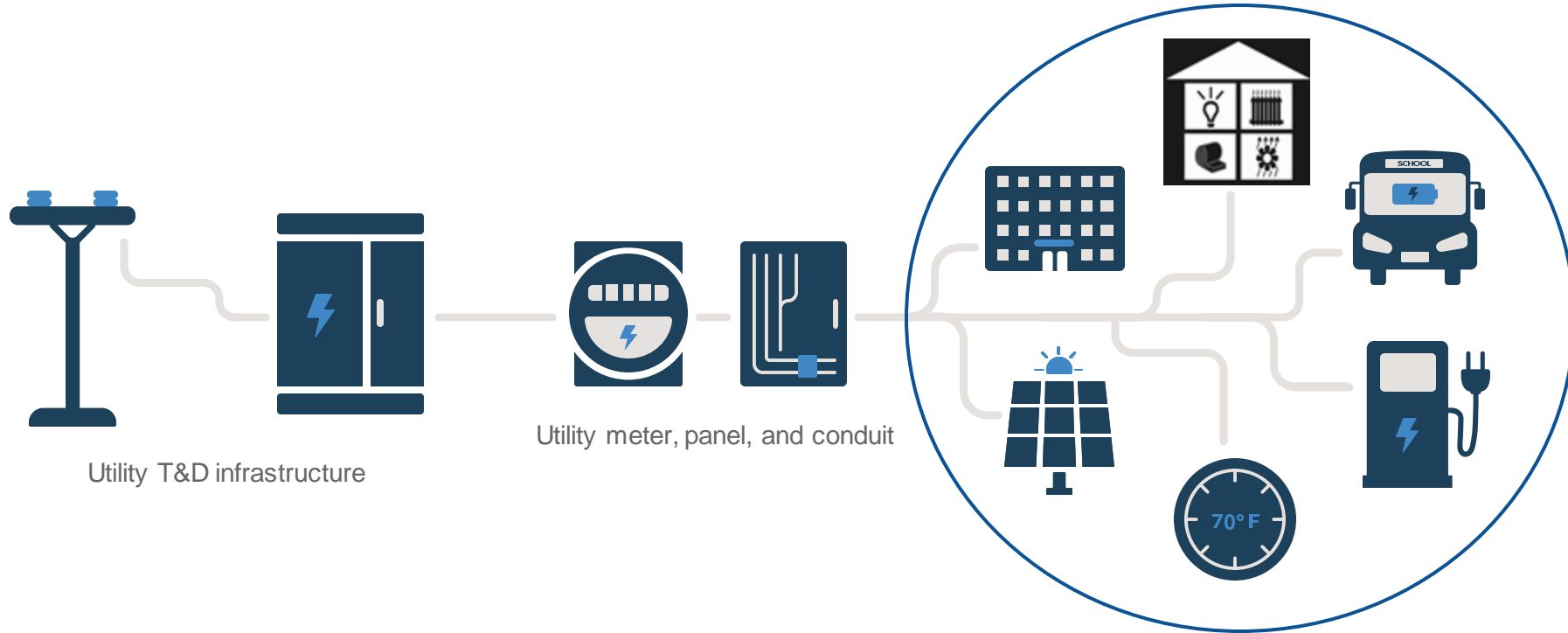
Low-Income Barriers Study, Part A: Overcoming Barriers to Energy Efficiency and Renewables for Low-Income Customers and Small Business Contracting Opportunities in Disadvantaged Communities

California Energy Commission
Edmund G. Brown Jr., Governor

December 2016 | CEC-300-2016-009-CMF

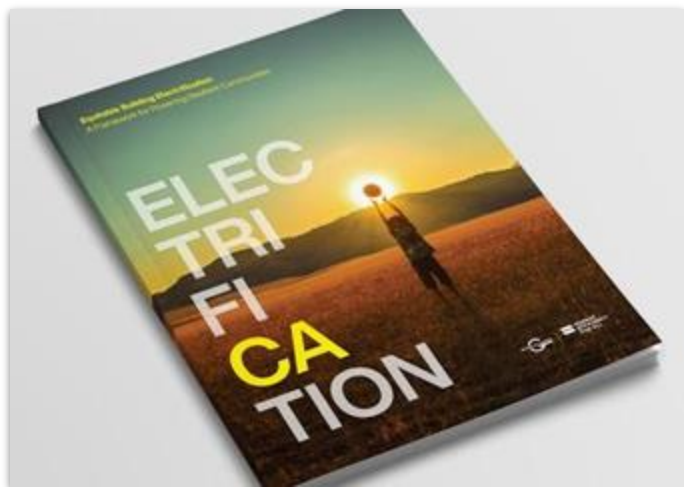


Utilities can be authorized to capitalize DERs with strong consumer protections, expanding participation and pathways to ownership with high acceptance rates



2018: California set its sights on building decarbonization with SB1477

SB1477 funds the TECH pilot, which awards funding to develop an inclusive utility investment program. Meanwhile, champions for equity collaborate to develop a vision for inclusion...



Greenlining Institute and Energy Efficiency for All
lead publication of Equitable Building Electrification framework



2020: Building Decarbonization Coalition engaged 150 stakeholders who developed and applied design criteria that led to recommendation of a tariffed on-bill program

Towards an Accessible Financing Solution

A POLICY ROADMAP WITH PROGRAM IMPLEMENTATION CONSIDERATIONS FOR TARIFFED ON-BILL PROGRAMS IN CALIFORNIA



A 2020 report by the Building Decarbonization Coalition concluded that utility tariffed on-bill programs are the best way to realize clean energy targets at scale AND to be truly inclusive such programs must demonstrate:

1. Ability to finance over long periods (10-15 yrs) even in rental units with multiple changes in tenancy
2. Ability to leverage utility bill savings to defray investment costs, rather than rely on consumer credit or equity
3. Cash-positive outcomes that assure LMI customers will not experience increased energy burdens
4. Ability to scale to serve millions of households

*“A threshold research finding that guided the Project’s subsequent investigations is that **consumer credit finance products are ill suited** to meet the design criteria above. This knowledge already has motivated multiple public agencies to develop policy recommendations and solutions that would facilitate site-specific clean energy investments with utility or societal capital and site-specific cost recovery consistent with regular terms of service offered by utilities.” (p.3)*



Assigned Commissioner
Genevieve Shiroma

A clear vision of success:

“As we look to expand clean energy financing strategies, the Commission will look to **ensure** that new options will be **accessible to populations that face issues of creditworthiness and barriers to accessing affordable capital.**”

“These strategies will be informed by existing efforts to **ensure equitable access to clean energy.** An example is the Low-Income Barriers Study initiated pursuant to Senate Bill 350 (De León, 2015).”

Reconciling a profound contrast in scale of deployment foreseen by CEC and CPUC: CEC estimated rate of deployment compared to proposals received by CPUC

With a goal of 6 million heat pumps deployed by 2030, the CPUC Energy Division staff reminded participants of a recent public workshop that this implies an average deployment rate of ~62,000 per month.

However, the proposals made thus far to the CPUC for facilitating *deployment of capital* for *deployment of DERs* would amount to several thousand over *a few years*.

The engagement between CEC and CPUC to reconcile this massive mismatch in anticipated need for scale compared to the instruments for mobilizing investment may be essential for addressing concerns about distributive equity and climate justice in California.

2021: EPA announced it would work to accelerate adoption of inclusive utility investment (described as tariffed on-bill investment), five years after the CEC's 2016 recommendation



ACCELERATING BUILDING DECARBONIZATION: A WHITE HOUSE ROUNDTABLE WITH GOVERNMENT & INDUSTRY



*"We are working on accelerating emerging models of success at expanding the scale of efficiency deployment in underserved and overburdened communities, such as...**inclusive utility investment approaches with robust consumer protections like the Pay As You Save® (PAYS®) model.**"*

*- EPA Administrator Michael Regan
White House Roundtable on Accelerating Building Decarbonization with Government and Industry*



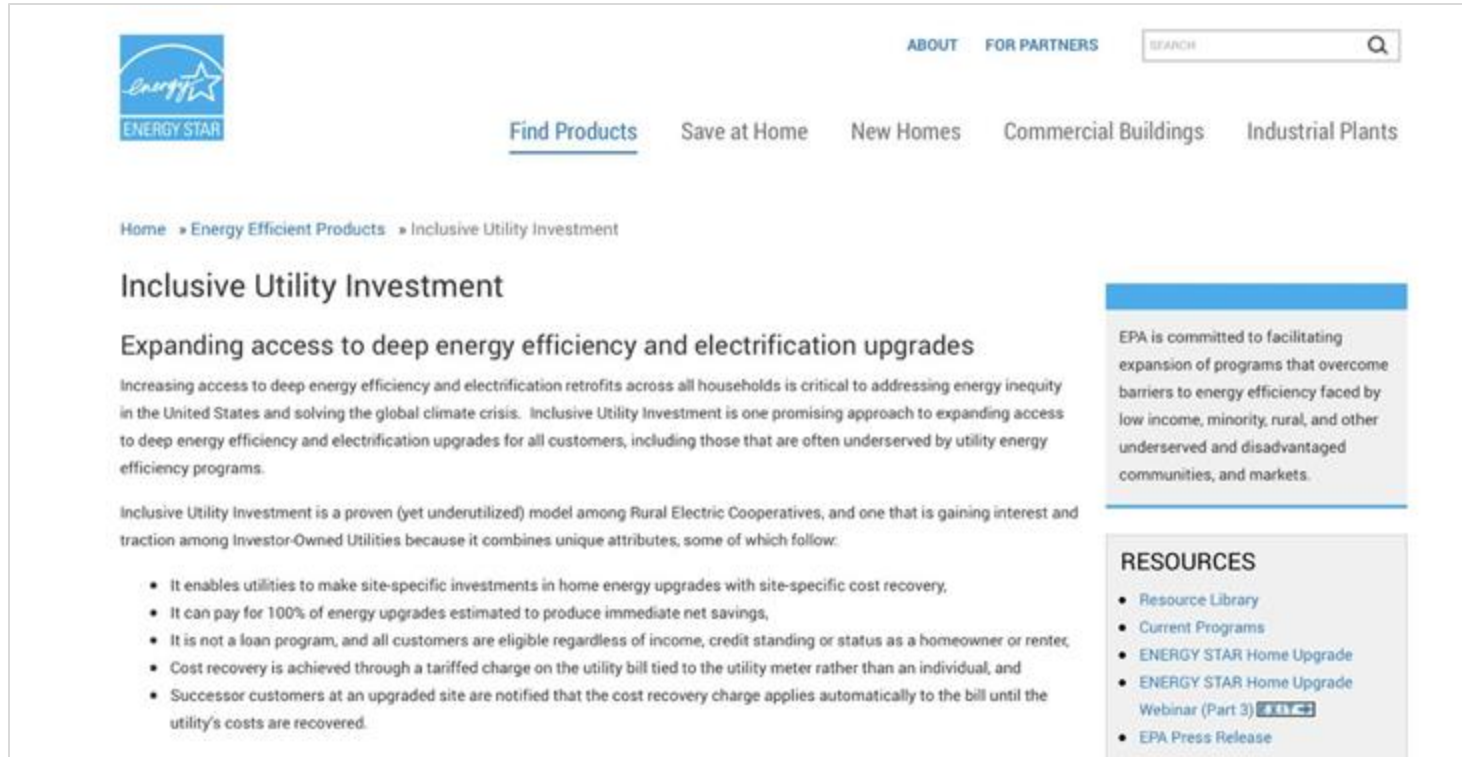
EPA launches ENERGY STAR Home Upgrade and promotes the use of Inclusive Utility Investment. Webinar features PAYS® practitioners including an investor owned utility

2021 ENERGY STAR Products Partner Meeting



Source: [White House](#), [EPA](#)


2022: EPA launches a new resource hub for Inclusive Utility Investment in conjunction with the launch of ENERGY STAR's building decarbonization upgrade program



The screenshot shows the EPA's Inclusive Utility Investment resource hub. At the top, there is a navigation bar with the ENERGY STAR logo on the left, and links for 'ABOUT' and 'FOR PARTNERS' on the right. A search bar is also present. Below the navigation bar, there are five main categories: 'Find Products' (which is underlined), 'Save at Home', 'New Homes', 'Commercial Buildings', and 'Industrial Plants'. The main content area features a breadcrumb trail: 'Home > Energy Efficient Products > Inclusive Utility Investment'. The title 'Inclusive Utility Investment' is prominently displayed. Below the title is a sub-header 'Expanding access to deep energy efficiency and electrification upgrades'. The main text explains that increasing access to deep energy efficiency and electrification retrofits across all households is critical to addressing energy inequity and solving the global climate crisis. It states that Inclusive Utility Investment is a promising approach to expanding access to deep energy efficiency and electrification upgrades for all customers, including those that are often underserved by utility energy efficiency programs. A quote from EPA states: 'EPA is committed to facilitating expansion of programs that overcome barriers to energy efficiency faced by low income, minority, rural, and other underserved and disadvantaged communities, and markets.' Below this, it mentions that Inclusive Utility Investment is a proven (yet underutilized) model among Rural Electric Cooperatives, and one that is gaining interest and traction among Investor-Owned Utilities because it combines unique attributes, some of which follow:

- It enables utilities to make site-specific investments in home energy upgrades with site-specific cost recovery,
- It can pay for 100% of energy upgrades estimated to produce immediate net savings,
- It is not a loan program, and all customers are eligible regardless of income, credit standing or status as a homeowner or renter,
- Cost recovery is achieved through a tariffed charge on the utility bill tied to the utility meter rather than an individual, and
- Successor customers at an upgraded site are notified that the cost recovery charge applies automatically to the bill until the utility's costs are recovered.

On the right side of the page, there is a 'RESOURCES' section with the following links:

- [Resource Library](#)
- [Current Programs](#)
- [ENERGY STAR Home Upgrade](#)
- [ENERGY STAR Home Upgrade Webinar \(Part 3\)](#) 
- [EPA Press Release](#)



Thank You

www.cleanenergyworks.org