

**DOCKETED**

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*Comment Received From: Paul Donahue*

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*Docket Number: 23-DECARB-01*

## **Plug-in Electric Panel Upgrade for Resilient Energy Efficient Electrification**

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### **DISCLOSURE:**

I am filing individually as Cofounder, CTO, and Board member of NeWorld Energy, LLC that was formed in 2019 after me and other co-founders of NeWorld Energy had successfully worked with CEC, CPUC, and CA IOUs on multiple EPIC Grants and projects since 2013. We were also among the first cohort of CalTestBed awardees for a unique UL Listed Plug-in Electrical Panel upgrade technology that positively impact the value, time, cost, energy efficiency, and resilience normally required to upgrade Electrical panels and wiring for Electrification including use of Heat pumps, EV chargers, Solar, and Energy Storage Batteries. NeWorld Energy has recently filed an application for Demonstration of Value from our unique Plug-in Electric Panel technology called the Energy Quarterback "EQB MIM" for resilient energy efficient Electrification, EV2x, and Battery Storage systems on single family and Multi Family residences through CEC EPIC Grant: GFO-23-302 - Power Electronics for Zero-Emission Residential Resilience (PEZERR).

Our Plug-In resilient Electric Panel technology has been ordered for adoption by CPUC ALJ Decision, Paragraph 9 of "D" 21-01-018 following CPUC Rulemaking Proceeding R.19.09.009 and CPUC/IOU agreement E-5194. Our Plug-in Electrical Panel upgrade has since successfully completed thorough tested and approvals by UL plus SDG&E and PG&E for technical compatibility and safety with the Grid and Smart Metering infrastructure. The EQB MIM Plug-In Electric Panel Upgrade for Single Family and Multi-Family residences will equitably enable widespread resilience from Energy Efficient Appliances (Heat Pumps) EV2x charging and Battery storage technologies to rapidly scale and equitably meet several Statewide initiatives. This is accomplished by reducing installation time and costs normally expended along with lengthy permitting and customized field wiring by electricians to upgrade Electrical Panels to equitably meet resilient energy efficient Electrification opportunities and needs.

Opportunity/Problem Being Solved

### **PROBLEM FOR THE STATE**

Policies that bring capital resources to bear for Disadvantaged Community single family and Multi-Family properties in support of State policies must be kept in mind.

Equitable solutions are critical and required by the IRA legislation. An example in current discussion at CEC is the idea of installing Heat Pumps and linking 50122

Electrification funding to heat pumps. Such an idea would block many viable solutions in single family and Multi-Family residences where heat pumps are costly to install and would create a paucity of funds for other equitable Electrification, EV2x, and Battery storage projects to meet other existing State Legislation and Mandates.

The State of California has relied on policies implemented primarily through the IOUs (PG&E, SCE, SDG&E, SCGas) who serve only a portion of the State's population. Approximately 40% of the State's population is outside the IOU territories. Statewide requirements must ALSO address non-IOU populations. Additionally, the amount of capital available via IOUs and the resulting IOU rate increases is limited, especially when compared to the capital needs of traditional Electric Panel upgrades for Electrification of residential appliances, Battery storage, and PEV transportation.

Care and consideration to the realities of Disadvantaged community Multi-Family and Single-Family renters and owners is essential for Equitable and successful deployment of IRA 50121 and 50122 funds.

#### PROBLEM TO SOLVE FOR RENTERS

Currently residential solar is appx 95%+ installed in single family homes while 43% of the California population (and rising) are Renters, most of whom live in multi-family properties that have limited access to the benefits of renewable technologies such as solar power, backup energy storage for emergency use of essential refrigeration (particularly for medicine and powering medical devices) or lighting in case of power outages, and access to readily available electric vehicle charging.

Benefits accruing from all Electrification technologies include lowering renters' costs of living through decreased utility costs, and realistically displacing dirty gasoline powered vehicles with electric vehicles as California has set as the State's goal. Of note is that low-income households who disproportionately reside in multi-family residential properties spend an average of 1/3rd of their after-tax income on transportation. (More than 1/3rd when home use of energy is added.) With rapidly rising energy prices, especially in IOU territories, tenants are seeing their budgets squeezed.

As the State of California stated in its recent EV Infrastructure report, "PEV adoption still faces several challenges, including high upfront vehicle purchase costs, barriers to home charging, and range anxiety due to gaps in public charging infrastructure. These challenges are often felt by low-income households that spend, on average, about a third of take-home income on transportation costs." [CA EV Infrastructure Deployment Report " page 10]

#### PROBLEM TO SOLVE FOR PROPERTY OWNERS:

Concurrent with the above are property owners of multi-unit buildings who do not pay the direct cost of electricity and thus have little incentive to allow or make resilient or Energy Efficient Electrification investments on their property.

## OPPORTUNITY:

Through widespread incentives for Plug-in Electric Panel upgrade technology and Renewable or Energy Efficient Electrification, It is possible to simultaneously lower the cost of living for tenants, increase property values for owners, and fund energy efficiency and EV infrastructure upgrades while creating jobs and increasing the utilization of renewables for home and transport.

### Recommended Actions

We recommend a set of rules within the IRA 50121 and 50122 implementations by California to address the barriers to delivering resilient energy efficient appliances, storage, and electrified transportation benefits to Renters in Disadvantaged communities. These include:

- 1) Allocate a proportion of funds equal to or greater than the multi-family residential population plus some adjustment for past inequity i) At least 50% of any funds should be allocated to Multi-Family projects. ii) Assure that non-IOU territories receive a fair allocation (at least 40% of funds).
- 2) Leave implementation rules flexible. For example: do NOT link 50122 Electrification for Wiring and Electric Panel upgrades to Heat Pumps alone or to any single technology. Allow for Stand Alone wiring and Plug-In Electric panel upgrades that include any Electrification upgrade for Energy Efficiency measures, resilient backup batteries, and EV chargers, i.e., not exclusively tied to heat pumps. Approved 50122 upgrades should include use of UL Listed Plug-in Electric Panel upgrades.
- 3) Allow project grants to be retroactive to the date of the IRA legislation as other IRA programs are moving faster than CA's 50121/50122 implementations. The DOE ITC bonus adder program for example has already been issuing awards but there is significant uncertainty around whether projects awarded under the DOE ITC program will also be able to benefit from the 50121/50122 programs. This will enable a running start when CA 50121/50122 programs are in effect.
- 4) Assure that UA and CUAC adjustments can be made in low-income properties and communities if the utility bill of energy consumption is reduced. In this way, Low Income properties can improve their bankable position WITHOUT negatively impacting Tenants.

*Additional submitted attachment is included below.*

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