

New EV Rate Design Released by PURA

Public Utilities Regulatory Authority (PURA) Directs Utilities to Offer EV Charging Incentives

The final rate design adjudication was released on July 14th. Even though it is the final version, it actually isn't quite final yet. We now know a lot about the program, but the document creates working groups to fill in unfinished gaps on some important details, such as some rates, approved equipment, etc. The PURA doc is uploaded to the website as a blog post [here](#). It doesn't exactly read like Jurassic Park, but we need this kind of thing if we are to wean ourselves off "dino juice."

The program is quite comprehensive, containing incentives for residential and commercial, the latter including workplace charging and fleets, and which also applies to municipalities. The incentives cover hardware, service upgrades, make-ready, demand charge mitigation, and discounted electric rates.

It is important to note that this program takes effect in January 2022. It is not retroactive. If you purchase a charger tomorrow, it will not be eligible for the subsidies.

Below is a summary of the incentives referenced in the chart at the top of the blog post. These are hardware and installation-related discounts:

- A residential incentive of up to \$500 for the cost of an EV charger. This incentive is for a smart charger, which is a WiFi-connected charger. EV charger prices vary, in

part depending upon how many amps are drawn by the charger, but according to MYEV.com, the range for a smart charger is \$600-\$800. If you take advantage of this incentive, you are required to participate in a managed charging program. The point of the connected charger is to enable the utility (which is also known as an Electric Distribution Company or EDC) to see and communicate with the charging unit.

- Also for a residence, there is a subsidy to help with the cost of an electric service upgrade if that is necessary if your current panel does not have the capacity to accommodate the added amperage of an EV charger. The amount of the subsidy is not yet determined.
- There is no mention in the chart of a subsidy specifically for installation, so we assume for now that the \$500 applies to both hardware and installation. Installation costs can vary considerably depending on how far your panel is from your garage. It could be as much as \$1,000.
- There are similar incentives offered for multi-unit dwellings (MUD), workplace chargers, and make-ready. The incentive is 50% of the cost of the charger subject to a cap for the site and a minimum number of charging ports. Note that this is ports, not chargers. There are dual-port charging units. There are higher site caps for MUDs, public level 2, and DCFC charging in underserved communities.
- There is a 100% make-ready incentive, which means the EDC will pay to bring the power to where the chargers will be installed. This is a big deal.
- Finally, there is a subsidy of 50% for the installation of a DCFC charger, which is short for DC current fast charger, also known as a level 3 charger. These are commercial, high voltage units that can quickly charge an EV capable of accepting a fast charge, which applies to most battery electric vehicles.

- There will be a list of specific approved charging equipment. This is necessary for the utilities to be sure they are able to get the information they need from the charger. This list will be finalized later in the year.

Residential Incentives for Electricity Usage

As noted in the first bullet about residential charging, a household can receive an incentive for participating in a managed charging program. There are 2 levels, called basic and advanced. As mentioned earlier, receiving the incentives for the hardware require participation, along with giving the EDC permission to capture data from the charger.

- Basic incentive. In this program, a consumer will be notified of an upcoming demand response event (i.e. when the EDC is expecting there to be a high demand for electricity and they need to take measures to avoid brownouts or blackouts). The consumer has the option to decline participation. However, the default setting is opt-in. Incentives are awarded for participation. The particulars are still being developed, but there is a cap of \$200 per year, which will be sent as a direct payment to the consumer.
- Advanced (direct load control). The consumer will set charging sessions (via app, web portal, email or text) and the EDC has the right to throttle the rate of charge. The particulars of the incentive are still under development. Your participation level will influence the size of your incentive. We hope this is not too burdensome a level of admin for the consumer.
- The Authority has directed the EDCs to submit recommendations for EV rates for MUDs, which could involve sub-metering.

Note: A common way of protecting the grid, which is used in other places but is not part of this program, is time of use (TOU) charging. We are disappointed that this isn't part of the program because it is a very simple, easy to understand, no maintenance approach. If you charge during off-peak hours, you get a lower rate. Easy. The adjudication specifically states that it doesn't foreclose moving that way at some future point. There are regular evaluation points built into this 9-year program. And there is nothing to say that TOU can't be combined with managed charging. Theoretically, if every EV (assuming many more of them than there are today) started a charging session at the first minute of the off-peak period, there could be a demand surge, but managed charging could mitigate that.

There is an existing installed base of EV chargers, and many of these, my guess is almost all of them, are so-called dumb chargers. They are not WiFi enabled so the EDC can't see or interact with them. The program tasks the utilities to develop a workaround to include these chargers as it could jumpstart program participation. There are existing programs at other utilities, Con-Ed comes to mind, that do just that. With Con-Ed, the driver gets a flash-drive type device to install in the car's USB port, or with some manufacturers, there is the ability to connect directly to the telematics of the vehicle with the owner's permission, and incentives will be developed to reward off-peak charging. This actually comes a little closer to time of use. Finally, a recent development is that there is equipment coming on the market that can add connectivity to a dumb charger. PURA is aware of this, as well as developments in better accessing vehicle telematics, and there is the potential for this part of the program to evolve.

The \$200 cap on residential demand response rebates seems low to us. The concern is the lack of differentiation between one and two (or more) EV households. We want to see all vehicles participating.

Demand Charges

Demand charges affect commercial establishments. If the demand for electricity spikes for a period of time above normative levels, electric rates increase substantially. Demand charges have been a barrier to the installation of level 3 charging stations. The adjudication directs the EDCs to maintain a temporary rate-rider to mitigate demand charges while taking the time to develop a more permanent and sustainable solution. Demand charges were originally developed so that those putting the most strain on the grid contribute disproportionately to necessary upgrades. These rules were developed long before the modern EV and definitely need to be re-thought.

Outreach

On balance, this is a strong program. We look forward to seeing, and if possible, being a part of, how it evolves. We intend to keep our members informed and hope the outreach, in general, is effective so it hits the ground running in January!