

Senate Bill 233

Bidirectional EV Charging

Senator Nancy Skinner (D-Berkeley)

BILL SUMMARY

SB 233 would require electric vehicles (EVs) and EV chargers, known as electric vehicle service equipment (EVSE) sold in California to have bidirectional capability by 2027 in order to enhance California's electrical grid reliability and resilience.

ISSUE

Wildfires and extreme weather events are occurring with increased frequency. These events can lead to both planned and unplanned [power outages](#). In September 2022, during California's most recent extreme heat wave, the state narrowly averted power outages when electricity demand reached a record high of 52 gigawatts (GW). One tool that helped keep the lights on was California's reliance on utility grade batteries that store power and when needed send that power to the grid.

Fortunately, there is a comparable technology that more and more Californians now own that can help increase the resilience and reliability of our electricity grid: that is the energy storage capacity of the batteries in our electric vehicles, passenger cars, trucks, and buses.

California currently has over a million light-duty EVs on the road, [a number projected to grow to 7.5 million by 2030](#). These 7.5 million EVs, combined with medium- and heavy-duty vehicles, will have as much as 60 GW of energy capacity contained in the batteries. EVs with 'bidirectional' capability can "load shift" the energy stored in batteries on a daily basis, capturing abundant renewable energy generated during the day and [discharging that stored energy either to the grid](#) or to homes and buildings during evening peak hours when electricity demand is higher and the sun isn't shining.

During extreme weather events and power outages, batteries in California's EVs can also support critical electricity needs in homes, businesses and public facilities. Deployed in this manner, California's transportation electrification

can support enhanced grid resilience and [reliability](#).

With over a million solar roofs and a million EVs, California is ideally suited to lead the nation in harnessing the untapped battery capacity of EVs to help clean the air and build a more reliable and resilient electricity grid.

SOLUTION

SB 233 will enhance California's grid reliability, maximize taxpayer benefits, and get us to our zero emission goals. Specifically SB 233:

- Directs the CA Energy Commission (CEC), the CA Air Resources Board (CARB), and the CA Public Utilities Commission (CPUC) to define "bidirectional capable" for EVs and EV charging stations (EVSE), and set goals for the bidirectional use of EVs;
- Requires by model year 2027, all EVs sold in CA be bidirectional capable and that all EV chargers installed in California be bidirectional capable, except if exempted by the CEC and CARB.
- Calls for state EV funding to prioritize deployment of bidirectional EVs and EV chargers
- Ensures that disadvantaged communities receive meaningful health, economic and clean energy resilience benefits from state EV funding.

SUPPORT

The Climate Center (Sponsor)
Union of Concerned Scientists
DCBEL
Nuvve
Indivisible California
Los Angeles Business Council
Sunrun
350 Bay Area
Climate Action California
California Environmental Voters

CONTACT

Elmer Lizardi
Office of Senator Nancy Skinner
(916) 651-4009 | Elmer.Lizardi@Sen.Ca.Gov

