PERMIT POWER



STATE POLICY ROADMAP

Ready to Plug-In

A State Policy Roadmap to Save Families Money On Their Utility Bills By Legalizing Plug-In Solar

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How Plug-In Solar and Batteries Can Lower Utility Bills

Families across the United States have seen their electricity bills consistently rise over the past five years.[1] The increase has been so significant that 68% of respondents in a recent poll by Consumer Reports said that their energy bills were straining the household budget.[2] Unfortunately, this upward pressure on bills is projected to continue as American families are charged for the costs of serving new data centers, building new power plants, replacing aging infrastructure, and recovering from disasters.

Plug-in solar (also called balcony solar) is a small solar and battery system that a family can buy at a hardware store and plug into an existing outlet at home. Plug-in solar is much more accessible than traditional home solar. It is inexpensive and can be used by the 40% of American families who rent or live in an apartment building.



68%

of poll respondents say energy bills are straining their household budget



40%

of American families rent or live in an apartment building



1-2 months

of utility bills a small plug-in solar system could pay for each year



14m

families could save with plug-in solar if adoption matched peer countries

Plug-in solar could generate immediate utility bill savings that families can track on their phone and be reminded of every time they look at their solar panel. A small plug-in solar system could save a family enough money to pay for 1-2 months of utility bills.[3]

Plug-in solar has been used by millions of families around the world to save money on their utility bills. Yet today, because of burdensome red tape, plug-in solar is effectively illegal in much of America. If plug-in solar were legalized and adoption were similar to that in peer countries, we project over 14 million American families (including renters) could save over $10 billion over the life of their plug-in solar systems.[4]

Legalizing plug-in solar is a no-cost policy intervention that quickly delivers bill savings families notice, with no new state spending and benefits to all ratepayers. State government is in a unique position to legalize plug-in solar, as neither the federal government nor local governments have jurisdiction. Voters were clear that affordability is their top concern, and the time to act on giving more families access to the bill savings of home solar and batteries is now.

The Problem of Illegal Plug-In Solar

Today, in much of the country, a family that plugs a small solar panel into a wall outlet must first get approval from their utility, just as if they were installing a much larger and more complicated traditional home solar system. The rules were written for those larger systems and do not distinguish between the two, so a single plug-and-play panel goes through the same interconnection application, with its technical diagrams, fees and weeks or even months of waiting, even though plug-in solar sends little to no power to the grid. For a system that can cost a few hundred dollars and that is more similar to a toaster than a power plant, that process can be enough to stop a family from buying one at all.

Some local governments are now adding a second layer of red tape. Ventura County, California, for example, is trying to require families to get a permit before they can use a plug-in solar system. A permit means an application, a fee, and often an inspection: a process designed for construction projects, applied to an appliance that a family buys at a store and plugs into an existing outlet.

Requiring interconnection approvals or local permits also blocks renters from benefiting from the utility-bill savings of plug-in solar, as most do not have the authority to make interconnection requests or apply for building permits.

How to Deliver Utility Bill Savings by Legalizing Plug-In Solar

Families should not need the approval of their utility, local government or landlord to plug in a simple small plug-in solar system and start saving. The model law provides that families can use a plug-in solar system:

01 Without utility approval.

02 Without a local government building permit.

03 With a notification to their landlord, homeowners association, or co-op, which can't set unreasonable rules that prevent families from using plug-in solar systems.

04 Without needing to make changes to the home's electrical wiring, for the smallest systems.

01 Exempt Systems that Export Little Power from Interconnection Applications

THE POLICY

States should require utilities to establish "connect and notify" programs for low-exporting home solar and battery systems, like plug-in solar systems, that do not require families to go through an interconnection application process prior to turning on their systems.

WHY IT MATTERS

In most of the country, families who use plug-in solar or install a rooftop system have to first gain approval from the utility, even though they have minimal impact on the grid. This time-consuming and arduous interconnection process will add cost, and will dissuade homeowners and block renters from benefiting from the utility bill savings of plug-in solar. In Germany, where millions of families use plug-in solar, a small system needs only a simple online registration, with no approval from the grid operator.

02 Prevent Local Governments from Requiring Plug-In Solar Systems to Apply for a Building Permit

THE POLICY

States should treat plug-in solar and battery systems like any other household appliance, and prevent local governments from requiring plug-in solar and battery systems to apply for a building permit.

WHY IT MATTERS

A plug-in solar system that meets national product safety standards is a finished product that plugs into an existing outlet, with no construction for a building department to review. Permit and inspection processes built for much larger projects are out of proportion, add unnecessary costs and will dissuade homeowners and block renters from benefiting from the utility bill savings of plug-in solar.

03 Prevent Landlords, Homeowners Associations & Co-op Boards from Blocking Plug-In Solar & Batteries

THE POLICY

States should prevent landlords, homeowners associations and co-op boards from banning or unreasonably restricting plug-in solar and battery systems, so that a family only needs to notify them before plugging one in.

WHY IT MATTERS

Plug-in solar is designed both for families who own their home and for the 40% of American families who rent or live in an apartment building. A landlord, homeowners association, or co-op board should not be able to block a plug-in solar system that is used safely even where state law otherwise allows it. Without these protections, the families who rent and have the fewest other ways to lower their utility bills are the ones most likely to be shut out from the bill savings of plug-in solar.

04 Allow Small Plug-In Solar & Battery Systems to be Used without Changes to the Home's Electrical Wiring

THE POLICY

States should allow the smallest plug-in solar and battery systems to be plugged into an existing outlet without any changes to the home's electrical wiring.

WHY IT MATTERS

The product safety standards for solar and battery equipment have not been updated to accommodate plug-in solar. They contain out-of-date rules that require a specialized plug and a dedicated circuit, which means an electrician and new wiring for nearly every plug-in solar kit. That makes even the smallest systems far more expensive and will dissuade homeowners and block renters, who cannot rewire a home they do not own, from benefiting from the utility bill savings of plug-in solar.

Case Studies

- 10 states, including Utah, have already passed plug-in solar legalization laws, exempting plug-in solar systems from interconnection requirements.
- Colorado exempts all systems that export little power from interconnection requirements, and prevents homeowners associations and landlords from blocking plug-in solar and batteries.
- New Jersey prevents local governments from requiring plug-in solar systems to apply for a building permit and prevents landlords, homeowners associations, and co-op boards from blocking plug-in solar and batteries.
- Colorado, Maryland, New Jersey, and Virginia allow small plug-in solar and battery systems to be used without changes to the home's electrical wiring.

References

1 Heatmap, Massachusetts Institute of Technology, "Electricity Price Hub", May 5, 2026, https://electricity.heatmap.news/

2 Consumer Reports, New Survey From Consumer Reports finds Majority of Households Strained by Energy Bills, Concerned over Data Centers' Impact on Bills, March 11, 2026.

3 Based on modeled annual savings from NLR's PySAM.

4 Based on modeled annual savings from NLR's PySAM.

PERMIT POWER

Permit Power is an energy affordability nonprofit organization that makes it cheap and easy for Americans to power their lives. We do research, education, and advocacy to break down the bureaucratic barriers that get in the way of American families installing home solar, batteries, and other energy upgrades.