

# Opportunities for Distributed Energy Amidst Trump's War on Renewable Energy

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# Carlyle Group Study: The New Joule Order Based on Energy Security

- ◆ **Security is now paramount.** The energy transformation is on the cusp of reaccelerating. . . . Climate concerns, however, will not be the main driver of The New Joule Order. It **will be driven by the quest for security**, with nations creating a diversified energy mix of joules across multiple sources to insulate themselves (and investment portfolios) from geopolitical, macro, and financial risks.
- ◆ **Security drives higher returns and faster transition.** Non-fossil fuels are generally not traded and hence are local. . . . These types of fuels thus become **more in demand when security is paramount**, which historically drives a more profitable, cleaner, and faster transition.
- ◆ **Trade Tariffs Speed the Replacement of the Green Premium with the Security Premium.** Local energy can command a premium as nations are willing to pay more to secure supply. Thus, **a tariff and a security premium are analogous to a carbon tax and a green premium—and may be more effective at spurring transitions.**
- ◆ **Macro to Micro: What It Means for Distributed Energy.** “The New Joule Order does not address distributed energy. But **its core message – that we’re in a period where local, domestic energy is gaining value – bodes well for onsite energy.** Nothing is more secure than each household or business generating all or part of its own energy supply.” Source: [Elisa Wood, Energy Changemakers, March 15, 2025](#).
- ◆ **Source:** [The Carlyle Group, The New Joule Order \(March 2025\)](#).

# Residential Demand-Side Capacity (RDSC): An Emerging Key Market

- ◆ **DER Market to Double in Size.** In its 2023 US Distributed Energy Resource Outlook, Wood Mackenzie forecasted that **the distributed energy resource (DER) market is expected to nearly double in capacity from 2022 to 2027**, with capital expenditure reaching \$68 billion annually.
- ◆ **RDSC > Peak Demand by 2035:** A June 2024 report for Deloitte Research Center for Energy & Industrials—“Households Transforming the Grid”—concludes that residential DER capacity could surpass peak demand in the US by 2035 if properly realized in a decarbonized scenario. .
- ◆ **Glacial Approval Stokes RDSC Market,** Faced with backlogged interconnection queues on the supply side subject to the notoriously glacial regulatory approval process, electric utilities seeking to maintain grid reliability are looking to the residential demand side, where flexible electric load adoption is growing.
- ◆ **Problems with the Study.** Like all other studies, it uses a top-down focus on utilities as a central actor in distributed energy development. DERs are first and foremost intended to serve consumer needs.
  - ◆ **Excerpt:** “At this critical moment in the grid’s evolution, US electric utilities must change the narrative and shift how they are perceived by their customers. Utilities are the good guys, but if customers don’t understand that, they won’t participate in load management programs.” **Question: Are utilities the “good guys” and why should that affect distributed energy adoption?**
- ◆ **Source:** The Franklin Group, “[Tapping Residential Capacity to Power an Evolving Grid,](#)” March 2025.

## Energy Appliances: Starting Out Small in Germany with Solar Balconies

- ◆ The hardware can be purchased for about \$550 (500 euros.).
- ◆ More than 550,000 systems dot cities and towns nationwide, half of which were installed in 2023.
- ◆ Regulations limit each system to just 800 watts, enough to power a small fridge or charge a laptop.
- ◆ Optimally, these systems can produce 15 percent of a consumer's load.
- ◆ Market Drivers: the Covid pandemic and Russia's invasion of Ukraine.



Source: Grist, "[How Germany outfitted half a million balconies with solar panels](#)," September 26, 2024.

# Utah HB 340: Portable Solar Generation Devices

- ◆ **General Description.** This bill modifies provisions related to residential solar energy generation by creating a new category for small portable solar generation devices.
- ◆ **Relevant Provisions.**
  - ◆ Creates **exemptions from interconnection requirements** for portable solar generation;
  - ◆ Establishes **basic safety requirements** for portable solar generation devices; and
  - ◆ Provides **liability protections** for electrical corporations (a.k.a. utilities).
- ◆ **Definition of Portable Solar Generation Device.** "Portable solar generation device" means a moveable photovoltaic generation device that:
  - ◆ Has a **maximum power output of not more than 1,200 watts (WAY TOO LOW!)**;
  - ◆ Is designed for connection to an electrical system via a **standard 120-volt alternating current outlet**;
  - ◆ Is intended primarily to **offset part of the customer's electricity consumption**;
  - ◆ Meets the most recent **the National Electrical Code standards**; and
  - ◆ Is **certified by Underwriters Laboratories** or an equivalent nationally recognized testing laboratory.
- ◆ **Source:** Utah State Legislature, ["H.B. 340 Solar Power Amendments,"](#) 2025 General Session.

# Energy Appliances: A MEGA Solution for America

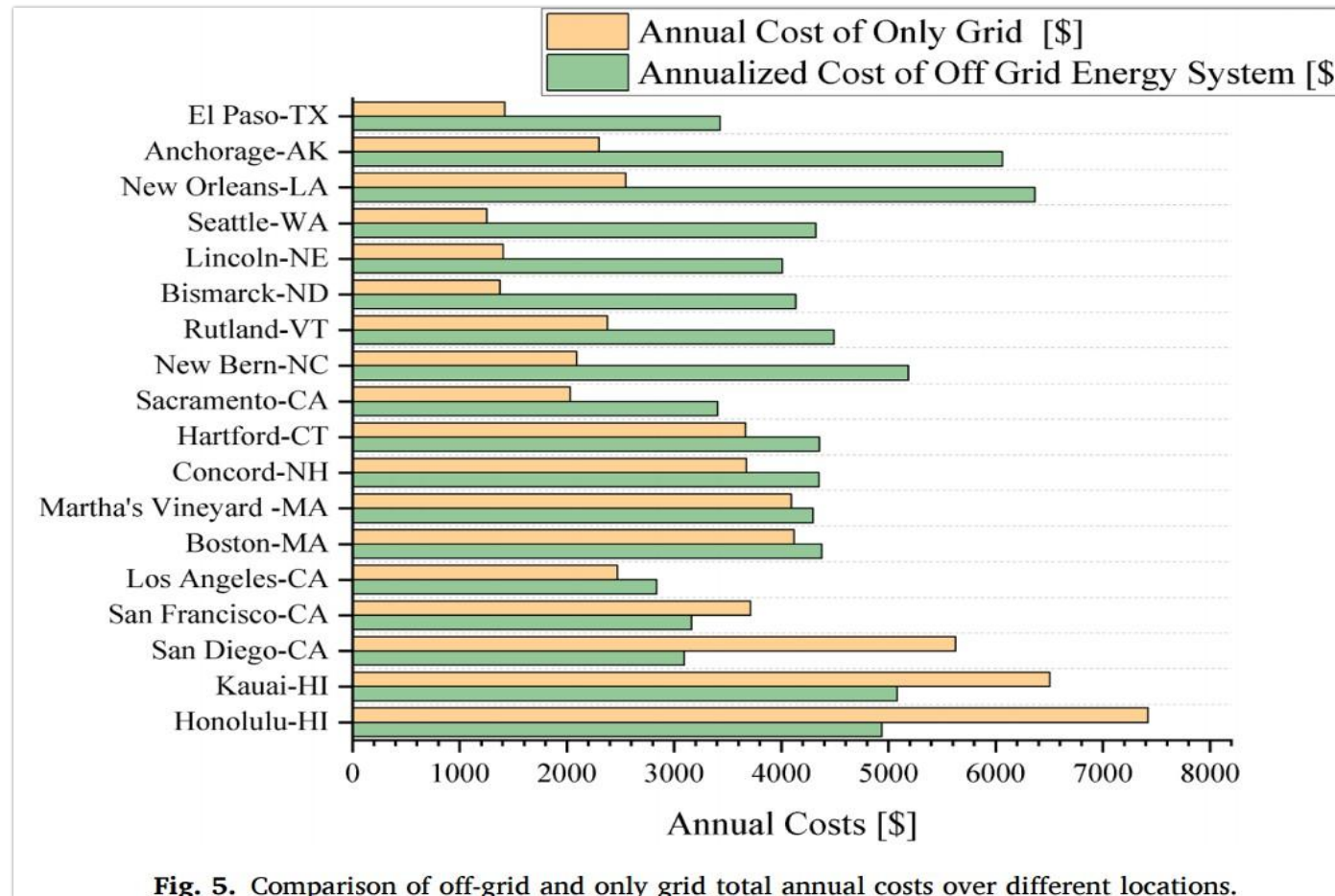


## ◆ Specifications:

- ◆ Dimensions (collapsed): 80in (H) x 176in (L) x 96in (W). Fits into a standard 2-car garage.
- ◆ Cost: The 6.3-kW system currently costs \$24,000, without a storage component.
- ◆ Requirements match L2 Charging: 240V outlet with a standard 40A circuit breaker.
- ◆ Structure designed to withstand high wind and snow loads with an approved anchoring system.
- ◆ UL Certification pending; Approved by various utilities on a pilot-project basis.

◆ Sources: [Gismo Power](#), [Lisa Cohn, Microgrid Knowledge](#), [March 10, 2025](#).

# Grid Defection is Closer Than You Think



**Source:** Seyyed Ali Sadat, Joshua M. Pearce, [The threat of economic grid defection in the U.S. with solar photovoltaic, battery and generator hybrid systems](#), November 2024.

# Takeaways

- ◆ **Energy Security is a universally desired goal within all elements of our society.** This paradigm will reach consumers who, for whatever reason, don't value decarbonization or climate change.
- ◆ **Our Chaotic Society under Trump Stokes Energy Insecurity:** More people than ever are experiencing insecurity in multiple arenas, with energy occupying a central role, opening a market for energy appliances to cover consumers' most important energy needs.
- ◆ **Energy Policy Must Seek Both Upscale and Downscale Solutions:** Energy policy focus today is primarily upscale, seeking to conform DERs to "serve the grid". Downscale solutions are necessary so average consumers can achieve true energy security via direct control over generation and storage to serve critical loads.
- ◆ **Distributed Energy is a Consumer Rights Issue:** UL-certified appliances should be configurable to work within various BTM load scenarios, and keep all energy behind the meter, even if it means running excess energy to ground.
- ◆ **Energy Appliance Regulation Must Occur Outside the Utility Sphere of Influence.** A properly designed energy appliance need not affect the distribution grid. The bottom line is that BTM energy should be the consumer's prerogative, not the utilities.

# Thank You!

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