New Modelling Reveals $14.5 Billion Rooftop Solar Opportunity for Perth

WA's biggest untapped energy source isn't in the ground — it's sitting quietly above our heads.

PERTH, WA, AUSTRALIA, November 21, 2025 /EINPresswire.com/ -- Perth is sitting on a gold mine of sunshine. New modelling reveals that if every suitable roof across the city were fitted with solar panels, Western Australia could avoid more than $14.5 billion in future power-grid upgrades while delivering cleaner, cheaper energy to homes statewide. The findings highlight the scale of Perth rooftop solar potential and the opportunity still left untapped across the city.

> "Perth's rooftop potential is world-class. With smart solar and battery adoption, households can meaningfully cut bills while helping stabilise the state's grid."
>
> *Vista Electrical Controls spokesperson*

Around one in three Perth households now generates its own electricity from rooftop solar. On clear days, those systems collectively produce more power than WA's largest fossil-fuel station, feeding clean energy directly into local suburbs. Yet more than 85 percent of viable roof area remains unused—no panels, no savings and no contribution to a more resilient grid.

Analysts say closing that rooftop gap, particularly when paired with home batteries, would transform the state's energy system by reducing the need for major transmission projects, improving air quality and helping stabilise household bills. Homeowners considering upgrades increasingly look toward solar installation Perth services to take advantage of falling battery prices and generous incentives.

Perth's rooftop transformation didn't come from a single mega-project. It emerged house by house and panel by panel. Today, rooftop solar is the largest generator on the South West Interconnected System during sunny hours. In late 2024, renewables supplied more than 85 percent of momentary demand, with rooftop systems alone reaching about 76 percent. Minimum operational demand dropped to a record 511 MW as solar output surged, highlighting both the strength of distributed energy and the importance of managing it intelligently.

The $14.5 billion opportunity reflects how much capacity remains unused. Only 13–15 percent of suitable rooftops nationwide currently host solar. WA-specific modelling shows that saturating suitable roofs with battery-supported systems could avoid billions in transmission and

distribution infrastructure over time, while keeping more generation local.

Two major shifts in 2025 have accelerated adoption. From 1 July 2025, Perth households can access up to $5,000 in stacked state and federal support for a home battery, while regional customers may receive up to $7,500. Many households also qualify for $10,000 interest-free loans. Electricity tariffs increasingly reward storing and using your own solar as export rates fall, strengthening the business case for Residential Solar Panels Perth homeowners exploring solar-plus-battery setups.

Battery uptake is climbing quickly, with 776 home batteries installed in WA during the first quarter of 2025 alone. Perth's high solar exposure—averaging about 5.4 peak-sun hours per day—continues to make rooftop systems among the most productive in Australia.

The fact that 85 percent of suitable roof space remains unused highlights the extraordinary headroom available before Perth reaches its practical limit. Every kilowatt-hour generated and consumed locally reduces the need for long-distance transmission and lowers pressure on the broader network. Smart controls and batteries help maintain grid stability as more homes participate.

Virtual power plants and community batteries also play a growing role. Project Symphony demonstrated how more than 500 homes and businesses could pool their energy resources to support both local reliability and wholesale market functions. Perth is now rolling out additional neighbourhood-scale batteries, enabling renters and apartment dwellers to share in the benefits.

Solar is increasingly recognised as a value-adding home feature in many Perth suburbs. Property analytics point to modest but meaningful premiums for homes with rooftop systems, a trend supported by both sales data and buyer preferences.

Challenges such as midday low-demand periods, reduced export rates and the difficulty renters face in accessing solar remain part of the transition. WA's emergency solar management rules exist only as a last-resort stability tool and are rarely used. Meanwhile, community batteries, tariff reform and virtual power plant participation are helping broaden access while protecting grid security.

Long-term forecasts point toward more than one million solar-equipped homes in Perth by 2060, with a significant proportion supported by batteries. This shift could avoid billions in future network costs and expand opportunities for installation, engineering and digital-grid service jobs over coming decades.

Perth is already among the most solar-powered cities in the world—on an isolated grid. With 85 percent of usable rooftops still empty, WA's biggest future power station is waiting above our heads.

Media Relations – Vista Electrical Controls
Vista Electrical Controls
+61 8 6118 5611
email us here
Visit us on social media:
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Other
