Who is Australia's biggest renewables investor?

With an election imminent there is re-invigorated debate of energy policy, particularly on renewables.

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Australia is not only blessed with plentiful energy resources but also world class technical expertise; electrical engineers, system planners and market operators. Often, they are not well heard. The conversation is dominated by faux experts; keyboard warriors, talking heads and idealogues of all political persuasions.

A thought experiment. Each time you hear commentary on energy policy or generation technologies, ask yourself; *how does this person inform their view?* Have they ever designed, built, commissioned, repaired, invested, operated, maintained or decommissioned electrical infrastructure? The answer will rarely be yes.

It's not our role to engage in politics, nor participate in culture wars. Our role is investing in sustainable infrastructure delivering attractive risk-adjusted returns for our clients over the long-term. When investing clients' life savings, thorough due diligence is mandatory, as is strenuously prosecuting the investment thesis.

This is multifaceted; complex electrical engineering, project delivery capability, operational expertise, contracting expertise, market expertise, combined with typical investment fundamentals. Only with access to, and the support of, deep specialist expertise can we invest with confidence.

It used to be that State and Federal Governments made energy policy and laws, and the industry got on with the job of delivering the energy system within that framework. If the government didn't like the outcome, it would change the policy or law. Since the hyper-politicisation of energy policy from around 2009 this has changed. Governments of all persuasions have decided to directly intervene if it suits their short-term political agenda.

This is not limited to Mr Dutton's nuclear policy, Mr Turnbull's Snowy 2.0, Mr Andrew's re-creation of the SECV, or the absurdly titled "hydrogen ready" Kurri Kurri gas peaker in NSW - all government seat-of-the-pants initiatives instigated to meet short-term political ends. So how does Federation invest in this environment? Thankfully, the energy industry is not driven by political invective, it's driven by engineering and economics.

Australia has the highest level of rooftop solar penetration in the world with around 25GW of solar on our roofs. This is growing at about 3 GW per annum. This is as it should be. Our solar resources are exceptional, and our low-density housing stock is suited to rooftop solar. It is by far the cheapest energy a household can procure. For example, the payback period for rooftop solar in Australia is between 3 and 5 years[1]. With an asset life of 20 years, that's a no-brainer for consumers.

To contextualise Australia's rooftop solar fleet;

- 3 times the size of AGL's total generation fleet[2]
- 8 times the size of Eraring, Australia's largest power station.
- **Grows** at a rate equivalent to 3 AP-1000 nuclear reactors[3] **per year**. At this rate, by the time the **first** reactor under the coalition's nuclear policy is commissioned in 2035, rooftop solar would have **grown by 2.5x the entire planned nuclear fleet**, which won't be achieved until 2045 at best.

[1] Source: https://engie.com.au/blog/what-is-the-cost-and-payback-time-of-a-home-solar-system-0. Payback periods are affected by solar irradiance, and state.
[2] AGL is Australia's largest generation company with 7.95GW of generation across coal, gas and renewables. Source AGL
[3] Westinghouse AP-1000 reactor identified by the coalition as the preferred technology for its planned nuclear fleet. Net output 1.1 GW
[4] The NEM and SWIS are north south oriented meaning highly correlated solar production.
[5] See image above. Average price excludes all price events >$1000/MWh, noting prices can go up to a cap of $17,500/MWh. Average peak price = ~$650/MWh when including these events.

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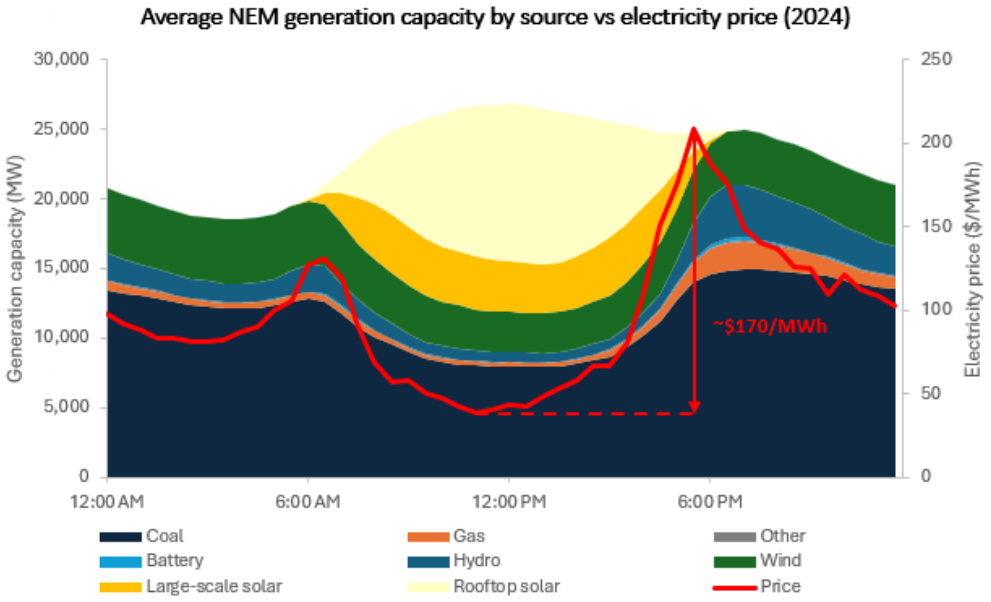

Source; AEMO

Federation's Riverina Battery Energy Storage System

So why not just build rooftop solar and forget about utility scale generation? Fortunate as we are to have our solar resource, there is a challenge in that all solar generation comes on and off, at almost the same time every day[4]. This is why Australia's electricity markets have a deep "duck curve"[5] resulting in low and often negative electricity prices during the middle of the day. The average difference in national electricity market prices between noon and 6pm was about $170 MWh in 2024.

BESS is proving to be an excellent asset class: multiple revenue sources, low construction risks, minimal environmental impact and low operating costs. All of this alone with providing a critical energy security role. Storage is a large-scale investment opportunity with attractive risk-return characteristics.

Federation has high conviction there is an attractive scale investment opportunity in the Australian energy storage market. An opportunity that arises not because of energy policy. Instead, the opportunity arises because of the physics of electrical engineering, and economics.

So, who is Australia's biggest renewables investor? You are. Australian households. To support continued growth in solar generation, lower energy costs, stabilise the grid and permit retirement of our aging coal fleet, Australia will be investing in BESS at scale.

And Federation will continue to be a leader in investing in this asset class.

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