



BUHLE POWER

Sydney Flow Battery Australia





Overview

Could flow batteries reshape Australia's Energy Future?

Enter flow batteries —a homegrown technology that could reshape Australia's energy future. Unlike lithium-ion batteries, which max out at four to six hours of storage, flow batteries can store energy for up to 12 hours, making them a game-changer for balancing solar and wind power. And here's the kicker—this tech isn't imported.

Are flow batteries coming to Australia?

But they are, finally, arriving in earnest. This year, the Australian government launched a national battery strategy to expand domestic manufacturing of batteries. This A\$500 million strategy will focus on the well-known lithium-ion batteries which power phones and cars. But it will also include flow batteries.

Are flow batteries a good choice for Australia's grid-scale batteries?

To date, most of Australia's grid-scale batteries use chemistries such as lithium-ion. But as our grid shifts to renewables, we'll need longer duration storage to eliminate the need for fossil fuel backup generators. That's a task well suited to flow batteries. Related article: Horizon Power's vanadium flow battery passes factory tests.

Can we use flow batteries?

We can also use flow batteries. These are a lesser-known cross between a conventional battery and a fuel cell. Flow batteries can feed energy back to the grid for up to 12 hours – much longer than lithium-ion batteries which only last four to six hours. I was one of the inventors of one of the main types of flow battery in the 1980s.



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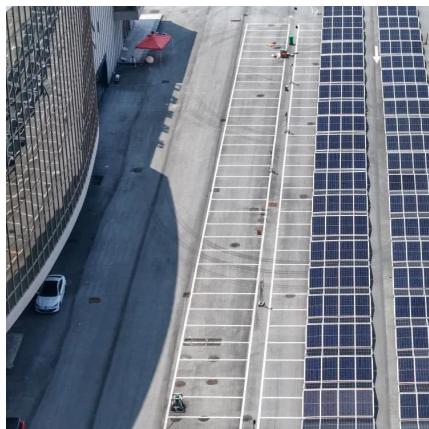


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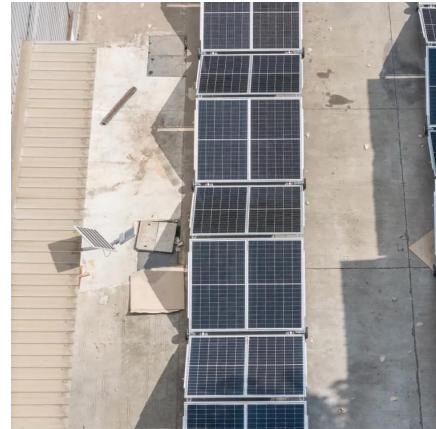
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MEDIA RELEASE: Innovation Symposium to explore ...

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Jan 6, 2025 · Emeritus Professor Maria Skylas-Kazacos with a prototype of the vanadium flow battery now being built at grid-scale storage capacity in Australia and across the globe. Photo:

...



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