

# Distributed Energy Resources Roadmap

Information Sheet

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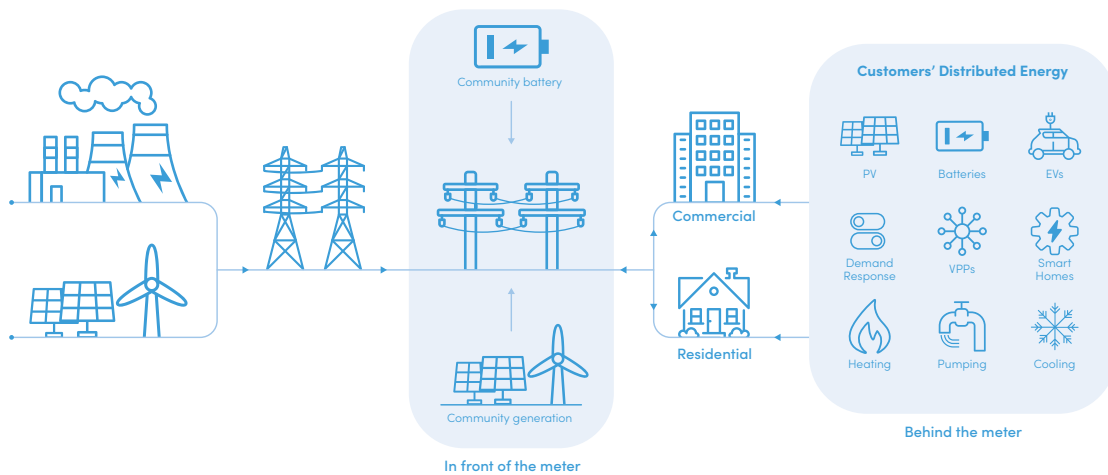


**Energy Transformation  
Taskforce**

# Distributed Energy Resources Roadmap

Rooftop solar systems, batteries, electric vehicles, microgrids and other technologies are transforming Western Australia's electricity system. These small-scale devices, known as Distributed Energy Resources (or DER) present both challenges and opportunities for the way we produce, manage and consume electricity in our State.




The DER Roadmap outlines the actions we must take in order to meet these challenges and harness the potential for cleaner, more affordable energy.



## Western Australians have embraced solar and other DER, which provide exciting opportunities for our energy future

Almost one in three households in the South West Interconnected System (SWIS – WA's principal power system) have a rooftop solar photovoltaic system. This is expected to reach one in two over the next decade. This clean, inexpensive form of generation, coupled with technological improvements, battery storage and electric vehicles, means WA has the potential to be a leader in sustainable energy.

## But the speed and scale of solar uptake presents serious risks to our current power system

<p><b>Risk of blackouts</b></p> 	<p>More rooftop solar means less total electricity demand from the grid in the middle of the day. Low daytime demand affects power system stability, which if left unchecked, could lead to blackouts from as early as 2022. Shifting energy use to the middle of the day will help stabilise the system.</p>
<p><b>Risk of higher bills</b></p> 	<p>Existing tariff structures do not encourage customers to use more energy in the middle of the day and less in the evening peak. Without changes to when we consume electricity, there will need to be expensive investment in large scale infrastructure, which will add to electricity bills.</p>
<p><b>Risk of limits on solar</b></p> 	<p>Our electricity network was not designed to handle the large volumes of intermittent and unmanaged electricity generation currently being provided by rooftop solar. Technical issues on the distribution network must be solved if we are to avoid having to limit the size and number of solar systems customers can install.</p>

**This is a global challenge, but the risks are greater in our grid. We are leading the way in finding solutions through the development of the Roadmap – an Australian first.**

## Your new energy future...

Achieving the Roadmap actions will enable WA to have a smart, flexible and integrated electricity system that can:

- reduce power system costs, and put downwards pressure on electricity bills;
- use more renewable energy, reduce emissions and contribute to a cleaner energy future;
- enjoy the benefits of solar without risk to the stability of the power system; and
- develop energy systems with more customer choice.

Customers will be able to participate more actively in the energy chain. In the majority of cases, this will be delivered via an aggregator. Most customers will have simple “set and forget” arrangements with their aggregator who in turn orchestrates the DER and pays customers for the services provided.

# As a customer, I can...



Our vision is a future where DER is integral to a safe, reliable and efficient electricity system, and where the full capabilities of DER can provide benefits and value to all customers.



**1. Secure and reliable supply**



**2. DER are active and delivering value**



**3. Customers are benefitting and protected**

## The Roadmap aims to deliver this future ...

The Roadmap outlines changes to policies, regulations, technical requirements and customer protections to support the integration of solar and other DER into the SWIS. The Roadmap actions fall under four themes:

### Technology integration



- Upgrade inverter functions and settings
- Implement grid support and system operations measures
- Deploy distribution network battery storage

### Tariffs and investment signals



- Pilot tariffs to shift consumption to the middle of the day and promote efficient investment in and use of DER (such as batteries)
- Reduce barriers to the installation of solar PV for renters

### DER participation



- Build a future where customers with solar and other small-scale devices can be an active participant in the power system
- Pilot a virtual power plant to test DER aggregation
- Help customers to participate in the market through aggregators
- Assist residential and commercial tenants to access the benefits of DER

### Customer protection and engagement



- Ensure customers are provided clear information
- Develop new frameworks so customers are protected under emerging business models
- Help customers make informed choices about their electricity use and DER investment
- Support customers to use more energy when the sun is shining

**The DER Roadmap actions will allow us to use more renewable energy for the benefit of all customers.**

### **Energy Transformation Taskforce**

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### **Energy Transformation Taskforce**

On 20 May 2019, the Hon Bill Johnston MLA, Minister for Energy established the Energy Transformation Taskforce to deliver the Western Australian Government's Energy Transformation Strategy. The Taskforce reports directly to the Minister for Energy and comprises five members, including an Independent Chair and four senior State Government officials:

- Mr Stephen Edwell – Independent Chair
- Mr Michael Court – Deputy Under Treasurer, Department of Treasury
- Ms Kate Ryan – Executive Director, Energy Policy WA
- Mr Brett Sadler – Director, Department of the Premier and Cabinet
- Ms Katharine McKenzie – Principal Policy Adviser to the Hon Bill Johnston MLA, Minister for Energy