INFORMATION

A Distributed Energy Resources Roadmap

Planning for a bright energy future

More households and small businesses than ever are installing solar photovoltaic (PV) systems to take control of their electricity supply.

Rapid advances in technology will also soon see battery storage, electric vehicles, and home appliance automation become everyday parts of our lives.

These technologies create exciting opportunities, but also present real challenges for how we plan and operate our power system.

Background

Distributed energy resources, or 'DER', are smaller-scale devices which can either use, generate, or store electricity and form a part of the power system in the south west of the State which serves homes and businesses (the distribution network). DER can include renewable generation, energy storage, electric vehicles, and controlled appliances, such as air-conditioners and pool pumps.

In Western Australia, more than 25% of households now have a solar PV system. With around 1,000 megawatts of solar PV installed in our main grid in the south west of the State, solar PV is now the biggest source of generation in the system – three times the size of the largest traditional generator, the 340 megawatt Collie Power Station.

DER create an exciting opportunity to reduce electricity costs and lower emissions from the energy sector. However, they can also present a risk to system security if not properly managed. Over the coming five years, continued uncoordinated uptake of rooftop solar PV systems will see daytime demand for traditional thermal generation will fall to levels at which the stability of the power system is likely to be compromised.

In some parts of the State, new solar PV installations are already being restricted, as our network operators find solutions to local grid stability issues. To avoid this, a new policy framework is urgently needed to coordinate the efficient integration of DER into our power system.

Our response: A Distributed Energy Resources Roadmap

In response to these challenges, the Government is developing a DER Roadmap to ensure we can integrate growing levels of DER into the State's electricity systems in a safe and secure way and make sure customers can continue to benefit from solar PV and other new technologies.

The Roadmap will guide changes to policies, regulations, technical requirements and customer protections to support the integration of DER over the short, medium and longer term. The Roadmap will also provide guidance on how DER can be integrated with the operation of the power system and Wholesale Electricity Market.

Next steps

The Public Utilities Office will develop the DER Roadmap, in consultation with stakeholders. The Roadmap will be delivered to Government by the end of 2019.