ELECTRICITY NETWORK TRANSFORMATION ROADMAP

2017-27

MEDIA RELEASE

**28 April 2017**

## Energy plan can deliver millions in customer savings and increased energy security

A national plan for energy could save Australian energy customers $100 billion and improve energy security according to the final report of the *Electricity Network Transformation Roadmap* released today by Energy Networks Australia and CSIRO.

The Roadmap includes new state-by-state analysis by CSIRO, highlighting when energy security and cost risks will emerge in key locations and need to be addressed in a national energy transition plan.

Roadmap analysis found that by 2030, around 40% of both Victoria's and Western Australia's energy could be generated by intermittent renewables as is the case in South Australia today. New South Wales and Queensland are expected to follow suit in the 2030s as coal-fired power generators shut down.

CSIRO Chief Economist Energy, Paul Graham, said this means the eastern states could need to build as many as five intermittent renewable generation projects each year for five years in the 2030s and 2040s.

"The big question is what will replace the existing fleet of coal-fired generation as they retire at different rates across each state jurisdiction," Mr Graham said.

"To achieve deep decarbonisation while keeping the lights on, it's likely the eastern states will depend on the equivalent of 25 new large-scale solar or windfarms being built in just a five year window with new building activity focussing on Victoria in the 2020s, New South Wales and Queensland in the 2030s and Victoria and Queensland in the 2040s."

Energy Networks Australia CEO John Bradley said that without clear signals to the market, building the required amount of new generation will be more expensive or less secure.

"The findings highlight the critical need for State and Federal Governments to agree on a long-term energy transition plan and national policy frameworks," Mr Bradley said.

"The intense level of project development will only be possible with a national transition plan like the Roadmap and stable and enduring carbon policy to support investment."

The Electricity Network Transformation Roadmap is an evidence-based plan detailing what needs to be done during the next decade to provide Australians with secure and affordable energy and to decarbonise electricity by 2050.

Mr Bradley said that while integrating large-scale variable renewable energy will be vital, customers will drive the transformation of Australia's electricity system as world leading adopters of distributed energy resources.

"The Roadmap forecasts up to 10 million households and small customers will have distributed energy resources like solar, storage, smart homes and electric vehicles by 2050," Mr Bradley said.

"Networks could buy grid support from customers instead of building their own infrastructure– in fact, annual payments to customers could be worth $1.1 billion within 10 years.

"The orchestration of these new energy assets in the 'right place at the right time' could save customers a total of $16 billion in network costs by 2050."

Energy Networks Australia

CSIRO

A partnership between Energy Networks Australia and CSIRO

The Roadmap finds it critical to move to fair and efficient network charges for residential and small customers before 2021. Mr Bradley said tariff reform would ensure a medium size family who can't take up solar and storage is $350 per year better off in 2027.

"The Roadmap is an energy transition plan to save the average Australian household $414 per year in their electricity bills by 2050," Mr Bradley said.

"Work will start in the coming months on the Roadmap's highest priority projects but real action is needed by government as well as industry.

"A national approach to carbon and energy policy will support commercial investment to keep the lights on and bills affordable now and in the future."

**ENDS**

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The Electricity Network Transformation Roadmap Final Report is available here.

## Regional Analysis Snapshot

| | Projected renewable generation mix by state (%) | | | Greenhouse gas emissions reduction (%) | | | Installation of rooftop solar by state (GW) | | | Installation of onsite-battery storage by state (GWh) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2017 | 2030 | 2050 | 2017 | 2030 | 2050 | 2017 | 2030 | 2050 | 2017 | 2030 | 2050 |
| **NSW** | 14 | 28 | 100 | 8 | 39 | 100 | 2 | 11 | 22 | <0.5 | 6 | 24 |
| **VIC** | 16 | 40 | 100 | 24 | 54 | 100 | 1 | 6 | 17 | <0.5 | 6 | 22 |
| **QLD** | 8 | 12 | 100 | 0 | 21 | 100 | 2 | 12 | 26 | <0.5 | 10 | 30 |
| **SA** | 44 | 55 | 100 | 11 | 42 | 100 | 1 | 4 | 7 | <0.5 | 4 | 9 |
| **WA** | 19 | 44 | 100 | 14 | 33 | 100 | 1 | 3 | 6 | <0.5 | 2 | 7 |
| **TAS** | 86 | 84 | 100 | 20 | 20 | 100 | 0 | 1 | 2 | <0.5 | 1 | 2 |

**Figure 29:** Projected renewable generation as a share of state generation under *the Roadmap* scenario.

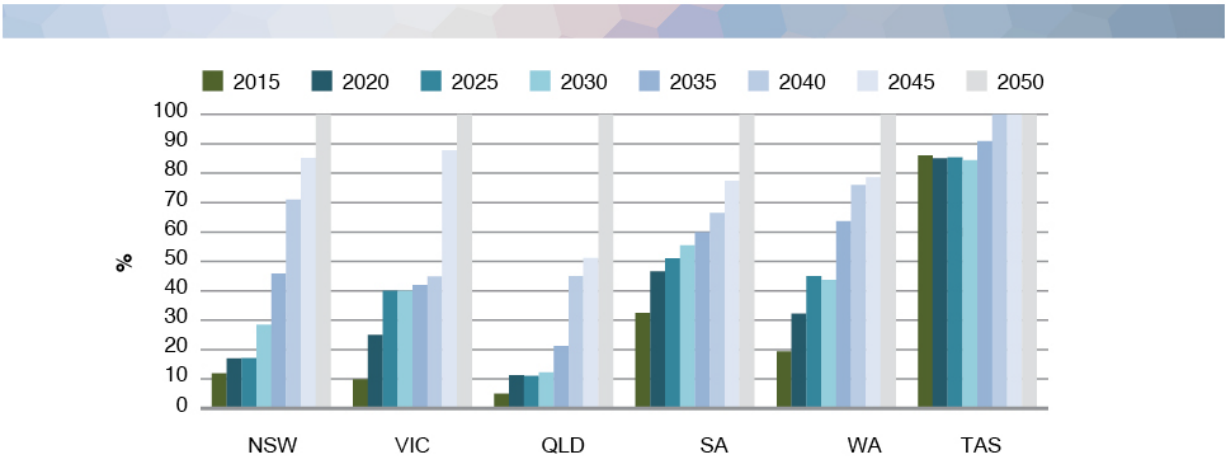


**Figure 34:** Projected installations of rooftop solar by state.

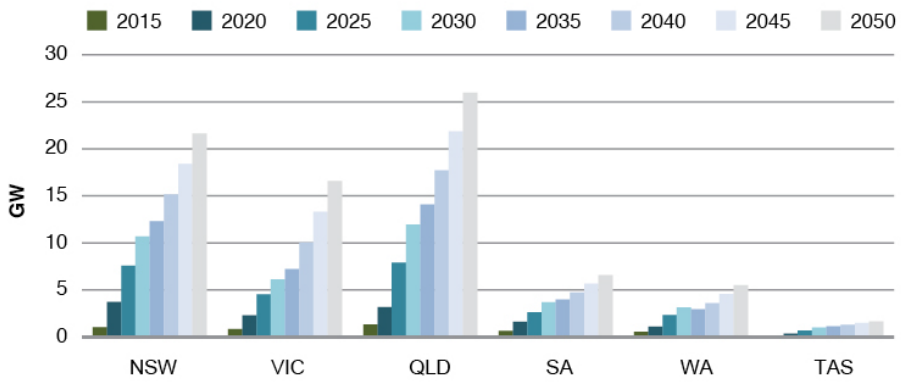
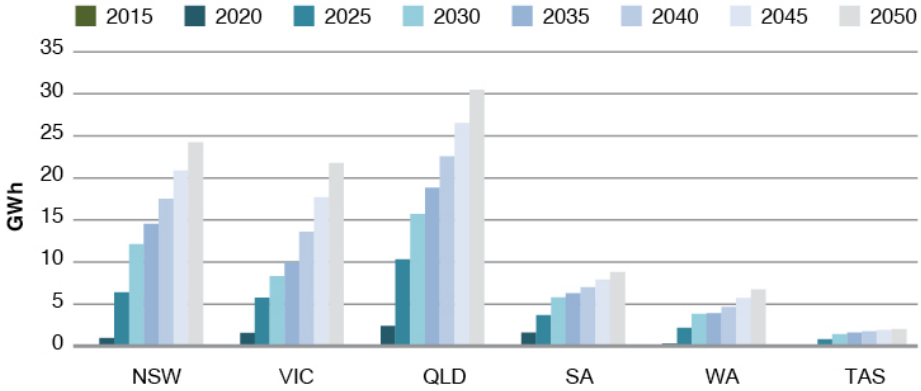



**Figure 35:** Projected installations of on-site battery storage by state




## About the Electricity Network Transformation Roadmap

Australia's national science agency CSIRO and the peak national body representing gas distribution and electricity transmission and distribution businesses in Australia, Energy Networks Australia have partnered to develop an Electricity Network Transformation Roadmap (the Roadmap).

Energy Networks Australia has developed an action plan to achieve the Roadmap's 45 milestones. Networks are currently working on project plans for 11 flagship programs. Work will start on the highest priority projects in the coming months.

The final report is the product of more than two years of collaborative work carried out by Energy Networks Australia and CSIRO. More than 200 different industry representatives contributed at over 14 workshops and webinars held as part of the public consultation process. Information on the Roadmap has been viewed more than 30,000 times during the development process.

For more information go to [www.energynetworks.com.au/roadmap](www.energynetworks.com.au/roadmap)