

28 April 2017

Big and small batteries will support South Australia's energy transformation

New analysis shows that South Australia's rooftop solar panels will increase by more than 300% by 2030, with 4,000 MWh of small-scale battery storage, representing both wider customer adoption and larger system sizes as costs continue to fall.

The final report of the *Electricity Network Transformation Roadmap* released today by Energy Networks Australia and CSIRO shows transformational changes in South Australia's energy system.

Energy Networks Australia CEO, John Bradley, said while South Australia already leads the nation in the installation of new large-scale renewable generation and is set to become a leading installer of large scale battery capacity, small-scale renewables and batteries will also play an important part.

"Customers will drive the transformation of Australia's electricity system as world leading adopters of distributed energy resources," Mr Bradley said.

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

CSIRO Chief Economist Energy, Paul Graham, said a diverse fleet of large and small scale generation sources supported by storage or similar technologies will play a critical role in maintaining system strength and grid stability in South Australia into the future.

"In addition to storage, our analysis also indicates that there will be geographic differences in renewable energy output between and within States," Mr Graham said.

"So interconnection will also help to manage the ups and downs of South Australia's wind and solar output."

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 with the right policy settings and a national transition plan, Australia's electricity system could achieve zero carbon emissions by 2050.

"Networks could buy grid support from customers with annual payments worth \$1.1 billion within 10 years," Mr Bradley said.

"Orchestration of these distributed energy resources could see \$16 billion in network infrastructure investment avoided by 2050."

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.

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“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.”

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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.

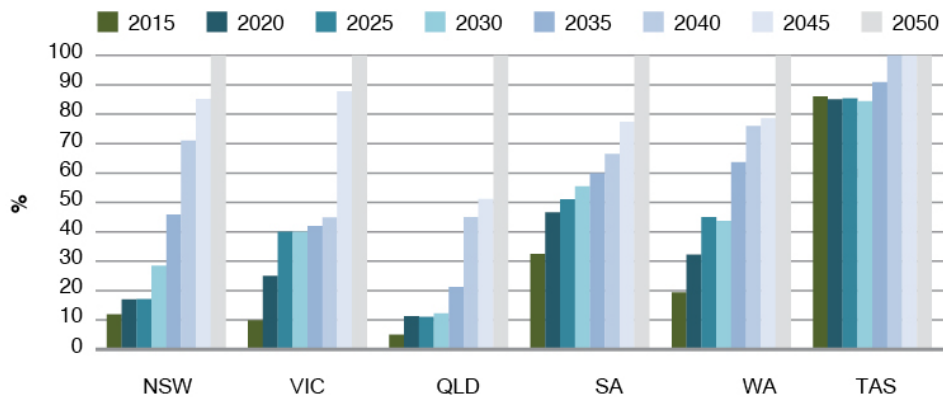


Figure 34: Projected installations of rooftop solar by state.

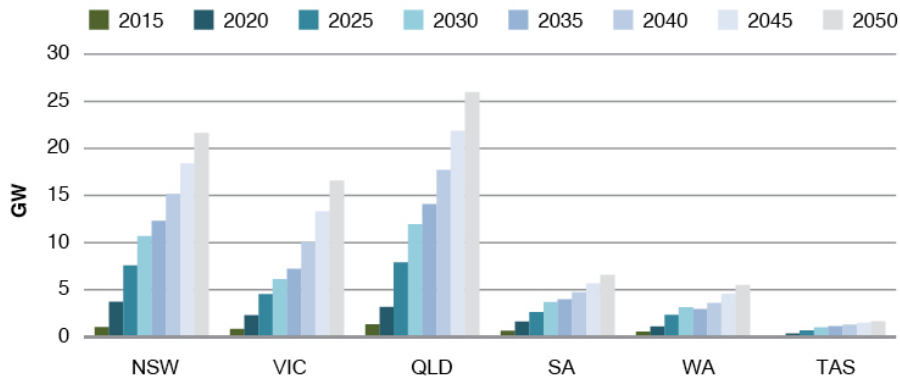
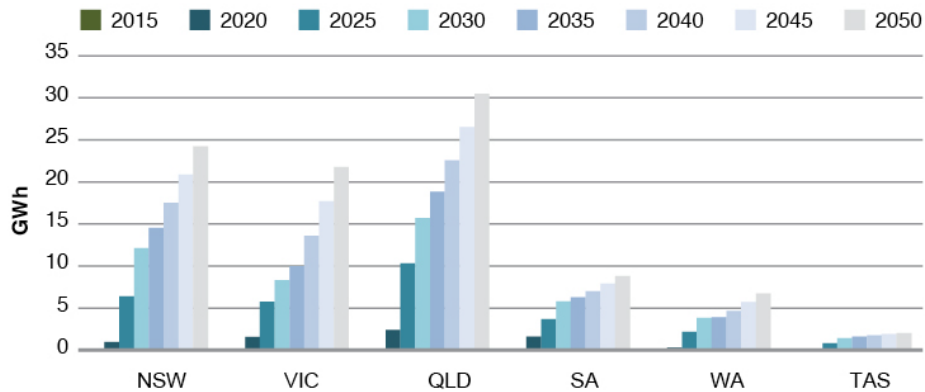


Figure 35: Projected installations of on-site battery storage by state



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