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Batteries and solar to surge in Victoria but national plan needed

Victoria's rooftop solar panels will increase 500% by 2030, with more than 6,000 MWh in 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 highlights transformational changes in the Victorian energy system.

Energy Networks Australia CEO, John Bradley, said solar panels will continue to contribute significantly to Victoria's renewable energy targets with capacity of 6,000 MW by 2030.

"Battery storage would play a key role in supporting the transformation in the Victorian energy system, with the equivalent of 440,000 residential battery storage systems installed by 2030 and more than 1 million by 2050," Mr Bradley said.

"However, high levels of rooftop solar and other distributed generation will create operational challenges for Victoria's networks, with the potential for 'reverse flow' in many parts of the Victorian power system within 15 years."

CSIRO Chief Economist Energy, Paul Graham, said the analysis indicates there will be geographic differences in the renewable energy generated between and within States.

"Interconnection could help to manage the ups and downs of Victoria's renewables generation," Mr Graham said.

"Batteries can also play a critical role in managing grid security and stability by helping to smooth out variable renewable energy inputs."

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

"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."

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.

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“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.”

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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.

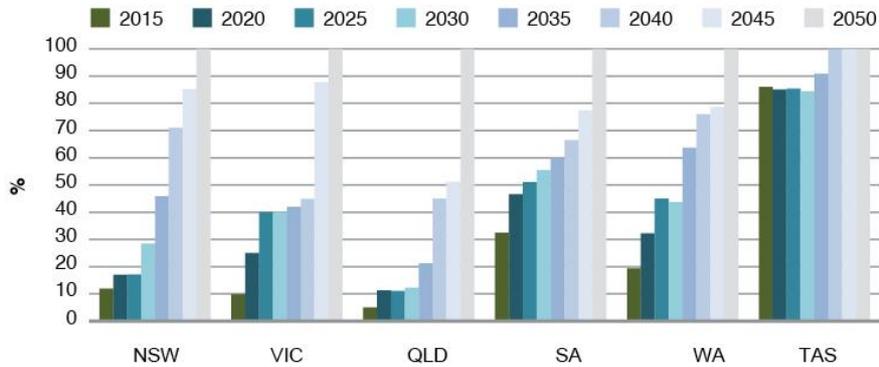


Figure 34: Projected installations of rooftop solar by state.

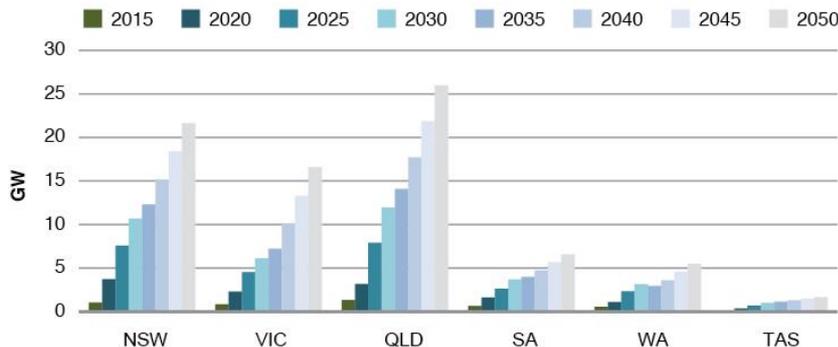
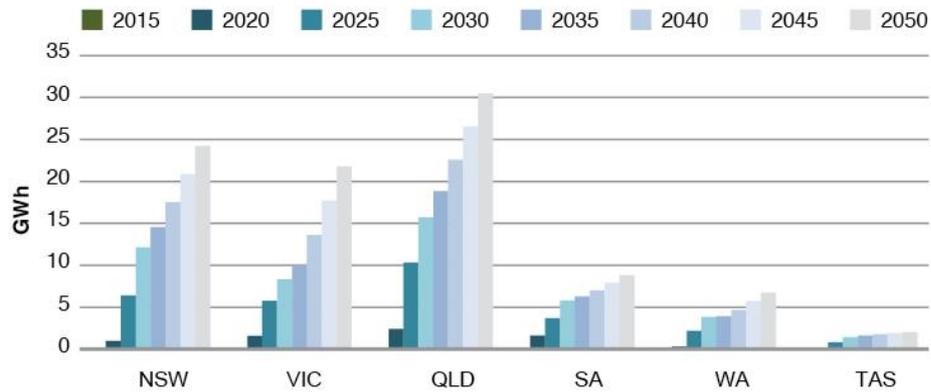


Figure 35: Projected installations of on-site battery storage by state



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