Report

DELWP

An Estimate of Retail Bill Impacts of VRET 2030

August 2019

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Bill Impacts of the VRET 2030 target

This memorandum provides an estimate of the retail bill impacts of the Victorian Renewable Energy Target (VRET), which sets targets for renewable generation at 40% of total generation in 2025 and 50% in 2030.

The retail bill impacts are determined by:

- The impact of additional renewable uptake on wholesale prices. The wholesale price impacts were derived from simulation modelling of the National Electricity Market, with and without the VRET. The simulation model determined wholesale prices on an hourly basis for the period from 2020 to 2030.

- The cost of funding VRET projects (through reverse auctions or other means), which is set at the difference between the costs of the renewable generation minus any projected earnings on the wholesale market, with this cost spread over all customers.

The simulation modelling was based as much as possible on assumption developed by the Australian Energy Market Operator for its *Integrated System Plan 2018*. Note that the Victorian Solar Homes program, is included in the simulation run with VRET but not the simulation without VRET.

The introduction of VRET 2030 led to downward pressure on wholesale prices. On average, wholesale prices are lower by around $5.90/MWh.

However, the additional large-scale renewable generation brought into the market under VRET will require funding from another source to recover all costs including investment costs (capital costs plus an adequate return on investment).

Once taking into account the reduction in wholesale prices[1] with the cost of funding the scheme, retail tariffs in the period from 2020 to 2030 are estimated to be:

- $7.97/MWh lower on average for residential households;

- $8.62/MWh lower on average for medium businesses; and

- $7.61/MWh lower for large commercial and industrial customers.

The estimated bill savings calculated from this tariff reduction are shown in the following tables. The savings were calculated by assuming average electrical consumption levels of:

- 4.026 MWh per annum for a household;

- 360 MWh for a medium business; and

- 20,000 MWh for a large company.

The average bill savings are estimated to be $32 per annum for a household, $3,104 per annum for a medium business and $152,250 per annum for a large company.

[1] The wholesale price for each customer class is derived from hourly wholesale prices across the year weighted by the typical hourly load profile for each customer class

	Household			Medium Business		
	No VRET, $/MWh	VRET, $/MWh	Savings on bill, $	No VRET, $/MWh	VRET, $/MWh	Savings on bill, $
2020	334	329	19	330	325	1,832
2021	314	310	17	303	298	1,670
2022	342	336	24	325	319	2,321
2023	336	330	22	310	305	2,089
2024	333	327	23	309	303	2,237
2025	338	328	42	312	301	4,016
2026	338	333	19	316	311	1,804
2027	337	331	23	317	311	2,205
2028	337	329	30	317	309	2,871
2029	353	334	77	332	311	7,463
2030	357	343	58	329	314	5,635
Average annual savings			**32**			**3,104**

	Large Company		
	No VRET, $/MWh	VRET, $/MWh	Savings on bill, $
2020	202	198	81,012
2021	180	176	76,999
2022	197	192	107,830
2023	186	181	100,431
2024	185	179	109,831
2025	186	177	194,776
2026	191	186	96,059
2027	192	186	120,579
2028	192	184	150,945
2029	203	186	354,235
2030	202	188	282,085
Average annual savings			**152,252**