Senate Standing Committee on Environment and Communications
Legislation Committee
Answers to questions on notice
Environment and Energy portfolio

Question No: 318

Hearing: Supplementary Budget Estimates

Outcome: Agency

Program: Clean Energy Regulator (CER)

Topic: Renewable Energy Generation

Hansard Page: n/a

Question Date: 28 October 2016

Question Type: Written

Senator Back, Chris asked:

1. How much is the total annual amount of renewable energy that is currently being generated throughout Australia including below the baseline and state based schemes?

2. What is the breakdown of these amounts per generation type? For example: total amount of installed capacity; hydro, wind, solar panels, behind the metre solar, waste to energy etc. Please provide detail as to the amount above and below the baseline where applicable.

Answer:

1. The role of the Clean Energy Regulator is to, among other things, administer the *Renewable Energy (Electricity) Act 2000* (the Act) and we only monitor and report on renewable generation incentivised under the Act. The Clean Energy Regulator annually prepares an Administrative Report on the operations of the Act which is tabled in Parliament. The Renewable Energy Target 2015 Administrative Report and Annual Statement (the Report) can be found on the Clean Energy Regulator's website at: www.cleanenergyregulator.gov.au.

   Below baseline generation varies from year to year depending on rainfall and can only be determined in arrears as power stations accredited under the Act must firstly reach their baseline. Graph 6 on page 46 of the Report shows total large scale generation above baseline in 2014 as approximately 15 million MWh and below baseline generation at approximately 13 million MWh. The infographic on page 6 of the Report shows that, in 2015 (based on data to 28 February 2016), 15.2 million MWh were generated above baseline from accredited power stations and 8.9 million MWh were either generated (from small-scale solar photovoltaic systems) or displaced (from solar hot water or heat pumps).

   The Clean Energy Regulator does not report on state based schemes. The projects supported by the ACT Government are accredited under the Act and produce large-scale generation certificates (LGCs). Hence, the generation from these projects are included in the numbers reported by the Clean Energy Regulator. Any further detail should be requested from the ACT Government.

2. Above and below generation based on fuel type is provided in the table below.

Above baseline generation (approx. MWh) – 2015 calendar year*	
Hydro	743,023
Landfill gas	799,176
Solar	275,933
Wind	11,306,853
Wood waste	155,273
Waste coal mine gas	803,571
Bagasse	912,815
Black liquor	213,976
Agriculture waste, food waste, waste from agriculture products	38,160
Sewage gas and biomass based components of sewage, municipal solid waste	187,086
Total	**15.4 million**

Below baseline generation (approx. MWh) – 2015 calendar year*	
Hydro	12,014,798
Landfill gas	189,528
Solar	0
Wind	4,303
Waste coal mine gas	0
Bagasse	455,694
Black liquor	154,445
Agriculture waste, food waste, waste from agriculture products	104
Sewage gas and biomass based components of sewage, municipal solid waste	23,477
Total	**12.8 million**

* Based on data as at 7 November 2016. Note, the above baseline generation of 15.2 million MWh reported in the 2015 Renewable Energy Target Administrative Report was at 28 February 2016; certificates can be created for up to 12 months after generation occurred.

The 8.9 million MWh per year generated or displaced by small-scale systems comprises approximately 5.8 million MWh generated by small-scale solar photovoltaic systems and approximately 3.1 million MWh displaced by efficient hot water systems.