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

Question No: 229

Hearing: Budget Estimates

Outcome: Agency

Programme: Clean Energy Regulator (CER)

Topic: Estimated shortfall by 2020

Hansard Page: -

Question Date: 07 June 2017

Question Type: Written

Senator BACK asked:

Referring to the CER's table in QON 282; I tabled my own version of these estimated figures for your reference and discussion:

1. In the year 2016 on the first line the shortfall figure is 2,284,027, yet the legislated target of 21,431 GWh minus the level of generation of 17,300 GWh is equal to a shortfall of 4,131,000 LGCs. Where does the 2,284,027 figure come from?
2. In the year 2018, the available LGCs after surrender are 3,000,000, yet the legislated target for that year 28,637,000 minus your expected generation 23,700,000 is 4,937,000. The 2017 available LGCs after surrender of 7,400,000 minus 4,937,000 is 2,463,000 not 3,000,000 as you have estimated. Where does the 3,000,000 figure come from?
3. I have calculated my own figures for the following years and inserted them into the table. You will note that the estimated shortfall by 2020 will result in over $1 Billion (shortfall charge $65) being paid into federal revenue. The electrical consumer will pay $1.59 Billion by my estimation. Does the CER have updated estimates for the expected levels of generation and/or any of the other figures in the table?

Answer:

1. "Shortfall" is discussed in section 36 of the *Renewable Energy (Electricity) Act 2000*. If a liable entity has a large‑scale generation shortfall of 10 per cent or more for a year, a large-scale generation shortfall charge is payable in respect of the shortfall.

   In the 2016 compliance year, 2,284,027 Large-scale Generation Certificates (LGCs) was the total shortfall for all liable entities under the Large-scale Renewable Energy Target as per this definition.[1] Details on the total liable entity shortfall for the 2016 compliance year can be found on the Clean Energy Regulator website.

   Senator Back calculated the shortfall for 2016 as 4,131,000 LGCs, which is the difference between the number of validated LGCs and the annual target for 2016 as set by the *Renewable Energy (Electricity) Act 2000*. LGCs remaining from the previous compliance year (2015) can be and are used by liable entities.

2. We model generation and capacity required to meet the 2020 target on pages 49 and 50 of our report: Tracking Towards 2020: Encouraging renewable energy in Australia.

The 3,000,000 figure was a modelled estimate of the most probable surplus after liability is acquitted for the 2018 assessment year after 14 February 2019. Given the factors outlined in Background below that may impact all the variable inputs, our model does not assume the level of precision in the question. Hence the caveat: "The Clean Energy Regulator is unable to predict accurately the level of available certificates following surrender due to a number of factors including variability in hydro generation and variability in construction times associated with firmly announced projects", in the answer to Question on Notice number 282 (Additional Estimates 2017).

3. The model referred to in part 2 above is our most up to date projections.

   This assumes the full 6,000 megawatts (MW) of installed capacity required to meet the 2020 target is announced and built. We believe this assumption is reasonable given that 4,000 MW has been firmly announced and the momentum in announcements has accelerated in 2017. Senator Back's table does not show generation ever exceeding 30,000 gigawatt hours and hence assumes the 2020 target is not met.

   In our Annual Statement to Parliament for the 2016 year we say:

   > "…Supply and demand for certificates is likely to be tightly balanced for the 2018 compliance year. However, the recent series of new project announcements leads us to consider that the market is most likely to remain in surplus overall. There is time for sufficient build to come on for the operating surplus to return to adequate levels for the 2019 and 2020 compliance years."

   The Clean Energy Regulator still believes this statement is reasonable noting the factors below in Background that may result in the actual position being different. Hence, we disagree with the estimates of shortfall charge in the question and believe that any shortfall that might arise is most likely to be the result of liable entities choosing shortfall or failing to enter into prudent commercial arrangements to cover their future obligations. These are decisions of individual entities that cannot be predicted.

The Clean Energy Regulator also notes Senator Back's request to discuss the differences between his generation projections and those of the Clean Energy Regulator. At the time of drafting this response, a meeting date has not yet been confirmed.

Background

In its 2015 Annual Statement to Parliament, the Clean Energy Regulator estimated an additional 6,000 MW of new installed capacity was needed from 1 January 2016 through to 2020 in order to meet the cumulative demand for LGCs to meet the 2020 target. The Clean Energy Regulator reported (page 49) that following the 2,069 MW capacity firmly announced in 2016, approximately 3,000 MW of new capacity needs to be firmly announced in 2017, and a further 1,000 MW new capacity in 2018, to generate the required number of LGCs to meet the target.

The modelling used to project future generation and LGC production is firstly based on projects that have been firmly announced. The Clean Energy Regulator uses the best available estimates for accreditation dates and industry verified capacity factors for wind and solar technology. Being based on estimates, and as such not precise, the new generation for each year may be higher or lower in the future than has been estimated in the modelling.

For additional capacity required, but not yet firmly announced, the Clean Energy Regulator estimates for modelling purposes when that capacity may begin to generate. The agency believes that the 6,000 MW estimated capacity required by 2020 is achievable considering 4,000 MW is now firmly announced.

As stated in Question on Notice number 228 (Budget Estimates 2017), generation from hydro can vary by up to an estimated 3 million LGCs from year-to-year depending on dam levels.

Generation for any year can be reported, and LGCs created, up to 12 months after the generation has occurred. As timing for the reporting of generation and creation of LGCs rests with the accredited power stations, further uncertainty is introduced into any estimations for yearly generation.

Shortfall charge incurred in lieu of surrender of certificates cannot be predicted as it involves future decisions taken by individual entities. This alone amounted to more than 2 million certificates for the 2016 assessment year. Nor can it be predicted whether and when any shortfall charge paid may be redeemed under the 3 year rule.

Liable entities can also under surrender by less than 10 per cent in a year and simply carry that forward without paying a shortfall charge. Again, it is not possible to predict how much liability may be legitimately carried forward as this again relates to decisions of individual entities. For the 2018 assessment year, which currently appears to be the year in which supply of certificates will be very tight, use of this rule could make a difference of around 2.8 million LGCs.

Given all the possible variables above that can affect supply and demand for LGCs, a high degree of accuracy in projections cannot be claimed. Hence, we update our projections regularly as new information becomes available.

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1. Large-scale generation shortfall charge information for an assessment year will change throughout the year. Assessments of the Energy Acquisition Statement lodged by liable entities may be amended to increase or reduce the amount of shortfall charge payable.