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

Question No: 200

Hearing: Budget Estimates

Outcome: Agency

Program: ARENA

Topic: Compare cost of electricity

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Question Date: 23 May 2017

Question Type: Spoken

Senator Ludlam asked:

Senator LUDLAM: I do not know whether this is within your remit or not, but we have been contacted by people in Perenjori. So, on the one hand, we have got this quite promising study. I wonder whether you might be able to take on notice—because I would not expect you to have these figures here—whether you can compare the estimated levelised cost of electricity that they modelled in 2014 with what the estimate for the similar kind of technology would be today. Is that something you would be able to undertake for us and see if there is any difference?
Mr Frischknecht: We would certainly be happy to take it on notice. I do not know what we will be able to tell you, but—
Senator LUDLAM: Whether it is predicted to be cheaper to build a similar plant now than it was back in 2014. I guess that is what I am getting at.
Mr Frischknecht: We can look at the assumptions.
Mr Kay: We can look at the assumptions. I suspect what is going to be more relevant is the numbers that we see when we go out for the request for information that we have talked about earlier.

Answer:

The levelised cost of electricity (LCOE) with the assumptions underpinning the Perenjori study was $350/MWh, based on a 20 MW plant with 7 hours of thermal storage. The costs and headline LCOE number were modelled by a third party on a one off basis. It did not provide a sufficiently granular level of detail to enable ARENA to determine whether these modelled costs would have increased or decreased in the time since the report was provided to ARENA. This noted, the study indicated that increases in the size of the proposed plant (from 20MW to 110MW) would result in a 39% to 42% reduction in the EPC Price per MW. As part of the Perenjori study, work was commissioned to examine the LCOE cost reduction over time based on a larger size plant (110MW) and removing the first-of-kind cost penalties. This analysis found that the LCOE of a 110MW plant in 2012 would have been $252/MWh and that this would have reduced to $177/MWh at the beginning of 2015.

In 2017, ARENA obtained some indicative costing on a 100 MW plant with 10-15 hours of thermal storage in South Australia. That costing indicated a PPA price of approximately $150/MWh.

ARENA has recently reached out to the market via a request for information (RFI) to gather insights into the costs and advantages of solar thermal in order to inform a potential future solar thermal funding round.