



17th February 2016

AEMC Ref: ERC0191

Ms Anne Pearson
Acting Chief Executive
Australian Energy Market Commission
PO Box A2449

Paper – Local Generation Network Credits

Sydney Water welcomes the opportunity to respond to the Commission's consultation paper on local generation network credits. We acknowledge that our submission has been sent after the closing date and so we have kept our response brief.

Sydney Water has invested heavily in embedded generation across our business. Our generation assets consist of

- 11 co-generation engines with a total capacity of 9.9MW installed across 8 of our treatment plants,
- 3 micro hydro turbines with a total capacity of 5.7MW across our network, and
- 2 separate photovoltaic arrays each of 30kW at our Potts Hills office.

In the last financial year these assets generated 72.4GWh; enough to supply 17.5% of our electricity requirements.

By the end of this financial year Sydney Water will have rolled out photovoltaic arrays at a further 7 sites bringing our installed capacity to 160kW. Network charges account for over 44% of Sydney Water's electricity costs. The identification of sites that are viable for investment has therefore been limited to those sites that have significant onsite electricity demand. Sydney Water owns over 6,000 sites, of which 329 have been identified as having roof or land space suitable for installing photovoltaic arrays. However 95 of these have no onsite electricity demand.

The requirement to identify sites that have significant onsite electricity requirements has severely restricted site selection and the size of arrays that can be deployed. This has impacted on Sydney Water ability to benefit from economies of scale. To address this problem Sydney Water is currently developing a research project to assess the potential of battery storage to remove reliance on the grid imports. This project aims to allow low demand Sydney Water sites to go 'off grid'.

This financial year we are on track to increase our generation to 87.6GWh; enough to supply 20% of our electricity requirements. One of our treatment plants is already energy neutral, producing enough electricity to supply all of the electricity requirements on site. There is the potential to further increase generation across all 8 treatment plants. This could result in Sydney Water supplying surplus electricity to the distribution system.

Harnessing Sydney Water's renewable generation potential would lead to a significant decrease in the electricity costs for Sydney Water. This would provide a direct economic benefit for all residents of Sydney through a reduction in water charges. When this increase in disposable income is spent, this spending becomes someone else's income which in turn drives additional spending. These benefits will extend beyond the 4.8 million customers of Sydney Water due to this multiplier effect as well as through the reduction in emissions from electricity. However, in Sydney Water's view, there are insufficient regulatory incentives at the current time to produce more electricity than can be used behind the meter.

The changes to local network charges via changes to the national Electricity Rules would improve these incentives. Charges for local generation should reflect the fact the network costs to deliver electricity from local generators to customers are significantly lower than from large remote power plants. This change would enable efficient deployment of decentralised generation and reduce incentives for customers to disconnect from electricity networks. Maintaining the customer base of the network operators will result in lower network charges for all customers and avoid the 'death spiral' scenario that has played out all too painfully in Germany.

Sydney Water supports the submissions of the City of Sydney and the Institute of Sustainable Futures, UTS. In particular Sydney Water wished to make the following points:

- both new and existing local generation should be eligible for any changes local network charges
- results from the Institute of Sustainable Futures project on local network charges and virtual net metering should be used by AEMC to access how best to implement this change

Sydney Water echoes the calls for the Commission to undertake an extensive and detailed program of industry and stakeholder consultation on the rule change proposal.

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Yours sincerely



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