

Mr John Pierce  
Chair, Australian Energy Market Commission  
Level 6, 201 Elizabeth Street  
Sydney NSW 2000



4 February 2015

## **ERC0191 National Electricity Amendment (Local Generation Network Credits) Rule 2015**

Dear Mr Pierce

The Energy Efficiency Council (EEC) welcomes the opportunity to comment on the rule-change proposal ERC0191 National Electricity Amendment (Local Generation Network Credits (Rule 2015)).

The current regulation of the National Electricity Market (NEM), including both the rules and the implementation of the rules by the Australian Energy Regulator (AER), does not provide the right incentives for the most economically efficient balance of investments including networks, large-scale generation, embedded generation and demand-management.

The Local Generation Network Credits (LGNC) proposal is a potential solution to improving the price signals for one segment (small embedded generators), but it highlights a broader set of problems that also affects investment in larger embedded generators, demand management and energy consuming equipment.

The EEC supports the Australian Energy Market Commission (AEMC) developing and assessing a potential LGMC model, but also advocates that this review look at the broader issues and some potential solutions to this wider set of problems. For example, the National Competition Review lead by Ian Harper has concluded that is inappropriate that there is no active oversight of Distribution Network Service Providers (DNSPs) in relation to network connection and payment for non-network services.

The EEC recommends that the AEMC also consider the following complementary solutions to address key problems that distort investment in the NEM:

- Improving the incentives that DNSPs face for non-network solutions and measuring the proportion of network spend that each DNSP is offsetting each year by non-network solutions (either directly or through payments to non-network providers);
- Establishing an individual with a specific remit to oversee network connection and payment for non-network solutions (including embedded generation and demand-management);
- Developing a report on what an integrated system of energy users tariffs, connection charges, and charges for Transmission Use of Service (TUOS) and Distribution Use of Service (DUOS) would look like; and
- Undertaking a national 'model tariff' development process.

Responses to the questions in the Consultation Paper are set out on the following pages. We look forward to continuing to engage with the AEMC on this matter. For further information please contact me on [rob.murray-leach@eec.org.au](mailto:rob.murray-leach@eec.org.au) or 0414 065 556.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Rob Murray-Leach', is centered below the text 'Yours sincerely'.

Rob Murray-Leach  
Executive, Policy and Advocacy  
Energy Efficiency Council

## Question 1 Assessment Framework

### 1. Would the proposed framework allow the Commission to appropriately assess whether the rule change request can meet the NEO?

The proposed framework must be updated in two specific and related ways:

1. The framework needs to focus on the total bill paid by the consumer (or the total cost of supply), not the price 'per unit' of electricity. There are two reasons for this.
  - a. There is currently significant debate about the precise structure of electricity tariffs in the future (e.g. the size of fixed charges and demand charges) and the level of write-down of network assets, and therefore the 'price per unit of electricity' is neither a clear nor nationally consistent unit.
  - b. Consumers ultimately care about the total size of their electricity bill, not the cost per unit, and this is affected by demand management. For example, Californian households are more energy efficient than the United States average, and while the cost per unit of electricity supply in California is higher than average for the United States, total bills are lower.
2. As specified by the National Electricity Objective (NEO), the assessment framework must focus on promoting efficient investment in 'electricity services' (which includes demand-side investment) rather than just efficient investment in generation and networks. This is particularly important given that this rule-change relates improving the balance of investment in network and non-network solutions.

This is not an abstract point – a system with price signals that encourages the right balance of supply-side and demand-side investment will have a much lower total cost. For the purposes of assessment, this means that:

- a. 'Meeting demand at lowest cost' must mean 'demand for electricity services' (including investment in energy efficiency) rather than just 'demand for a specific volume of electricity'. For example, consumers are concerned about having thermally comfortable homes, rather than obtaining a specific volume of electricity for heating.
- b. 'Efficient investment in assets' should include both supply-side and demand-side investment, and investments before the metre (e.g. networks and large-scale generation) and behind the meter (e.g. energy efficiency and solar PV). The last five years have seen a massive shift in investment patterns driven by real-world changes in technology and consumer preferences, and to simply assess 'efficient investment' as before-the-meter supply-side investments would lead to sub-optimal investment.

### 2. What is the relevance, if any, of reliability and security for the purposes of assessing the proposed rule (or a more preferable rule)?

Reliability and security are critical for assessing this proposal. The EEC notes that developments in storage and demand-response technologies mean that demand for ancillary services and short-term capacity can be met at much lower cost than in the past, which lowers the cost of higher penetrations of intermittent generation.

### 3. What change, if any, to the proposed assessment framework do you consider appropriate?

See response to Question 1.1

## Question 2 Percieved issue with the current NER

- 1. Are the current NER provisions (including changes that have been made but not yet come into effect) likely to provide appropriate price signals for efficient embedded generation? That is, do the NER provide incentives to individually or collectively (including through small generation aggregators) invest in and operate embedded generation assets in a way that will reduce total long-run costs of the electricity system?**

The current NER provision will not provide appropriate price signals for efficient investment and use of embedded generation (and demand-management) at various times and sites. The fundamental problem is that:

- DNSPs do not face appropriate investment signals for non-network solutions (including embedded generation and demand management) and it appears that the Demand Management Incentive Scheme (DMIS) will not be applied in a way that drives substantial change. Even if NSPs faced balanced price signals, they would still bias supply-side investment owing to a long history and culture of supply-side investment. In a competitive environment there would be pressure to shift culture, but there is no such competitive pressure on NSPs.
  - NSPs are both monopoly service providers (with an incentive to build their asset base) and the gatekeepers for network connection and charges or payments to energy users, generators and third-parties for non-network solutions that could affect their asset base. As the Competition Policy Review lead by Ian Harper points out, this is entirely inappropriate. The LGNC Rule Change Proposal has been developed a potential solution to part of this issue (i.e. clearly specifying the Network Support Payments that DNSPs should make to embedded generators). The EEC has long advocated for an independent party charged with oversight of connection and charges/payments associated with non-network solutions, which could complement (or possibly substitute for) clearly specifying LGNCs.
  - The National Electricity Market needs an integrated system of energy users tariffs, connection charges, and charges for TUOS and DUOS. This need for an integrated system has been exacerbated due to the emergence of prosumers.
  - The current process for tariff reform has unequivocally provided insufficient guidance to develop reasonable tariffs, as demonstrated by Networks NSW's proposal for declining block tariffs and the high fixed charges introduced in Queensland. As noted above, DNSPs do not have a strong incentive to develop tariffs that are in the long-term interests of consumers. Australia needs a process to bring together providers, consumers and expert bodies to develop 'model' tariffs for Australia that aren't mandatory for DNSPs but guide the development of tariffs.
- 2. Are the current NER provisions (including changes that have been made but not yet come into effect) likely to provide appropriate price signals for efficient embedded generation? That is, do the NER provide incentives to individually or collectively (including through small generation aggregators) invest in and operate embedded generation assets in a way that will reduce total long-run costs of the electricity system?**

No – see above.

- 3. Do the current NER provisions (including changes that have been made but not yet come into effect) appropriately incentivise network businesses to adopt both network and non-network solutions to achieve efficient investment in, and**

**operation of, the electricity system that minimises long-term costs?**

No – see above.

- 4. If your answer to questions 1 or 2 is 'no', what is the specific area in which the current NER provisions do not achieve these outcomes – for example, is the issue with the current provisions only related to embedded generators of a certain type or below a certain size, or is there an issue for all embedded generators?**

The poor price signals provided by the NER affect a very broad range of investments, and applies to investment in both embedded generation and demand-management, irrespective of the scale of projects.

### **Question 3 Determining avoided costs**

- 1. What are the factors that influence the long-run network costs that can be avoided through embedded generation? For example, do these cost savings depend on the location, voltage and type of generation?**

While cost savings vary with both the location and type of generation, the EEC has not conducted modelling on the materiality of these variations.

- 2. Can embedded generation materially reduce DNSPs' ongoing operating and maintenance expenditure? If so, to what extent do these cost savings depend on the location, voltage and type of generation?**

Embedded generation (and demand-management) can materially reduce DNSPs' ongoing operating and maintenance expenditure, and there is ample evidence of this. As above, the cost or cost savings from embedded generation will vary with both the location and type of generation, but the EEC has not conducted modelling on the materiality of these variations.

## **Question 4 Specificity of Calculations**

If LGNCs of some form were to be introduced:

- 1. What is the appropriate degree of specificity in the calculation of avoided network costs and, if relevant, operating and maintenance costs? For example, should different calculations be made for different voltage levels and/or geographic locations and, if so, what would be the criteria for distinguishing between levels/locations?**

No comment at this time.

- 2. How often should this calculation be updated, recognising that the potential network cost savings can increase and decrease significantly over time as demand patterns change and network investments are made?**

No comment at this time.

## Question 5 Potential benefits of the proposal

1. Compared with the current NER provisions, would the proposal:
  - a. Provide superior or inferior price signals to embedded generators (including small-scale embedded generators) to incentivise them to invest in and operate those assets efficiently, thereby reducing long-term total system costs?
  - b. Provide superior or inferior incentives to DNSPs to adopt efficient network and non-network solutions (including small-scale embedded generation) so as to reduce long-run total system costs?
  - c. Have any potential beneficial or detrimental effects on any non-price attributes of the service, such as network reliability and/or security of supply?
  - d. Reduce or increase the prices consumers pay for electricity?

The impact of an LGNC would entirely depend on its design. The EEC has not seen modelling on what the LGNC would look like, and so cannot comment.

2. To what extent do your answers to 1(a) to (d) depend on:
  - a. To whom LGNCs are applied (eg whether it is applied to all embedded generators or whether there are criteria based on a generator's capacity, availability and/or location)?
  - b. The degree of specificity in the calculation of avoided network costs (ie whether separate calculations are made for different voltage levels and/or locations) and how often it is updated?
  - c. The proportion of the estimated avoided network costs that are reflected in the LGNCs paid to embedded generators?

The EEC's answer to questions 1(a) to (d) would entirely depend on the design details, including those specified in question 2(a) to (c).

3. If you do not consider that the proposed rule would enhance the NEO, are there potential alternative approaches that may do so?

The EEC believes that this review should take a broader remit and try to address the full range of problems that cause inefficient price-signals for the balance of investment in before the meter (large generators and networks) and behind the meter (embedded generation and demand management). The LGNC proposal is one potential solution to part of this problem, but there are broader range of issues and therefore solutions (which might include LGNCs). A suite of complementary solutions would include:

- Improving the incentives that DNSPs face for non-network solutions and measuring the proportion of network spend that each DNSP is offsetting each year by non-network solutions (either directly or through payments to non-network providers).
- Establishing an individual with a specific remit to oversee network connection and payment for non-network solutions (including embedded generation and demand-management).
- Developing a report on what an integrated system of energy users tariffs, connection charges, and charges for TUOS and DUOS would look like.
- Undertaking a national 'model tariff' development process.



## **Question 6 Potential costs of design, implementation and administration**

**1. What changes would DNSPs and other parties need to make to their existing systems and processes to enable the design, implementation and administration of LGNCs? To what extent does this depend on:**

- a. To whom LGNCs are applied (ie whether it is applied to all embedded generators or whether there are criteria based on a generator's capacity, availability and/or location)?**
- b. The degree of specificity in the calculation of avoided network costs (and, in turn, LGNCs) – ie whether separate calculations are made for different voltage levels and/or locations?**
- c. How often the calculation is updated?**
- d. How often the LGNCs need to be paid?**

No comment.

**2. What are the likely costs associated with undertaking the changes described above and how are these likely to vary depending on the factors set out in 1(a) to (d)?**

No comment.

**3. How do these costs compare to the expected benefits of the proposed rule change?**

No comment.