

LOCAL GENERATION NETWORK CREDIT RULE CHANGE – WHAT, WHY, HOW, FOR WHOM?

AEMC workshop presentation on behalf of proponents – 15 March 2016

Who are the rule change proponents?

The rule change proponents are the City of Sydney, the Total Environment Centre and the Property Council of Australia.

Why consider a rule change?

In the view of the proponents, there is a gap in the National Electricity Rules.

The current rules do not create a level playing field for local energy.

Specifically, consumers do not receive price signals about the cost of transporting electrical energy to their homes and businesses from different locations. This applies to both costs that have already been incurred and costs yet to be incurred.

For the rule change, we are honing in on costs that are yet to be incurred. This is more consistent with the incoming approach to network consumption tariffs.

So, we say, a mechanism such as the LGNC (local generation network credit) will provide consumers (via retailers) and local generators with appropriate signals about costs yet to be incurred (or which can be avoided) based on where energy is transported from and transported to.

Aren't there already enough rewards for local generation?

There are already quite a range of mechanisms in the rules. However, they not provide sufficient reward for efficient local generators and are unlikely to do so without major changes.

Let's look at some of the main incentives.

Avoided TUOS charges

Most new local generators are not eligible, thanks to Chapter 5A. Even if they are eligible under Chapter 5, avoided TUOS charge regimes range from the relatively transparent to the complex and unpublicised. And, as a general impression, the value of the avoidable component of TUOS charges has been wound back by transmission companies. So, many local generators ask, why bother?

Our view is, remitting transmission charges (not just avoided TUOS charges) could be a simple, practical way to acknowledge local generation avoids many of the network costs that are bundled up in consumption tariffs.

Network support payments

Our view is, network support payments are too limited in time, too discretionary in application, too opaque in value and too onerous in their obligations. Added to this, we are not aware of much research on the effectiveness or prevalence of network payments for either large or small embedded generators.

Regulatory investment tests

This has been presented as a major source of opportunity for local generation. However, there are many gaps.

Some gaps might be removed by mooted changes to the RIT rules. The threshold could come down. Or replacement could be included. However, even where a RIT process has happened, results have generally been unfavourable so far as use of local generation is concerned.

DMIS and DMIA

First, the benefits from existing rule-based DM arrangements have been modest.

Second, a new DMIS scheme is not with us yet. It is difficult for anyone to speculate on whether or how much this will make a difference.

So, what is the proposed solution?

The rule change proposes to introduce a system of payments to local generators for benefits that they provide to electricity networks. By benefits, we mean a reduction in the level and timing of future investment for replacement, reliability improvement and augmentation.

According to the rule change, there would be a base payment for supplying electricity at all times, and a higher payment for supplying electricity during peak periods.

Our proposal includes an option to reward local generators with a peak supply payment, based on minimum supply during specified periods of peak demand.

Should we wait for other changes?

No - there are good reasons to prepare now for a system of LGNCs.

First. We are in the midst of a transition to cost-reflective consumption tariffs. Improving better signals for efficient local generation should accompany this.

Second. It will take a regulatory period or more to assess the effectiveness of other, arguably more limited rule changes. Meanwhile the risks from overinvestment in networks and underinvestment in alternative solutions may persist. We consider that this rule change is relatively certain in its effect, both for networks and for alternatives.

Third. Network investment levels in the near term are generally quite low. Introducing LGNCs now will give networks the opportunity to adapt and allow for higher levels of local generation in future network planning. It is essential but takes time for attitudes and practices to change, so that networks are more willing partners in sharing responsibility for electricity supply.

How might the proposed solution be refined?

Imposing size limits

The proponents have a preference for making the proposal available to all local generators, however, we acknowledge that the AEMC may wish to target any system of payments to the mid-size generator range, say, 30 kW to 10 MW.

Limiting technology

We believe that all local generators should be recognised for their benefits. However, we do recognise that some technologies are more intermittent than others and that this will be reflected in the level of peak demand reduction that can be relied on.

Limiting location

The rule change envisages that different levels of payment could apply in different parts of a distribution network. However, we are cautious about the extent of targeting by location. Why?

First, there is an obvious risk – the wrong targets might be chosen. Demand growth predictions are notoriously unreliable, more so at a local level. Technical predictions such as length of life can also be tricky for both reliability and replacement projects.

Second, it is simpler and less cumbersome to apply a system-wide average for calculation of LGNCs. After all, this is the approach adopted by almost all networks for consumption tariffs. It also makes it easier to apply a surrogate, such as relief from transmission costs, which has been foreshadowed.

Third, there is more transparency and less haggling with a broad-based credit.

Hence, if a locational approach is adopted, the definition of location should be broader based rather than narrow. For example, as part of the Powering Sydney's Future project initiated by Transgrid, a benefited region which covered roughly half-a-million people was identified. Significant future benefits from local generation and other demand management initiatives could be identified, even at such a relatively large scale.

How should benefits be shared?

The proposal focuses on payment of benefits to local generators. This has been described by some stakeholders as a form of wealth transfer. A better description would be recovery of fair value.

Recovery of fair value by local generators does not reduce or ignore the long-term interest of consumers. In fact, the opposite should be true. This can happen both directly and indirectly.

Many consumers are also producers, so some customers will be directly rewarded e.g. a council with generation on one site and load on another. Indirectly, there can be a variety of financial relationships between generators and consumers:

- Consumers may own a generator e.g. a community wind farm that supplies a local town
- A retailer may pass the value of network credits on to consumers via netting off
- If it is a full retailer, the generator may offer lower prices to local customers
- If it is an exempt retailer, the generator may offer lower prices to consumers in its embedded network.

Benefits will grow over time. Consumers will benefit over time from the introduction of cost-reflective consumption tariffs, through lower future network investment.

Similarly, consumers will benefit over time through the introduction of LGNCs, due to greater use of efficient local generation in place of network investment.

The risk profile for networks will improve as they make more use of efficient local generation. Under-utilised and stranded assets will be less of an issue, and capex requirements will reduce. So unit cost of funds will be lower (the risk premium in the WACC is lower) and total return on investment will be lower (because total investment is smaller). Hence, consumers should pay less for network services.

What other consumer impacts might occur?

Incentivising local generation is likely to lower overall carbon emissions from the electricity sector. While this is not part of the AEMC's assessment framework, it is a critical objective for the proponents.

We would also encourage stakeholders to consider what might happen if this reform does not proceed or is not implemented effectively. In our view there would likely be:

- Less decentralised energy investment than would otherwise occur, because there is no financial incentive to build bigger than can be consumed behind the meter.
- Some inefficient investment in energy storage to store onsite generation instead of buying from other local generators that can export during peaks.
- More incentive to invest in private wires or micro-grids to connect sites with the same ownership, leading to duplication of network infrastructure.

Legacy customers could be left to pay more to cover largely fixed network costs. Just how much more is uncertain at this point, and more work needs to be done to quantify consumer impacts. We hope AEMC will facilitate this.

The fundamental logic remains. A grid with less upstream infrastructure and more efficient local generation should cost less, and network costs for consumers should be lower. Together, we need to find the best way to make this happen.