



Submission by the

Total Environment Centre

and the

Alternative Technology Association

on the

Electricity Distribution Network Planning & Connection Framework

MCE Standing Committee of Officials
Policy Response

13th March 2009

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1. Introduction

1.1 Main Issues

Total Environment Centre (TEC) and the Alternative Technology Association (ATA) welcome another opportunity for input into the Standing Committee of Officials (SCO) process to develop a national framework for *Electricity Distribution Network Planning and Connection*.

It is important that all connections for embedded generation (EG) should be regulated. There are safety issues for one, and it also establishes a record for the uptake of renewable energy (since most EG is based on renewable forms of energy). It is clear that processes are not consistent across all jurisdictions, which can pose barriers for installation businesses. For the smaller end of EG there is wide divergence in practices, which has the potential for dangerous installations. As feed-in tariffs for renewable energy become more established the situation will probably stabilise, but currently there are wide disparities in approach.

TEC and ATA strongly support the principle that connecting EG is not a standard connection process for a customer since there are many issues which distinguish it from regular energisation of a property. Therefore it is highly appropriate that the SCO is developing extra mechanisms for generation.

We would like to emphasise that the current situation varies considerably across the NEM, and enquiries from EG proponents can follow many routes. For instance, with micro generation – many customers first approach EG system businesses and installers, while others may approach retailers initially. It is generally only those investigating larger systems who approach DNSPs direct.

The principle of a definition for a micro generation class is one we fully support. The definition that has been developed in this process will be very useful and will considerably assist small customers with smaller forms of EG. The establishment of standard contracts and streamlined processes will remove a number of barriers and enhance the installation of renewable energy generators.

1.2 Convergence with other Policy Processes

We support the concept of the Australian Energy Market Commission (AEMC) undertaking a review of a national framework for electricity distribution network planning and expansion. Of concern, however, is the time such a review will take.

Whilst this review is set within a reasonable timeframe, any consequent *Rule changes* would need to conform to a standard Rule change process – meaning significant further delay in finalising the framework. We believe this constitutes a problem where the changes relate to embedded generation (EG). It is likely that the expanded Renewable Energy Target (the RET) will be established well before the results of any subsequent Rule changes, meaning that the resolution of EG treatment within the Rules will lag well behind.

In addition, there has also been a recent surge in installations of domestic-scale EG (in particular solar PV) alongside the development of feed-in tariffs by jurisdictional governments.

As such, large renewable energy generators are not likely to provide the only means of achieving the expanded RET, although there would appear to be a general attitude amongst regulators that this is the case (in this process as well as the AEMC Climate Change Review process). Small generators will also make a contribution by virtue of cumulative effect and so it is imperative that connections arrangements are streamlined as soon as possible.

The same problem of lack of cohesion across processes arises with connections and capital contributions, covered within this SCO Policy Response. Those matters have been tied into the National Energy Customer Framework (NECF). This too is working in the opposite direction to development of the RET; that is, there have been multiple delays in finalising the NECF and, again, there is a high possibility that final details for connection arrangements will be settled long after the expanded RET is established.

We urge the Standing Committee of Officials (SCO) to deal with this problem as a matter of urgency. Development of connection arrangements has already been under way for numerous years (for example, the draft Code of Practice for Embedded Generation was released three years ago), and Commonwealth and jurisdictional policies in response to climate change have overtaken this time-consuming process.

We are pleased that the SCO has at last responded to the NERA/ACG recommendations, but we remain very concerned that the process could easily drag out for another three years while EG proponents continue to face difficulties. We note that a Ministerial order could be used in this instance, and urge the SCO to consider this option.

2. Definitions and Treatment of EG Classes

2.1 Micro Generation

2.1.1 Definition

We support the case presented in the paper by Allens Arthur Robinson (AAR)¹ for a definition for micro EG up to 10kV and in line with standard AS4777, that is:

“2.1 Micro embedded generators

(a) Definition of micro embedded generator

We propose that a micro embedded generator should be defined as a generator that is compliant with AS 4777, that is, an inverter system to be connected to the low voltage distribution network, with ratings up to 10kVA for single phase or 30kVA for three phase.” (p. 5)

This would incorporate most domestic installations for householders, schools, small businesses and community buildings. It is also in line with a number of feed-in tariffs around the country. We believe these systems represent:

- minor technical arrangements;
- relatively minimal load on the distribution system; and
- minimal likelihood of requiring extensions or augmentations.

¹ Allen Arthur Robinson (2009) *National Connections Framework for Electricity Distribution Networks*. Network Policy Working Group, Melbourne.

2.1.2 Connection Arrangements

We support the SCO and AAR recommendations that there should be standard connection agreements developed by each DNSP – and approved by the Australian Energy Regulator (AER) – for micro generation.

2.1.3 Capital Contributions

Equally, we support the case as presented in the SCO paper regarding augmentation costs for micro-generators to be recovered through Distribution Use of System (DUOS) charges.

2.2 Mini Generation

2.2.1 Definition

As in line with our previous submission on this process (as then members of the Climate Action Network of Australia [CANA] and to the Code of Practice for Embedded Generation [COPEG]), we maintain that there should be a defined ‘mini’ class of greater than 10kW and in the range of 100kW. We reiterate the CANA arguments, as set out by AAR:

“A further category of ‘mini’ embedded generators should be introduced ... on the basis that embedded generation units of up to 100kW:

- should require little network augmentation;*
- can be connected to the distribution network;*
- are generally comprised of mass produced, over the counter components built to industry standards;*
- primarily provide supply to the residential and commercial premises in which they are installed; and*
- are generally proposed by new entrants with relatively unsophisticated understanding of the national electricity market.” (p 8)*

Whilst there is unlikely to be much EG in this size range in existence in Australia at present (particularly in metropolitan areas), there is potential in this range, particularly in rural and regional areas, and potentially for embedded co-generation units in the commercial sector. We consider this issue of sufficient importance to be worth further investigation.

Once again, we believe EG in this range would represent little additional load to or from the grid, and would generally require no augmentation.

2.2.2 Connection Arrangements

The establishment of a defined class of ‘mini-generation’ should also be subject to standard connection agreements developed by each DNSP and approved by the Australian Energy Regulator (AER).

2.2.3 Capital Contributions

With respect to capital contributions for a mini-generation class, given the likely requirement again for minimal extensions and augmentations, we would support the network costs of connection – which would be correspondingly minor – to be recovered through DUOS.

Mini generation would be likely to represent a small load on the system so it is not unreasonable that the costs should be spread across all customers, as although this minor addition may be the trigger that necessitates expansion, it is in reality the previous users who are the main cause. It is also likely that this class would also overlap with any definition of small customers.

3. General Connection Arrangements

3.1 Primary Contact

It is essential that consistent regulations be developed for connection of EG, rather than the varied arrangements that currently exist across the jurisdictions. Electrical systems pose safety risks which regulation could help to circumvent.

In addition, it would be useful to be able to track the number and volume of renewable EG that is installed across the NEM jurisdictions, partly as a measure to account towards achieving a national renewable energy target, as well as the effectiveness of any rebate systems that are developed for renewable energy systems.

TEC and ATA therefore support the statement by AAR that:

“the distribution contracts to be developed under the NECF to contain provisions prohibiting the connection of any embedded generation without following the connection process. This approach has been adopted in standard connection agreements by a number of New South Wales distributors.” (p 11)

In line with previous consumer group submissions from the National Energy Consumer Roundtable, TEC and ATA strongly favour a single point of contact for connection arrangements between EG proponents and electricity retailers. This is most relevant to micro-generation proponents as a minimum, but also extends to any standard contract arrangements established for a ‘mini’ generation class.

In reality, many domestic and small commercial customers have no relationship with DNSPs and their dealings with the NEM are solely through the retailer. It is then essential that the retailer notify the relevant DNSP, which it would seem does not always happen as a matter of course.

We would suggest this is another area where it could be helpful for the AER to develop a guideline setting out protocols for retailers, EG businesses and installers as to the proper process for communication. That is, setting out some descriptors for the processes required before it gets to DNSP.

3.2 Procedure for Connection

We support the general outline of the process for connection, as outlined in the SCO Policy Response on page 14. In the table of SCO responses, we would suggest that the steps outlined in Responses 19 and 20 be collapsed into one timeframe of 10 days (which accords with the page 14 outline, and was generally agreed to at the meeting of 16 February 2009).

We support the descriptions of the various steps in the connection procedure for new modified connection, with the proviso that the retailer will be the first point of contact. For a standard connection, there would be a deemed standard contract between the customer and the DNSP (as is done for the usual connection arrangements for small customers).

All agreements should include “both the initial connection and ongoing provision of distribution services” (AAR p 25). Where there will be a negotiated contract, it would be the DNSPs’ responsibility to contact the customer according to the suggested procedure. It is also clearly essential that the retailer keep the DNSP informed of all EG on their network (apparently this occurs in a haphazard fashion across the regions).

We also support the development of a separate schedule to the Rules for embedded generators that are not Registered Participants and that would not be covered by the micro and mini definitions (that is, subject to a standard contract).

TEC and ATA agree with the principle that the connection agreement should transfer with change of ownership (*Response 12*). Additionally, retailers again should inform DNSP, as they would be the first point of contact for new owners / tenants. We agree that the DNSP should inform customers about the terms and conditions as the agreement is with them, and customers may not know sufficient detail about the EG that has been installed. The retailer would also need to inform them about any arrangements made about tariffs (such as feed-in tariffs for renewable energy).

A small but important amendment to *Response 19* is to move one clause up to the process in *Response 17* (regarding the response to the initial enquiry), that is:

“advise the user if the application will be processed by another DNSP”.

There is no point informing the proponent after they have submitted an application, it should be done before.

In all cases the EG proponent should be given two months to respond to the DNSP’s offer (*Responses 21 and 24*) even where it is a negotiated contract, since until the details are finalised the proponent will not have full information of what is required of them.

There are likely to be other processes the customer then has to follow, such as complying with local council regulations and/or final arrangements with the installers. These can be time consuming and allowance should be made for this.