SUBMISSION: AEMC NETWORK PRICING REVIEW - EPR0097

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The original Principles of Network Pricing and the basic allocation of network costs to Network Users were established by the National Grid Management Council's Network Pricing Working Group (NPWG – originally TPMG) prior to the start of the National Energy (Electricity) Market in1998. These network costs are derived from the annual revenue determined appropriate for the owning and operation of both the various regulated Transmission and Distribution networks.

Notwithstanding a review in 2014, the fundamental Principle for Network Pricing, established for the NEM, was that network costs were to be primarily allocated to and recovered from the consumers of electricity (User Pays) with the electricity generation providers (the generators of electricity) contributing only to the costs of connecting their generating assets to the main network. A complex algorithm was used to allocate shares of the inter-connected Transmission Network costs to the delivery interface points of each Distribution Network.

In the period since the start of the NEM the annual Transmission and certainly the Distribution costs used for determining the network tariffs have been "averaged out" (smeared) in the interested of providing equity for similar domestic and commercial electricity consumers in each State (not across the NEM), mainly irrespective of their location within the much larger Transmission network.

Indeed, electricity consumers in a renewables rich area such as Eyre Peninsula (including Whyalla) probably still pay a significant Transmission Network cost component even though, now and definitely in the near future, their area would be a net exporter of electrical power with wind and PV grid connected services backed up with local large grid batteries. This regional area (others similarly) could actually be considered as a "generator of electricity" and potentially be treated under the same Rules as other individual generators connected to the network.

Also, under the current generation network cost arrangements, what about the treatment of small electricity suppliers, embedded within the Distribution network – the domestic or commercial electricity consumer with PV and perhaps with a battery? Should they also be considered as an electricity generator under the NEM Principles and have the same Rules applied with regard to network cost allocation?

Consequently, there would seem to be a current dilemma with some inconsistencies evolving in the allocation of Network Costs, which logically should be the subject of an appropriate holistic Study into Network Pricing before the application of what appears to be incremental changes and adjustments proposed by the AEMC to address currently perceived issues, which will undoubtedly further evolve as we move along the Transition path to 100% Renewables.

Such a Renewables based Review/Study into the basis of Network Costs and Allocations perhaps could take the same form as the original NGMG's NPWG (but with consumer representation rather than originally mainly network representatives contributing), reporting to the Energy Ministers directly, to re-look at appropriate network revenue determination (which keeps rising), basic network cost allocation and the appropriate cost allocation to both generators of electricity and consumers.

As a suggestion, such a **Renewables Based Network Pricing Review/Study** in preparation for a renewables based NEM which is expected to be different from that envisaged in the past, perhaps at least should examine the following areas:

1. **Fundamental Network Cost Allocation Principle**
   With much of the current network extensions being developed for the connection of widely distributed renewable generation, should the current "User Pays" principle be replaced with a 50:50 allocation between generation and consumers to reflect the efficiency cost related to the decisions related to where generation and associated storage is situated within the network.

2. **Allocation of Transmission Costs**
   With development of the Transition program it is expected that the electricity flow over many of the Transmission network segments will significantly change in both magnitude and direction from the early NEM period when the cost allocation algorithms were developed to allocate shares of the Transmission network to the various Distribution connection points based on the assessed electricity demand occurring at nominated peak demand periods.

The current processes perhaps should be reviewed, and changed if necessary, to provide confidence that the renewables based power system has both a fair and efficient cost allocation which satisfies the needs of both the Networks and the consumers.

3. **Determination of Regulated Network Costs**
   It would appear that the cost of electricity to the consumer has been increasing since the start of the NEM in 1998. In the period before the NEM commencement, Australian electricity prices were reportedly amongst the lowest in the world, actually recorded in a 1993 Australian Government document describing the advantages of developing a national based system for the supply and distribution of electricity.

   It seems that this comparable advantage now no longer exists, even though it is claimed that the average cost of electricity delivered into the NEM grid is claimed to be decreasing. A potential contributor to the ever increasing Australian consumer electricity costs is perhaps related to the combined regulated network charges.

   Consequently, any Review/Study should possibly also examine this issue and establish the network pricing impacts for consumers during the Transition path, and potentially review whether the current processes for determining network costs (including the asset valuation adjustment process) can ensure that the future processes will drive improved network performance, efficiency and potentially a lower network charge component of the total average cost of 100% renewable electricity to the consumers.

Summary

It is my view that the decision by AEMC to pursue changes to network prices to consumers should be deferred until a more extensive holistic Review/Study of the Principles and processes that define the allocation and actual costs of the networks can be independently established – in a similar approach to the original NGMC's Network Pricing Working Group that occurred prior to the start of the National Electricity Market in 1998.

It is considered that this review is necessary since the future NEM, with extensively distributed renewable electricity generation plus substantial renewable generation embedded within the distribution networks, will be significantly different from the NEM that commenced in the last century.