Energy Efficiency and Conservation Authority
Te Tari Tiaki Pūngao

7 December 2009

John Gleadow
Director, Transmission
Electricity Commission
PO Box 10041
Wellington

Dear John,

EECA submission on the consultation paper on high level options for transmission pricing

We welcome the opportunity to provide feedback on the Electricity Commission's consultation paper on high level options for transmission pricing.

We support the Commission's wide ranging review of transmission pricing and acknowledge the importance of transmission pricing to provide efficient locational signals for grid connected renewable generation and to encourage efficient investment in distributed generation and demand side alternatives to transmission.

Our detailed comments are enclosed.

Yours sincerely,

Steve Torrens,
Senior Policy Analyst

Energy Efficiency and Conservation Authority
Te Tari Tiaki Pūngao

EECA submission on the consultation paper on high level options for transmission pricing

Executive summary

1. We welcome the opportunity to comment on the Commission's consultation paper on high levels options for transmission pricing.

2. In summary EECA:

   - Would welcome more in-depth consideration of transmission pricing options to improve locational signals for investments in generation and load;

   - Submits that there is merit in the Commission reviewing connection costs in more depth. This applies in particular to connection assets serving remote regions with significant renewable energy resources that may potentially be shared by multiple generators; and,

   - Submits that there is merit in considering the extent to which transmission pricing can improve efficient investment in transmission alternatives.

Introduction

3. EECA is a Crown entity established by the Energy Efficiency and Conservation Act 2000. EECA's function is to encourage, promote, and support energy efficiency, energy conservation, and the use of renewable sources of energy.

4. We are interested in transmission pricing given its potential impact on efficient investment in renewable generation, distributed generation and demand side alternatives to transmission investment.

Locational signals

5. We would welcome more in-depth consideration of transmission pricing options to improve locational signals for investments in generation and load. No doubt such consideration will need to address a number of complex issues and we suggest that this includes:

   - The extent to which existing HVDC charges distort generation investment decisions in the South Island and whether this can be addressed;

   - The extent to which nodal prices may be muted by proposed locational pricing instruments; and,

   - The impact of locational signals on geographical diversity of generation and hence security of supply. For example, it is well known that the costs of wind integration can be lowered if wind generation is located in geographical diverse locations.

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Connection costs

6. We agree that as the provision of connection services is contestable regulatory intervention in this area should be avoided where possible.

7. We submit, though, that there is still merit in the Commission considering this issue in more depth. We are concerned about potential issues that may arise where a connection asset is required for a remote region with significant renewable energy resources such that it may be shared by multiple generators.

8. In such a scenario, for example, the connection asset may only be sized to accommodate the first renewable generator developed in the region rather than for all economically viable generation in the region. Problems such as this may arise because:

    - There may be uncertainty as to whether or when additional generation developments will proceed. This uncertainty will be exacerbated if the initial developer does not have access to accurate information about the economic potential of the region;

    - Of potentially high transaction costs associated with determining a suitable cost allocation method between future potential users of the connection asset; and,

    - The initial developer may not adequately take into account wider economic benefits of 'opening up' a remote region such as improved security of supply and competition.

9. New connection asset issues were raised in the Commission's transmission to enable renewables project[1]. We note that modelling proposed for phase 2 of this project could assist in understanding the extent to which these issues are a problem and the priority with which they need to be addressed.

10. In general, we suggest that it would be useful if the Commission clarified the relationship between the transmission pricing review and the transmission to enable renewables project.

Transmission alternatives

11. We submit that there is merit in considering the extent to which transmission pricing can encourage transmission alternatives.

12. Demand response and electricity efficiency can potentially be used as transmission alternatives. These types of alternatives do not receive the same transmission pricing signals as grid connected generation or load. Many electricity consumers have minimal exposure to nodal wholesale market pricing signals and signals provided by transmission charges to reduce peak demand are often muted. Also pricing is unlikely to be the sole barrier to demand response and electricity efficiency transmission alternatives. Other

[1] Electricity Commission. 2008. *Final report on the transmission to enable renewables project*. page 61.

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barriers may include a lack of consumer information or awareness of opportunities and free rider problems[2].

13. For these reasons non-priced approaches, such as Transpower's Grid Support Contracts, are required to support transmission alternatives. We submit that Transpower should continue to be able to recover the costs of such approaches through the transmission pricing methodology.

14. Frontier note that distributed generators can reduce transmission charges to lines companies and that lines companies pass on the benefits of lower transmission charges in different ways[3]. We agree with this point, but note that this could also potentially apply to a demand response or electricity efficiency initiative (not deployed by a lines company).

[2] As all consumers will benefit from the actions of those consumers that reduce demand for transmission in a given region. Refer Electricity Commission. (2005). *Consultation Paper. Options for Enabling Transmission Alternatives*. page 5.
[3] Frontier Economics. (2009). *Identification of high-level options and filtering criteria*. page 35.