



**Submission to the Electricity Authority**  
on  
Transmission pricing methodology: Second issues paper  
and  
Review of the distributed generation pricing principles

26 July 2016

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**Introduction**

1. We welcome the opportunity to submit on the Electricity Authority's *Transmission pricing methodology: Second issues paper* and *Review of the distributed generation pricing principles* (DGPP). We endorse the submissions put forward by both the Electricity Networks Association and PricewaterhouseCoopers.
2. Our answers to the Second issues paper can be found at Appendix A of this submission. For answers to the DGPP consultation please refer to the Electricity Network association (ENA's) submission.
3. No part of our submission is confidential.

**Rate design in the literature**

4. We appreciate that literature on transmission/distribution rate design suggests that prices should be based on long run costs, and any under recovery of costs through the former, should be recovered through a residual charge. Where the aim of pricing using long run costs, is to maximize societal welfare in the long run welfare will be maximized when both the customer and producer surplus are themselves maximized and any deadweight loss is reduced to zero.
5. Accordingly, maximum welfare will occur when customers consume at a point where marginal cost (MC) = price, or due to the nature of costs applicable to a transmission

network when long run marginal cost (LRMC) = price.

6. That is if prices are based on LRMC customers should consume at a quantity that maximizes welfare. However, if residual costs are also recovered through a price signal the price signal could be distortionary and cause customers to consume at a level which does not maximize welfare.
7. We also appreciate that when recovering residual costs, the literature suggests the use of Ramsey pricing to reduce the impact on consumption, by placing higher charges on customers with lower price elasticity of demand. Although Ramsey pricing is rarely used due to equity considerations.
8. It would appear that the Authority has developed the proposed TPM around these basic principles.

## Other considerations required

9. However, the literature also states that other pricing principles should be considered along with efficiency considerations. Professor Bonbright's distribution pricing principles are well known in the industry and provide a standard that many jurisdictions base their own principles on. Indeed the Authority's distribution pricing principles are similar in nature to Professor Bonbright's. Some authors even suggest that efficiency considerations may not be as important as other pricing principles<sup>1</sup>
10. The distribution pricing principles (d) and (e) state that prices should:
  - create certainty
  - be transparent
  - promote price stability
  - have regard to the impact on stakeholders.

## The TPM does not meet all pricing principles

11. We argue here that the proposed TPM does not meet all pricing principles, and therefore will not promote the best outcomes for customers.

## The impact on us of the proposed residual and AoB charges

12. The proposed charges are a large step from the present charges. The proposed charges will cause us to renegotiate contracts with our direct billed customers, and renegotiate contracts with distributed generators, regardless of the outcome of the DGPP consultation.

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<sup>1</sup> See Lazar, J and Gonzalez, W (2015) "Smart Rate Design for a Smart Future". Montpelier, VT: Regulatory Assistance Project.

13. Because transmission charges are unavoidable there will most likely be a rate shock for some or all of our direct billed customers if the proposed changes are accepted. For example, one of our direct billed customers' demands over 3MW and are contracted so that they pay no interconnection charges if they reduce demand to zero during RCPD periods. This charging is appropriate as the customer does not generate increased costs where demand falls outside of RCPD.
14. If we re-negotiated the contract discussed above, and made the customer pay the full cost of what would have been the interconnection cost, this would amount to a 100% increase in their annual delivery charges. A fee which could put them out of business and which wasn't factored into negotiations with them. That is the proposed changes add a level of unpredictability around transmission and potentially distribution pricing, that has not been a factor to date, and which will make future negotiations more problematic.

### **Proposed TPM is too complex**

15. For charges to be effective they must be understood by the customer so as the customer can react appropriately to the pricing signals being sent. It is our belief that the Area of Benefit (AoB) charge will not be well understood by contracting parties as it stands. With the result that customer actions differ from what the Authority would prefer. We also believe that calculations of benefits are difficult to defend and can vary widely between customers, increasing the level of complexity.

### **Review of the distributed generation pricing principles**

16. The Authority's review of the distributed generation pricing principles is dealt with in a separate paper<sup>2</sup> to the TPM. We are of the view that the issues are linked and accordingly are responding to that consultation in this submission.
17. As discussed in more detail in both the ENA and PWC submissions if Transpower took over avoided cost of transmission (ACOT) payments electricity distribution businesses (EDBs) would:
  - i) be forced to renegotiate contracts with distributed generation (DG) providers
  - ii) not be able to recover ongoing contracted ACOT payments under the Input Methodologies (IMs).
18. The issue with renegotiating contracts is that investors in DG would have factored in ACOT payments into their overall cost benefit analysis and would not be favorable to a material change in the amount they receive for avoided transmission. Accordingly, DG may be unwilling to renegotiate contracts leaving EDBs to make payments that could be unrecoverable.

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<sup>2</sup> Electricity Authority, *Review of the distributed generation pricing principles*, 17 May 2016.

19. Current ACOT payments are a cost that can be recovered under the IMs. Changing the framework so as payments are no longer considered to be ACOT will make the payments unrecoverable.
20. As stated in other submissions to address this issue the Authority could consider grandfathering of existing ACOT payments. Grandfathering would also remove the potential issue that will arise if Transpower has little incentive to pay ACOT payments to DG connected to transmission assets with sunk costs.
21. We agree with the Authority that EDBs may under recover DG costs, if priced at incremental costs, because not all costs are incurred at the incremental level. However, we disagree with the Authority on what is the best method in which to deal with the under recovery.
22. As per the ENA submission the correct way is to amend the DG pricing principles and not abolish them as is being proposed by the Authority. As stated by the ENA abolishing the principles removes guidance important for smaller players when negotiating with Transpower on potential pricing arrangements.

## Conclusion

23. While it is commendable that the Authority wants to bring elements of transmission pricing further in line with theory, we believe that the Authority should not lose sight of other transmission/distribution pricing principles also discussed in the literature, which are of equal or of greater importance.
24. We believe that the proposed charges:
  - will create a rate shock
  - do not factor in transaction costs required to renegotiate contracts with direct billed customers
  - are not wholly transparent and are too complex, therefore they will not generate the desired outcomes
  - create an unnecessary climate of unpredictability.

## Closing comments

25. We hope that our submission is helpful to the commission. We are happy to discuss our opinions further with the Authority should it find it useful.
26. The main contact for this submission is:  
  
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## Appendix A—Answers to the Authority’s questions

<p>Question 1: What threshold value should be used to determine which new investments should be subject to the standard area-of-benefit charge versus the simplified area-of-benefit charge? Please provide your reasoning and evidence in regard to the trade-offs mentioned above and any other factors you believe are material to this decision.</p>	<p>In accordance with the ENA submission we do not support the AoB charge, and also find that it produces a climate of unpredictability and complexity opposing good rate design principles.</p>
<p>Question 2: Bearing in mind that it is proposed that Transpower develop a method of determining the areas of benefit, which of the above methods do you think should be used to determine the areas of benefit from high value investments in the interconnected grid?</p>	<p>As with the ENA submission we also find that methods determining customer benefits are complex and unreliable.</p>
<p>Question 3: Bearing in mind that it is proposed that Transpower develop a method for determining the areas of benefit, which of the above methods do you think should be used to determine the areas of benefit from low value investments in the interconnected grid?</p>	<p>As above for question 2</p>
<p>Question 4: Do you prefer the residual-based approach or the surcharge-based approach or some variant of the two and why?</p>	<p>While we agree with the theory behind a residual charge, the movement required from the existing TPM to the proposed is too big a leap which we believe will cause more issues than it will solve. That is it will likely cause a rate shock for many customers and includes a level of unpredictability which will tarnish ongoing negotiations with customers in regard to regulatory risk.</p>