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28th October 2014

Dr John Rampton
General Manager Market Design
Electricity Authority

By email to submissions@ea.govt.nz

Dear John,

**Transmission pricing methodology: Problem definition working paper**

This is a submission by Carter Holt Harvey Pulp & Paper Ltd on the Electricity Authority (EA) Working paper "Transmission Pricing Methodology : Problem definition relating to interconnection and HVDC assets Connection charges" published 16 September 2014.

1. **High level summary response**

   a. This paper, while intended to better articulate the problem definition first proposed in the October 2012 consultation paper, has provided some further useful information, but is not convincing in providing quantitative evidence of the materiality and importance of the problems described.

   b. Since there appears to be much less likelihood of a requirement for significant capital expenditure on transmission capacity increases in the medium term and the nature of the impact of technology on consumer demand is quite uncertain at present, we consider that an evolutionary approach to any TPM changes that makes small scale adjustments to the allocation of charges for existing assets is more appropriate than a revolutionary approach.

   c. We agree with and support NZIER report on "Transmission pricing problems, assessment of the 2014 EA problem definition" commissioned by MEUG.

3. Below are our responses to some of the questions posed in the paper.

Thank you for the opportunity to contribute to this working paper on Problem Definition relating to interconnection and HVDC assets.

Yours sincerely

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| Question | CHHPP response |
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| Question 1: Do you agree that, in relation to decisions around transmission pricing, the Authority should focus on overall efficiency of the electricity industry for the long-term benefit of electricity consumers? Why or why not? | We agree that the Authority should first focus on the long term benefit of electricity consumers as this is their primary objective. Overall efficiency is a method for achieving this, and it should be remembered that efficiency gains can accrue to any or all participants be they suppliers or consumers in the electricity industry. |
| Question 2: Do you agree with the Authority's view on what constitutes an efficient charge? What role do you consider durability plays in determining efficient charges? Please explain your answers. | In general yes. Although we note that with trends that appear to becoming apparent with consumer behaviour (e.g. load reduction due to more efficient appliances and equipment, and potentially disruptive technologies such as PV, electric vehicles and enhanced methods for consumers to manage their electricity use) that future investment in augmenting transmission services may well be quite minimal or even non-existent.<br><br>While durability and certainty is always helpful for all in the electricity industry, it may well be unrealistic in the face of potentially significant changes in consumer behaviour to expect that any TPM improvements carried out now will not need further significant changes in the next 5-15 years. |
| Question 3: Do you agree with the Authority's revised position on the problem definition, described above? Please explain your answer. | There has been some useful additional focus on some issues e.g.<br>• many consumers do not receive price signals from TPM charges in a way that they can respond appropriately<br>• "charges that seek to reflect cost are likely to best promote efficient outcomes" P34<br><br>However<br>• It seems to have been accepted by the Authority ( P32 of the Working Paper ) that there has not been a sufficient material change in circumstances which would warrant a review of the TPM.<br>• There is a wide range and quantum of present values of "inefficiencies" described in Table 1 which appear to us to be of relatively minor importance compared with annual interconnection and HVDC charges of approximately $740M pa.<br><br>This leads us to the conclusion that any changes to the present TPM as a result of addressing the problems described in this working paper should be incremental rather than transformational. |
| Question 4: To supplement information already provided by Transpower, do you have any comments on the steps taken by Transpower or by other parties after approval of the NAaN, NIGU, and other investments such as the LSI Reliability Upgrade investments, to review whether it might have been efficient to | No. |

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| postpone elements of them? | |
| Question 5: To what extent do current interconnection charges promote efficient timing of investments? Please explain your response. | |
| Question 6: To what extent do you consider participant support for transmission investments takes into account the cost implications for them and for other parties? To what extent do you consider the efforts made by participants to provide relevant information on transmission investments take into account the cost implications for them and for other parties? | Transmission investments such as NIGUP are inherently technically complex, and rely on complex load projections and so are not easy for even technically minded consumers to assess and comment on in a credible manner. In addition, in many cases such consumers do not have the resources necessary to carry out such work.<br><br>To overcome resource constraints we work collectively with other large users' through MEUG; but only where we can make a difference or important precedents for interpreting the regulatory decision making regime are being set. In cases where the problem is the regulatory regime we and MEUG do not participate in individual regulatory investment decisions rather we use our resources to improve the regime.<br><br>The existing TPM already provides pricing signals, albeit mostly in a negative context. I.e. At present we can pay for something we get little or no benefit from.<br><br>We consider that any further strengthening/focussing of pricing signals is unlikely in our case to lead to more useful scrutiny and comment on future possible investment in the overall transmission system than we do at present. |
| Question 7: Do you agree that the Kawerau investment proposal described is an example of an inefficient investment resulting from the TPM? Please explain your answer. | See the Norske Skog submission response to questions 7 and 8. We agree with their comments and conclusion. CHHPP has load and embedded generation at the Tasman Pulp & Paper Mill site, and as we were impacted at times until the larger 250MVA 220/110KV transformer was installed, we took an interest in this issue and its outcome. |
| Question 8: Do you consider that current TPM can incentivise parties to prefer interconnection assets over connection assets or building and owning their own assets (by which they will be required to pay a higher portion of transmission costs)? Please explain your answer and provide any examples you may have. | For the reasons noted above, we do not agree that the Kawerau "example" provides any evidence that the TPM is inadequate in this respect. |
| Question 9: Do you agree that the TPM can materially impact investment efficiency? Please explain why or why not. | We do agree that investment decisions and their timing can have a material impact on overall transmission charges. However, the principle investment decision approval process is via the Commerce Commission and so we consider that the TPM at best could only have a secondary impact on investment decisions. |
| Question 10: Do you agree that cross-subsidisation of TPM costs between consumers is an important consideration when considering the durability of TPM charges? | Cross subsidisation of TPM costs, in particular interconnection charges is a consideration when considering TPM charges durability. However, given the diverse nature of the transmission system, elimination of cross subsidisation seems to be a very unlikely outcome for any changes to the TPM. |
| Question 11: Do you consider that the | In general, it appears to us that the present form of the TPM is |

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| current TPM is durable? Why or why not? | durable, if only because it is relatively easily understood.<br><br>However, that does not imply that improvements should not be made in response to changing circumstances that are evident to all. |
| Question 12: Do you agree that the examples provided above are examples of a durability problem? Please explain your response. | |
| Question 13: If you consider there to be a durability problem, do you know of any further examples of durability problems with the TPM? If so, please describe. Please also estimate the costs that you have incurred in relation to submissions on the TPM for as far in the past as you are able to provide (i.e. in relation to current and previous TPMs). | |
| Question 14: Do you agree that durability is a particularly difficult problem to measure? Please explain why or why not. Are you aware of an appropriate methodology for measuring durability? If so, please provide details of that methodology. | |
| Question 15: Do you consider that the RCPD allocation provides an efficient signal of the need for load shedding at coincident peak times? Do you agree with the Authority's estimate of the possible efficiency effects? | In principle, we consider that the RCPD allocation provides an efficient signal for the need for load shedding and also assists with allocating transmission costs according to the use consumers make of the transmission system.<br><br>It reduces cross subsidisation of those consumers who have a "peaky"load profile (who in many cases will trigger the requirement for inefficient grid augmentation) by those consumers who have a flat load profile and so make efficient use of the transmission system.<br><br>We consider that the major inefficiency of the present RCPD signal is that a large proportion of consumers do not see the signal and this has had a major negative impact on previous grid investment needs and may well continue to do so in the future.<br><br>Please note that CHHPP does respond to peaks at its Kraft Pulp and Paper mills in the central NI , but only to the extent that no material costs are incurred. I.e. for example log chipping is often stopped at potential peak periods where chip inventories allow continuing production in the pulpmills. |
| Question 16: Do you agree that the interconnection charge may over-signal the need for overall reductions in consumption? Do you agree with the Authority's estimates of inefficiency? Which of the four scenarios, if any, do you consider the most plausible? Please explain your answer. | |

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| Question 17: Do you agree that the interconnection charge may over-signal the cost of increasing Tiwai smelter production in summer? Do you agree with the Authority's inefficiency assessments? Please explain why or why not. | |
| Question 18: Do you agree that the interconnection charge and ACOT payments may over-signal the value of embedded generation? Please explain your answer. | |
| Question 19: Do you agree with the Authority's assessment that, although the interconnection charge may over-signal the value of generation to direct-connect consumers, any resulting efficiency loss is likely to be relatively small? Please explain your answer. | Both of our Kraft pulpmills have cogeneration plants which at present supply a little under 50% of our mill electricity needs as well as process steam and they are fully integrated with the overall operation. These cogeneration plants are fully embedded in the pulpmills themselves. We therefore consider that our pulpmills present themselves to the transmission system as a net load<br><br>These cogeneration plants run continuously as long as the Kraft pulpmills are in operation and their purpose is to offset the electricity usage in the mills. They have inherently high energy efficiency as all exhaust heat is used in the pulping and drying process.<br><br>Since the mills present themselves to the transmission system as a fully integrated net load, we consider that the present interconnection charge methodology provides the appropriate transmission charge signal. |
| Question 20: Do you agree that the HAMI allocation may incentivise SI generators to withhold existing capacity? Do you agree with the Authority's estimate of inefficiency? Please explain your answer. | |
| Question 21: Do you agree that the HAMI allocation may discourage upgrades to SI generation capacity? Do you think this is a material problem? Please explain your answer. | |
| Question 22: Do you agree that the HVDC charge may discourage investment in SI grid-connected generation? Do you agree with the Authority's inefficiency estimate? Please explain your answer. | |
| Question 23: Do you agree that the HVDC charge may bring forward the need for upper SI transmission investment? Do you agree with the Authority's estimate of inefficiency? Please explain your answer. | |
| Question 24: Do you agree with the | |

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| Authority's view on prudent discount policy? Do you agree with Transpower's view that a PDP for notional generation is not practically achievable because of the difficulties in valuing notional disconnection? Please explain your answer. | |
| Question 25: Do you consider that there are any other material problems with the TPM (in particular, the HVDC charge, interconnection charge, and the prudent discount policy) that the Authority has not considered in this paper? If so, please provide details. | |