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authoritative analysis

Benchmark agreement and interconnection rules

Report to MEUG

17 April 2007

Preface

The New Zealand Institute of Economic Research (NZIER) is a specialist consulting firm that uses applied economic research and analysis to provide a wide range of strategic advice to clients in the public and private sectors, throughout New Zealand and Australia and further afield.

NZIER is also known for its long-established *Quarterly Survey of Business Opinion* and *Quarterly Predictions*.

NZIER was established in 1958.

Authorship

This report has been prepared at NZIER by Johannah Branson and Brent Layton.

8 Halswell St, Thorndon

P O Box 3479, Wellington

Tel: +64 4 472 1880

Fax: +64 4 472 1211

econ@nzier.org.nz

www.nzier.org.nz

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1. Purpose

Part F of the Electricity Governance Rules 2003 (the Rules) requires the Electricity Commission (the Commission) to develop benchmark agreements for connection to and use of the transmission grid.

In May and June 2006, the Commission released consultation papers on its proposals for the benchmark agreement and interconnection rules. After initial consideration of submissions, the Commission also invited cross-submissions.

The Commission released a summary of submissions and its provisional response in December 2006. The Commission revised some of its proposals as a result of the submissions it received and the further analysis it undertook. The Commission also held a conference of interested parties in February 2007.

On 19 March 2007, the Commission invited interested parties to make comments on the drafting of a set of recommendations to be made to the Minister of Energy on the draft benchmark agreement, the interconnection rules, proposed amendments to Part F of the Electricity Governance Rules (the Rules) and new definitions for Part A of the Rules[1]. On 23 March 2007, the Commission published additional drafting changes to the proposed benchmark agreement and interconnection rules with regard to economic investments and service levels for the reporting and response service measures[2]. The Commission is now seeking drafting comments on the final form of the benchmark agreement recommendations to ensure that the elements of the benchmark agreement accurately reflect the proposals. Drafting comments are required by noon 18 April 2007.

The Major Electricity Users Group (MEUG) previously commissioned NZIER to provide analysis of the Commission's benchmark agreement and interconnection rules proposals (the original proposals of May and June 2006)[3], and subsequently on other parties submissions on these proposals[4] and a presentation to the conference in February 2007[5]. MEUG has now

[1] Electricity Commission (2007) *Benchmark Agreement and Interconnection Rules – Cover paper for Drafting Comments*, 19 March 2007, and appendices A to E, www.electricitycommission.govt.nz/consultation/draftingcomments/view

[2] Electricity Commission (2007) *Minor Drafting Changes to the Draft Benchmark Agreement and Draft Interconnection Rules*, 23 March 2007, www.electricitycommission.govt.nz/consultation/draftingcomments/view

[3] NZIER (2006) *Benchmark Agreements and Interconnections Rules – The Electricity Commission's Consultation Documents*, report to MEUG, July 2006.

[4] NZIER (2006) *The Benchmark Agreement and Interconnection Rules Papers – Invitation for Cross-Submissions*, report to MEUG, 27 September 2006.

[5] NZIER (2007) *Draft Benchmark Agreement & Interconnection Rules*, presentation to the Electricity Commission Conference, February 2007, www.electricitycommission.govt.nz/pdfs/opdev/transmis/BA/NZIER.pdf

commissioned NZIER to provide advice on the conceptual and design aspects of the Commission's revised proposal as contained in the documents released in March 2007. This report presents our advice.

2. Original proposals

In our earlier analyses, we supported many but not all of the Commission's original benchmark agreement and interconnection rules proposals. In particular, we:

- cautioned against making statements that might be interpreted as suggesting that the HVDC link is an interconnection-type asset
- rejected the Commission's reasons for concluding that interconnection asset services should be dealt with in the Rules
- argued that interconnection asset services should be covered by the benchmark agreement
- argued that the Commission has made a fundamental mistake in defining which parties should be designated transmission customers and hence counterparties to transmission agreements – we consider that retailers should also be included among the designated transmission customers
- argued that the Commission should introduce a market measure that relates to the economic impact of outages to consumers
- rejected the Commission's reasons for considering that it is not reasonably practicable to enforce reliability and availability measures
- argued that the proposed compensation and liability measures for inclusion in benchmark agreements were of very limited practical use to Transpower's counterparties
- urged the adoption of the universal service guarantee approach to compensation and liability
- argued that the Commission's proposals in relation to the grid reliability standards and connection assets are a tumble down the slippery slope to the effective implementation of N-1 as the grid reliability standard for all grid exit points and the elimination of economic rationality in investment decision making relating to the transmission grid
- rejected the Commission's proposals for changing the Rules to cater for new and upgraded connections and
- argued that the optimal change to the Rules to deal with new and upgraded connections is to introduce a provision that precludes Transpower from objecting to any other party connecting to its assets, except on technical grounds, and provides for an appeal to the Rulings Panel against any technical objections raised by Transpower.

3. Revised proposals

The Commission has since changed or clarified some of its proposals as a result of the consultation process, the Commission's subsequent consideration of the proposals and the feedback received.

In advising on the final form of the benchmark agreement recommendations, we also draw on the Commission's provisional response to submissions[6] and draft final decision on the benchmark agreement and interconnection rules[7].

Our assessment of whether the Commission's revised proposals have adequately addressed our concerns about its original proposals is presented below. Our comments, by clause, are summarised in Appendix A.

Concern: cautioned against making statements that might be interpreted as suggesting that the HVDC link is an interconnection-type asset

The Commission's original proposal that the HVDC link be treated as an interconnection asset remains unchanged, except for a drafting change to the proposed definition of interconnection assets to expressly include the HVDC link.

We reiterate that the proposal to treat the HVDC link as an interconnection asset for the purpose of the interconnection rules risks providing ammunition to parties pressing for charges for the HVDC link under the transmission pricing methodology to be postage stamp as they are for other interconnection assets.

The submissions received by the Commission and the presentations at the conference fully justified our concern that parties seeking to review the charging regime for the HVDC link would seize upon the proposed treatment of the HVDC link as an interconnection asset. In our view, the Commission's decision to revise its proposal so as to explicitly include the HVDC link in the definition of interconnection assets compounds the risk that parties wishing to have the HVDC link charges spread among all users will use its treatment in this context as evidence that the HVDC link is essentially an interconnection asset.

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[6] Electricity Commission (2006) *Summary of Submissions and Provisional Response to: Submissions on the Draft Benchmark Agreement and Draft Interconnection Rules*, 14 December 2006, www.electricitycommission.govt.nz/pdfs/opdev/transmis/BA/Sub-summary-draft-BA-14Dec06.pdf

[7] Electricity Commission (2007) *Draft Final Decision Paper for the Benchmark Agreement and Interconnection Rules*, 23 March 2007, www.electricitycommission.govt.nz/pdfs/opdev/transmis/BA/Sub-summary-draft-BA-14Dec06.pdf

We continue to caution against any statements or arrangements that could be interpreted as suggesting parallels between the HVDC link and interconnection assets.

Concern: rejected the Commission's reasons for concluding that interconnection asset services should be dealt with in the Rules and argued that interconnection asset services should be covered by the benchmark agreement

The Commission's original proposal that interconnection asset services and the outage protocol be directly regulated under the Rules, rather than in the benchmark agreement, remains unchanged.

We demonstrated in previous analysis that the Commission's original reasons for interconnection asset services being dealt with in the Rules do not withstand scrutiny. The use of the Rules for initiating changes and dealing with delivery failures for these services has the major drawback of breaking the relationship between Transpower and its customers. Transpower will inevitably come to see the Commission as its only customer for these services, which will remove the real customers from any opportunity to shape these services in a dynamic sense and hold Transpower accountable for its performance.

We do not accept the Commission's concern that our proposal regarding setting service levels for interconnection assets would require multilateral agreement and would result in many disputes coming before the Rulings Panel. What we propose is that the initial service levels should be based on actual historical levels of service, such that their determination should be largely a factual process. There should be few disputes and those that occur should be reasonably readily resolved by reference to the facts.

Nor do we accept the Commission's concern that our proposal to allow the parties to try to agree changes in service levels before any steps are made to impose them would require payments to be linked to services, whilst the currently proposed transmission pricing methodology does not do this. Under what we suggest, changing service levels would require either agreement between the parties or a dispute resolution procedure. We see no reason why the dispute resolution procedure could not be modelled on the cost-benefit analysis approach the Commission is currently proposing. The "novel" feature of our proposal is providing the opportunity for Transpower and its counterparties to agree on service level changes before a more centralised process is adopted if no agreement can be reached.

Concern: argued that the Commission has made a fundamental mistake in defining which parties should be designated transmission customers and hence counterparties to transmission agreements – we consider that

retailers should also be included among the designated transmission customers

The Commission's proposal that the appropriate categories of participants to be designated as counterparties, required to enter into transmission agreements with Transpower, are generators, distributors and directly connected customers remains unchanged.

We consider that retailers should also be designated transmission customers, along with direct-connect customers, generators and lines companies. Retailers compete for the business of end-consumers, whilst line companies have an effective monopoly and, under the current regulatory regime as specified under Part 4A of the Commerce Act 1986, have the right to pass-through any transmission charges to their customers. Retailers are therefore likely to be better agents of end-consumers in representing those aspects of the services provided by Transpower that are important to consumers.

In addition, retailers are likely to be more interested in and informed about many aspects of Transpower's services than line companies, especially line companies protected by the right to pass-through all transmission costs to their clients. Examples of aspects of service likely to be of more interest to retailers are:

- the frequency and duration of unplanned outages
- the flow of information about restoration times, etc. when unplanned outages occur
- the timing and level of notice given for planned outages
- the level of surplus capacity available in an area to connect new load or cater for the growth in load requirements from existing customers
- the absence of transmission constraints in a region, and hence its vulnerability to price spikes and uncompetitive offering by generators as a result of constraints reducing effective competition for the provision of energy in the region

The Commission argues that, by putting interconnection asset services in the Rules, retailers will have a vehicle to raise concerns about services. The basis on which they will be able to raise concerns, however, is as just another market participant with a suggestion to change the Rules or by laying a complaint that an existing rule is being breached. This is not a substitute for being able to pursue a change in service arrangements or a breach of service delivery unilaterally.

The Commission argues that, for connection services, retailers should engage with distributors and it would be inefficient and impractical for Transpower to contract with multiple parties. Distributors are monopoly providers and there is no lever available to retailers to induce distributors to take up their concerns and those of their customers. Undoubtedly some, like

Orion, will do so out of goodwill to consumers and because they are directly or indirectly "owned" by consumers, but others will not.

A policy that requires consumers to depend on the goodwill of disinterested third parties with monopoly positions to ensure that their service requirements and interests are adequately represented to another monopoly provider which is in turn guaranteed revenue security irrespective of whether or not it performs is very likely to be a disaster for consumers. It is also likely to be inefficient as consumers and retailers waste resources trying to get a line company with no real motivation to deal with Transpower over any failings and inadequacies it may have.

Nor is it impractical for one party to contract with multiple parties over the delivery of a service. Such contracts are commonplace. The many residents of Auckland City have contracts with Vector over delivery of service, not all of which specify the same service levels. There are no obvious difficulties. We have a contract with Vodafone to provide us with mobile phone services. The contract specifies service levels in a number of respects. Many other parties also have contracts with Vodafone, which specify service levels, most of which are unlikely to be identical to ours. Our contract is tailored to our needs. This does not cause any impractical problems for Vodafone, Vodafone's other customers or us. All Vodafone need do is ensure that its commitments to counterparties are not mutually inconsistent and that it is able to deliver each level of service it contracts to provide.

Concern: argued that the Commission should introduce a market measure that relates to the economic impact of outages to consumers

The Commission's original proposals included a range of capacity, availability, reliability and customer service measures. The proposed reliability measures included planned and unplanned reliability, measured in terms of the number of supply interruptions per annum due to outages of connection assets and the amount of unserved energy. In its revised proposals, the Commission has made some changes to the proposed service measures, but has not adopted a measure that reflects the economic impact of outages.

The Commission previously considered but discounted introducing measures of how outages in the transmission system affect the cost of delivered electricity for connection and interconnection services, on grounds that such measures are not reasonably practicable at this time and much of the necessary information is already available from market information providers. Given the importance to consumers of the economic impacts of outages, we consider the decision not to progress such measures at this time unfortunate. Although it may not be easy to obtain precise answers on what prices would have been in the absence of the outage, estimates based on what prices were on average in previous and subsequent days without the

outage are likely to be adequate for most purposes and not too difficult or costly to implement.

Concern: rejected the Commission's reasons for considering that it is not reasonably practicable to enforce reliability and availability measures

The Commission has not altered its proposal that reliability and availability measures be for information only and not require Transpower to meet set levels of reliability and availability. The Commission considers that reliability and availability measures should not be enforceable due to the very low probability of failure of transmission assets and the difficulty of identifying whether a failure was within Transpower's control. In its revised proposals, the Commission does, however, indicate that it intends to review the enforceability of these measures within two years of the April 2008 implementation of the benchmark agreement.

We endorse such a review. We consider the Commission's reasoning that such measures cannot be enforced to be flawed in assuming that only failures that Transpower could have avoided should be counted as breaches. In our previous analysis, we identified the alternative approach of an unconditional service guarantee. This focuses more on whether than why a failure occurs, which is the most effective way to ensure that the provider does all that is practical to eliminate failures irrespective of cause and who is at fault.

We are also concerned about the Commission's reasoning around low probability of failure. Low probability events can and do happen and they can have major consequences for consumers. It is important that Transpower is incentivised to avoid such events when it is efficient to do so.

Furthermore, without enforceability of, and sanction for failing, reliability and availability measures, there is also a risk of perverse incentives for Transpower to have recurrent reliability and availability problems to boost its chances of investment approval; it would suffer no direct penalty for failing these measures, but could use these failures to justify more investment. Penalties for breaches of reliability and availability measures are important for the Commission to preserve the integrity of the investment decision making process.

Concern: argued that the proposed compensation and liability measures for inclusion in benchmark agreements were of very limited practical use to Transpower's counterparties

The Commission originally proposed that liability under the benchmark agreement generally be limited to direct costs. It proposed that liability under the outage protocol and interconnection rules be consistent with normal rule breach processes. These proposals remain unchanged, except for the addition of the proposal that Transpower indemnify counterparties

for any potential losses arising from outages caused by Transpower Assets under the Consumer Guarantees Act 1992.

In our previous analysis, we demonstrated the original proposals to be of very limited practical benefit to Transpower's counterparties, given that the proposed service measures do not have enforceable, meaningful and/or consequential service levels for measuring and attributing the costs of breaches. The addition of the requirement on Transpower relating to the Consumer Guarantees Act 1992 will provide some practical benefit to Transpower's counterparties but only in the circumstances where the Consumer Guarantees Act applies. The Act only applies to household consumers and not to firms or organisations engaged in business.

Overall, despite this amendment, the proposed liability and compensation provisions are of limited practical use to Transpower's counterparties.

Concern: urged the adoption of the universal service guarantee approach to compensation and liability

In its proposals, the Commission considers there to be insufficient time to develop an unconditional service guarantee without delaying implementation of the benchmark agreement, although does not rule out its future use. The Commission indicates its intention to review the potential for an unconditional service guarantee following implementation of the benchmark agreement.

We reiterate that an agreement cannot be effective without enforcement and sanctions for non-performance. It is essential to develop enforceable service measures and sanctions for failure to meet required service levels before the provisions are brought into operation. We do not consider that it would take a lengthy amount of time to develop satisfactory provisions.

Concern: argued that the Commission's proposals in relation to the grid reliability standards and connection assets are a tumble down the slippery slope to the effective implementation of N-1 as the grid reliability standard for all grid exit points and the elimination of economic rationality in investment decision making relating to the transmission grid

The Commission originally proposed that Transpower be required to inform counterparties where connection assets do not meet the grid reliability standards and to develop proposals to ensure connection assets do meet the grid reliability standards. Under this proposal, counterparties would decide whether to invest and any investment would be required to be consistent with the grid reliability standards. Transpower would not be required to allow counterparties to invest on its land.

In response to submissions, the Commission amended its proposal with regard to connection assets so that counterparties would decide whether to

invest and any investment would be required to be consistent with the grid reliability standards. Counterparties could undertake investment themselves, subject to obtaining Transpower's consent to enter its land. Transpower would not be able to submit an investment where it could not agree on an investment with a counterparty. The Commission would still be able to request submission of a grid upgrade plan. Counterparties would be entitled to specify their value of lost load, subject to a reasonableness requirement.

In its revised proposals, the Commission has made further amendments. An alternative value of lost load would not be specified by the customer subject to a reasonableness test but proposed by the customer. If the Commission did not consider the proposed value reasonable, the standard value under the rules would have to be used. For shared connection assets, Transpower would be able to ask the Commission to request it to submit a grid upgrade plan in the event that the connected parties could not agree among themselves or that the counterparties did not agree with Transpower.

The first of the adjustments in the revised proposals appears to us to make little practical difference. There is little difference between the customer choosing the value of lost load subject to a reasonableness test conducted by the Commission and the customer proposing a value which will be accepted by the Commission if reasonable.

Transpower having the right to ask the Commission to request a grid upgrade plan does not mean the Commission will agree to do so or will agree to the grid upgrade plan investment. The change does, however, open an alternative avenue for Transpower to get investments in connection assets approved even when customers do not want them. This might be justifiable when there is more than one customer using the connection asset and they do not agree. We can think of no reason why, however, the Commission considers it should decide what connection assets joint customer should or should not use and pay for when they both do not agree with Transpower. This change in the proposal is unwarranted and undesirable.

Concern: rejected the Commission's proposals for changing the Rules to cater for new and upgraded connections

Although not proposing a rule change at this time, the Commission's proposals discuss whether an amendment to the Rules may be required to address situations where transmission customers require new connections to the grid or upgrades to existing connection assets. Following submissions, the Commission remains of the view that there is sufficient support for regulation of new connections to justify further work on this issue and indicates its intention to consider this need following implementation of the benchmark agreement.

In the meantime, the Commission's proposal notes two options for dealing with new and upgraded connections. The first entails requiring Transpower and the counterparty to negotiate in good faith, with outstanding matters to be dealt with by the Rulings Panel. The second involves incorporating into the Rules provisions covering the enquiry and application process for parties wanting new connections to the grid (putting them in the benchmark agreement would not cover the case when a party needs a connection prior to having an agreement).

We consider that the second option would not fully overcome the problem as being able to enquire and apply would provide no assurance that Transpower would not use its monopoly position. As we have stated previously, our view is that the most straightforward remedy is to address the cause of the problem – Transpower has a monopoly. As a result of considering the submissions and cross-submissions of other parties, we accept why the Commission has not followed through with its initial proposal to require Transpower to provide access to other parties to its land.

We are disappointed that the Commission has not picked up our suggestion that if Transpower were to refuse access to its land, what it is able to charge the connection customer should be capped by the lowest alternative price available to the customer, provided the price is *bona fide*. As the proposal stands currently, Transpower would be able to use "reasons" such as staff safety, the need to control who has access to its own assets, etc., to block customers using alternative providers. Transpower would in effect be able to extract monopoly returns from its customers by denying them the opportunity to have connection assets provided by alternative parties.

4. Conclusions

In conclusion, the Commission's revised proposals do little to allay our concerns about its original proposals. The Commission must be sure that the objectives and consequences of its proposals are correct before it progresses to determining precisely how to word the benchmark agreement and interconnection rules to achieve the intended outcomes.

We believe that the Commission is passing up a very significant opportunity to reshape and improve the relationship between Transpower and its customers and consumers. As a monopoly, Transpower is under no pressure to fulfil its customers' needs and objectives; they have no alternative provider to turn to if dissatisfied. The proposed regulatory regime fails to create a situation in which Transpower is incentivised to consider the wishes and interests of the consumers of its services despite being a monopoly. It could have achieved this very easily. The Commission has turned its back on a significant opportunity.

Even worse, the failure of the Commission to have retailers among the designated transmission customers has left end-consumers in the invidious

position of depending on the goodwill of disinterested third parties with monopoly positions to ensure that their service requirements and interests are adequately represented to another monopoly provider which is in turn guaranteed revenue security irrespective of whether or not it performs. We believe this situation is very likely to produce a failure with respect to consumer service levels.

Appendix A Summary of comments

A.1 Benchmark agreement drafting comments

Clause	Comment	Recommendation
All	We reject the Commission's reasons for concluding that interconnection asset services should be dealt with in the Rules. See discussion above.	We recommend that interconnection asset services should be covered by the benchmark agreement. See discussion above.
20	We consider the proposed compensation and liability measures likely to be of very limited practical use to Transpower's counterparties. See discussion above.	We recommend the adoption of the unconditional service guarantee approach to compensation and liability. See discussion above.
36 and Schedule 5		We recommend that service standards include a market measure that relates to the economic impact of outages to customers. See discussion above.
36.2 and Schedule 5		We recommend that service levels are set for availability and reliability service measures, which are enforced and subject to sanctions if not met. See discussion above.

A.2 Interconnection rules and Outage Protocol rules

Clause	Comment	Recommendation
All	We reject the Commission's reasons for concluding that interconnection asset services should be dealt with in the Rules. See discussion above.	We recommend that interconnection asset services should be covered by the benchmark agreement. See discussion above.

A.3 Changes to sections I, II, III and IV of part F of the Rules

Clause	Comment	Recommendation
1.5	We reject the Commission's reasons for concluding that interconnection asset services should be dealt with in the Rules. See discussion above.	We recommend that interconnection asset services should be covered by the benchmark agreement. See discussion above.
Schedule F1		We recommend that retailers should be included among the designated transmission customers. See discussion above.
Future	We suggest the Commission for change the Rules catering for new and upgraded connections.	We recommend changing the Rules to deal with new and upgraded connections by introducing a provision that, if Transpower, objects to other parties having access to its land, then the charges it is able to levy a connection customer are capped by the amount proposed to be charged by an alternative provider, provided the offer was bona fide.

A.4 Related changes to the definitions of part A of the Rules

Clause	Comment	Recommendation
Page 1, definition of interconnection asset	We caution against statements that might be interpreted as suggesting that the HVDC link is an interconnection-type asset. See discussion above.	