



Vector Limited
101 Carlton Gore Road
PO Box 99882, Newmarket
Auckland 1149,
New Zealand
www.vector.co.nz
Corporate Telephone
+64-9-978 7788
Corporate Facsimile
+64-9-978 7799

Matthew Lewer
Regulation Branch
Commerce Commission
Wellington

Sent by email to: regulation.branch@comcom.govt.nz

21 September 2011

Submission on Electricity Volume Projections

1. Vector welcomes the opportunity to provide this submission on the Commerce Commission's ("Commission") *Reset of 2010-15 Default Price-Quality Path for Electricity Distribution Businesses: Consultation Paper on Electricity Volume Projections*, dated 15 September 2011. No part of this submission is confidential.
2. Vector's contact person for this submission is:

Allan Carvell
Group General Manager Regulation and Pricing
DDI: 09 978 8340
Email: allan.carvell@vector.co.nz
3. Vector welcomes the Commission's willingness to consider and consult on alternative approaches to aspects of its price reset. However, we are concerned that the timeframe for this consultation is extremely tight and this new proposal has emerged very late in the process of making decisions on starting price adjustments for electricity distribution businesses ("EDBs"). It is clear that different forecast approaches have a material impact on EDBs. The Commission should place a high hurdle on using model inputs that emerge at a late stage with limited scope for consultation since this significantly increases the risk that the inputs will be unsuitable for the purpose of setting starting price adjustments.

Transpower's energy demand forecast

4. Having considered the Commission's consultation and the Transpower forecasts, Vector does not support the use of Transpower's energy demand

forecast as an input to the Commission's starting price adjustment model, on the following grounds:

- a) The forecast is not well suited for starting price adjustment purposes.
- b) The forecast is materially inconsistent with actual volume growth observed so far in the 2011 calendar year.
- c) The forecast change in volumes between the 2010 and 2011 calendar years is implausible as a single year's growth rate.

In the following paragraphs we explain each of these points further.

Not well suited for starting price adjustment purposes

5. Vector has reviewed Transpower's consultation paper on the demand forecasts.¹ We make the following observations:
 - a) Transpower's forecasts are a product of a new forecasting regime. As Transpower advise, in recent years they have not developed their own forecasts but instead relied upon the demand forecast from the Electricity Commission's Statement of Opportunities.² This year is the first time their new forecasting methodology has been developed and consulted on. As a result the forecasts have no track record (of how well they predicted the actual trends) against which they can be judged.
 - b) Transpower have used a number of forecasting techniques to derive a range of probable outcomes. They state that "it is not useful to seek a single "most accurate" point estimate. It is more important to describe the range of plausible outcomes, and to take this range into account when assessing investment needs."³
 - c) Transpower's main focus is, understandably, on the development of peak demand forecasts. They have developed energy demand forecasts but only because these "are also required for long term grid modelling".⁴ Transpower has written to the Commission advising that their forecasting process was not intended to provide accurate forecasts of regional demand over a 1-2 year period, but instead to project national and regional peaks over a 5-10 year period.⁵
 - d) While Transpower has consulted on their demand forecasts, only one page (page 37) in their 55 page consultation document focused specifically on

¹ Transpower, *Draft Demand Forecast*, May 2011.

² *ibid*, page 3.

³ *ibid*, page 5.

⁴ *ibid*, page 5.

⁵ Email from Brian Bull to Tobias Maugg of 19 September 2011.

the energy demand forecasts. The remainder of the detail was either generic between the two or focused on peak demand forecasts.

e) Vector provided some comments on Transpower's forecasts in response to their consultation, but these were focused on the peak demand forecasts as these are of most importance to Vector's grid planners. Transpower's energy demand forecasts were seen as less relevant for the purpose so we did not provide comments on these forecasts during Transpower's consultation.

6. In summary, Transpower's energy demand forecasts are new and untested. They were derived for a long-term grid modelling purpose, not a short-term revenue-related purpose. To Transpower, the energy demand forecasts are secondary to the more important (for their purposes) peak demand forecasts. The forecasts were developed with potentially limited input from the industry and on the basis of a series of techniques that provide a range of potential outcomes – the mean point estimate of these is, as Transpower says, not useful. These factors all suggest the energy forecast is not well suited for the purpose of informing 2010-2015 starting price adjustment decisions.

Inconsistent with observed results in 2011 calendar year

7. Transpower's forecast predicts energy usage in the North Isthmus region will grow by 7.61% between the 2010 calendar year and the 2011 calendar year. The forecast also predicts that energy usage in the Auckland region will grow by 9.03% between the 2010 calendar year and the 2011 calendar year.
8. As of the due date of this submission, we are slightly more than 8.5 months into the 2011 calendar year and have gone through the winter period where usage is greatest. Accordingly it is possible to compare the Transpower forecast to actual experience in the 2011 calendar year thus far. Vector's volume growth rates between January and August 2011 and the equivalent period in 2010 is set out in the table below.

Energy throughput growth rate between Jan-Aug 2010 and Jan-Aug 2011	
Vector's Auckland network	1.48%
Vector's Northern network	1.07%

9. We recognise that Vector's network boundaries do not match the regional boundaries used in the Transpower forecast and that the 2011 calendar year is not yet complete. However, Vector is supplied by five of the 12 GXPs in Transpower's North Isthmus region and by seven of the 10 GXPs in Transpower's Auckland region. Vector's growth rates are likely to strongly influence the growth rates in both regions.

10. For Transpower's forecast of energy growth for the 2011 calendar year to be accurate, there would need to be extremely high growth in the remaining quarter of 2011. Alternatively the energy growth rates in the non-Vector parts of Auckland and North Isthmus regions would need to be dramatically higher than energy growth rates within Vector's network. Neither of these explanations is likely to be accurate.
11. As a result, Transpower's energy growth forecast for the 2011 calendar year is inconsistent with observed actual energy growth. We therefore do not believe the Commission should rely on it as a forecast for this year.

Forecast change between 2010 and 2011 is not credible

12. Transpower's forecasts include energy growth rates of, in some cases, more than 10% between the 2010 and 2011 calendar years and 7.6-9% in Vector's regions. Annual growth rates of this magnitude are implausible. As noted above, it is inconsistent with observed growth rates on Vector's network in 2011. We have also reviewed past information disclosures and attempted to identify any cases in recent years where growth rates on Vector's network have reached this level in recent years (noting that pre-2008 Vector's growth rates included growth on the Wellington network). The results are summarised in the table below.

Year	Electricity supplied (GWh)⁶	Energy volume growth from previous year
2005	10,243	Not applicable
2006	10,289	0.45%
2007	10,696	3.96%
2008	11,078	3.57%
2009	8,485	Not applicable
2010	8,576	1.07%
2011	8,589	0.16%

13. As show in the table, annual volume growth rates did not exceed 4% in the regulatory years 2006-2008 and 2010-2011 (i.e. the years excluding those in which United Networks Ltd was purchased and the Wellington network was sold). There is no precedent for annual energy growth of ~7.6-9%.

⁶ Source: Vector Ltd. Electricity Distribution Information for Disclosures.

14. The Commission's statement that changes of up to 10% "are not unexpected" is therefore not supported by any information we are aware of. Vector spends some time and effort forecasting volume growth on our network and at no stage do we expect a 7.6-9% increase in throughput volume in a single year – such an increase is not realistic.
15. It also seems likely that the single annual jump in forecast growth between 2010 and 2011 calendar years is being forecast because Transpower, as grid planner, is seeking to tie growth rates to an underlying long-term trend. Because of recent events such as weather conditions and the economic downturn, energy growth has been suppressed below that trend for a time. Transpower expects the growth rates to recover to the long-term trend.
16. In our view, it is possible that this rebound may occur in the longer-term. However, current world events suggest that the economic recovery is fragile at best. Given the clear impact the Global Financial Crisis has had on consumption, a view that throughput may grow at the rates in the Transpower forecasts for the 2011 calendar year is heroic. The prospect of this level of growth being spread over the next few years (through to the end of the regulatory period) also seems to be highly unlikely. It is at least as plausible that a new, lower, long-term throughput growth trend will emerge as a result of the economic downturn. In any case, it is not plausible that any recovery to the pre-recession long-term trend will occur in a single year.
17. We expect that Transpower recognises that a single-year growth rate of up to 10% is not realistic, but in terms of its role as grid planner it prefers to err on the side of caution. Further, it is concerned with the long-term trend so whether the rebound to the long-term trend happens in a single year or over a number of years is of less importance to Transpower. Of course, in the context of the Commission's starting price adjustment model, whether a large amount of volume growth occurs in a single year or is spread over a series of years is extremely important and has a material impact on model outcomes. The impact is particularly strong as the 2011 calendar year falls across the 2011 and 2012 regulatory years and therefore has a strong effect on the ΔD term in the allowable notional revenue formula.

Matching regional forecasts to EDBs' areas

18. We note that the Commission intends to match the regional throughput forecasts to EDBs' areas "using weights calculated from historic [sic] GXP

level electricity volumes”.⁷ Vector has considered this proposal and the technical guidance provided by the Commission. We also found informal discussions on GXP weightings with Commission staff most helpful. However, it has been somewhat difficult to judge the usefulness of this proposal as it is unclear which time period the Commission intends to use to assess the “historic [sic] GXP level electricity volumes”.

19. Vector’s preference is for the Commission to retain its previous approach of matching EDBs to regions by means of ICP allocations in each region. While weighting by GXP volume may have some merit it has been subject to less consultation and consideration than the ICP weighting approach. This new proposal was afforded just 22 words in the Commission’s consultation paper and important details such as the time period to be used to assess historical volumes are undefined. We do not believe the GXP weighting proposal has been fully consulted on so we do not support a shift away from ICP weighting at this time.

Forecasting volume growth based on peak demand forecasts

20. In the consultation paper the Commission raises the prospect of basing volume forecasts on Transpower’s peak demand forecasts and an assessment of the relationship between peak demand and volume. We are aware that Transpower has written to the Commission suggesting this as a preferable option to the use of Transpower’s energy demand forecasts.
21. Vector agrees with the Commission that the relationship between peak demand and energy demand is insufficiently stable for use as a forecasting tool. Vector’s experience is that peak demand and energy demand trends have diverged in recent years and that changes in peak demand may be reflective of changes in peak management by EDBs, rather than underlying changes in consumer demand. We also note that a small percentage error in the peak demand forecast can have large implications for the energy forecasts.
22. There is insufficient time available to consider these matters fully. Vector therefore does not support the use of peak demand forecasts in the 2012 starting price reset.

Next steps

23. The Commission’s consultation paper has raised interesting proposals. However, they are insufficiently robust and detailed to be implemented on the basis of a single week’s consultation. For the 2012 starting price

⁷ Commerce Commission, *Reset of 2010-15 Default Price-Quality Path for Electricity Distribution Businesses: Consultation Paper on Electricity Volume Projections*, 15 September 2011, paragraph 8.

adjustment reset, Vector recommends that the Commission reverts to the proposals consulted on in its draft decisions paper, as modified following submissions (e.g. Vector's advice regarding the allocation of its ICPs among Transpower's regions).

Yours sincerely,

A handwritten signature in blue ink, appearing to read 'Allan Carvell', with a stylized flourish at the end.

Allan Carvell
Group General Manager Regulation and Pricing