



MAJOR ELECTRICITY USERS' GROUP

7 August 2012

Bryan Field
Acting Manager
Energy Information & Modelling
Ministry of Business, Innovation and Employment
By email to EDGS@med.govt.nz

Dear Bryan

Electricity Demand and Generation Scenarios

1. This is a submission by the Major Electricity Users' Group on the Ministry of Business, Innovation and Employment discussion paper "Introducing the Electricity Demand and Generation Scenarios" published July 2012¹. This submission is not confidential.
2. Responses to the questions in the consultation paper follow:

Question	MEUG response
Q1. Do you agree with the Ministry's assessment of the key EDGS assumptions?	<p>The primary purpose of the EDGS is to derive peak demand forecasts that are a key driver for major transmission investment proposed by Transpower for approval by the Commerce Commission. Peak demand forecasts are derived from the key assumptions in the demand column of figure 1. Those key assumptions or drivers of peak demand should be specified in terms of peak as well as average annual assumptions. For example relative peak prices of electricity versus peak prices for alternative fuels.</p> <p>Similarly on the supply column of figure 1 labelled Generation, the key assumptions for peak supply should be specified at periods coinciding with peak demand for transmission.</p>

¹ <http://www.med.govt.nz/sectors-industries/energy/pdf-docs-library/energy-data-and-modelling/modelling/EDGS/introducing-the-electricity-demand-and-generation-scenarios-discussion-paper.pdf>

Question	MEUG response
	<p>This is important for GS4 (relatively high wind and low thermal) because at peak demand if there is no wind and hydro catchments are low, then high levels of thermal will be needed as backup.</p>
<p>Q2. Do you agree with the overall demand forecasting approach for the EDGS, including the use of Transpower's ensemble model for peak demand forecasting?</p>	<p>No. Regional electricity peak demand forecasts may be affected by prices of alternatives at periods of peak electricity transmission demand. As we read it the Ministry's models include forecasts of alternative energy sources whereas Transpower's models do not. Therefore the Ministry rather than Transpower should be responsible for developing regional peak supply and demand forecasts.</p>
<p>Q3. Do you have different views than the Ministry on demand growth and assumptions?</p>	<p>None at a national level. See answer to question 2 regarding regional forecasts.</p>
<p>Q4. These scenarios reflect The Ministry's views on new generation costs and availability. Given that these scenarios will be used for transmission investment planning, do you agree that the general scenario themes cover a sufficient range of uncertainty?</p>	<p>See answer 1 above on the need to consider peak supply options.</p>
<p>Q5. Do you have any specific feedback on the proposed EDGS capital cost assumptions sourced from the PB: 2011 NZ Generation Data Update?</p>	<p>The PB report of 26th January 2012 is a very useful reference paper². There are two technologies that may become economic in the EDGS forecasting timeframes and should therefore be considered:</p> <ul style="list-style-type: none"> • Nuclear power stations; and • Electricity storage devices. <p>The latter are particularly relevant as possible lower cost options for managing peak demand than building new transmission assets.</p> <p>An \$11/MWh cost is added to the LRMC of a typical South Island wind project for HVDC charges (paragraph 75). The Ministry should provide details of how this was estimated and if allowance has been made for charges to decrease over time as the HVDC is depreciated.</p>

² <http://www.med.govt.nz/sectors-industries/energy/pdf-docs-library/energy-data-and-modelling/technical-papers/2011%20NZ%20Generation%20Data%20Update%20v006a.pdf>

Question	MEUG response
<p>Q6. In GS4, the Ministry will adjust the relative costs of wind and geothermal to favour wind. Do you agree that there is enough uncertainty between the relative costs of these technologies to make this adjustment in this generation scenario?</p>	<p>This intervention seems unwarranted and sets a poor precedent for lobbying by interested parties for arbitrary changes in future EDGS. If the economics of wind relative to geothermal change over time then future EDGS should reflect that change.</p>
<p>Q7. Do you have any views on potential geothermal resources, consentability and/or how the Ministry could model these uncertainties?</p>	<p>The proposed exemplar sampling approach is reasonable to account for resource quantity and quality uncertainty for new geothermal fields.</p> <p>The exemplar sampling approach might also be useful to distinguish between projects that are likely to be easily consented and those that may have delays and therefore added costs for consenting. For example the quality of wind resources may be firmer than geothermal but prone to RMA delays and additional costs.</p>
<p>Q8. Do you agree with the Ministry's views on gas market scenarios?</p>	<p>Recent oil shale and associated gas developments in the US and elsewhere have radically changed the outlook for petroleum prices and debunked peak oil arguments. Provided the IEA forecasts make provision for the effect shale oil then we agree with the Ministry's approach.</p>
<p>Q9. Do you agree with the Ministry's approach to carbon price assumptions?</p>	<p>Given experience with delays in achieving international agreement on climate change policy and the extremely fragile state of the international economy, the steeper carbon price paths for GS1 and GS4 from 2015 path, only 3 years from now, seem unrealistic.</p> <p>The work by the PCE on carbon pricing in paragraph 112 was published in July 2010 (report by Covec for the PCE) and, in our view, is significantly out of date and therefore not a useful reference.</p>
<p>Q10. Is there anything else the EDGS should consider in relation to existing thermal generation or coal prices?</p>	<p>No comment.</p>

Question	MEUG response
Q11. The Ministry's assessment of the likely price and demand effects is based on understanding developed through the Energy Outlook process. Have any other considerations been omitted from this discussion?	No comment.
Q12. Table 4 summarises the Ministry's proposed EDGS assumptions. When considering the assumption set as a whole, do you have any specific comments?	No comment.

3. We look forward to reading and if required commenting on the submissions of other parties.

Yours sincerely



Ralph Matthes
Executive Director