

Table 1: Response to Meridian comments

Meridian comment	Meridian proposed	Authority comment	Authority amendment
<p>The Authority states in the Executive Summary that “it is evident that with lower energy offers at Manapouri whilst spilling, it would have generated more energy, reducing spill and system dispatch costs”. Meridian considers the word “evident” to be too strong. The counterfactual used by the Authority in its analysis assumes a static wholesale market, when in reality, any change in offers by one party is likely to prompt a response from other participants.</p>	<p>Executive summary: “Increased energy offer prices from Manapouri, which reduced its output whilst spilling, in January 2013. The reduced output was a commercial response to impending transmission constraints and price separation. It is evident possible that with lower offer prices at Manapouri whilst spilling, it would have generated more energy, reducing spill and system dispatch costs. The Authority estimates that with lower energy offer prices at Manapouri over the 20 day period from 09 January 2013 to 28 January 2013 there would-could have been an 8% reduction in system dispatch costs over this period and a 0.29% reduction in the system dispatch costs over the period from 01 January 2013 to 26 May 2013.”</p>	<p>The Authority’s counterfactual analysis was based on estimating the market dispatch, using vSPD, with Manapouri offer prices set to \$0.01/MWh over the 20 days period when there was high inflow spill at the station. This resulted in an increase in output from Manapouri under the counterfactual analysis. While no changes were made to other generators in the counterfactual, it is unlikely these would have significantly affected the simulated output of Manapouri as this would imply other generators offering at around \$0.01/MWh for sustained periods over the 20 day period, which is unlikely. As such the Authority considers the use of the word “evident” as appropriate.</p> <p>The Authority does agree that the estimated impact on system dispatch costs could be affected by offer changes from participants.</p>	<p>Executive summary: “Increased energy offer prices from Manapouri, which reduced its output whilst spilling, in January 2013. The reduced output was a commercial response to impending transmission constraints and price separation. It is evident that with lower offer prices at Manapouri whilst spilling, it would have generated more energy, reducing spill and system dispatch costs. The Authority estimates that with lower energy offer prices at Manapouri over the 20 day period from 09 January 2013 to 28 January 2013 there could have been an 8% reduction in system dispatch costs over this period and a 0.29% reduction in the system dispatch costs over the period from 01 January 2013 to 26 May 2013....”</p>
<p>The report should acknowledge that Meridian made requests to the Grid Owner to postpone or cancel scheduled transmission outages in Southland to avoid the risk of binding transmission constraints. We consider it to be important context that the Grid Owner’s incentives in planning grid outages may not be well aligned to achieving an optimal market outcome.</p>	<p>Paragraph 10.4: “As part of this enquiry, we observed high energy offer prices at Manapouri resulting in reduced output during periods of spill in January 2013. Meridian has indicated that during these periods, offer prices for Manapouri took into account the transmission outages and the resulting security constraints in the Southland region, so that the dispatched generation at Manapouri was at a level where these constraints did not bind. Meridian has also indicated that, prior to these transmission outages occurring, they had contacted the Grid Owner to request that the outages be moved, in order to avoid the risk that generation from Manapouri would cause the transmission constraints to bind.”</p>	<p>The Authority has included a summary of the Meridian proposed statement and a response from the grid owner. The grid owner has indicated that change requests were received for some transmission outages and these were considered and where possible these outages were moved to reduce their impact.</p>	<p>Paragraph 10.4: “As part of this enquiry, we observed high energy offer prices at Manapouri resulting in reduced output during periods of spill in January 2013. Meridian has indicated that during these periods, offer prices for Manapouri took into account the transmission outages and the resulting security constraints in the Southland region, so that the dispatched generation at Manapouri was at a level where these constraints did not bind. Meridian has also indicated that, prior to these transmission outages occurring, they had contacted the grid owner to request that the outages be moved, in order to avoid the risk that generation from Manapouri would</p>

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			<p>cause the transmission constraints to bind. The grid owner has indicated to the Authority that when outage change requests were made these were considered and where possible outages were moved.”</p>
<p>In concluding that 7.6% of the reported spill at Manapouri for January 2013 could have been used for generation, the Authority is also concluding that 92.4% of spill occurred for high inflow reasons and could not have been avoided. Meridian suggests this be made clear in the report.</p>	<p>Paragraph 10.6: “We estimated the potential additional generation that could have been supplied from Manapouri during these periods of high inflow spill, had lower priced energy offers been provided at Manapouri. These simulations used the vSPD model with Manapouri energy offer prices set to \$0.01/MWh and included the transmission security constraints in the Southland region. This approach estimates the upper bounds of the market impact, when compared with an optimal market outcome. The simulations indicate that an additional 19GWh of energy could have been scheduled from Manapouri during the 20 days of high inflow spill at Manapouri, with the transmission security constraints in the region and South Island reserve requirements restricting further increases in its generation. This additional 19GWh represents 5.5% of Manapouri generation over the period from 09 January 2013 to 28 January 2013 and 7.6% of the reported high inflow spill at Manapouri for January 2013 (indicating that 92.4% of the spill that occurred at Manapouri in January 2013 was for high inflow reasons and could not have been avoided)...”</p>	<p>The Authority will include additional footnotes in Paragraph 10.6 which will provide additional clarification on the conclusion of its counterfactual analysis.</p>	<p>Paragraph 10.6: “We estimated the potential additional generation that could have been supplied from Manapouri during these periods of high inflow spill, had lower priced energy offers been provided at Manapouri. These simulations used the vSPD model with Manapouri energy offer prices set to \$0.01/MWh and included the transmission security constraints in the Southland region. The simulations indicate that an additional 19GWh of energy could have been scheduled from Manapouri during the 20 days of high inflow spill at Manapouri, with the transmission security constraints in the region and South Island reserve requirements restricting further increases in its generation. This additional 19GWh represents 5.5% of Manapouri generation over the period from 09 January 2013 to 28 January 2013 and 7.6% of the reported high inflow spill at Manapouri for January 2013. ...”</p> <p>Additional footnotes:</p> <p>*This approach estimates an upper bound of the market impact as other generators are assumed to adopt the same offers.</p> <p>+This analysis indicates that during this period, the remaining 92.4% of high inflow spill at Manapouri could have occurred even with all its energy offers priced at \$0.01/MWh.</p>

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<p>We note that any spill at Manapouri in January did not impact on the subsequent storage available at Manapouri during the period of high prices in February and March. Available hydro storage in February would have been the same regardless of whether water was spilled or used for generation in January. Meridian considers this is a critical conclusion that is not covered in the EA's analysis. Excluding this conclusion risks creating an implied link between spill at Manapouri and high prices in February and March (particularly given the title of the report). Meridian asks that the EA expressly note in its report that spill at Manapouri in January was not causative of high prices during February and March.</p>	<p>Executive summary: "Increased energy offer prices from Manapouri, which reduced its output whilst spilling, in January 2013. The reduced output was a commercial response to impending transmission constraints and price separation. It is evident possible that with lower offer prices at Manapouri whilst spilling, it would have generated more energy, reducing spill and system dispatch costs. The Authority estimates that with lower energy offer prices at Manapouri over the 20 day period from 09 January 2013 to 28 January 2013 there would could have been an 8% reduction in system dispatch costs over this period and a 0.29% reduction in the system dispatch costs over the period from 01 January 2013 to 26 May 2013. It is important to note that regardless of whether water was spilled or used for generation at Manapouri in January, the impact on hydro storage at Manapouri would have been the same. As such, spill at Manapouri in January was not causative of the high market prices in February and March that are the main subject of this report."</p>	<p>The Authority's analysis does not draw a causal link between the spill at Manapouri in January 2013 and the period of high wholesale electricity prices in February and March 2013.</p>	<p>Executive summary: "Increased energy offer prices from Manapouri, which reduced its output whilst spilling, in January 2013. The reduced output was a commercial response to impending transmission constraints and price separation. It is evident that with lower offer prices at Manapouri whilst spilling, it would have generated more energy, reducing spill and system dispatch costs. The Authority estimates that with lower energy offer prices at Manapouri over the 20 day period from 09 January 2013 to 28 January 2013 there could have been an 8% reduction in system dispatch costs over this period and a 0.29% reduction in the system dispatch costs over the period from 01 January 2013 to 26 May 2013.</p> <p>The Authority considers that the spilled energy at Manapouri in January 2013 would not have affected Manapouri storage during the subsequent dry period and as such sees no causative effect of this spill on the high wholesale electricity prices in February and March 2013.</p>
<p>With respect to the proposed solution of an intra-island FTR, Meridian notes there is unlikely to be a sufficient quantity of appropriate FTR's available to cover the entire output of the Manapouri power station, hence some basis risk (and incentive to avoid the binding of transmission constraints) is likely to remain. We will address this issue in our submission on the Within Island Basis Risk consultation.</p>	<p>None</p>	<p>The Authority has noted in Paragraph 10.14 of its report that the introduction of intra-island FTRs would reduce these incentives but would not eliminate them.</p>	<p>None</p>

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<p>Figure 6: The EA notes that Tekapo storage has been removed from NZ controlled storage for 2013. It is unclear whether this means that Tekapo storage has been removed from both the numerator and the denominator of the “proportion of mean” calculation. We suggest Tekapo storage should only be removed from the numerator in this calculation – in undertaking a comparison of prices between years, it is clearly a relevant consideration that Tekapo storage was not available in 2013 while it was available in other years.</p>		<p>Removing Tekapo from the numerator but maintaining it in the denominator would be more representative of a situation where Tekapo storage was actually at zero in 2013 but at historic levels during the previous years. The Authority considers this as an extreme representation of the actual 2013 storage conditions. While Tekapo storage was unavailable during February and March 2013, it was at mean storage levels during this time and there was knowledge to the market of access to this storage from mid April 2013. This would imply some consideration of the Tekapo storage should be considered. To account for the variability in the impact of the storage at Tekapo in 2013, a range is provided, one where Tekapo is excluded (as per Meridian’s suggestion) and one where Tekapo is included.</p>	<p>Figure 6 and the associated text of Paragraph 3.6 and 3.7 have been updated to reflect the range of impact of Tekapo storage on the proportion of mean calculation.</p>
<p>Figure 28: We suggest that this chart include an indication of the periods when transmission outages were in place.</p>		<p>The Authority has included the transmission outages listed by Meridian in its response the Authority’s query. These being the NMA_TWI outages in January 2013.</p>	<p>Figure 28 has been updated.</p>
<p>Paragraph 10.7: We suggest that the nominal price impact is included as well as the percentage change, to provide additional context on the scale of the calculated price difference.</p>		<p>The Authority has included the nominal price impact.</p>	<p>Additional footnotes have been included in Paragraph 10.7 to indicate the change in the nodal price at the respective nodes.</p>