

## Congestion Management Technical Working Group

### Working paper – Approach to cost benefit analysis

#### *Purpose of paper*

The ESB proposes to undertake a cost benefit analysis in support of its recommendations for managing congestion in the NEM. The TAR project team seeks feedback from the TWG on our proposed approach to the CBA.

The TAR project team seeks feedback from the TWG on:

1. our proposed approach to the CBA
2. potential use cases to demonstrate the impact of the reforms.

#### *Context for cost benefit analysis*

The cost benefit analysis for these reforms will inevitably be imperfect given that the reforms take effect over a long time horizon, in a dynamic and complex environment. As there is no counterfactual to refer to, even attempting to model what we expect to occur if we do nothing is highly contentious.

Rather than putting a precise dollar value on the costs and benefits of the various options, the objective of this exercise is to gain an understanding of the trends and the magnitude of potential impacts under various options. We seek insights that will help us to choose between the different options.

We will also work to prepare use cases to demonstrate how we expect the reforms to provide benefits, for instance in terms of changed operational incentives for batteries and changed incentives for location decisions. We envisage the use cases as short vignettes (eg. 1-2 PowerPoint slides) that we can present to stakeholders and decision makers.

**Table 1 – Proposed categories of quantitative cost benefit analysis**

Model element	Costs	Benefits
<b>Status quo</b>	<ul style="list-style-type: none"> <li>Neutral</li> </ul>	<ul style="list-style-type: none"> <li>Neutral</li> </ul>
<b>Congestion relief market</b>	<ul style="list-style-type: none"> <li>AEMO implementation costs</li> <li>Industry costs – assume industry participants only participate if participant benefits &gt; participant costs</li> </ul>	<ul style="list-style-type: none"> <li>Improved dispatch efficiency – NERA modelling [supplemented by % improvement in dispatch efficiency based on international experience]</li> <li>Benefits to be presented as a range reflecting differing level of opt out</li> <li>Improved investment efficiency for storage and flexible loads [requires ISP sensitivity with storage built in line with current market incentives]</li> <li>Change in cost of capital</li> </ul>
<b>Congestion management model</b>	<ul style="list-style-type: none"> <li>AEMO implementation costs</li> <li>Industry costs</li> </ul>	<ul style="list-style-type: none"> <li>Improved dispatch efficiency – NERA modelling [supplemented by % improvement in dispatch efficiency based on international experience]</li> <li>Improved investment efficiency for storage and flexible loads [requires ISP sensitivity with storage built in line with current market incentives]</li> <li>Change in cost of capital</li> </ul>
<b>Priority access + CRM</b>	<ul style="list-style-type: none"> <li>Additional AEMO costs over basic CRM</li> <li>Costs of holding auctions</li> <li>Industry costs (excluding auction payments as these are a wealth transfer)</li> </ul>	<ul style="list-style-type: none"> <li>Change in cost of capital</li> <li>% improvement in efficiency of capex spend [assumption based on international experience]</li> <li>For consideration – social cost of unnecessary investment and/or wider economic benefits??</li> </ul>
<b>Congestion fees</b>	<ul style="list-style-type: none"> <li>Ongoing administrative costs – AEMO and TNSPS</li> <li>Industry costs (excluding fee payments as these are a wealth transfer)</li> </ul>	<ul style="list-style-type: none"> <li>Change in cost of capital</li> <li>% improvement in efficiency of capex spend [assumption based on international experience]</li> <li>For consideration – social cost of unnecessary investment and/or wider economic benefits??</li> </ul>
<b>Enhanced information</b>	<ul style="list-style-type: none"> <li>Ongoing administrative costs – AEMO and TNSPS</li> </ul>	<ul style="list-style-type: none"> <li>% improvement in efficiency of capex spend [assumption based on literature]</li> </ul>