

## Appendix C: Format for submissions

| Submitter  | WMAC.Cloud Limited   |
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| Questions  | Comments   |
| <p>Q1: Do you agree with the principle that the winter capacity margin should be based on the trade-off between the cost of the hours of reserve or energy shortfall and the cost of the peaking generation needed to mitigate it? Do you have any other suggestions on factors the Authority should consider and why?</p> |  |
| <p>Q2: Do you agree with our assessment of the incentives for demand response? If not, what is your view? Are there other criteria that the Authority should consider?</p>   | <p>Transpower has prohibitive technical expectations around demand load shedding for the reserves, wanting direct control over the loads coming back online.</p> <p>Automating load off to frequency drop in the network can be achieved at the device, and adding sufficient randomised buffer times for the network to recover can be automated within Transpower's desired parameters. However, their desire to have direct control to switch these loads back on creates a significantly higher management cost, making smaller loads less viable to aggregation.</p> <p>Having more flexible rules around participating in instantaneous and sustained reserves could open up a more comprehensive range of loads for very little additional costs.</p> |
| <p>Q3: Other than financial incentives, what are the other barriers to entry for demand response participation in the wholesale market that you have identified?</p>   | <p>Non-Energy Retailer Flexibility Services providers that optimise loads for their customers have considerable hurdles to overcome caused by both the EDBs and Energy Retailers.</p> <p>Some EDBs have moved to a broader pricing differential between peak and off-peak periods, creating new opportunities for flexibility providers to help customers optimise for price by shifting noncritical loads out of peak hours. These differentials have real potential to drive innovation within the current market</p>  |

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|   | <p>structures. However, other EDB have moved to flat rate charges with no peak or off-peak difference.</p> <p>There are two critical issues for innovation within the current conditions: Greater transparency in electrical billing, EDB Pricing Schedule should have the same pricing schedule format.</p> <p>Energy Retailers: Retailers absorb the cost of distribution and transmission. However, their transparency in pricing for customers varies from retailer to retailer and customer to customer.</p> <p><b>A mandate for transparency in distribution costs within customer invoices</b> would improve customer understand of electricity pricing and make the business case for flexibility easy for customer to understand. Currently, proving the savings that On/Off-peak pricing differentials set by the EDBs isn't represented in a large majority of retailer invoicing.</p> <p>EDB's pricing schedules: <b>There should be a uniform pricing schedule for all EDBs this would reduce complexities</b> making it easy for retailers and Flexibility Service Providers to understand. <b>Note: this would also help retailers in the transparency of distribution tariffs for retailer consumer invoices.</b> In the current state, navigating pricing schedules is an impossible task with thousands of different tariffs.</p> <p><b>A mandate price transparency on electrical bill, EDB pricing schedules and a greater difference in peak and off-peak charges will move large volumes of non-essential loads out of peak.</b></p> <p><u>Note:</u> WMAC uses the term flexibility instead of Demand Response, as our current objective is to optimise for the customers. However, these services have benefits to local distribution and Transpower. Further development in demand-side flexibility services could severely reduce the need for costly aggregated load-shedding services.</p> |
| <p>Q4: Do you agree that the Authority should focus its resources on identifying and lowering barriers for BESS and demand side flexibility to participate in the wholesale and ancillary services markets? If so, where do you think the Authority should focus first?</p> | <p>BESS will certainly be a part of the solution. However, it will discourage positive long-term changes in demand/consumption, as it would naturally become treated as additional generation/supply capacity during peak periods. This will encourage additional consumption within peak periods. BESS will also likely struggle to balance its commercial incentives to cycle the batteries to maximise their investments and the need for an additional buffer of additional capacity for extended periods of low-level intermittent generation. We still need to encourage investment and lower barriers to access to the network and developing BESS solutions. <b>However, demand-side solutions require the Authority's focus immediately to untap additional innovation.</b></p> <p>The Authority focus need to be also on fixing for long-term solutions, focusing its energy on finding ways to increase</p>  |

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|  | <p>investment in demand-side flexibility and capabilities of chasing capacity as we move to more intermittent generation sources. Reducing barriers, such as: Encouraging distribution pricing transparency through retailers and increasing network visibility across EDBs networks to enable flexibility services to become more targeted and open additional revenue streams.</p> <p>New Zealand has many non-critical loads in residential and commercial applications consumed in peak periods that could be moved with little effect on consumer behaviour if optimised and automated around generation capacity within the market.</p> |
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| <p>Q5: Do you agree that any solutions should satisfy these principles? If not, what is your view and why? Are there other principles that the Authority should consider?</p> |  |
| <p>Q6: Do you agree that a standard product for financial 'super peak' hedges is required?</p>  |  |
| <p>Q7: What factors do you think we should consider in the design of such a product?</p>  |  |
| <p>Q8: Do you agree with our assessment of the risk for the medium to long term?</p>  |  |
| <p>Q9: Do you think it would be beneficial to create a new integrated standby ancillary service? What is your view and why?</p>   |  |

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| <p>Q10: How should the costs for a standby ancillary service be allocated?</p>  |  |
| <p>Q11: How should the residual requirement be set? Should it be an operational setting or dynamically calculated? If it is dynamically</p> |  |

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| <p>calculated, what factors should be considered in the calculation?</p>   |  |
| <p>Q12: How should deficit (scarcity) standby residual be priced in relation to scarcity energy and scarcity reserve prices?</p>                           |  |
| <p>Q13: Do you agree with our assessment of the issues associated with procuring additional resource out of market? If not, what is your view and why?</p> |  |
| <p>Q14: Do you think it would be beneficial to create an out-of-market tender for emergency demand response? If not, what is your view and why?</p>        |  |

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| <p>Q15: Do you think it would be beneficial to provide payments to resource providers for any uncleared generation and/or dispatchable demand? If not, what is your view and why?</p> |  |
| <p>Q16: What do you consider to be an appropriate scaling factor to determine the price for residual and why?</p>   |  |
| <p>Q17: What is your view on the factors the Authority should consider when valuing</p>   |  |
| <p>the costs associated with a standby ancillary service?</p>   |  |
| <p>Q18: What other options should be considered to better manage residual supply risk for winter 2024?</p>  |  |
| <p>Q19: Do you have information on any other international standby ancillary services and their positive impacts? If yes, please share your information.</p>                          |  |

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| <b>AEMO</b>      | Australian Energy Market Operator            |
| <b>ASX</b>       | Australian Stock Exchange                    |
| <b>AU\$</b>      | Australian dollars                           |
| <b>Authority</b> | Electricity Authority Te Mana Hiko           |
| <b>BESS</b>      | Battery Energy Storage Systems               |
| <b>Act</b>       | Electricity Industry Act 2010                |
| <b>CAN</b>       | Customer Advice Notice                       |
| <b>Code</b>      | Electricity Industry Participation Code 2010 |
| <b>DDA</b>       | Default Distributor Agreement                |
| <b>DER</b>       | Distributed Energy Resources                 |
| <b>DFS</b>       | Demand flexibility service                   |
| <b>DR</b>        | Demand response                              |
| <b>ECRS</b>      | ERCOT Contingency Reserve Service            |
| <b>EMA</b>       | Energy Market Authority (Singapore)          |
| <b>ERCOT</b>     | Electricity Reliability Council of Texas     |
| <b>ERC</b>       | Electricity risk curve                       |
| <b>ERS</b>       | Emergency Response Service                   |
| <b>ESO</b>       | Electricity system operator (UK)             |
| <b>FCAS</b>      | Frequency control ancillary service          |
| <b>GBP</b>       | British Pounds                               |
| <b>GEN</b>       | Grid Emergency Notice                        |
| <b>IL</b>        | Interruptible Load                           |
| <b>KS-9</b>      | Kupe gas operation                           |
| <b>MDAG</b>      | Market Development Advisory Group            |

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| <b>MW</b>          | Megawatt  |
| <b>NEM</b>         | National Electricity Market (Australia)             |
| <b>NPS</b>         | Network Service Providers                           |
| <b>Regulations</b> | Electricity Industry (Enforcement) Regulations 2010 |
| <b>RERT</b>        | Reliability, Emergency Reserve Trader               |
| <b>S\$</b>         | Singapore dollars                                   |
| <b>SCADA</b>       | Supervisory Control and Data Acquisition            |
| <b>SPD</b>         | Scheduling, Pricing and Dispatch                    |
| <b>SSAD</b>        | Security Standard Assumptions Document              |
| <b>TCC</b>         | Taranaki Combined Cycle Power Station               |
| <b>TJ</b>          | Terajoule   |
| <b>US\$</b>        | U.S. dollars  |
| <b>VoLL</b>        | Value of lost load                                  |
| <b>WDR</b>         | Wholesale Demand Response                           |
| <b>WRN</b>         | Warning Notice                                      |
| <b>\$/kWh</b>      | Dollars per kilowatt hour                           |
| <b>\$/MWh</b>      | Dollars per Megawatt hour                           |