

Transpower's response to the Electricity Authority's Immediate assurance review of the 9 August 2021 demand management event

The following table is Transpower's response to the Authority's phase one review of the events of 9 August 2021. We have worked hard to ensure our response is comprehensive and supportive of the Authority's recommendations, with which Transpower agrees and accepts in their entirety. Some work on recommended changes is already underway and work on others will commence shortly. A project timeline is included following the table.

TRANSPOWER



Issue	Recommendations	Transpower response	Wider considerations and context
<p>1. Inconsistent handling of recipient queries to demand allocation notice: some parties concerns were passed to NCC others were not. Those passed to NCC were told to hold action.</p> <p>Significant communication volumes and call durations to NCC staff added to the operational overhead in the control room.</p> <p>Participants relied upon processes designed for rolling outage plans to manage a short-term outage event.</p> <p>One call to NGOC highlighted potential differences between NGOC actual load indications and</p>	<p>1A. The system operator to further electricity sector readiness to respond to critical demand management incidents.</p> <p>This will include (but not be limited to) an annual pan-industry exercise - (similar to critical gas contingency incident management exercises).</p> <p>No Business Continuity Plan style exercises with the system operator have ever been held for a supply shortage situation, this left participants unfamiliar with protocols and requirements. Protocols developed for a rolling outage situation lasting many hours do not appear to have the flexibility to manage a short term, short notice event</p> <p>The development of an annual exercise, involving the system operator, distributors, generators and retailers would allow operational and communication processes to be refined and responsibilities better defined. The first exercise will place emphasis on resolving the objectives of communications between the system operator and distributors and direct connect consumers.</p>	<p><u>We agree with this recommendation.</u></p> <p>Our system operator long-term plan includes a calendar of proposed exercises; the plan will be amended to ensure an event is scheduled before 30th June 2022 which will:</p> <ul style="list-style-type: none"> (a) include a wider range of participants (b) include a generation-shortage scenario (c) focus on communications. <p>Learnings will be used to improve operational procedures and practices.</p>	<p>The potential development of distributed energy resources (DER) and their availability to manage system stability and contribute to event management may change how the system operator and the industry needs to share information and how, together, they respond to situations which would otherwise have potential to create system management issues. Market design changes, including to available products, are also relevant.</p> <p>As we expect that high impact events will occur less frequently due to the tools available through DER, it may become more challenging to manage events when and if they occur as institutional memories across all participants fade and newcomers have limited event management experience.</p> <p>There may be a greater requirement for all participants to join industry exercises and attend educational events, to ensure operational and communications processes are in place for managing events, including providing helpful communications to consumers.</p> <p>Code changes would be needed for any market design changes.</p>



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<p>distributor load indications.</p> <p>In interview, another distributor queried why their load allocation was split between 2 NGOC areas.</p>	<p>1B. For island-wide and national demand management, queries regarding notices must be directed to NCC via NGOC.</p>	<p><u>We agree with this recommendation.</u></p> <p>We have started work improving the style and content of our formal notices, reflecting what we have already learned from this event.</p> <p>Notices related to demand management now make it clear that questions related to those notices must be directed to the National Coordination Centre (NCC).</p> <p>This requirement has already been made very clear to our National Grid Operating Centre (NGOC) team; our ongoing, scheduled training programme will ensure the team is regularly reminded of the process and that it is well understood.</p> <p>The industry exercise referred to in response to 1A will ensure this requirement is understood by participants.</p>	<p>Currently notices to participants are constructed in the relatively inflexible market system which does not allow for the electronic acknowledgment of receipt of bids and offers. Moving to a more comprehensive electronic notice issue and receipting process would be a significant task and might best be considered against the probable course of industry developments over the next decade.</p> <p>The potential emergence at scale of DER may require distribution companies and embedded generators to provide real time data to the system operator, if DER providers wish to participate in an active DER response market. Currently there is no requirement on distribution businesses to provide any data to the system operator; Code changes would be needed to make such a requirement. The context for doing so would arise from the design of new market products and the need to manage such products centrally. Substantial investment by distribution businesses and the system operator would be required and the changes would be a significant industry undertaking.</p>
	<p>1C. Clear and consistent lines of communication must be made known to recipients and where those communication lines differ – i.e., NCC vs</p>	<p><u>We agree with this recommendation.</u></p> <p>It is critical that inter and intra control room communications must be timely, clear and consistent.</p>	<p>If the system operator has access to live information from distribution companies the interactions between the NCC and NGOC control rooms would reduce, and more automated management systems could be</p>



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	<p>NGOC the messaging between them needs to remain consistent.</p> <p>1D. Communicate any changes to actions required to all participants. Any update information regarding the demand management notices, ie, instruction to some participants to hold action, must be immediately communicated to NGOC and all participants. This is critical in events where customer demand has been, or is intended to be, disconnected beyond discretionary load management.</p>	<p>We are reviewing all operational aspects of the event to identify matters to be improved. Initial improvement opportunities have already been identified, including:</p> <ul style="list-style-type: none"> (a) a new demand management process to include communication of the objective, a prioritised list of who to contact and a brief script (b) access to an indicative list of available discretionary demand to assist with prioritisation (c) a prioritised list of who to contact and a brief script (d) a communication protocol to ensure: <ul style="list-style-type: none"> i. NGOC is kept updated on any changes to the system status e.g. if sufficient load has been reduced ii. that any enquiries to NGOC regarding demand management are directed to the NCC <p>Improvements will be progressively implemented with the initial improvements to notices and an updated</p>	<p>introduced which would support normal system management as well as system events.</p> <p>But industry will need to be part of the consideration and design of any system to provide such information given the costs and changes (including to the Code) such arrangements would require.</p>



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		<p>temporary process to be in place by 30th November 2021.</p> <p>A learning event is being developed for both NCC and NGOC teams to be included in the team training round planned to be completed by mid-December 2021.</p>	



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	<p>1E. Review operational tools for accuracy. The system operator must review grid exit point to distributor modelling in their operational tools to ensure it is current.</p>	<p><u>We agree with this recommendation.</u></p> <p>During the event the system operator became aware there was a difference in load indications seen by the NGOC and one of the distribution networks. This has been investigated and rectified.</p> <p>We have audited other load indications and are now resolving some variations we found. We are establishing a process to minimise the risk of recurrence (this includes regular audits). This work will be completed by 17th December 2021.</p> <p>Load allocations split across NGOC regions arose when the Demand Allocation Notice (DAN) was issued; this created confusion on 9th August. The LSR tool used to generate the DAN has been taken out of service so this split across NGOC regions is no longer relevant. The LSR tool will not be returned to service without the regional allocations matter having been addressed.</p>	



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<p>2. Industry stakeholder and customer communications by distributors and retailers were limited by a lack of information regarding the event from the system operator.</p> <p>Outage communications from distributors to retailers tended to be passive eg, via a website update.</p> <p>Comments were made by retailers that this works well for planned outages but not for unplanned outages.</p>	<p>2A. The system operator to work with stakeholders to develop an agreed and comprehensive communication approach to ensure prompt and consistent information.</p> <p>The system operator will work with distributors and retailers to resolve and formalise how priority information is to be promptly and consistently cascaded, and how affected customers and stakeholders will be notified for critical grid emergencies, unplanned outages, and material deterioration in network security.</p> <p>The system operator will put in place an agreed communication approach that will enable distributors and direct connect consumers to support a response to critical grid emergencies, in parallel to managing localised network support pressures.</p>	<p><u>We agree with recommendations 2A – 2C.</u></p> <p>Improved communication of system events (grid emergencies, unplanned outages, and material deterioration in network security) are needed.</p> <p>We have started development of an improvement plan to ensure our events are well communicated and that distributors and direct connect consumers understand what we are saying – what is happening and what response we want or demand and when.</p> <p>Immediate steps to be completed by 30th November 2021 are:</p> <ul style="list-style-type: none"> (a) Inviting distributors, direct connect consumers and retailers to step through our processes with us and ask questions, giving us more assurance about the extent to which industry understands the current process and procedures. (b) Checking existing contact lists for accuracy. (c) Making changes to our formal notices with the clarity improvements already identified 	<p>The industry as a whole should participate in the design of how operational and customer communications around system events should occur.</p> <p>All parties have their own communications needs (internal and to stakeholders including consumers) as well as those related to their operations and the management of system-wide events.</p> <p>The prospect of generation and market changes over the next decade provides an opportunity to consider the redesign of how industry communications currently work and what is needed for a more connected future.</p> <p>The roles and responsibilities of participants will need to be very clear. The Authority will need to play a central role in a redesign.</p>



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	<p>2B. Communication between distributors and retailers during an emergency situation, where customers are being disconnected, should be active rather than the passive forms used for planned outage communication. This must be balanced against the operational needs and workload of the distributors during the event. Distributors and retailers must work together to formalise contact points and communication methods. The agreed communication methods must:</p> <ul style="list-style-type: none"> (a) be between identified roles within each organisation with responsibility for ensuring the communication is sent, received and escalated appropriately, and (b) not rely on individual communication, alternate contacts should have access to the notification process to mitigate the risk of staff absence impacting the communication process, and (c) use standard language to provide formal notice of outages identifying the customers being disconnected. 	<p>and testing these with stakeholders. These will not materially change current process but should lead to improved participant responses. Updating our website with clear details of our event management processes.</p> <p>Separately, we will work with distributors and direct connect consumers to more generally review and improve how we communicate industry events to enable them to support our response to grid emergencies. This work will include:</p> <ul style="list-style-type: none"> (a) Reviewing the existing communications framework to ensure it describes expected outcomes, expected behaviours and the roles each stakeholder must play, and clearly describe accountabilities. (b) Seeking feedback from participants on improvements and their recommendations, probably through a workshop. 	



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	<p>2C. Given most distributors use webpages and/or phone apps to communicate local outages, an automated messaging extension to this system may be a suitable long-term solution.</p>	<p>(c) Publishing an updated communication framework and ensuring it is tested as part of an annual exercise.</p> <p>This work will be carried out by 30th April 2022 ahead of the proposed industry exercise before 30th June 2022.</p>	
<p>3. The system operator had little visibility of the actions taken, or planned to be taken, by demand side participants in the lead up to the event and what resources were expected to still be available to them over the period the system operator expected to need to call for demand management.</p>	<p>3A The system operator must improve their access to information on general demand management resource availability. The system operator will establish baseline information on the general demand management resources available within the system, and update this on a regular basis.</p>	<p><u>We agree with this recommendation.</u></p> <p>We will establish a process to capture and maintain baseline information regarding demand management resource availability.</p> <p>In addition, this work will include establishing a clear definition of a demand management resource to ensure we preserve existing AUFLS and IL obligations and capacity.</p> <p>Work will start immediately and be completed by 30th November 2021. Note that our work will rely upon receiving responses from distributors.</p>	

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<p>Some interviewees understood that the formal notices issued prior to 6.48pm GEN (1% demand reduction) did not have a specific call to action nor indicate scale of the problem being forecast by the system operator. This led to an uneven response to notifications in the time before the 6.48pm GEN.</p>	<p>3B In support of potential grid emergency responses, the system operator will establish processes capable of timely verification of the actual demand management resources available to the system operator, to the distributors, and to direct connect consumers.</p>	<p><u>We agree with this recommendation.</u></p> <p>We will consider how the system operator could, in the context of an emerging system event, call for all controllable load to be used before it issues (or needs to issue) a demand for load reductions. We will identify whether changes to the current process may require amendments to the Code.</p> <p>This might, for example, include a manual process to issue a Grid Emergency Notice calling for all remaining controllable load to be used.</p> <p>This work will be completed by 30th November 2021.</p>	
<p>Lack of communication between when the 13.02 WRN and 17.10 GEN were issued led some recipients to view the 17.10 GEN as an instruction to act immediately whilst others viewed it as a notice that action was</p>	<p>3C Review the contents of the formal notices. Where practicable, the system operator must ensure formal notices include specific actions to take, the reason, the timeframes when these actions must be taken and confirmation of when the action taken is required – supported by timely feedback from the system operator on the effectiveness of those actions.</p>	<p><u>We agree with this recommendation.</u></p> <p>In our response to 1B and 2A we have said that the content of formal notices will be reviewed.</p> <p>As an immediate and interim response, we have already re-drafted our formal notices to be clearer regarding the specific actions we need or require to be taken, the reason and the timeframes when</p>	



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<p>required from the 18.00 trading period.</p> <p>The actual response by distributors to the 1% demand reduction GEN was closer to 3% on a national average but significantly higher in some distribution businesses.</p> <p>Confusion as to whether notices were calls to immediate action or forewarning of possible future action.</p>	<p>3D Where practicable, ensure earlier formal notices include specific actions to take, the timeframes when these actions must be taken and if there is a requirement to acknowledge the action has been taken, e.g.</p> <p>a) Immediately update demand bids for 18.00-20.00 to reflect expected offtake and confirm when the action is taken (b) Reserve dispatch will be reduced to release generation volume from 18.00 (c) System operator requires all controlled and discretionary load to be managed on a national basis and confirm when the action is taken (d) Direct connect consumers and distributors must prepare for demand management call from 18.00 onwards (e) Current forecast energy/reserve shortfall is XXXMW.</p>	<p>these actions are requested or required to be taken.</p> <p>We will ask generators and direct connect consumers if the changes add the clarity we expect.</p> <p>We will also consult generators and direct connect consumers on the most appropriate means of acknowledging notices and proving feedback on their intended actions, taking account of the operating environment in control rooms during an emergency.</p> <p>We will complete this work by 30th November 2021.</p>	
	<p>3E The language used in the notices must be consistent and clear on the consequences to affected participants of an insufficient response.</p>	<p><u>We agree with this recommendation.</u></p> <p>See our response in 1B, 2A and 3C.</p>	



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	<p>3F Update participants on any worsening of the situation.</p> <p>Ensure relevant market indicators of the event are clearly communicated to all affected parties. The language used in any notification should use a standardised form that has been developed in conjunction with the expected recipients. This will ensure a common understanding of the meaning of the notification and any actions required of the recipients. Changes in the shortfall or residual level published through the market schedules would not necessarily be seen or understood by distributor operations staff even though they are most likely to be impacted by a worsening situation.</p>	<p>It is important that the operations staff of directly connected parties have an awareness of the market schedules and understand their intended impact.</p> <p>Opportunities to provide updates or changes in the situation of a developing event to affected parties will be assessed as part of the work referred to in our response to 1D.</p>	



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<p>4. Earlier formal notices were not consistently reinforced with phone calls to communicate urgency and discuss mitigation options.</p> <p>Some participant operations centres do not have access to email for IT security purposes, so notices were missed.</p> <p>The receipt of email notifications was not always noticed by the recipient operations staff.</p> <p>Not all participants received all notifications from the system operator.</p>	<p>4A Evaluate alternatives to email distribution for critical notices. The system operator will evaluate alternative communications systems that would better support notification to the operations focussed staff that are the target recipients (separate to the current email-based notification approach).</p>	<p><u>We agree with this recommendation.</u></p> <p>The system operator needs to be confident its means of communications with distributors and direct connect consumers are effective. We note the Code places obligations on all participants to have communication channels (and back- ups), but it is apparent there is room for operational improvements.</p> <p>We will review and evaluate alternative communications systems to better support notification of relevant information to the operations staff of distributors and direct connect consumers (in addition to the current email-based notification approach).</p> <p>The system operator has a project in its work programme to consider information exchange with EDBs. This work will rely on participation by distributors and direct connect consumers.</p> <p>We will agree a delivery target for this work with the Authority.</p>	



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	<p>4B In the interim, where practicable, formal notices published using the existing email delivery approach which require timely recipient action should be followed up with phone calls. This communication would confirm the recipient's understanding of the issue being addressed and the actions required of them.</p>	<p><u>We agree with this recommendation.</u></p> <p>Operational requirements make it difficult in a national event to commit exactly to this requirement, given the number of distributors and direct connect consumers that would (in a national event) need to be contacted, and noting the system management priorities which might have to be addressed at the time. In the immediate future, the system operator is likely to continue to rely on the NGOC to assist its verbal communications while managing an event of the type experienced on 9th August. For regional events the recommendation can usually be met.</p> <p>We will review our event management processes to address this recommendation.</p> <p>We expect to complete this review 30th November 2021</p>	



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	<p>4C To support the current email-based notification, the system operator will put in place an assurance system to maintain up to date contact lists for key operational staff (and back up contacts) across distributors, direct connect consumers, generators and any other parties that could be required to respond to an emergency notice from the system operator.</p>	<p><u>We agree with this recommendation.</u></p> <p>Transpower manages the electricity industry contact list and has a procedure for updating the list on a regular (six-monthly) basis. This list includes management and operational staff. No change to this responsibility of process is proposed. In most cases, a generic email address such as: controlroom@Distribution.co.nz or Operator@generator.co.nz is used.</p> <p>We will review the current lists to ensure they include key operational staff across distributors, direct connect consumers, generators and any other parties that could be required to respond to an emergency notice. This work will require us to contact each party to ensure we have the correct contact points. Our target completion date is 30th November 2021.</p> <p>An initial review has already been undertaken. We confirmed that:</p> <ul style="list-style-type: none"> (a) all distribution networks and connected parties are included (b) the address lists for both Operational Notices (CAN) and Formal Notices (GEN and WRN) are aligned. 	



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<p>5. Load shed and restore decision support tool (LSR) There were significant discrepancies between the 19.09 allocated demand limits and the demand individual participants were consuming at the time, or indeed were physically capable of consuming.</p>	<p>5A Assurance system for decision support tools relied upon in medium and large-scale events. The system operator will put in place an assurance system that identifies the current state of the suite of decision support tools that are relied upon to respond to medium and large-scale events. The purpose is to ensure that the stock of tools is regularly maintained and adjusted to reflect material changes in networks.</p>	<p><u>We agree with this recommendation.</u></p> <p>We have assurance processes in place which support our SCADA, market dispatch and related tools. For instance, as part of our annual planning processes we undertake a capability assessment across all areas of our service, including the functional fit and technology quality of the systems we rely on.</p> <p>We will share this framework with the Authority not later than 30th November 2021.</p> <p>With respect to the discrepancies in the LSR tool, we will share our findings related to the data inputs and the future process to automate these updates (if we retain the tool – see 5B response below).</p>	

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	<p>5B Specific to the LSR decision support tool, the system operator must determine if the LSR decision support tool continues to be fit for purpose.</p>	<p><u>We agree with this recommendation.</u></p> <p>The LSR tool has been taken out of service pending further reviews.</p> <p>In addition, we will:</p> <ul style="list-style-type: none"> • review how emergency demand reductions are undertaken and if the LSR tool supports this need • establish if the LSR tool is fit for this purpose and if an alternative or modification of the existing tool is required or if any tool is required • if the tool is required, identify if any changes are needed and implement those changes • consider if the tool has a role in managing regional restoration or rolling cuts events, even if not required for national demand reduction events. <p>We note that dispensing with the tool or making any changes may require changes to the Code.</p> <p>We will agree a process and timetable for this review with the Authority.</p>	



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	<p>5C Review the technical and functional debt associated with other legacy tools and processes. The issues with the manual data updates for the LSR decision support tool and questions regarding the fitness of the LSR functional specification raise concerns of further technical and functional debt in the system operator tool suite. While the ongoing Market System Simplification project run by Transpower, is addressing technical debt in the core market systems, the system operator should also review:</p> <ul style="list-style-type: none"> (a) any further manual data update processes for market system tools and their fitness for purpose, and (b) the fitness of the functional specification of any other legacy tools and processes, particularly those that are used infrequently or in a manner that does not use their full functionality. 	<p><u>We agree with this recommendation.</u></p> <p>As noted in our response to 5A, a framework is in place to regularly assess all tools and associated processes. This assessment includes fitness for purpose, technical and functional debt.</p> <p>Nonetheless, we will review this process and ensure that the regular assessment includes identification of and has appropriate management around:</p> <ul style="list-style-type: none"> (a) any processes that required a manual update of data (b) tools that are used infrequently. <p>We will undertake the review of manual processes not later than 30th November 2021.</p> <p>We will review our infrequently used market system tools, and consider the outcome, within our assessment framework (see 5A) not later than 31st March 2022.</p>	



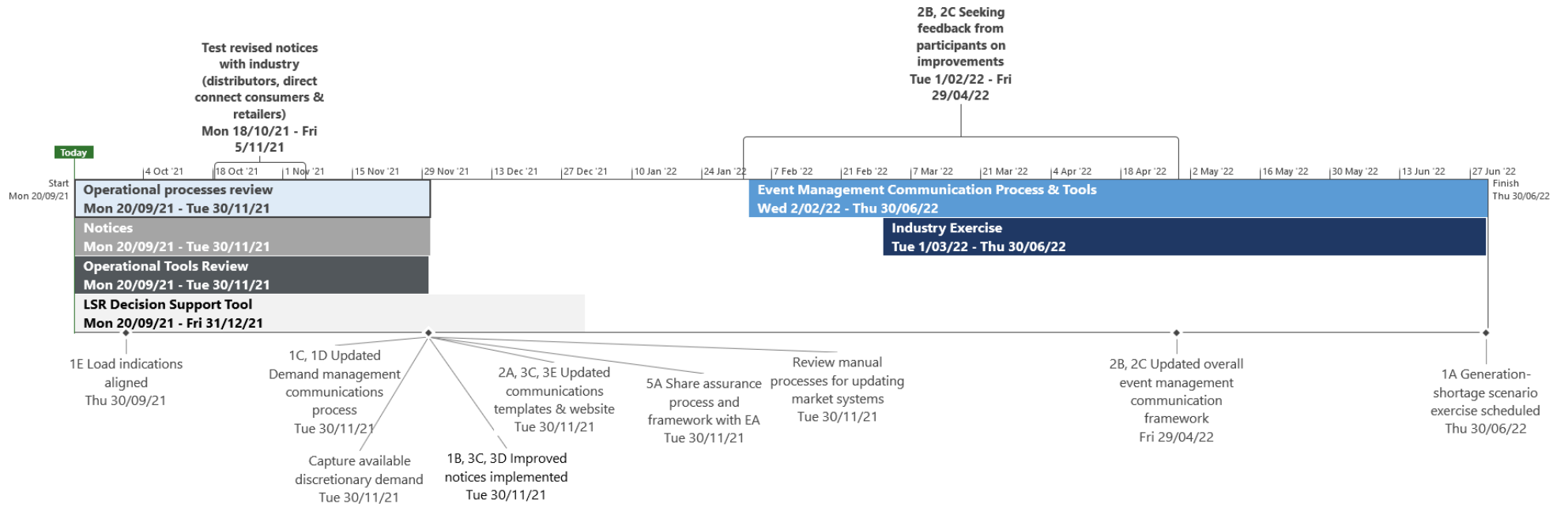
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	<p>5D Redesign the LSR interface to simplify its operation. The user interface must be simple, clear and allow for intuitive assessment of the tool outputs to ensure they meet the needs of the power system. Process documentation should be clear and explicit about the expected operation of the tool and the checks necessary to validate the outputs of the tool.</p>	<p><u>We agree with this recommendation.</u></p> <p>Our response to this recommendation will be further developed in the review referred to in 5B.</p>	
	<p>5E Enhance training on the revised LSR decision support tool. Training on any reinstated LSR decision support tool must include validating tool outputs and corrective actions that can be taken.</p>	<p><u>We agree with this recommendation.</u></p> <p>Our response to this recommendation will be further developed in the review referred to in 5B.</p>	
	<p>5F Enhance post market system update testing to validate LSR decision support tool inputs and outputs. A process needs to be put in place to ensure that the data load is carried out at the required frequency and is tested and signed off as complete, correct and functional after each upload.</p>	<p><u>We agree with this recommendation.</u></p> <p>Our response to this recommendation will be further developed in the review referred to in 5B.</p>	



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	<p>5G Testing scripts in the test automation suite need to be updated to not only check that the tool remains usable after any changes but also that the inputs it requires – i.e., historic data is appropriate and the output it generates is correct.</p>	<p><u>We agree with this recommendation.</u></p> <p>Our response to this recommendation will be further developed in the review referred to in 5B.</p> <p>We note that full testing is part of our standard development process for all systems</p>	
	<p>5H Ensure distributors and direct connect consumers are familiar with the aims and outputs of the new LSR tool. The system operator must ensure that distributors are made familiar with the function, and expected outputs, of any future LSR decision support tool and the actions expected of them in response to related notices.</p>	<p><u>We agree with this recommendation.</u></p> <p>Our response to this recommendation will be further developed in the review referred to in 5B.</p>	
	<p>5I The Authority will monitor the system operator’s review of the LSR decision support tool. The Authority must closely monitor the investigation, development and implementation of any fixes, or wholesale redesign, of the LSR decision support tool.</p>	<p><u>We agree with this recommendation.</u></p> <p>Our response to this recommendation will be further developed in the review referred to in 5B.</p>	



Below is a visual timeline of the response activities listed above and the underlying detail which supports the project plan.



Recommendation	Task Name	Finish
<i>Theme</i>	<i>Operational processes</i>	<i>Tue 30/11/21</i>
1C, 1D, 3F, 4B, 4C. 3A, 3B	Operational processes review	Tue 30/11/21
1C,1D, 3F	New demand management process - communicating objectives	Tue 30/11/21
1C,1D, 3F	Accessing indicative list of available discretionary demand	Tue 30/11/21
1C,1D, 3F	Prioritised contact list with script	Tue 30/11/21
1C,1D, 3F	Communication protocol	Tue 30/11/21
4B	Consider phone calls to follow up emails - as part of review of event management processes	Tue 30/11/21
4C	Review current lists for all key operational staff	Tue 30/11/21
1C,1D, 4B, 4C	1C, 1D Updated Demand management communications process	Tue 30/11/21
3A	Establish process to capture baseline demand management resource information	Tue 30/11/21
3A	Capture available discretionary demand	Tue 30/11/21
3B	Consider options to call for all controllable load to be used before issuing demand for load reduction	Tue 30/11/21



Recommendation	Task Name	Finish
<i>Theme</i>	<i>Communications</i>	<i>Thu 30/06/22</i>
1B, 3C, 3D, 2A, 3C, 3E	Notices	Tue 30/11/21
1B, 3C, 3D	Improve style and content of notices	Fri 15/10/21
1B, 3C, 3D	Test revised notices with industry (distributors, direct connect consumers & retailers)	Fri 5/11/21
1B, 3C, 3D	1B, 3C, 3D Improved notices implemented	Tue 30/11/21
2A, 3C, 3E	Update TP website with education regarding operational notices	Tue 30/11/21
2A, 3C, 3E	Inviting distributors, direct connect consumers & retailers to step through processes and ask questions	Tue 30/11/21
2A, 3C, 3E	Check existing contact lists for accuracy	Tue 30/11/21
2A, 3C, 3E	2A, 3C, 3E Updated communications templates & website	Tue 30/11/21
2B, 2C, 4A	Event Management Communication Process & Tools	Thu 30/06/22
2B,2C	Reviewing existing event management communications framework to ensure it describes expected outcomes/behaviours/roles each stakeholder must play & accountabilities	Fri 29/04/22
2B,2C	2B, 2C Seeking feedback from participants on improvements	Fri 29/04/22
2B,2C	Publishing and updated event management communication framework and testing annually	Fri 29/04/22
2B,2C	2B, 2C Updated overall event management communication framework	Fri 29/04/22
4A	Evaluate alternative communications systems to support notification of distributor and direct connect consumers (timeframe TBA with EA)	TBA with EA

Recommendation	Task Name	Finish
1A, 3F	Industry Exercise	Thu 30/06/22
1A, 3F	Review exercise scenarios to be broader/include more participants	Mon 11/04/22
1A, 3F	Develop a schedule of exercises	Mon 11/04/22
1A, 3F	1A Generation-shortage scenario exercise scheduled	Thu 30/06/22



Recommendation	Task Name	Finish
Theme	Operational Tools	Fri 29/04/22
1E, 5A	Operational Tools Review	Fri 29/04/22
1E	Complete load investigations updates in systems	Wed 29/09/21
1E	1E Load indications aligned	Thu 30/09/21
5A	Share assurance process and framework with EA	Tue 30/11/21
5B, 5D, 5E, 5F, 5G, 5H, 5I	LSR Decision Support Tool	Fri 31/12/21
5B, 5D, 5E, 5F, 5G, 5H, 5I	Review if LSR tool supports emergency demand reductions (timeframe TBA with EA)	Fri 31/12/21
5B, 5D, 5E, 5F, 5G, 5H, 5I	Establish if LSR tool is fit for purpose (timeframe TBA with EA)	Fri 31/12/21
5B, 5D, 5E, 5F, 5G, 5H, 5I	If tool is required, identify amendments needed and implement changes (timeframe TBA with the EA)	Fri 31/12/21
5B, 5D, 5E, 5F, 5G, 5H, 5I	Consider if tool has a role in managing regional restoration (timeframe TBA with EA)	Fri 31/12/21
5C	Review processes for updating market systems including change control and assurances	Mon 20/09/21

