

Summary of comments received on UFM Project Brief

Genesis

Comments	Response
<p>“We welcome the prospect of improvements to under-frequency arrangements and consider there is value to applying the technical resources of the System Operator to this task. However, we are concerned that if this process is to lead to successful code change proposals then it will need to be designed to bring in perspectives from across the market on how any changes to under-frequency arrangements can best contribute to the statutory objectives in the Electricity Industry Act 2010. These statutory objectives are broader than the objectives of the System Operator. A more engaged approach with the market is more likely to achieve broad buy-in to any project recommendations.</p> <p>Unfortunately, the proposed project plan does not look like the best way to achieve this. We recommend that, rather than relying on presenting results to market participants and holding “facilitated sessions”, the System Operator should convene an advisory group, steering group or contact group of industry participants who can play a constructive role in shaping the project as it evolves.</p> <p>As noted above, we consider that this would improve the chances of successful code change proposals eventuating at the end of the project and would help ensure a broader perspective is applied. This approach would be consistent with the advisory group model that the Electricity Authority is developing for other work streams. It is also consistent with past Transpower practice.”</p>	<p>We agree that there needs to be thorough industry engagement throughout the project. A more engaged approach with the market is critical to the success of this work. A preliminary AUFLS Policy workshop is planned to be held in mid April to enable industry input into the project. In order to increase the effectiveness of industry discussion, the System Operator needs to complete a sufficient amount of technical study to enable informed discussion to occur. Once sufficient technical work has been completed, we are happy to facilitate more stakeholder sessions if requested.</p>
<p>“We are encouraged that the project plan includes “...investigating the plausibility, implications, and requirements of creating an AUFLS market”. We expect that there is scope for market-based procurement arrangements to provide the System Operator with greater flexibility regarding AUFLS block sizes, locations and quality.”</p>	<p>The potential options around market based AUFLS procurement will be discussed with industry at the AUFLS Policy workshop in mid April.</p>

Comments	Response
<p>“However, we also expect that most of the benefits to be gained from market-based procurement arrangements will be unrelated to security considerations or system operations. Changing AUFLS procurement arrangements could allow consumers greater choice about how they participate in the energy market with respect to the interruptibility of their electricity consumption. This should help to make demand side participation more viable and could have benefits across the supply chain.”</p>	<p>These issues will need to be discussed in the mid April forum. From a security perspective, the key issue for the System Operator is that any arrangement gives assurance around volume and performance.</p>
<p>“We would be concerned if promising changes to AUFLS procurement were discounted on the basis of the System Operator’s perspective on costs, benefits, and technical implementation details.”</p>	<p>Agreed. The System Operator will be putting forward a number of options with each merit to be weighed up to be assessed by the industry.</p>
<p>“We note that, as this work is to be carried out by the System Operator, it will be funded by levy payers. As such, we believe it would be appropriate for the Electricity Authority to disclose the budget that it has agreed for this project and to report on expenditure against that budget.”</p>	<p>Monitoring expenditure against budget is an internal SO function and a EA SOSPA/TASC function, therefore it would not be appropriate to have the project budget disclosed.</p>

MEUG

Comments	Response
<p>“Any projects and initiatives that may be placed on hold or delayed to await the outcome of the UFM review should be identified and the impacts/implications understood. This is important given our experience with implementation of the MSP where many other projects were affected. Section 6 of the Project Brief mentions that work on Extended Load Control, Wind Generation Integration Project and Normal Frequency Review is “associated with this project”. It’s not clear if that means work on those issues will be delayed, accelerated or modified because of the UMF work. This should be clarified. There may be other affected work that needs to be identified.”</p>	<p>The AUFLS Exemption work is dependent on the outcome of the UFM work.</p> <p>The Extended Load Control work is part of the UFM project and will be included in the work carried out after the preliminary presentation in July.</p> <p>A review of the overall instantaneous reserve cost allocation methodology will also be informed by the UFM outcomes.</p>

Comments	Response
<p>“The expected types and quantities of reserves that are available under various market structures and product designs need to be understood in order to undertake cost benefit analysis. This isn’t stated explicitly in the scope.”</p>	<p>Agreed. One of the objectives of the UFM work is to identify and quantify the type of reserve products required to meet the challenges of the changing power system, which includes the possibility of having a single reserve market. We will undertake the cost benefit analysis once the options have been identified.</p>
<p>“The AUFLS review included a survey of international practice that provided context for the recommendations from the technical and economic reviews. It is understood that the survey work included a collation of international policies for reserves and AUFLS. Would it be expected that the UFM review would draw on this information? If so then this should be included in the scope.”</p>	<p>The design of New Zealand under frequency market should address specific issues challenging New Zealand’s under frequency management arrangement. While international practice may provide a benchmark the design we put in place should reflect New Zealand’s uniqueness in terms of the sizes of our risks and the available reserves makeup. A high level overview will be included in the work stream 3 review.</p>
<p>“The fourth bullet point in section 3.2 (Work stream 2) reads “Reviewing the regulatory requirements for AUFLS provision and exemptions.” The System Operator has responsibilities and technical expertise appropriate for the operational and technical aspect of the UMF review. The regulatory aspects are the responsibility of the EA. Practically the optimal solution will require careful design of technical, regulatory and commercial incentive parameters. This will require co-operation by the System Operator, EA and industry.</p> <p>Therefore we suggest it would be better to delete the fourth bullet point and add a new bullet point at the end of section 3.2 “Identify issues to be considered in transitioning from the current arrangements to alternatives.” This is broad enough to cover first; the “current arrangements” include regulated requirements for AUFLS provision and exemptions. And second, the System Operator isn’t the primary party “reviewing” changes from current arrangements but is instead indentifying issues.”</p>	<p>Agreed. The fourth bullet point in section 3.2 has been amended to “Identify issues to be considered in transitioning from the current arrangements to alternatives.”</p> <p>While the regulatory aspect is the responsibility of the Electricity Authority, they have contracted the System Operator to take accountability for the operational and technical work programme. We will be working closely with the EA and industry to work towards a preferred outcome for New Zealand, and in a way that is consistent with the regulatory framework given that the outcome of the UFM project will likely involve Code changes. A preliminary workshop is planned to discuss with industry AUFLS and IL feeder sharing, market options, and AUFLS provision in mid April.</p>

Meridian

Comments	Response
<p>Work stream 1</p> <p>“Suggestion to add: Examine wind generation's ability to contribute to IR and determine whether rules should be modified to enable wind generation to contribute to IR.”</p>	<p>Agreed. The scope is to investigate any type of reserves product which will include wind generation. The scope also includes reviewing supporting Codes that might be required as a result of the introduction of the new products (Section 3.1 bullet point 6).</p>
<p>Work stream 1</p> <p>“Suggestion to make sure that co-optimisation with energy is improved. We have to do all sorts of workarounds with regard to our offer to make sure we don't breach. As an example we would like SPD to co optimize energy, PLSR and TWDR. But at the moment the SPD will quite happily dispatch all three at once even though this is impossible to dispatch. Simple rules like for every y MWs of TWDR reserve a part of the capacity is no longer available for energy dispatch would be very useful. This forces us to either offer PLSR or TWDR but not both unless we leave a very large safety factor.”</p>	<p>This is currently not part of the scope. However, the current scope includes undertaking high level investigation on the potential changes in the market systems and its components, which contains SPD. The suggested work can be packaged up with other enhancements identified from this project.</p>
<p>Work stream 1</p> <p>“Suggestion to specifically mention "inertia" as a potential product.”</p>	<p>Agreed. The scope has been amended accordingly to reflect this input. The System Operator recognises that there is a longstanding issue with the use of Net Free Reserves (NFR), which includes inertia as one of its components. This project intends to address this issue which may include using inertia as an Instantaneous Reserve product. Investigation will be carried out to quantify the minimum inertia required for each island, consider different types of artificial inertia and market methods of charging for lack of inertia on generators.</p>
<p>Work stream 1</p> <p>“Need to make sure that provider costs of change are understood.”</p>	<p>Agreed. The cost benefit analysis will address this issue.</p>
<p>Work stream 2</p> <p>“I think we should at least consider demand side benefits as well us supply side.”</p>	<p>Agreed. The cost benefit analysis will address this issue.</p>

Contact

Questions	Comments	Response
<p>Do you agree with the approach that the System Operator is taking with regard to the structure of the under frequency management work?</p>	<p>“Contact is generally supportive of the System Operator’s approach with regards to the structure of the Under Frequency Management project.</p> <p>Contact recognises that Instantaneous Reserves (IR) is the first ‘safety net’ for the System Operator from a power system frequency restoration view point, and therefore suggests that Work Stream 1: Instantaneous Reserves receives the highest priority of the four proposed work streams.</p> <p>In addition, Contact also suggests that a fifth work stream, Work Stream 5: Cost Benefit assumptions – industry participant workshop be included. (see below)”</p>	<p>Noted. However, the System Operator is treating every work stream as important and will work towards finding the most appropriate arrangements to manage both CE and ECE events.</p> <p>Cost benefit analysis is an integrated part of each work stream. Therefore there is no requirement for a separate work stream.</p> <p>The System Operator welcomes feedback on the cost benefit assumptions that will be presented to the industry in July.</p>
<p>Is there any other work you consider desirable and relevant that the System Operator should include?</p>	<p>“Yes. Contact suggests that the System Operator include one additional work stream: Work Stream 5 –Cost Benefit assumptions – industry participant workshop</p> <p>This fifth Work Stream should take place in parallel with Work Stream 1: Instantaneous Reserves.</p> <p>Contact appreciates that the System Operator is the best agent in conducting power system technical analyses. However, Contact feels that equal emphasis should also be placed on the modelling of the benefits of the changes to the power system, particularly from a cost benefit perspective.</p> <p>This additional work stream allows for industry participants’ input; from an overall cost benefit perspective, to be included in the studies.”</p>	<p>This work is part of the Work Stream 4: Collective review. While it is important to understand the benefits from participants’ perspective, it is difficult to separate the technical and economic aspects. Therefore, it is not suggested to separate this into a different work stream. It is the System Operator’s intent that workshops would allow industry to input into the discussion.</p>
<p>Do you have other comments on the contents of the paper?</p>	<p>“Contact suggests that the System Operator conduct a high level desk-top analysis on the likely outcome of implementing changes to the reserve market as part of assessing the outcomes from this project.</p> <p>The purpose of this is to give the industry participants, including the System Operator, some possible insights on issues that might arise with the upcoming changes, so that they can be assessed.”</p>	<p>Agreed. Once valid options have been agreed upon, investigation of the likely implementation outcome will be further studied.</p>

Northpower

Questions	Comments	Response
<p>Is there any other work you consider desirable and relevant that the System Operator should include?</p>	<p>“IL/AUFLS overlap. Northpower provides IL as FIR and SIR – this is primarily hot water heating load at times when it is not being used for peak management purposes. The restriction on overlap between IL and AUFLS means that Northpower’s offers are lower than the amount that realistically would be shed in a UFE.”</p>	<p>Agreed. This work is part of the current scope and therefore will be addressed in this review. The preliminary findings will be available at a workshop in mid April.</p>
<p>Do you have other comments on the contents of the paper?</p>	<p>“The approach seems to focus on preparation to react to a contingent event. We would like the review to include evaluation of the trends that may be increasing the probability of contingent events in the long-term (fragile generators) and asking how that could be factored into the overall cost benefit. Otherwise distributors and end-use customers have to take all the ‘pain’ to balance the ‘gain’ of the generators.”</p>	<p>The System Operator does not have sufficient information to complete the suggested work as part of the UFM project. The focus of the UFM work is to investigate present under frequency arrangement in respect to the current credible event policy which was reviewed in 2009. The credible event policy is reviewed every 5 years and the suggested work could potentially be considered there.</p> <p>The revised arrangements coming out of the UFM project is designed to be durable with respect to being appropriate to future system configurations which may include increased probability of certain contingent events.</p>
	<p>“We are also wary of over-complexity in the market, and unnecessary expense.”</p>	<p>Agreed. We trust that the cost benefit analysis and good input from reserve providers and demand side participants will address the over-complexity in the market and hope to develop a scheme that is appropriately simple.</p>