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John Tamblyn
Chairman
Australian Energy Market Commission
PO Box A2449
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By Email: submissions@aemc.gov.au

Dear Chairman

Draft Rule Determination: Setting VoLL Following the Shedding of Interruptible Load

In responding to the Rule change proposal by the Australian Energy Regulator (AER), the National Generators Forum (NGF) supported a change in this aspect of the existing Rules, but proposed an alternative change which we believe to better contribute to the National Electricity Objective.

The Commission, in this draft determination, has chosen not to adopt this NGF proposal.

The NGF, in considering this draft determination, has reached the view that the Commission has not been adequately informed of the relevant facts in relation to the issues under consideration, and consequently this draft determination has not considered the NGF proposal in the correct context.

The NGF does not consider that it is part of its normal role to inform the Commission on the details of the market dispatch process, as such advice would normally be provided by other parties, but in this case it appears to be desirable for us to adopt this role.

This submission will describe aspects of the market dispatch and the process for restoration of shed load that have evidently not been considered in this draft

determination. On the basis of this additional information, the NGF requests that the Commission reconsider its rejection of the NGF proposal.

1. Unmet demand in dispatch

The current market Rules are silent on the inclusion of unmet demand in market dispatch.

Initially, the market dispatch process had no provision to include unmet demand. The dispatch process was then designed to schedule supply to meet a forecast demand, which was determined as the sum of the actual demand (as supplied by scheduled generators) at the start of a dispatch interval plus an estimated increment or decrement of load during the dispatch interval (plus a minor correction not relevant here).

The change in load is estimated by an automatic forecasting process based on historical data, and hence does not include the possibility of restoration of unmet demand.

In the event that load has been shed, this leads to dispatch based on meeting approximately that part of the demand already supplied, and makes no provision for the restoration of any part of the unmet demand. This was seen to have several adverse consequences –

- The price was based on the situation without any load restoration, rather than on a realistic appraisal of the outcome including any expected restoration, and hence is too low,
- Supply was not dispatched to meet any expected restoration, and hence the physical process of load restoration was needlessly impeded,
- Any restoration of supply utilised the FCAS regulation raise services to maintain frequency, which is outside the proper scope of this service

NEMMCO has recognised that this gap in the market Rules is undesirable and has added a facility for “demand offset” to allow these adverse consequences to be mitigated.

The NGF supports this initiative as a practical response to a deficiency in the Rules. However, we note that this process leaves NEMMCO with a wide and unfettered discretion in relation to the chosen component of any unmet demand that is introduced into dispatch.

The NGF alternative change to the Rules was designed to limit the possible adverse effects of this discretion, while allowing the desirable features of the demand offset system to apply.

The most desirable use of this NEMMCO discretion is not simple to define, because there are adverse consequences of either under-use or over-use of this facility. The appropriate level of demand offset is, in theory, the amount of unmet demand which will actually be restored to supply in the relevant dispatch interval. But the restoration process is complex and “lumpy” and not directly under NEMMCO control, and hence this ideal will be difficult to achieve.

If the demand offset applied is excessive, then the market price will be too high, and generators will not physically be able to reach the production levels dispatched because actual demand will be below the dispatch forecast. This leads to undue financial risks to those generators that are restricted to below their dispatch targets. It also leads to inappropriate use of regulation FCAS services, but in this case in the “lower” direction.

On the other hand, if the demand offset amount is too low, then the problems listed above in the absence of demand offset still apply (although somewhat reduced).

If we assume a proper exercise of this discretion by NEMMCO, the demand offset will be based on the best available estimate of load restoration in the coming dispatch interval.

However this leads to a problem when the load restoration is no longer governed by the practicalities of the restoration process, but is instead halted due to inadequate supply. In that case, following the practice as described, NEMMCO would set zero dispatch offset because no restoration is possible, despite the remaining unmet demand.

Market price would then be based on the false premise that the demand currently supplied is the whole demand that should be supplied. The NGF proposal would, in this circumstance set a VoLL price, thus recognising that the dispatch process, if fully informed on the potential demand, would set this price.

We note that the demand offset facility had only a small role in the reviews of the events of 16 January 2007, which led to the Rule change proposal under consideration. This is because this facility, although incorporated in the dispatch process at that date, failed to operate when called on, due to a technical problem.

In summary, the Commission in making its draft determination, has not had the opportunity to consider a relevant aspect of the market dispatch process, which is not explicitly authorised or regulated by the market Rules. This aspect of dispatch provides NEMMCO with a wide discretion. The NGF proposal was designed to deal with the possible adverse consequences of the exercise of this discretion and hence could not properly be considered without knowledge of these matters.

2. NEMMCO resource allocation

The draft determination cites, as reasons for not adopting the NGF proposal, that it would require NEMMCO to “exercise judgement” and to “allocate resources to the task of determining whether VoLL should be invoked”.

It is therefore relevant to examine whether the relevant judgement and resource allocation are in fact additional burdens that would be imposed on NEMMCO at critical times.

After an event of under-frequency load shedding, the priority for NEMMCO will be to stabilise and secure the power system. During this period the NGF proposal inherently has no role, and hence claims no resources.

Once secure operation has been restored, NEMMCO will consider the possibility of restoring supply to unmet demand. This cannot safely be done without a prior assessment of the adequacy of supply to meet the augmented demand. If load restoration were to take place without such an assessment then, depending on system circumstances, it would risk either an unmanaged decline in system frequency, or else power flows on the network exceeding secure limits.

This necessary assessment by NEMMCO of supply adequacy in relation to proposed supply restoration, will reach one of two possible conclusions –

- That there is available supply to permit some supply restoration, in which case this will probably be arranged and the criterion under the NGF proposal for VoLL to be applied is clearly not met, or
- There is insufficient supply available to allow further supply restoration, in which case restoration will be suspended, and the criterion for VoLL to be set under the NGF proposal is clearly met.

Hence it is apparent that the analysis relevant to the NGF proposal is inherent in the logic of restoring supply to unmet demand, and does not require any additional judgement or resources.

3. Risk of inconsistent application of VoLL

The draft determination also expresses concern in relation to possible inconsistency in the application of the NGF proposal, if adopted.

However, this judgement was apparently made in a context where the application of the demand offset facility was not considered.

The NGF believes that the application of demand offset is likely to lead to enhanced outcomes in relation to the National Electricity Objective. This applies both to the benefits in market pricing and in the enhanced ability to restore supply to unmet demand. However, the discretion that NEMMCO has in using this facility does add substantially to the uncertainty of market pricing and dispatch outcomes.

In this context, the NGF proposal emerges as a simple and well defined criterion that is independent of the exercise of discretion by NEMMCO in relation to demand offset. Also, as noted above, it is based on considerations that are inherent in the process of restoring supply.

In this different context, we believe that the NGF proposal should be seen as reducing the risks of inconsistent price outcomes, not increasing that risk.

The judgement that the NGF proposal would increase the risk of inconsistent pricing outcomes was made within an inadequate context, and should now be reviewed on the basis of additional information now supplied.

4. Pricing the market based on bids and offers

The draft determination cites as a benefit of the proposed Rule change that it leads to market pricing based on bids and offers.

The NGF supports market pricing based on bids and offers in general. However in the case where the NGF proposal is applicable, namely where there is insufficient supply available to meet the potential demand, this concept has no useful meaning.

It is evident that this comment was made without knowledge of the demand offset facility, which under conditions where load has been shed, introduces an arbitrary variable into the pricing process, thus negating the benefits claimed in the draft determination.

The proposition in the draft determination that pricing can be based on bids and offers in the circumstances where the NGF proposal would apply is false, and was evidently made without knowledge of the dispatch process that would actually apply in such cases.

On the basis of additional information supplied in this submission, the NGF requests that the Commission review the rejection of the NGF's earlier proposal in the draft determination.

The NGF further suggests that the Commission considers, at some future time, the authorisation and regulation of the demand offset arrangement within the market Rules.

For further information in relation to this submission please call Ken Secomb Phone: 03 9617 8321

Yours sincerely

A handwritten signature in blue ink, appearing to read 'J. Boshier', with a large loop at the end of the name.

Executive Director