MAJOR ELECTRICITY USERS' GROUP

30 July 2010

Mike Collis
Electricity Commission

By email to submissions@electricitycommission.govt.nz

Dear Mike

Submission on Frequency Keeping Cost Allocation

1. This is a submission by the Major Electricity Users' Group (MEUG) on the Electricity Commission consultation paper titled "Frequency keeping Cost Allocation" published 17th July 2010[1]. This submission has been prepared with high level advice from Strata Energy[2] and ROAM Consulting[3] ("ROAM"). We appreciate the time Commission staff and advisors to the Commission have taken to answer questions and participate in conference calls with MEUG members and staff from Strata Energy and ROAM.

2. As background to the answers to the Commission questions that follow, MEUG note:

   a) There is an urgent need to increase contestability into provision of frequency keeping (FK) services. MEUG welcomes efforts by the Commission to establish some form of AGC first and then to consider development of a FK market. The earliest a FK market is expected to be in place is 2012 and more likely we think it will be after that date. An important outcome of that market will be an alignment of marginal FK costs with marginal FK prices.

      The sooner we can get some competition to drive down the annual FK cost of approximately[4] $60m pa the better.

   b) We agree with the Commission that there is an urgent need to ensure that all generation (existing and new) that creates a need for FK to pay the costs ahead of a FK market commencing. This is particularly important for providing economic signals to generation developers at the time when generation plant is being specified.

      In broad terms, if the existing 50 MW FK band costs $60m pa and another 350 MW of wind generation is added, then the FK band may have to increase by between 6 to 9 MW[5]. On an equivalent average rate as current costs, the new wind generation will add between $5 to $7½m per annum to FK costs. This additional cost is a lower bound because the incremental cost of meeting new FK needs is likely to be greater than the average cost of meeting existing FK needs.

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[1] http://www.electricitycommission.govt.nz/consultation/freq-keep-cost-allocation/view
[2] www.strataenergy.co.nz
[3] www.roamconsulting.com.au
[4] Consultation paper paragraph 2.1.3, average cost for last 5 calendar years.
[5] Ibid paragraph 7.5.4 (c) using a 350 MW wind generation expansion case.

The above comments that new generation should face some element of causer pays in the transition to a FK market also apply to new or expansion of existing noisy load; though there is no such planned load that we are aware of.

Having transitional FK cost allocations consistent in principle with the expected direction or future market derived marginal prices will be challenging. The Commission consultation paper is a good start to developing a conversation with the industry on how this can be achieved.

c) What to do with existing or legacy noisy load in the transition is also challenging. Separate submissions from Pacific Steel and NZ Steel will elaborate on their specific concerns.

There are high value risks if the wrong transitional arrangements are put in place.

For example if the transitional arrangements lead to existing noisy load deciding to close and there is no change in the 50 MW band that drives FK procurement and costs, then there will be little relief on aggregate FK costs. In the transition period prior to a FK market we believe the System Operator is likely to act cautiously and increase the MW band requirements for new wind and non-FGA generation but would not decrease the existing 50 MW band if noisy load suddenly decreased.

To avoid the risk of existing noisy load exiting without any commensurate reduction in FK procured, the transitional regime should not be any more onerous on existing legacy noisy load than the current regime. This could be achieved by capping the allocation rate charged to the load with the highest variability factor to no more than had the status quo cost allocation been in place. An example of how this risk might arise and how a cap on the preferred option in the consultation paper would retain the status quo for the noisiest load follows:

- Assume the status quo comprises 40,000 GWh demand and FK costs of $60 per annum. All loads pay a uniform FK rate of $1.50/MWh.
- Assume the consultation preferred option approach using the status quo assumptions above with 1,000 of the 40,000 GWh load deemed noisy and 26,000 GWh of intermittent and non-FGA generation to be allocated FK costs. This results in non-noisy load and generation paying $0.90/MWh and noisy demand paying $1.79/MWh. The latter rate is 19% above the status quo rate of $1.50/MWh. This example is approximately the same as that given in the consultation paper.
- However if the Commission has over-estimated the level of intermittent and non-FGA generation, then the unit rate for non-noisy load and generation, and the unit rate for noisy load both increase. If only 13,000 GWh of generation is allocated a share of FK costs, then noisy demand will pay $2.22/MWh and remaining load and generation $1.14/MWh.

MEUG does not believe the preferred option adequately protects existing noisy load from the risk the EC has miscalculated generation that should share FK costs in the transition. Hence one option to be considered is a cap on the maximum rate paid by the noisiest load equivalent to that had the status quo allocation been in place.

3. MEUG comments on the paper follow:

	EC question	MEUG comments
Q1	Do you agree with the Commission that a full review of the cost allocation should be deferred until a more competitive frequency keeping market is put in place?	Agree full review should follow implementation of a more competitive FK market. There are a number of elements identified which the transitional arrangements should not preclude: • Reducing FK requirements on NI and SI through transfer of FK over the HVDC link; • Including the influence of intermittent (and

	EC question	MEUG comments
		other) generation on system inertia; and • Arrangements between noisy loads and market operators/other participants where variability is predictable.
Q2	Do you agree that only relatively simple extensions of the existing arrangements be considered in the transition period?	Agree simplicity is best provided consistent with likely design of future FK market and avoids risks such as unintended financial hardship on existing noisy load.
Q3	Do you agree that a basis for allocating costs to generators holding dispensations from normal frequency obligations should be set out in the Rules?	Yes.
Q4	Do you agree that allocating costs to dispensations as discussed above is an appropriate transitional approach? If not, how should this be done?	Yes.
Q5	Do you agree with the proposed approach to classifying noisy demand? If not why not?	Agree extending the existing methodology to allocate total FK costs across both load and key influencers is a reasonable transitional step. The modelling and statistical analysis to identify parties that have caused the need for FK on a monthly basis seems reasonable. The choice of a variability factor of 2 to decide whether load at a GXP pays the average allocation rate or twice that rate because it is "noisy" is: • arbitrary; and • Results in a poor price signal because it categorises all load above 2 as having an equal need for FK. To amplify the latter point, identified noisy nodes above this threshold have a variability factor of 54 (based on the sample 3 months) and 3.2, respectively. Under the proposal these nodes are to be treated the same based on the arbitrary cut-off of 2. This would need to be further considered if a principle is adopted that parties should face costs relative to the FK need they cause. MEUG suggests work be undertaken to allocate FK costs to noisy demand based on a function of the variability factor rather than on a threshold basis. Variability factors for intermittent generators may also be calculated and applied in a similar way to differentiate FK cost allocations to differing types of wind turbine. ROAM have noted that they recommended to the Western Australian market charging FK services on the basis of capacity (MW), rather than energy (MWh). It is the size of the variability in MW that drives the FK requirement, rather than energy. Determining the marginal impact on FK costs on the basis of capacity should be considered for the transitional regime.

	EC question	MEUG comments
Q6	Do you agree that these are the main categories of costs for the proposal? If not, why not?	Agree the costs listed are relevant. Have no comments on the quantum of costs and assume those will be clarified with the System Operator.
Q7	Do you agree that the main potential benefit of the proposal is that some generators may remove dead-bands on governors in order to avoid a cost allocation?	This appears to be reasonable.
Q8	Do you agree with the Commission's assessment of potential benefits of the proposal?	Agree with the qualitative assessment by the Commission.
Q9	Do you agree with the Commission's overall assessment that the proposal has the highest net benefits?	Agree with the Commission's overall assessment that the proposal has the highest net benefits compared to the alternative options listed in the consultation paper. However MEUG suggests there are several design aspects to the proposal that could result in further improvements, eg: • Capping the rate the noisiest load pays to be no more than had the status quo formula applied – refer paragraph 2 c) above. • Instead of using an arbitrary variability factor of 2, the cost allocation rate could be a function of the variability factor – refer question 5 above. • Using MW variability as the cost allocator rather than MWh– refer question 5 above. • Reconsideration of the 5 MW deminimus when analysing variability of GXP[6]. This appears to be an arbitrary threshold.
Q10	Do you agree with the Commission's overall conclusions? If not why not?	The Commission's overall conclusions in paragraph 7.8.1 are reasonable provided further work is undertaken on allocating costs in the transition to legacy noisy load to avoid unintended consequences.

4. Overall MEUG welcome the general direction of this proposal to ensure generators that impose frequency related costs on other parties begin to bear those costs. Transitional arrangements ahead of a longer-term solution being put in place are supported. More work is needed on whether and how to differentiate the contribution to the need for frequency services for existing noisy demand compared to more conforming demand. MEUG suggests the Commission, System Operator and affected parties work through options in an industry forum or technical group. This will help in development of material for a second round consultation.

Yours sincerely

Ralph Matthes
Executive Director

[6] Ibid paragraph 4.8.6