

**From:** Keith Hitchings [mailto:keith.hitchings@quasar.co.nz]  
**Sent:** Thursday, 5 July 2007 3:15 p.m.  
**To:** Tim Street  
**Subject:** Market Design Review

Mr Tim Street  
Senior Adviser  
Wholesale  
Electricity Commission

Hello Tim,

Market Design Review

As an active and involved stakeholder in the NZ electricity market by virtue of our Company being a provider of advanced metering systems and solutions to generators, distribution networks, and industry in general, we have reviewed the Commission's Consultation Paper with interest.

We don't have any specific comments to make in response to the questions raised, however we do want to take the opportunity to bring to the attention of the Commission, what has become known in the industry as FCAS monitoring within the Instantaneous Reserves Market. Developed by our Company for the Australian NEMMCO market, the FCAS schedule requires monitoring of grid system frequency, recording of this frequency, load and disturbance time, and presenting this data in spreadsheet format. In simple terms if a grid experiences an increasing load that it cannot satisfy, the grid frequency begins to fall. To rectify the situation either additional generation must be provided or load must be dropped. There are many instances where this happens very quickly, for example where a generator goes off line.

Our FCAS solution continually monitors grid frequency and other electrical parameters at a very fast rate. When a frequency event occurs the data for a given period prior to the event, and for a given period following the event are captured and used to generate a report. The report will show to what extent load was shed, and how long it took for the grid frequency to recover. This satisfies the needs of the IR Instantaneous Reserve market.

This system is in wide use in Victoria, South Australia, and Tasmania, and also here in NZ.

If you would like further information please feel free to contact us directly.

Best regards

[Keith Hitchings](#)

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