

January 19, 2006

Subject: GE Comments on Econnect Report on Intermittent Generation for SWIS

Dear xxx:

GE is pleased to be given the opportunity to comment on the subject report and recommendations to SWIS. First, we would like to compliment the authors on the comprehensive and well written report. We are broadly in agreement with the observations and findings of the authors. We offer the following brief comments and suggestions as possible additions to their good work.

1. We agree that market mechanisms to support frequency control are appropriate. The authors are silent on the participation of energy consumers ("loads") in a FCAS market. We believe that provision for this should be included in the design of a FCAS market, as such participation will increase the options and may prove to reduce overall impacts on cost-of-energy.
2. The observations on high costs associated with overly stringent FRT requirements are sound. It is worth noting that the technologies to provide ever more aggressive FRT capability are evolving rapidly, and so the concern, while still valid, may be somewhat less pressing than in the near past. The authors are silent on the possibility of investment by the transmission owners in improving protection to reduce fault durations. This presents its own technical challenges. Nevertheless, investment in more sophisticated protective relaying could possibly be the most cost effective option, and should be included in the recommendations.
3. Network stability can be significantly impacted by control of wind projects. The authors address this in several places in the report, particularly with regard to inertia response and curtailment. Other control functions, most notably the ability to provide reactive power and regulate voltage under calm and extremely high wind (greater than shutdown speeds), are possible. Provision to reward market participants for providing network stability benefits (or ancillary services) beyond a minimum functionality that meets grid code should be included in the market design.
4. Regarding solar thermal generation, we note that plans are proceeding in southern California for as much as 1500 MW of new solar thermal generation using concentrators and sterling engines in the near future. The investment community appears to believe that the technology is sufficiently economic for large scale deployment. This technology (which comes in 25kW units, arranged in 1 MW strings) appears to be well suited to western Australia.

Very truly yours,

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