

Wind Energy Work in Progress

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Wind Energy Association Conference

31 August 2005



The Electricity Commission

- Established September 2003 after failure of industry self-governance
- Full-time chair and four part-time commissioners
- 40 staff
- Oversees electricity markets, provides dry year reserves, conducts electricity efficiency programmes, and regulates Transpower



Electricity Act

- the electricity sector contributes to achieving the Government's climate change objectives by minimising hydro spill, efficiently managing transmission and distribution losses and constraints, promoting demand-side management and energy efficiency, and removing barriers to investment in new generation technologies, renewables, and distributed generation.

Good News

- Abundant wind energy in New Zealand
- Technology is
 - Proven
 - Off the shelf
 - Compatible with hydro system
 - Scalable
 - Affordable
 - Consentable

Bad News

- Wind output is variable, affecting frequency and system dynamics
- Wind output is unpredictable, difficult to schedule
- Wind generation is currently centralized – output is highly correlated

Commission's Role

- Removing barriers to renewables
- Added market rules in 2004 to allow bidding of wind generation, so that Te Apiti could operate
- More rules needed as wind industry grows

Commission Wind Projects

- Tactical Project (short term)
- Wind Generation Investigation Project (“strategic project” – medium to long term)

Tactical Project

- “Impact of Manawatu Wind Generation on the Operation of the New Zealand Power System” by System Operator (Nov & Dec 04)
- An updated report (Jan. to May 05) expected September 05
- Purpose – identify **immediate** rule changes required to Electricity Governance Rules

Wind Generation Investigation Project

- Strategic project to assess the wider power systems impact of added wind generation development in 5 to 10 years
- Propose resolution to issues raised

Strategic Study (cont.)

- Led by Electricity Commission
- Project team includes Commission staff and the System Operator and EECA
- Technical stakeholders group appointed
- Final project scope and plan expected in September 05
- Project completion October/November 2006
- Possible rule amendments will follow

Conclusion

- Electricity Commission dedicated to enabling wind generation
- Trying to identify potential problems **before** they occur
- Will work with industry to resolve issues