Gas Industry Workshop

Transmission Investment – Electricity Sector

14 April 2011

TRANSPOWER

- Overview of Transpower
- Brief History
- Investment Framework (inc GIT)

Overview of Transpower

- 100% New Zealand Government owned
- Natural monopoly over electricity transmission in New Zealand
  - Revenue Regulated by Commerce Commission
  - Also governed by EIPC under Electricity Authority
- Principal objectives:
  - “Keeping the lights on”
  - Efficient operation and investment in the grid

Brief History

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- Market nodal pricing aimed to deliver appropriate investment in generation and transmission (1996-2003)
- Common good nature of transmission meant that there was no investment
- Industry regulation EGRs – 2004
  - Part F governed interconnection asset investment
- TP could recover investment via Transmission Pricing Methodology
- Huge build program ensued - $2.5 billion approved

Investment Framework (inc GIT)

Investment Framework

- Transpower identifies investment needs & develops proposals to address need –must pass GIT
- Submission to regulator for approval (Commerce Commission)
- If approved Transpower can recover investment through charges on all grid users
- Customers can ask Transpower to invest for their benefit – in which case they meet the cost directly

Grid Investment Test

- To be approved, proposed investments must pass the GIT
- Unorthodox cost benefit test
  - Narrow focus on market costs and benefits
  - Limited scope for including wider consumer and competition benefits
  - Requires forecasts of demand and generation development over 20-40 year period
  - High degree of accuracy implied from highly uncertain inputs
  - Requires us to evaluate a wide range of options including alternatives to transmission

Grid Investment Test Detail

- For reliability investments on core grid, lowest cost option passes GIT
- For economic and all investments on non core grid
  - Expected net market benefit must be greater than zero
  - Option that maximises expected net market benefit passes GIT
- Benefits include:
  - Avoided Value of Lost Load (VoLL)
  - Reduced fuel costs
  - Reduced generation capital costs
- Wairakei Ring Example
  - Modelling showed transmission would enable low cost geothermal generation compared to high cost thermal generation required with no transmission investment