

# Transmission Pricing Review

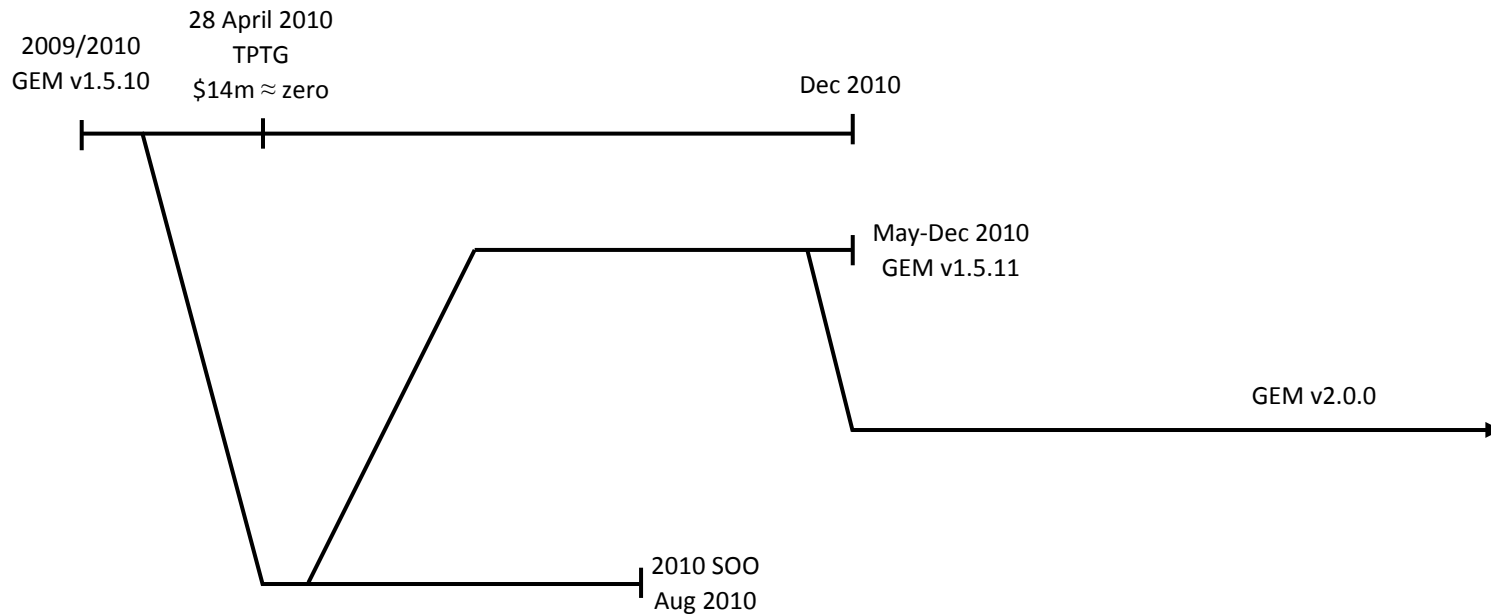
Update on GEM-based analysis

Phil Bishop

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This presentation has been prepared for discussion with TPAG. Content should not be interpreted as representing the views or policy of the Electricity Authority or of TPAG.

# GEM – too many versions



# GEM – data updating

- Review and update capex costs
  - Incl. exrate and local content assumptions
  - CCGT↑, OCGT↓, wind↓, diesel peakers/recip engines↓
  - Coal↑ but probably still too low, hydro too low?
  - MED/PB review of costs but too late for TPAG
- Review fixed and variable operating costs
- Heat rate and other operating assumptions reviewed
- WACC – 7% post-tax, real; c.f. 8% previously
- New HVDC charges and ownership shares
- Peak/security constraints (MW) – based on WEM. Also changed RHS, i.e. peak forecasts
  - => constraints now less aggressive
- Remove hard-coding (or fixing) of assumed commissioning dates in distant future

# GEM – analysis to be done

- Repeat earlier \$14m  $\approx$  zero experiment and explain differences (if any)
- Replicate J Culy HVDC analysis
- Demonstrate results using BOTE/GEMlite model
- Sensitivity analysis
  - Randomise capex costs, +/-20% for wind, hydro, geothermal
  - With and without security/peak constraints
  - Stochastic treatment of gas availability, CO<sub>2</sub> price, others?
  - Smelter decommissioning – when?
- Document revised model, data, and analysis