



# Critical Contingency Price for 13 July 2010

24 August 2010, Wellington

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John Small



- Line pack is a form of public good
  - Benefits are socialised via security of supply
  - Weak incentives to contribute during pre-CC stress
- Dual role of the CCP
  - Wash-up price for imbalances that occurred
  - Signalling role for future events

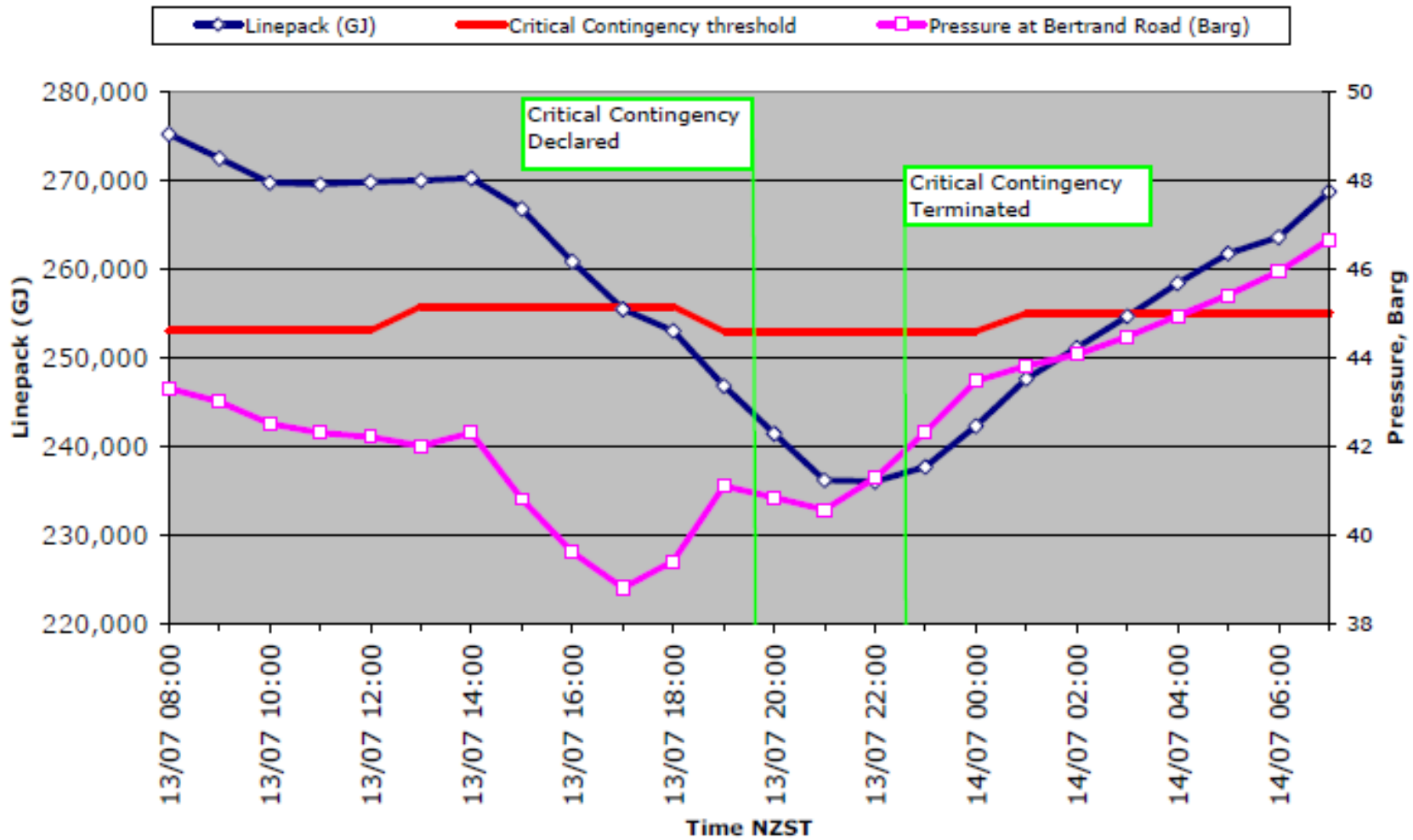


- CCP “reflects the price that would be established by an efficient short-term market that allocated scarce gas resources to the highest value uses during the critical contingency.”
- If no curtailments below band 1b, look at wholesale electricity price, unless there is a better option
- Otherwise, look at
  - Electricity price
  - Economic cost of loss of gas supply to those curtailed
  - Any other relevant matter

# Observed patterns



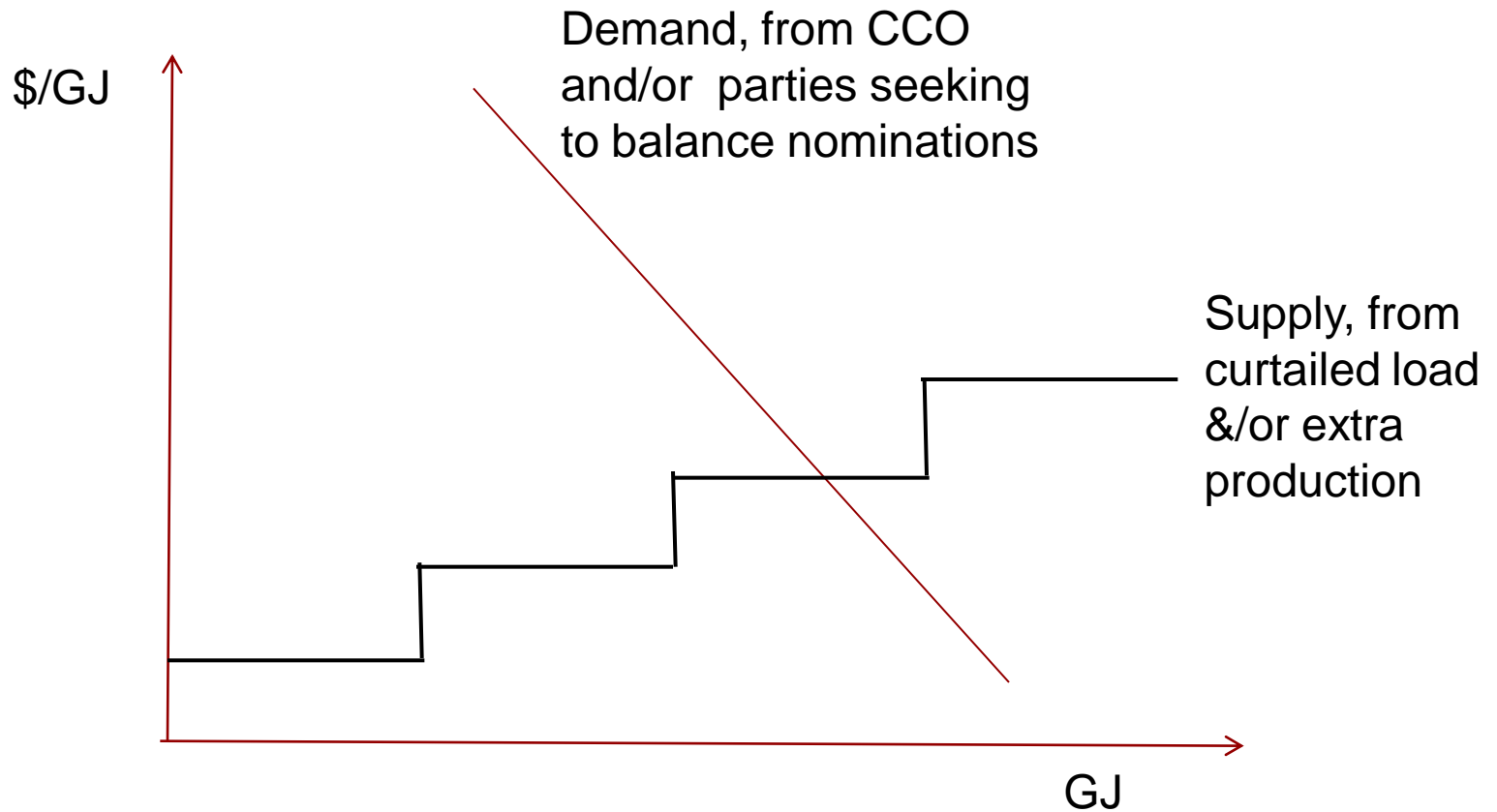
### Maui Pipeline Linepack and Pressure at Bertrand Road, 13 - 14 July 2010



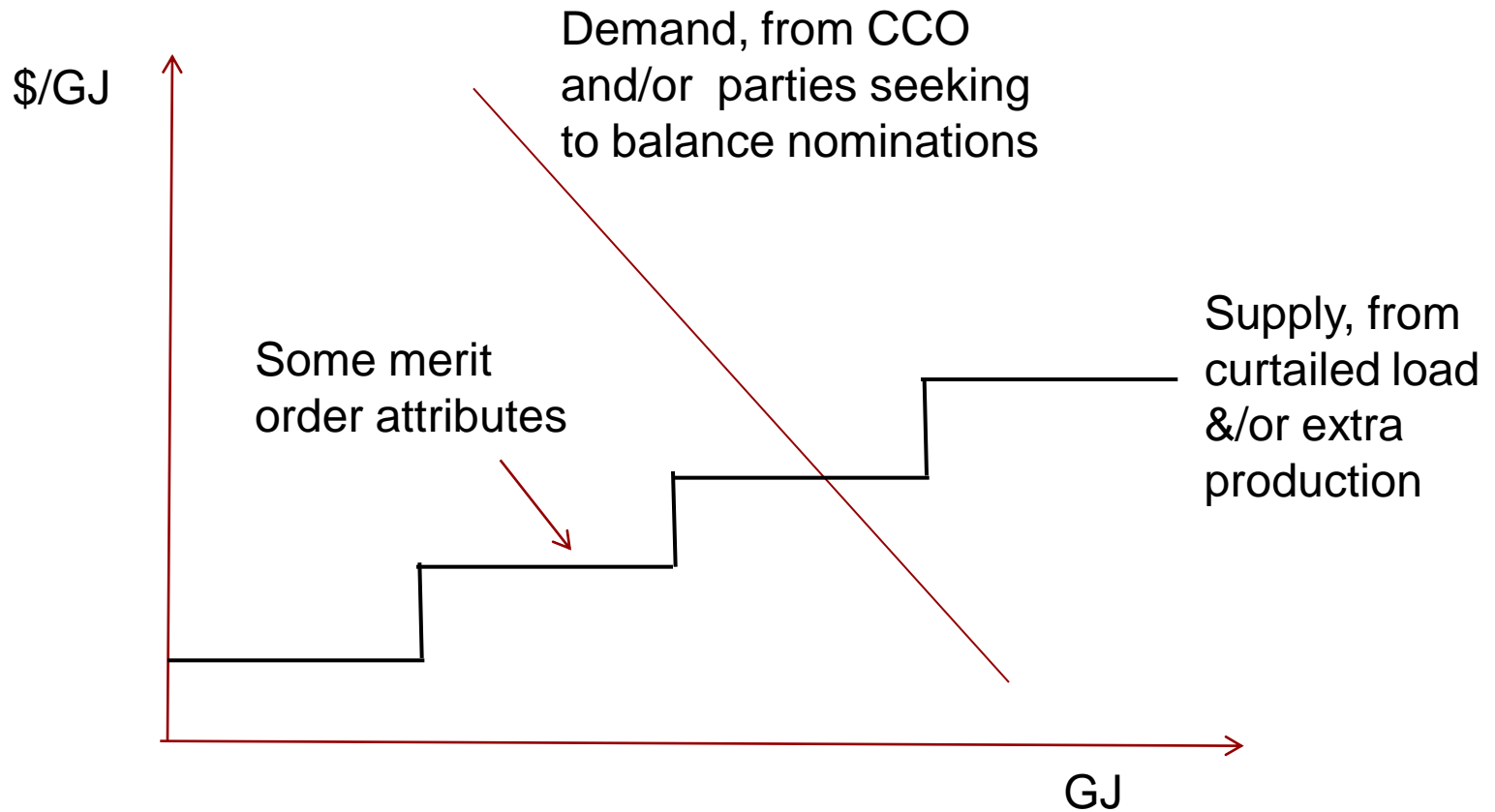


- 14.20 Outage at Pohokura
- 15.19 Low line pack critical notice posted on Maui IX
- 15.55 SO requested 3000GJ balance gas for ID4
- 16.08 MPOC curtailment at Ngatimaru Rd
- 16.43 Second MPOC curtailment at Ngatimaru Rd
- 17.56 CCO declared "Non-regional Potential Critical Contingency"
- 19.39 CCO declared "Non-regional Critical Contingency"
- 20.36 Flow resumed at both Pohokura welded points
- 22.36 CCO declared "Non-regional Critical Contingency Terminated"

# The notional gas spot market



# The notional gas spot market





- How to interpret this
  - There should have been?
    - Some parties were waiting for instructions
  - Actually it was only a minor event?
- Price implications
  - Other things equal, expect more severe CCs to have higher prices.
    - Needed to bring forth more savings if cost of supply slopes up





- Linkage to the notional market (s71)
- Potentially predictable (ball park) for future events
  - Non-arbitrary
- Will not induce gaming
  - Incentive compatible



- BGX purchases by MDL
  - Couldn't get 3000GJ
  - Took 1800GJ only @ \$14.95 and \$15/GJ
- Wholesale electricity market netback
  - Based on e3p (relatively efficient → relatively high WTP)
  - \$99.87/MWh → \$12.85GJ
  - May understate opportunity cost because price would rise if generation supply was cut

# Rationale for \$15/GJ



- Observed price
  - albeit from a market that differs from notional spot market
- Seems like a lower bound
  - Above electricity net-back, but that assumed no generation cut
  - Insufficient balancing gas to meet request → higher price required
- But this was a minor event
  - So lower bound may be reasonable
- Non arbitrary
- No future gaming incentive

# What now?



- Comments, feedback please
  - Verbally here &/or in writing by Monday 30<sup>th</sup>
- If you advocate a different price
  - please be specific and supply reasons
- I have an open mind
  - So the price may change