

# BM Pricing Issue

Presentation to GCRP 21<sup>st</sup> March 2012

by the

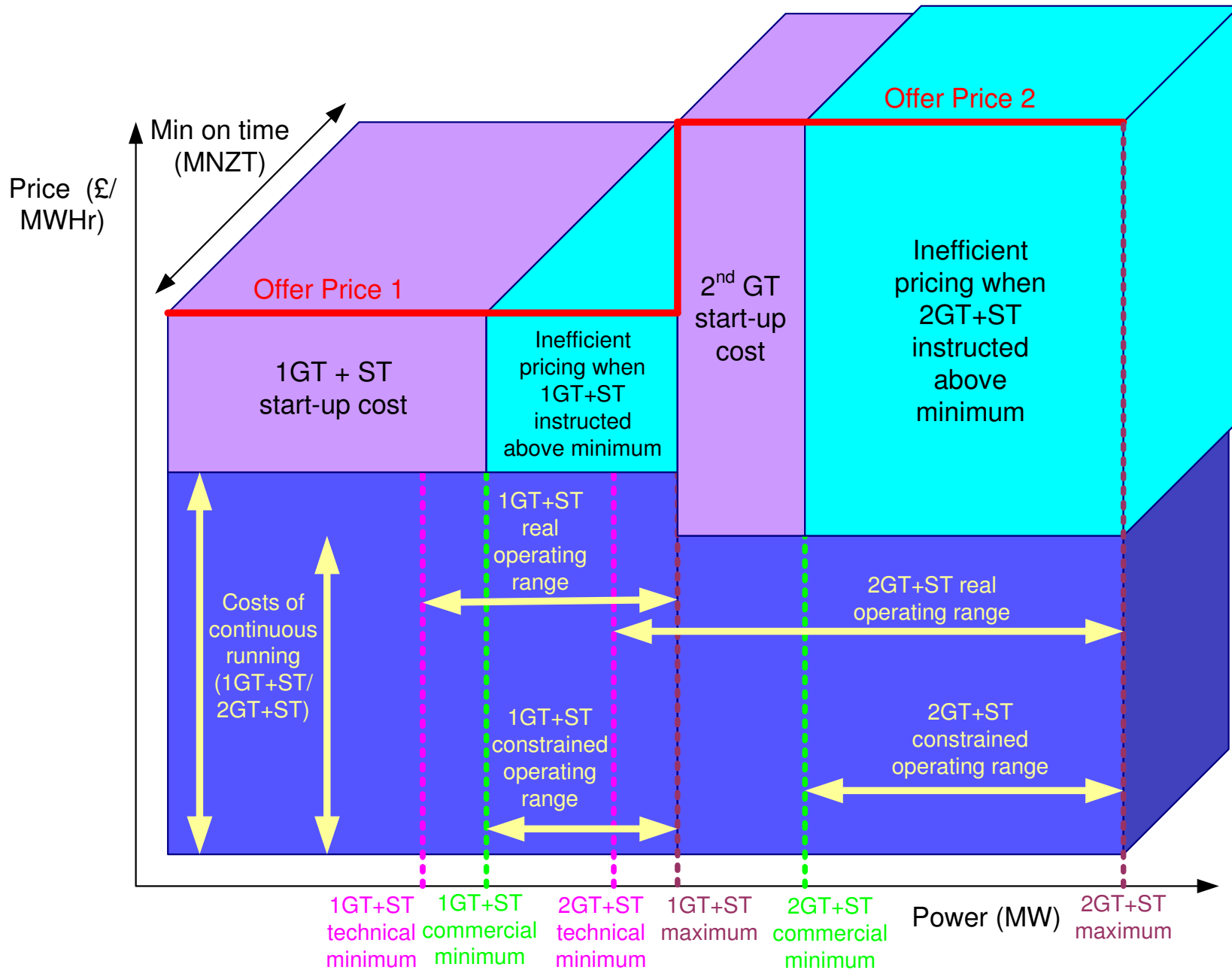
Electricity Balancing System Multi-Shaft  
Modelling Subgroup

# Background

- Multi-Shaft Modules are:
  - CCGTs
  - Cascade Hydro Schemes
- Comprising multiple Generating Units
- Currently modelled as single BMUs
  - Plus hardcopy module matrices
  - And active power above MEL/below SEL faxes
- No coherent model resulting in many issues when starting-up or shutting down units within a module
- Operational flexibility of modules is constrained

# Why this issue and why now?

- EBS has options to improve modelling
- EBS 2<sup>nd</sup> consultation responses:
  - Generally positive on improving modelling
- EBS Multi-Shaft Modelling Subgroup established
- Subgroup view was:
  - improvements in modelling less useful if pricing limited to 10 pairs of monotonically-increasing BOD Prices



# Pricing

- National Grid's existing dispatch algorithm requires monotonically-increasing prices
  - As uses linear programming
- EBS (and similar systems) use mixed-integer linear programming
  - Still need monotonically-increasing prices in order to perform acceptably
- Standard system & market approach is to use a start-up price to reflect start-up cost

# Conclusions

- Subgroup did not want to comprise requirements at this stage
  - Not before we know what is possible
- 13 years since NETA design
  - Renewables, interconnectors & CCGT operation now very different
  - Flexibility will be key for future
- Merit in reviewing pricing to check appropriate for future

# Recommendation

- Pricing is more within the remit of the BSC
- Recommendation is that this be raised as a BSC issue
  - By National Grid as Grid Code Administrator