

**Gas System  
Operator**

# **Workgroup 0661R Reconciliation and Imbalance Cash Out Prices**

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**nationalgrid**



Gas System  
Operator

01

Balancing  
Responsibility

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# Operational Balancing Responsibility

## UNC TPD D: Operational Balancing and Trading Arrangements

- National Grid is required to take **Operational Balancing Steps** where there is an **Operational Balancing Requirement** identified in order to maintain an **Operational Balance** (D1.1.3);
- **Operational Balance** means maintaining an acceptable balance between gas delivered to, and offtaken from, the **Total System** (D1.1.1)

## UNC TPD A: System Classification

- **Total System** means the NTS and all LDZs taken together (A1.1.1).

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Action 0801:  
Trading at NBP

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# Trading Arrangements

- National Grid has a Licence obligation to establish an independent market for Balancing
- Current Market Operator is ICE Endex, rules contained in UNC TPD Section D
  - Physical Market Transaction (where it is necessary to modify quantity delivered or offtaken) – enacted on ‘Physical’ and ‘Locational’ markets
  - Non-physical Market Transaction (all other transactions) – enacted on ‘Title’ market
- ICE Endex makes Trade Nominations (on behalf of trading parties) to effect Market Transactions
  - For Physical Market Transactions the User is required to submit a ‘Contract Renomination’ – to reflect change in Physical position at a Supply Point
  - Subject to a Physical Renomination Incentive Charge where this is not submitted within a set timescale (hour bar + 1)
- Validation:
  - Entry: CVSL validates allocations (apportionment of measured volume)
  - NBP trading: ICE Endex validates and actions traded quantities
  - Exit: volumes/allocations ‘validated’ by measurement

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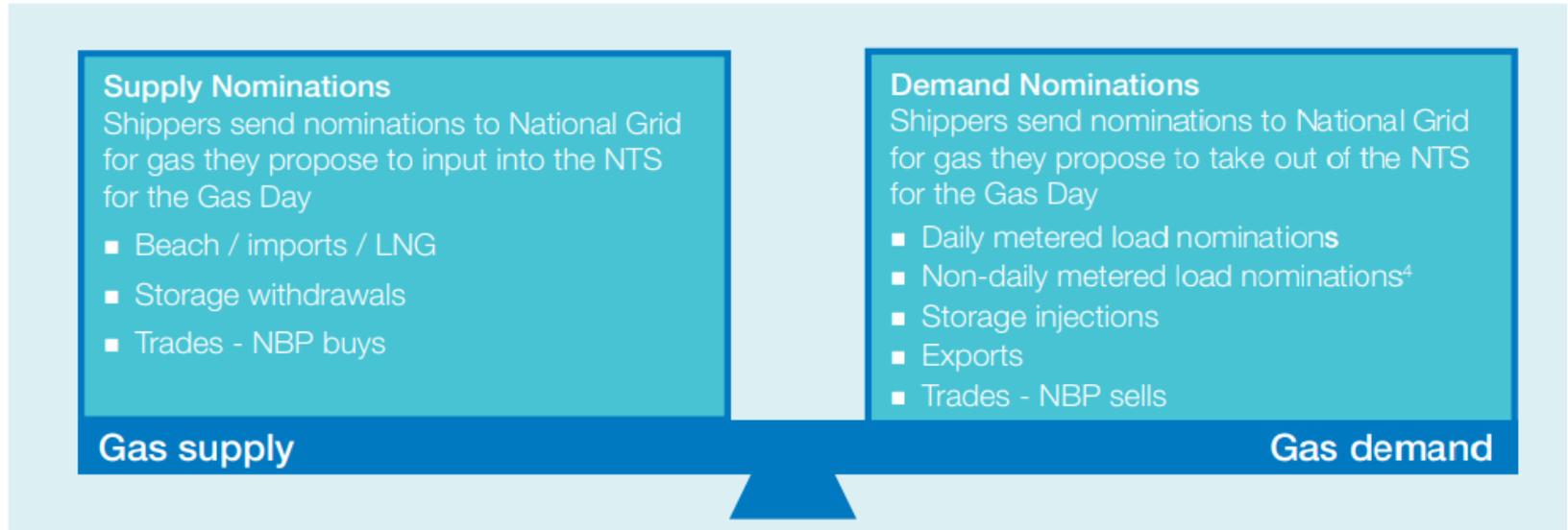
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## Action 0801: Balancing Overview

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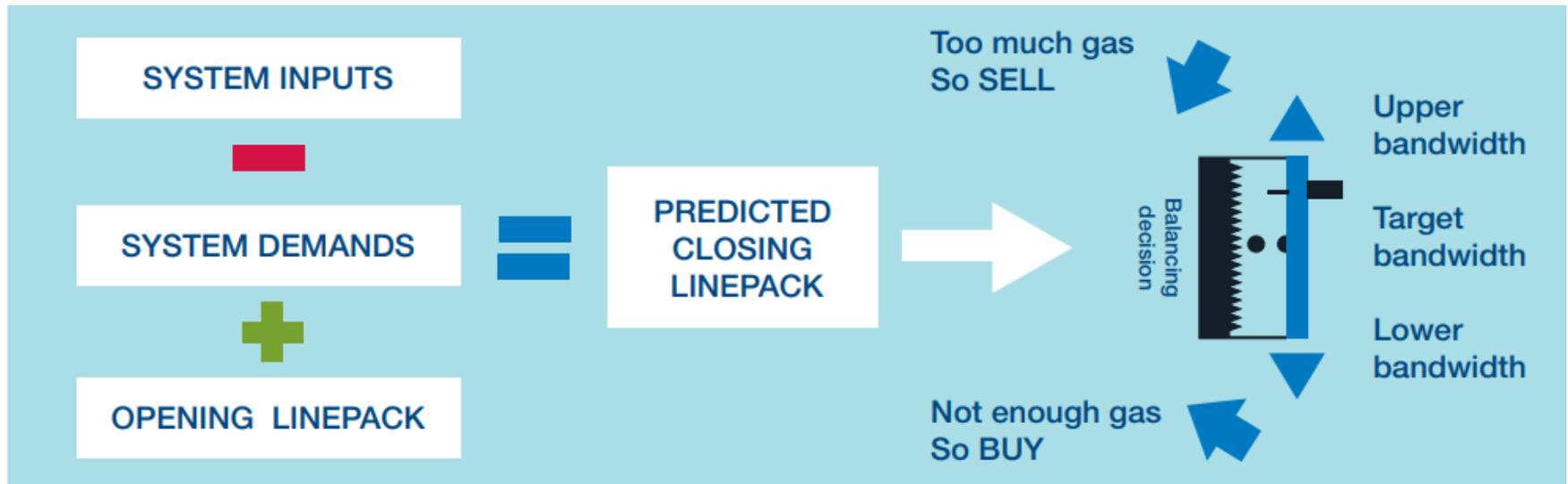


# Balancing Information from Shippers



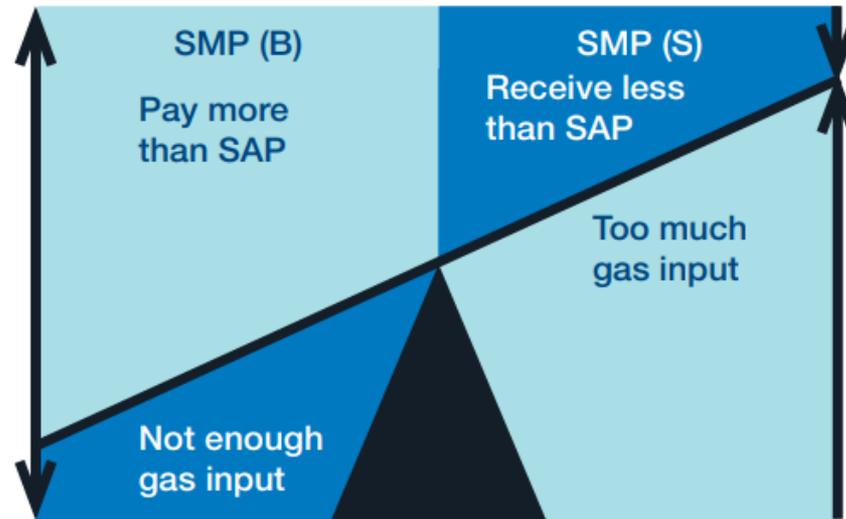
- Shippers are obliged to send Nominations (<sup>4</sup> apart from NDM sites which are provided by National Grid on Shippers behalf) to allow the System Operator to assess whether supply will 'cover' demand
  - Incentivised to ensure nominations are accurate (Scheduling charges)
  - Incentivised, not obliged, to balance supply and demand (imbalance 'cash out')
- Expected flows are also provided by 'high volume' points – Delivery Flow Notifications (DFNs) for entry and Offtake Profile Notifications (OPNs) for exit and Storage Flow notifications (SFNs) for Storage

# Residual Balancing Decision



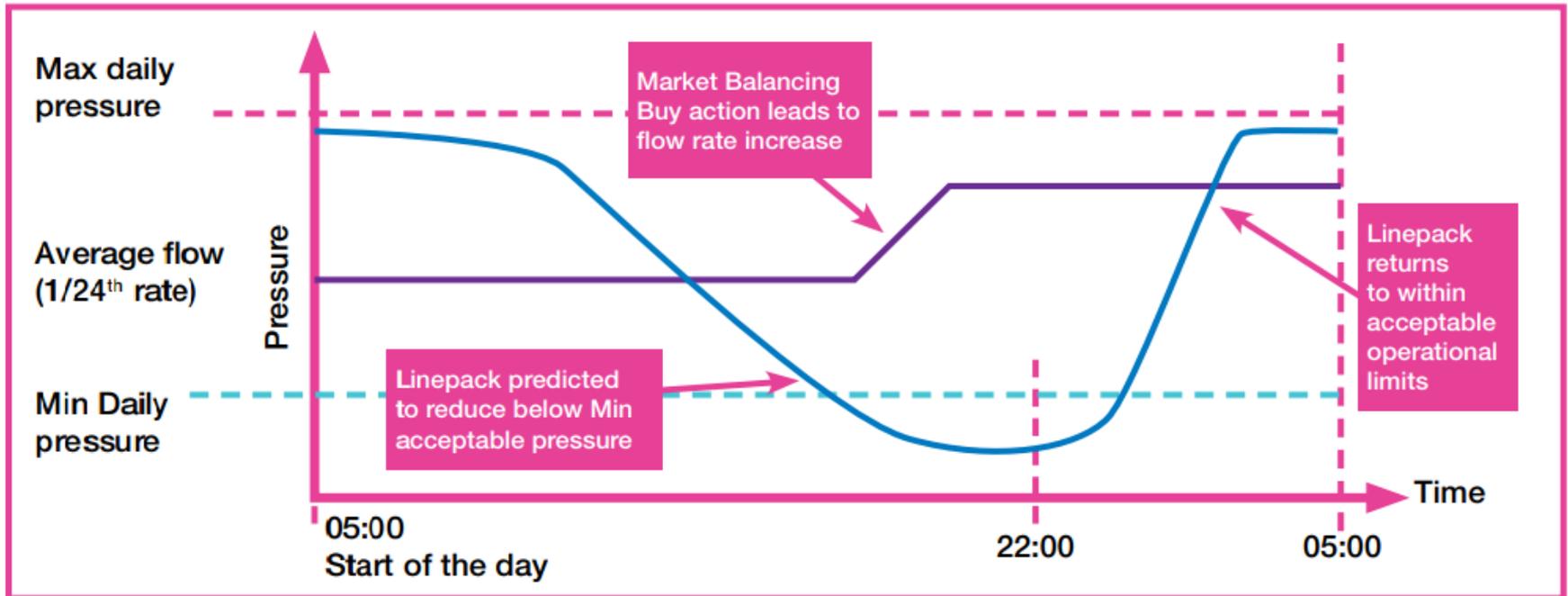
- National Grid monitors system to ensure it remain within safe and efficient operational limits
- Information of regarding supply and demand enables the System Operator to decide if an **Operational Balancing Step** needs to be taken to maintain **Operational Balance**
- National Grid Balancing Actions are driven by actual or forecast imbalance
- The system operator is incentivised to minimise linepack change day to day

# Shipper Balancing Incentive: Marginal Pricing



- If all shippers balance their respective inputs and outputs, Operational balance will be maintained
- Shippers are incentivised to achieve a daily balance by marginal pricing of any imbalance ('cash out')
  - If shipper is 'long', surplus gas is sold at a price lower than average
    - Lesser of lowest 'sell' balancing action on the day or SAP - Default marginal price
  - If shipper is 'short', shortfall gas is purchased a price higher than average
    - Higher of highest 'buy' balancing action on day or SAP + Default marginal price

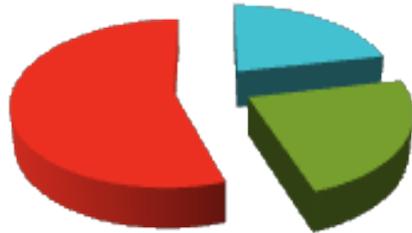
# Residual Balancing Decision



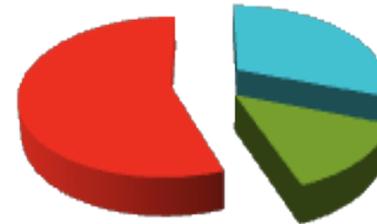
- Operational Balance is monitored throughout the day
- Operational Balancing Steps may be taken within-day to address current or potential issues

# System Operator: Residual Balancing Trades

2013/14



2014/15



2015/16



2016/17 YTD



■ Buy Days ■ Sell Days ■ Non Trade Days

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