

Update on Trading Activities

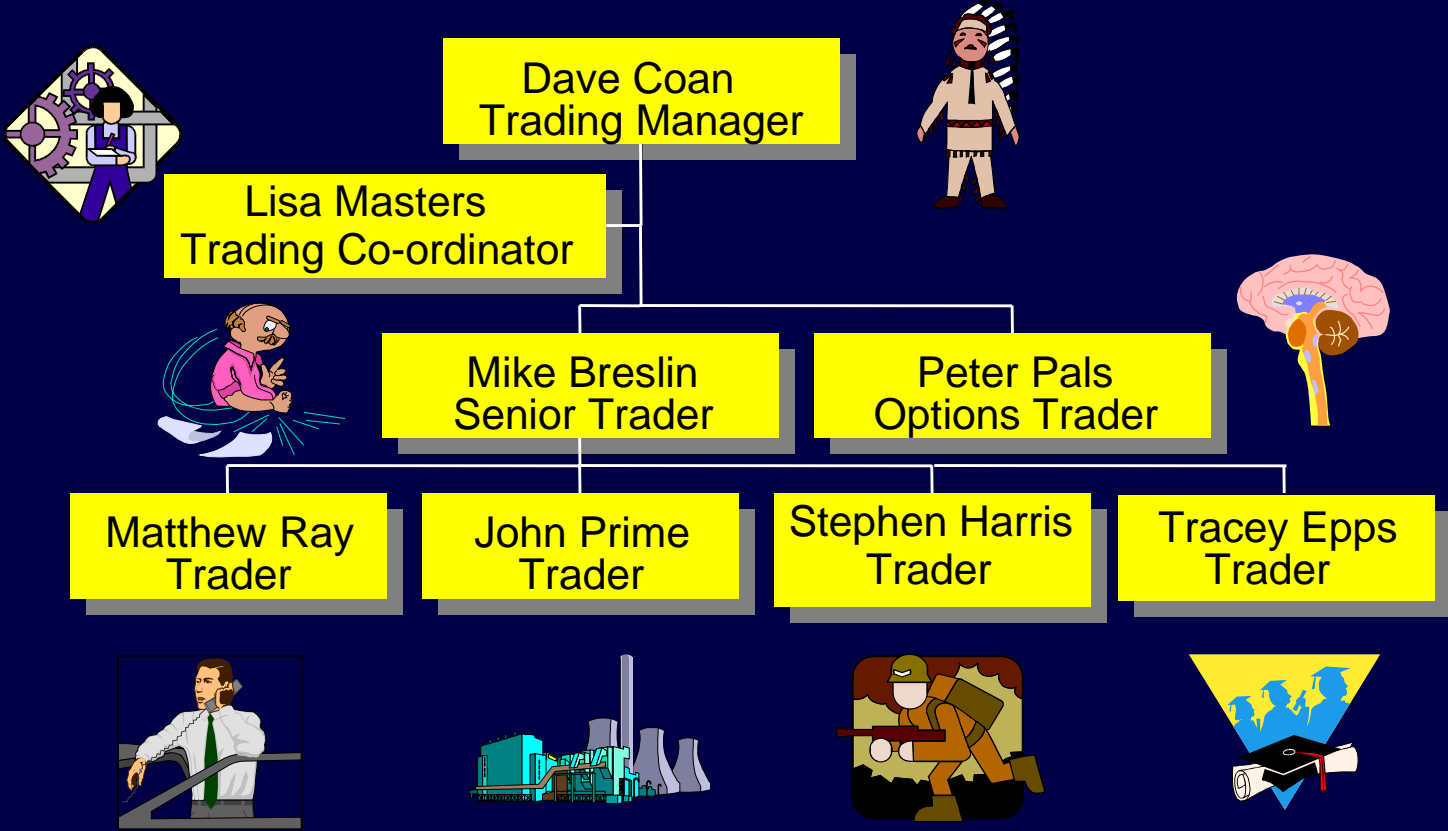
Mike Breslin

Overview

- ◆ **The Trading Team**
- ◆ **Why & How National Grid Trades**
- ◆ **Control Framework**
- ◆ **Energy & BM Unit Specific Trading**
- ◆ **Trading Activity to Date**
- ◆ **Future Issues for Trading**

Who are National Grid's Trading Team?

Trading Structure



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Why National Grid Trades

- ◆ **Licence Obligation to Balance the System economically**
- ◆ **Ofgem expects National Grid to use Trading**
- ◆ **Provides benefits to customers in reducing both energy balancing and system balancing costs**
- ◆ **Provides an additional System Balancing tool**

System Balancing tools

- ◆ **Balancing Services contracts**
- ◆ **Forward Power Exchange energy trades**
- ◆ **Bilateral OTC Trades / Options**
- ◆ **Pre-Gate BMU Transactions (PGBTs)**
- ◆ **Accepting Balancing Mechanism bids / offers**

What We Trade

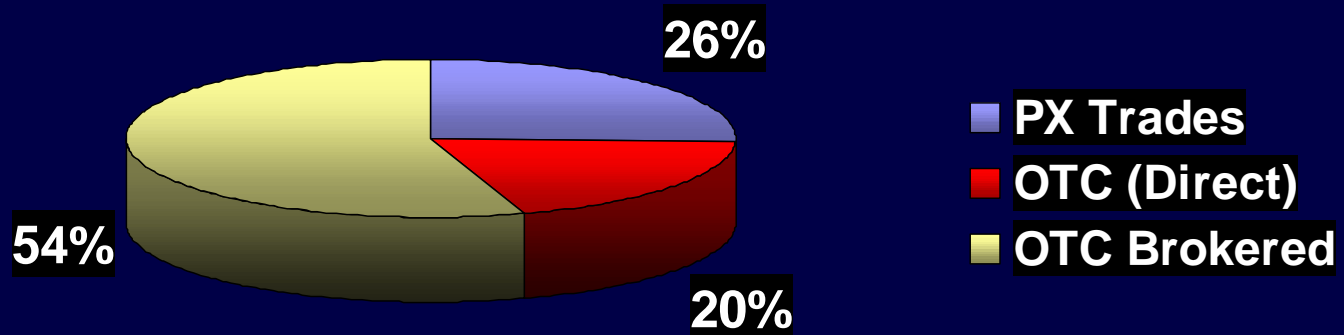
- ◆ **'Firm' Forward Energy**
 - standard contracts; shapes
 - non-locational
- ◆ **BMU Specific trades**
 - loading e.g. de-synchronising trade
 - locational e.g. Interconnector trade
- ◆ **Options - Both Firm & BMU Specific**

Our Routes to Market

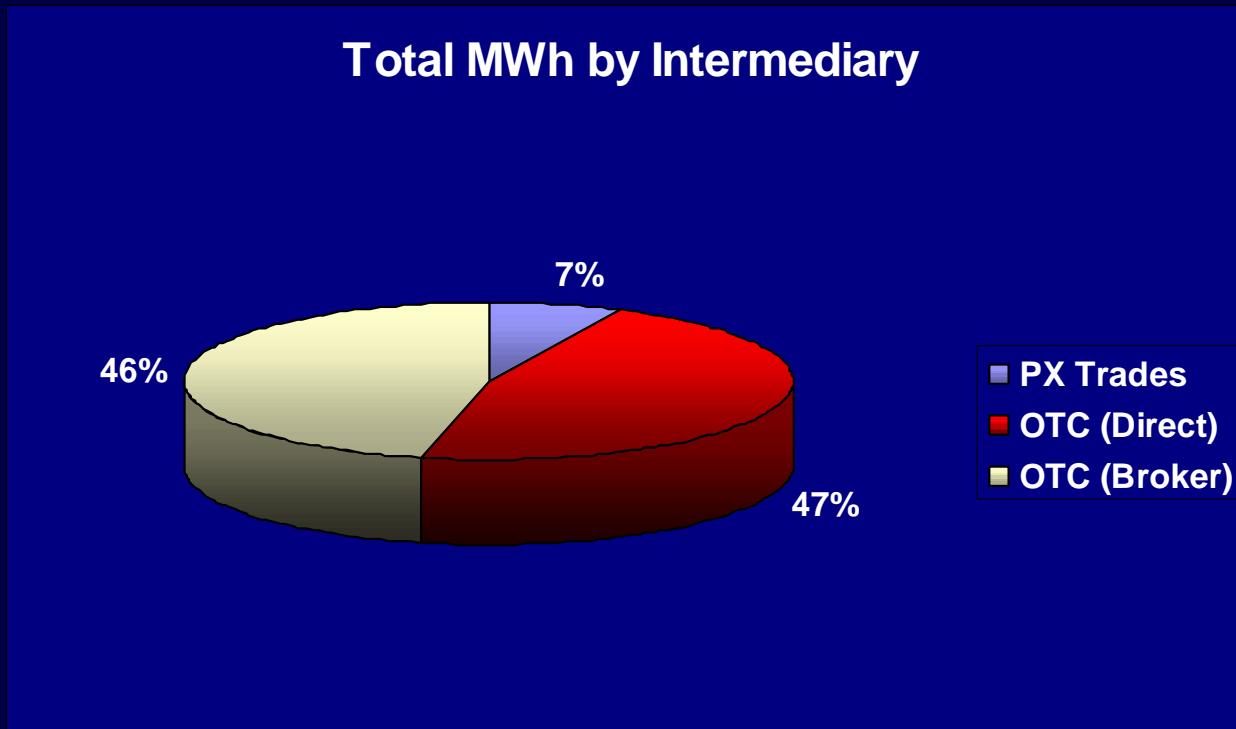
- ◆ **Brokered & Bilateral OTC Transactions**
 - * **28 GTMAs in place**
 - * **Further 12 currently being progressed**
 - * **Aim to set up GTMA with all participants**
- ◆ **Agreements with 5 Brokers**
- ◆ **Access to APX and UKPX**
- ◆ **Trade against a forecast 'physical' need - non speculative**

Where We Traded - 2001

Total MWh by Intermediary



Where We've Traded - 2002 (Apr - Oct)



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External control factors

- ◆ **Ofgem / Licence Obligations:**
 - ◆ **procure only to minimise system costs i.e. no speculative trading**
 - ◆ **operate economically and efficiently**
 - ◆ **Procurement Guidelines**
 - ◆ **Balancing Principles Statement**
 - ◆ **BSAD Methodology**
- ◆ **FSA Regulation - liaison with the FSA to ensure we comply fully with Financial Services legislation**

FSA Considerations

- ◆ **Financial Services & Markets Act 2000 - obligations under the Market Abuse Regime**
- ◆ **Code of Market Conduct - we have agreed with the FSA the scope of the Code w.r.t National Grid Balancing Services activities**
- ◆ **2 areas that come under scope of the Code:**
 - **PX Trading**
 - **OTC Energy Trading**

Compliance With The Code (Energy Trading)

- ◆ **Trading only on Information Available to The Market Place**
- ◆ **All Trading advice recorded and retrievable post event if required**
- ◆ **Trading strategy only revised in light of information in the public domain**
- ◆ **Trades only undertaken to meet a forecast physical requirement**

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Energy Trading Activity

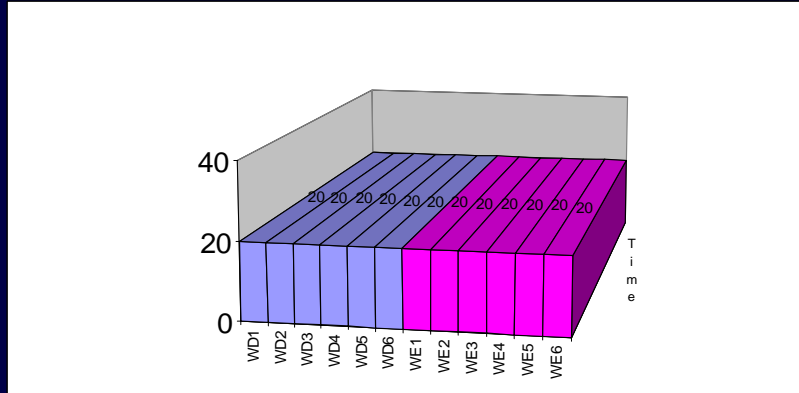
- ◆ **Volume Requirements identified by Trading Support from forecast NIV model**
- ◆ **Consistent SELLING position reflects :-**
 - * **our forecast market length - average NIV forecast approx 1000MW 'long'**
 - * **SALES undertaken to offset 'BMU Specific' BUY trades**
- ◆ **'Synthetic' trading strategies employed - hence occasional energy BUY volumes**

Synthetic Trading Strategies

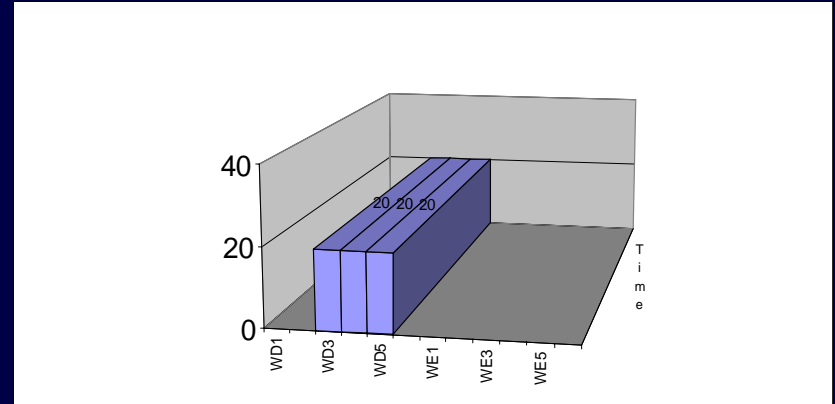
- ◆ **Forecast advice provided on an EFA block basis**
- ◆ **BUY / SELL combinations employed where product is illiquid or priced more favourably**
- ◆ **Both BUY & SELL volumes reported**
- ◆ **Example : Advice to SELL Off-Peaks Weekdays; SELL Baseload Weekends**
(Liquid products Weekly Baseload & Peaks)

Example : Synthetic Off-Peak

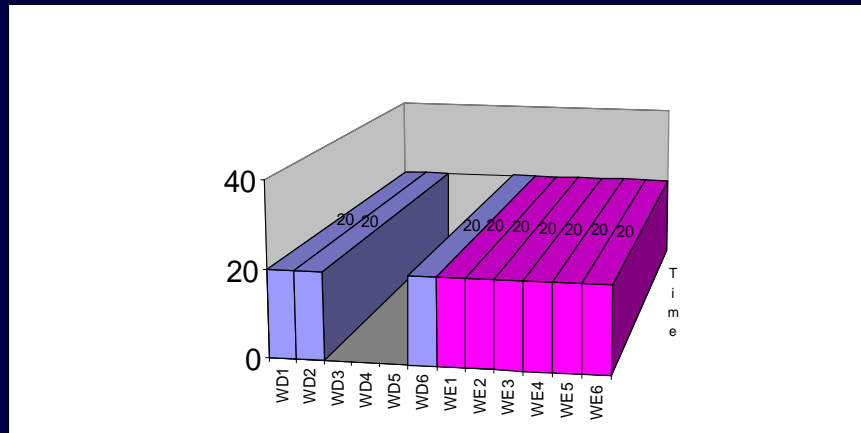
SELL WEEKLY BASELOAD



BUY WEEKDAY PEAKS



==



Weekday
Off-Peaks
+
Weekend
Baseload

BM Unit Specific Trading

- ◆ **BM Unit Specific trading synonymous with BM Actions / BS Contracts**
- ◆ **Requirements directly associated with a System Balancing need**
e.g.
 - margin deficit
 - constraints

GTMA Schedule 7A

- ◆ **To facilitate pre-gate BM Unit Specific trading - Schedule 7A developed**
- ◆ **Agreed trade price reflects the market price plus a premium**
- ◆ **Schedule 7A trades provide for an agreed FPN for a specific BM Unit**
- ◆ **Additional 'Premium' is paid if agreed PN is delivered at gate closure**

Example 1 - Interconnector Trading

- ◆ **Interconnector CALL options (exercisable dayahead) plus some additional firm energy trades purchased this year to manage South East constraints**
- ◆ **Avoided the requirement to take expensive BOAs in the BM**
- ◆ **Since April 2002 we have BOUGHT 215GWh locational Interconnector energy through exercising options plus firm trades**

Example 2 - Negative Margin Requirements

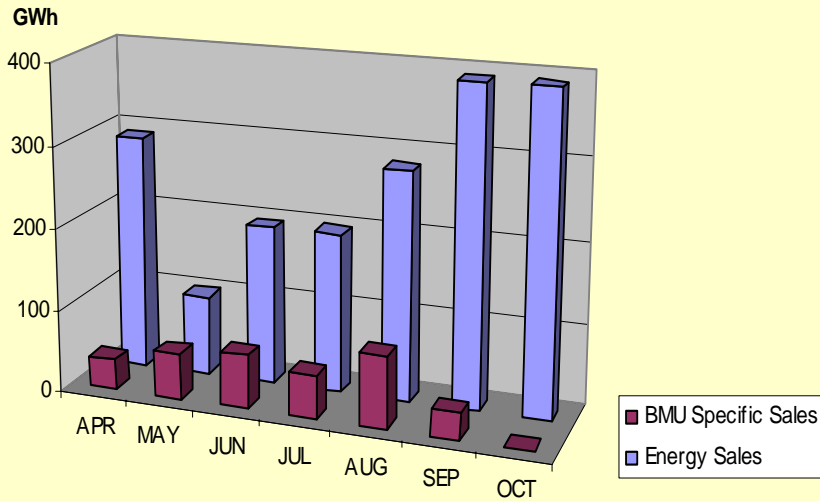
- ◆ **Requirement during low demand periods overnight - particularly under summer demand conditions**
- ◆ **Due to volume of synchronised plant operational difficulty in achieving downward regulation and system response requirements**
- ◆ **BMU specific trades undertaken with Generators to de-synchronise plant**
- ◆ **Since April 2002 National Grid has SOLD 330GWh**

Overview

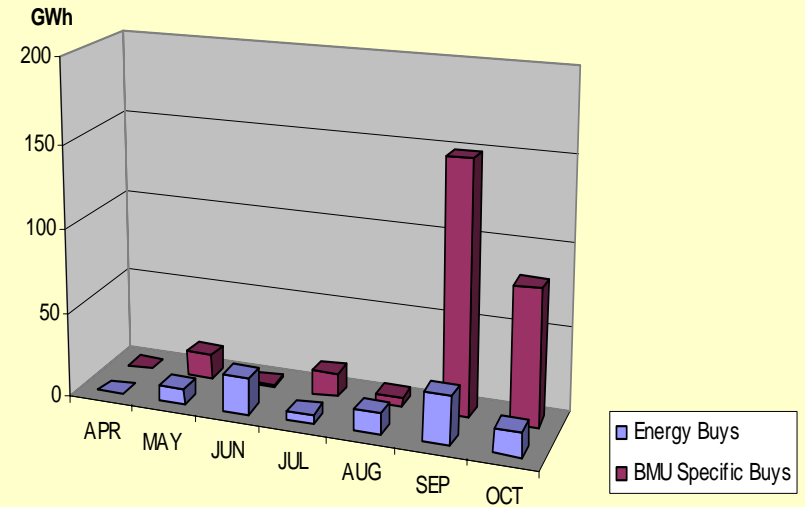
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Energy & BMU Specific Trading Volumes (Apr-Oct 2002)

Monthly Sales



Monthly Buys



Trading Gross Sales

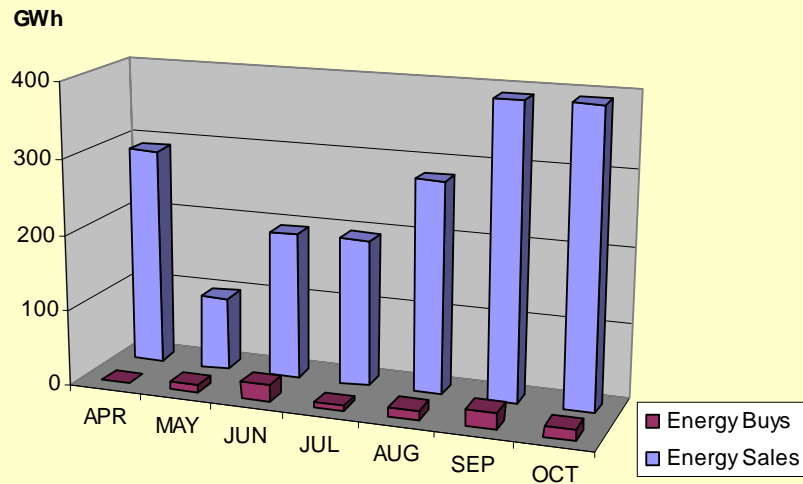
= 2.2TWh

Trading Gross Buys

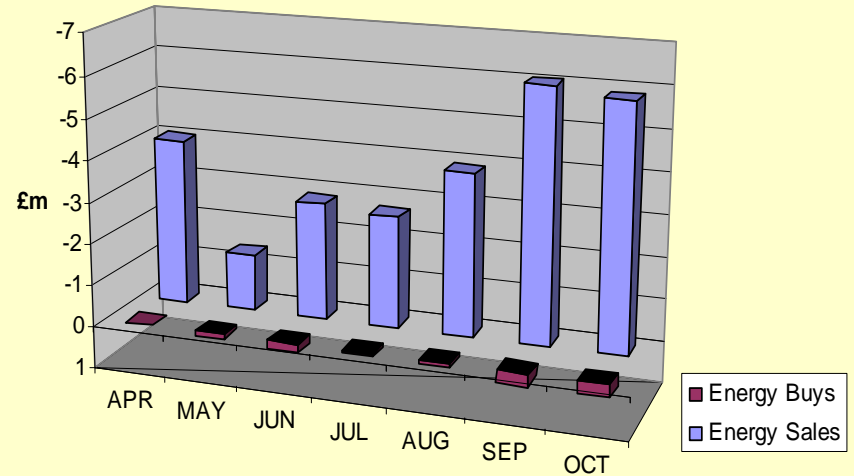
= 360GWh

Energy Trading Volumes & Value Apr - Oct 2002

Energy Trading



Energy Trading Income & Outgoings

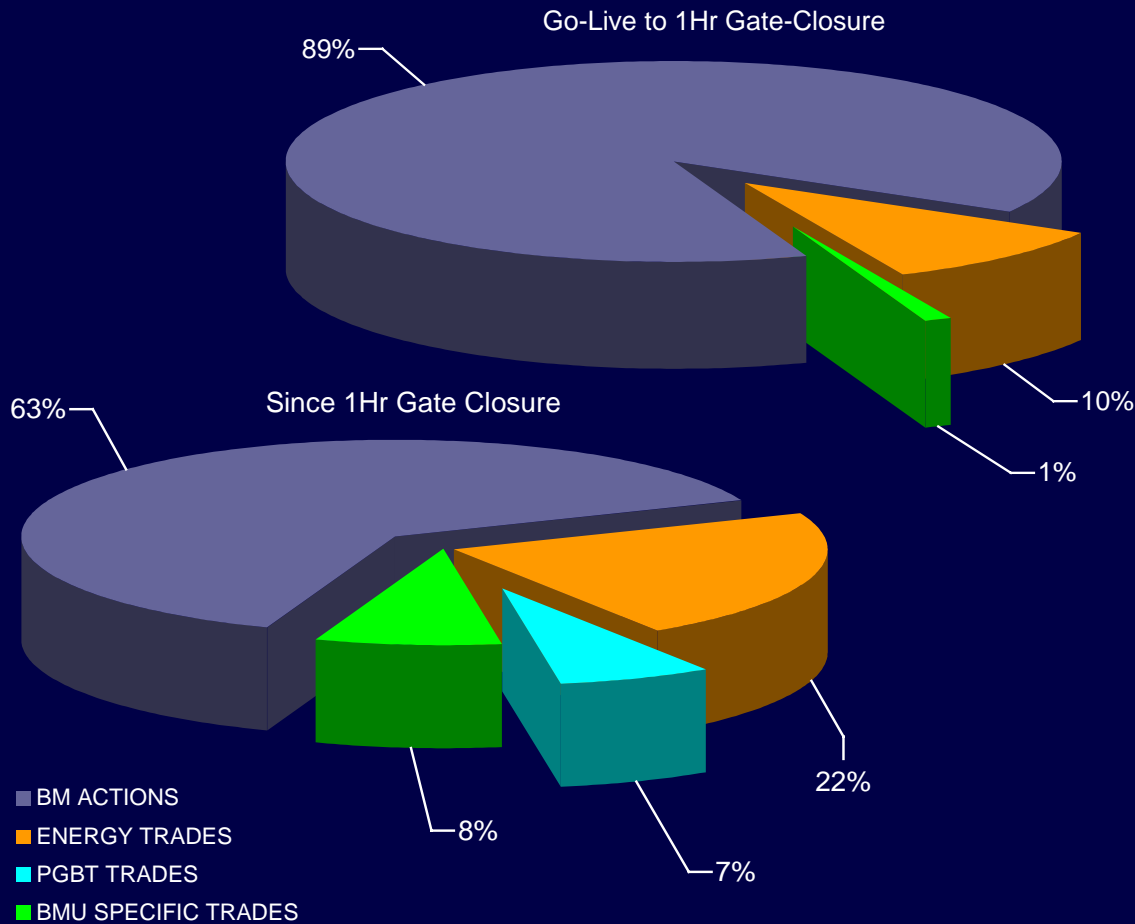


Av SELL Price
= £14.55 / MWh

Av BUY Price
= £11.40 / MWh

National Grid trading activity

Breakdown of actions since Go-Live



Since Go-Live National Grid has:

- ◆ *Bought 395GWh at an average price of £28/MWh*
- ◆ *Sold 3426GWh at an average price of £15/MWh*

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Future Issues for Trading

- ◆ **Improved NIV forecasting models to capture current lost opportunity**
- ◆ **Seeking to trade more into the front months**
- ◆ **Aim to expand the scope of our Options Trading :-**
 - to manage longer term risk
 - to support synthetic strategies
 - to manage system issues
- ◆ **To increase our counterparty portfolio**
- ◆ **Increase the number of counterparties signed up to Schedule 7A**

Summary

- ◆ **National Grid's Forward Energy Trading activities Apr-Oct have increased approx three-fold over the same period last year**
- ◆ **The volume of BMU Specific Trades have significantly increased by five-fold**
- ◆ **Trading has made a significant contribution to reducing total Balancing costs since Go-Live**