

Operational Experience of Forward Trading

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Overview

- ◆ **The Reasons Why National Grid Trades**
- ◆ **How National Grid Trades**
- ◆ **Trading Activity to Date**
- ◆ **Pre-Gate BM Unit Specific Trading**
- ◆ **Controls and Information Provision**
- ◆ **Future Developments**

Why National Grid Trades

- ◆ **We trade ahead of the BM in order to:**
 - ◆ **meet our forecast requirements for balancing energy - at least cost**
 - ◆ **meet deviations from forecast requirements**
 - ◆ **reduce total cost of system balancing compared with using only the BM**
 - ◆ **assist control room in meeting BM requirements**

How National Grid Trades

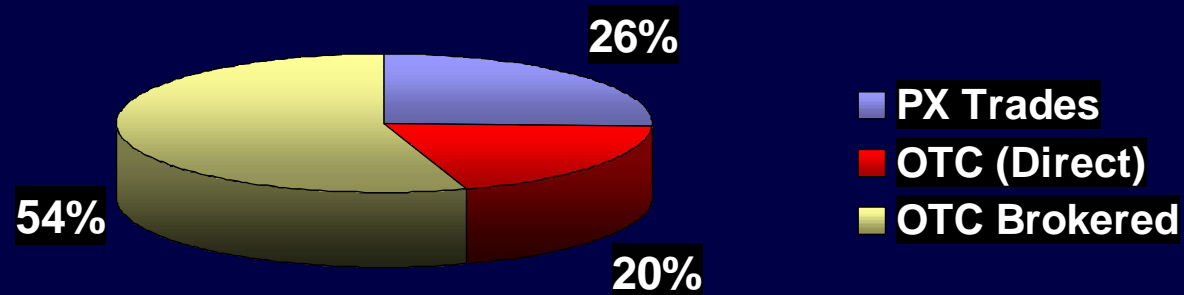
- ◆ **18 GTMAs in place**
 - **Further 4 being agreed**
 - **Target is for GTMA with every participant**
- ◆ **Agreements with 5 Brokers**
- ◆ **Access to APX and UKPX**

Trading Advice

- ◆ **Traders receive daily advice on target Volumes and Price**
- ◆ **Advice generated by forecast tools**
 - **Forecasts BM length**
 - **Forecasts BM bids offers**
- ◆ **Risk element included in targets**
 - **system balancing risk**
 - **market length risk**

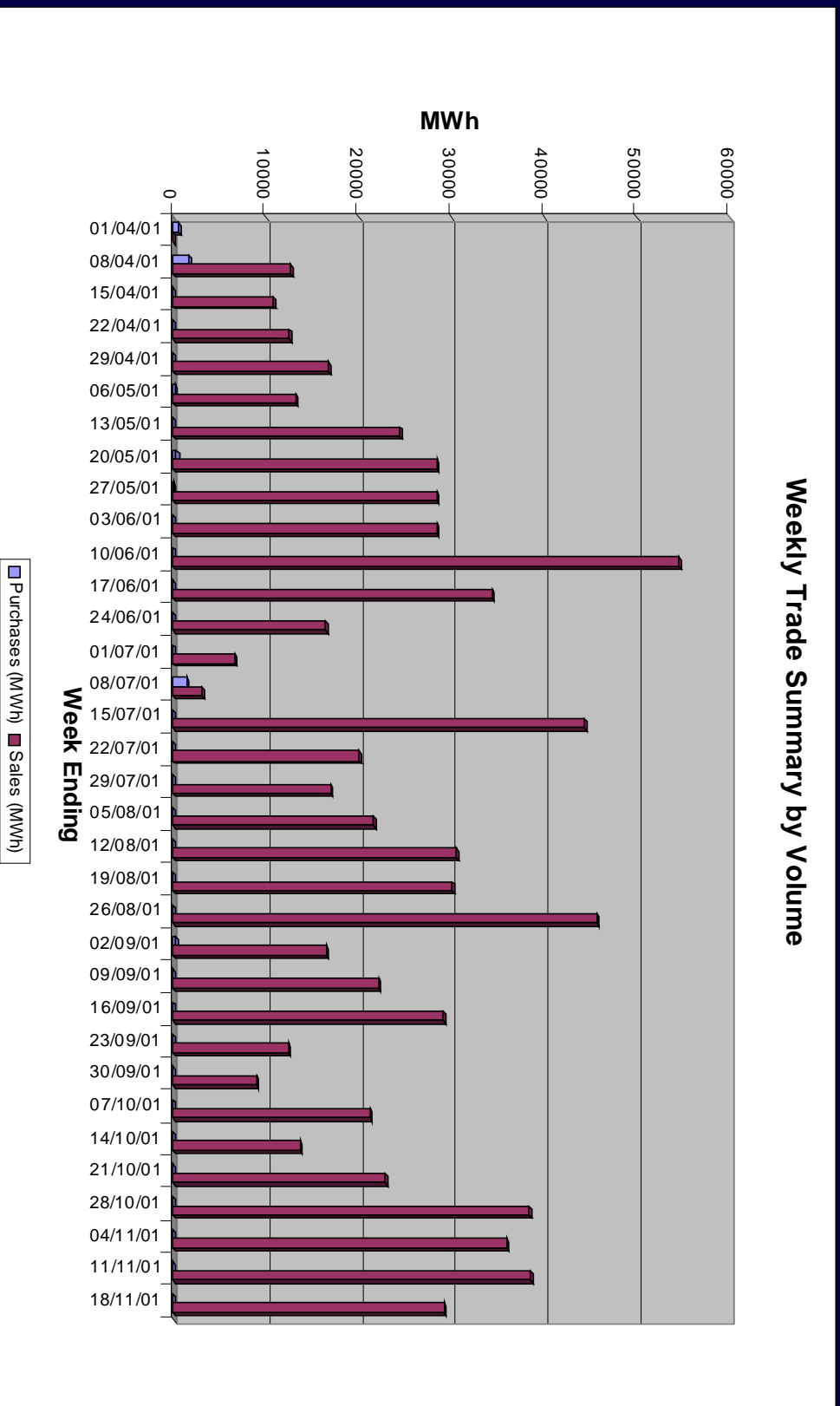
Where We've Traded

Total MWh by Intermediary

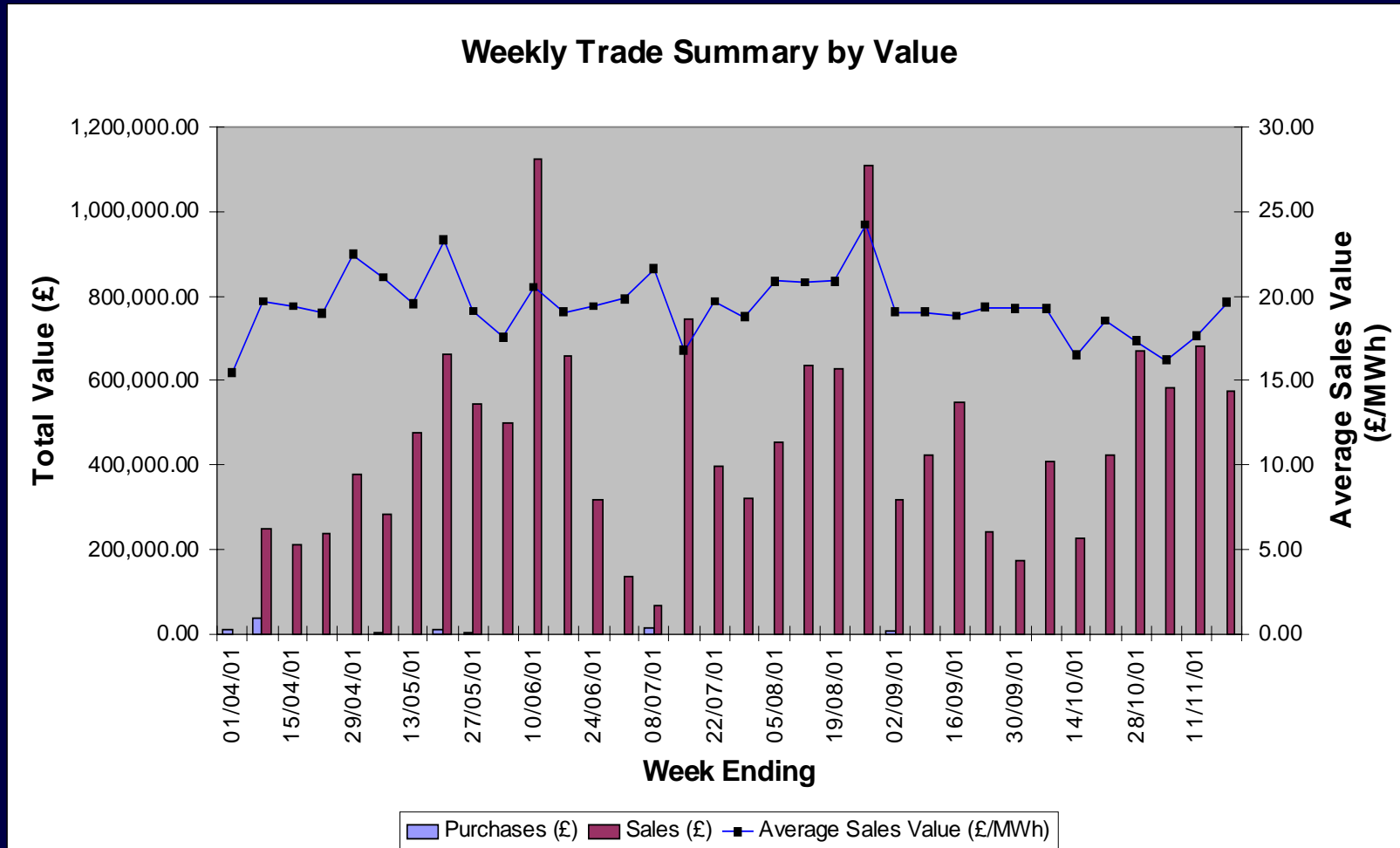


National Grid Weekly Trade Summary by Volume

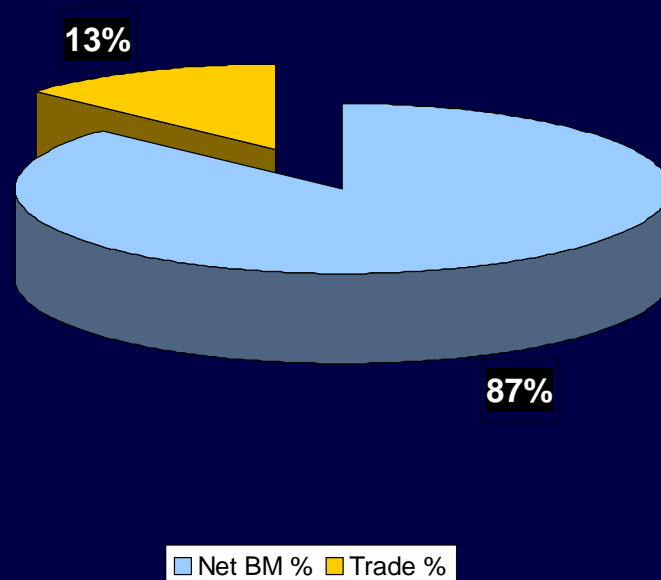
Weekly Trade Summary by Volume



National Grid Weekly Trade Summary by Value



Energy Imbalance: BM Vs Forward Trades



Since Go-Live our traders have:

⌚ Bought 4.86 GWh Energy at an average cost of £16.82/MWh

⌚ Sold 800.84 GWh Energy at an average price of £19.76/MWh

⌚ 7% of all forward trades have been unwound

Pre-Gate BM Unit Specific Trading

- ◆ **In addition to 'Energy Trades' have undertaken BM Unit specific trades**
- ◆ **Developed to assist in the management of minimum demand periods**
 - **Requirement to de-synchronise generation overnight**
- ◆ **Certainty in requirement resulted in more favourable prices**

GTMA Schedule 7

- ◆ **To manage pre-gate BM Unit Specific trading developed schedule 7**
- ◆ **Traded price made up of energy price and an additional premium**
- ◆ **Consulting on how prices are treated in BSAD**
- ◆ **Schedule 7 trades specify FPN for traded BM Unit**
- ◆ **'Additional Premium' only paid if contracted PN submitted at gate**

Pre-Gate BM Unit Specific Trades

- ◆ **To date undertaken 20 BM Unit Specific trades**
 - **Total Volume 128 GWh**
Sales 102 GWh
Buys 26 GWh

Control Framework

- ◆ **Licence Obligations:**
 - ◆ **procure only for balancing purposes**
 - ◆ **operate economically and efficiently**
- ◆ **Internal controls**
- ◆ **FiSMA Code of Market Conduct**

The Code of Market Conduct (1)

- ◆ **Market Abuse Regime (Section 118)**
- ◆ **Applies to ‘qualifying investments traded on a prescribed market’**
- ◆ **Two Key areas that come under scope of the Code:**
 - **PX Trading**
 - **OTC Trading**
- ◆ **In Discussion with FSA of scope of the Code w.r.t National Grid**

The Code of Market Conduct (2)

- ◆ **3 distinct areas of market abuse :-**
 - ◆ **behaviour based on information**
 - ◆ **behaviour giving false or misleading impression**
 - ◆ **behaviour likely to distort the market**

Compliance With The Code (Energy Trading)

- ◆ **Trading only on Information Available to The Market Place**
- ◆ **Trading strategy only revised in light of information in the public domain**
- ◆ **Trades only undertaken to meet a physical requirement**

Compliance With The Code (BM Unit Specific Trading)

- ◆ **BM Unit Specific trading synonymous with BM Actions/AS Contracts**
- ◆ **Strategy Set using information in the public domain and information only relevant to National Grid**
- ◆ **Trades only undertaken to meet a physical requirement**

Interface with Control Room

- ◆ **Forward energy trading has delivered significant cost savings but has potential to impact detrimentally on system operation**
- ◆ **Need to be aware of system issues**
- ◆ **System issues used in developing energy trading strategy**
- ◆ **Do not trade on any 'energy' issues (NISMs, plant loss) until information in public domain (via BSRS)**

Future Developments

- ◆ **Progressing development of Options Trading Capability**
- ◆ **Looking to procure options to hedge longer term risk**
- ◆ **Interest in both energy and BM Unit specific options**
- ◆ **Will not write options but will sell on options no longer required**