Market Information Provision Initiative (MIPI)

DSWG – 17th September 2007 Chris Logue



IE3 Current Presentation

Information provided in 2 ways:

Daily Summary Report

- Provides a snapshot of prevailing data
- Provides Alarms, notes and messages
- Updated within-day as information becomes available
- Graphical history to give context
- Key point of entry for most users
- data not all available on the screen at the same time

Reports in .PDF and .CSV

- viewable and/or downloadable
- Within-day (hourly)
- Daily
- Weekly
- Monthly
- Inflexible from a user perspective (no date ranges, fixed report content etc)
- no automated interface
- Complicated reports with nonintuitive names and content

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MIPI: Drivers for Change

- Utilisation of IE3 has increased 20 fold in the last 3 years but still based on the existing dated infrastructure
- Extremely high Availability and Timeliness of information publication required and incentivised to improve further to promote open market conditions
- Increasing future links to global markets and European supplies
- Evolving market conditions and the dynamic nature of the market leading to ongoing change in information requirements, particularly web services
- Shift in data use and requirements
 - Data volume required for market modelling
 - Offline analytical and user side decision making tools
- Limited extensibility for IE3 to accommodate additional functionality, including Regulatory changes (mod 97a, 104, 121, UNC RG140 info review)



MIPI: Why now?

- NG has made significant investments in improving IE3 over the last 3 years
- Real improvements in both functionality and performance have been delivered
 - The number of reports being published at greater than monthly frequency has nearly doubled
 - delays in publication of hourly reports has more than halved
 - Availability of the site is very close to 100%
- All this has taken the system to the limits of its capabilities and further investment is no longer cost effective
- Further performance improvements and the addition of more data and different functionality requires the changeover to a more suitable system



MIPI: Approach

- 2 stage approach adopted for replacement of systems and rationalising data provision :
 - Stage 1 (MIPI07) -
 - transfer key data, effectively all forecast and most after the day reporting, to a new platform
 - Deliver new UNC mods (97a, 104, 121)
 - Provide data based approach rather than reports
 - Introduce APIs
 - Stage 2 (MIPI08) -
 - transfer remaining data from IE3 and other website systems,
 - Deliver new or revised data requirements resulting from UNC Review Group140 (or other unrelated UNC mods)
 - decommission IE3
- New system to be based around GMRS infrastructure built to deliver UNC mod 006

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MIPI07: aims

- Provide information in a user friendly way, recognising that this will mean different things to different users
- Ensure high availability and performance by utilising a highly resilient, stable platform with auto-backup facilities and auto-failover
- Information provided 'data-centrically' rather than just reports
- Provide more on-screen data definition and help facilities
- Ensure nothing is 'lost' in changeover
- Provide an overview page that gives :
 - Single screen overview of latest available position
- Provide functionality that gives users :
 - Access to any stored data
 - choice of period range
 - Delivery as on screen view, CSV or XML downloads (but no PDFs)
- Make APIs available to access all the data provided

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MIPI: 3 tier structure

- ◆ Tier 1 Prevailing view
 - Provides a single page holistic view of the system with Key Data updated on or relating to the current Gas Day.
- Tier 2 Data Item Explorer
 - Provides a facility for the user to select individual data items and date range to view, and / or download data in XML or CSV format
- Tier 3 Report Explorer
 - Provides a facility to view and or download a series of 'reports' or predefined Data Items, in XML or CSV format:
 - that are obligated within code to be provided within a single report
 - that are currently custom and practice to provide within a single report
 - that have been identified as a set of Data Points that users commonly retrieve.
 - that logically provide a holistic view of an issue or field of interest nationalgrid

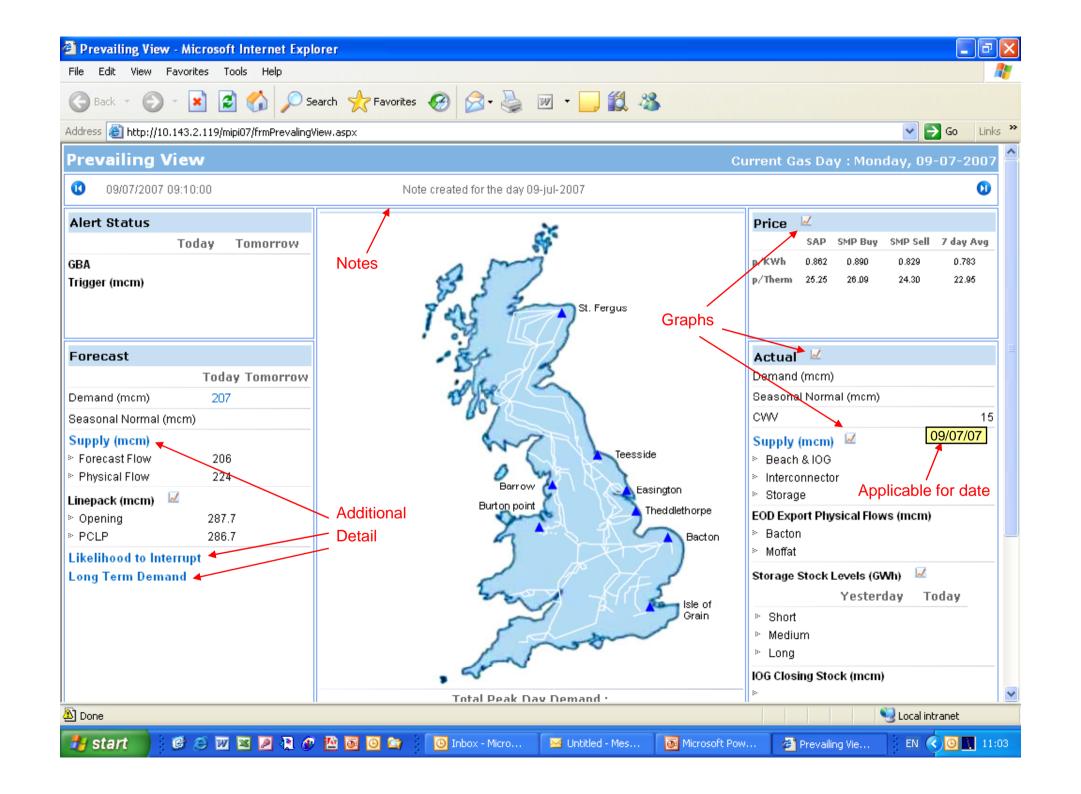
Functionality: Prevailing View

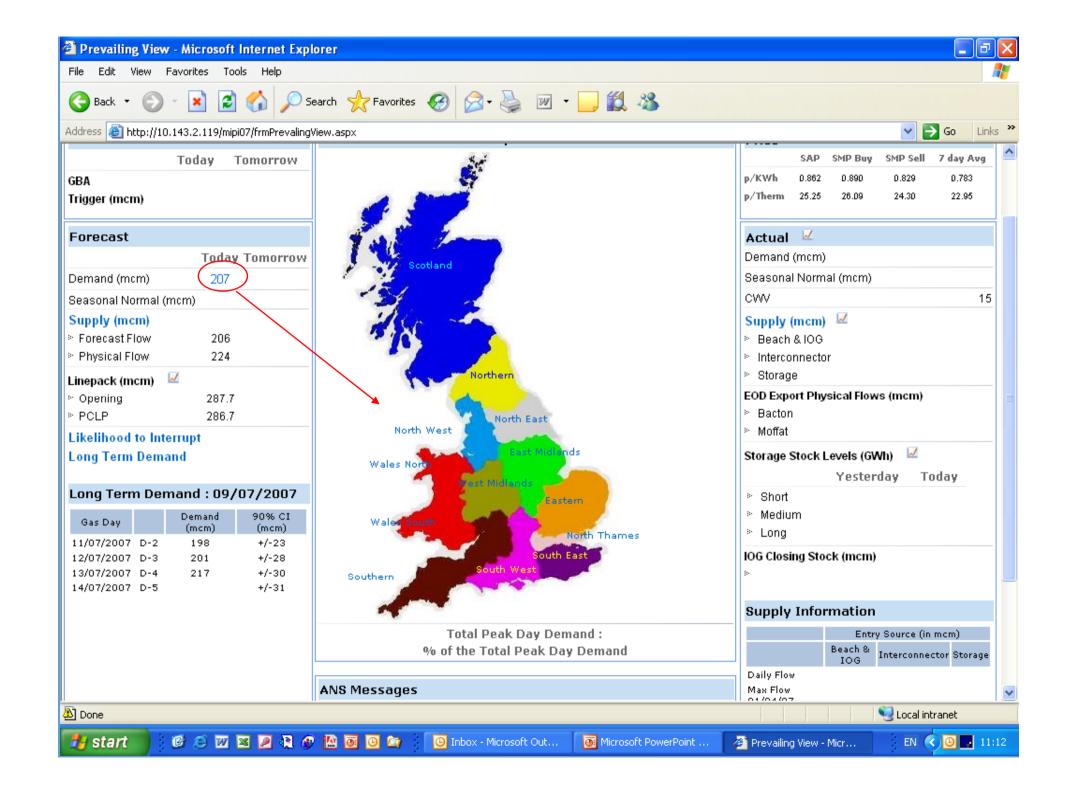


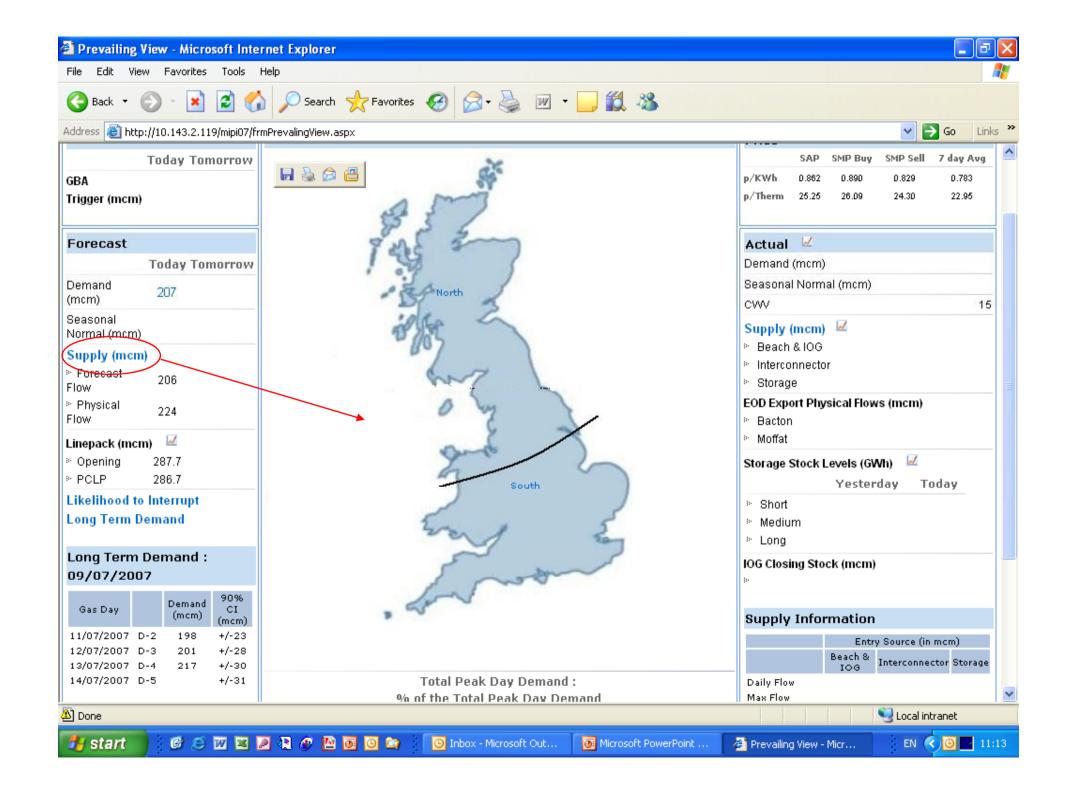
MIPI: Prevailing View

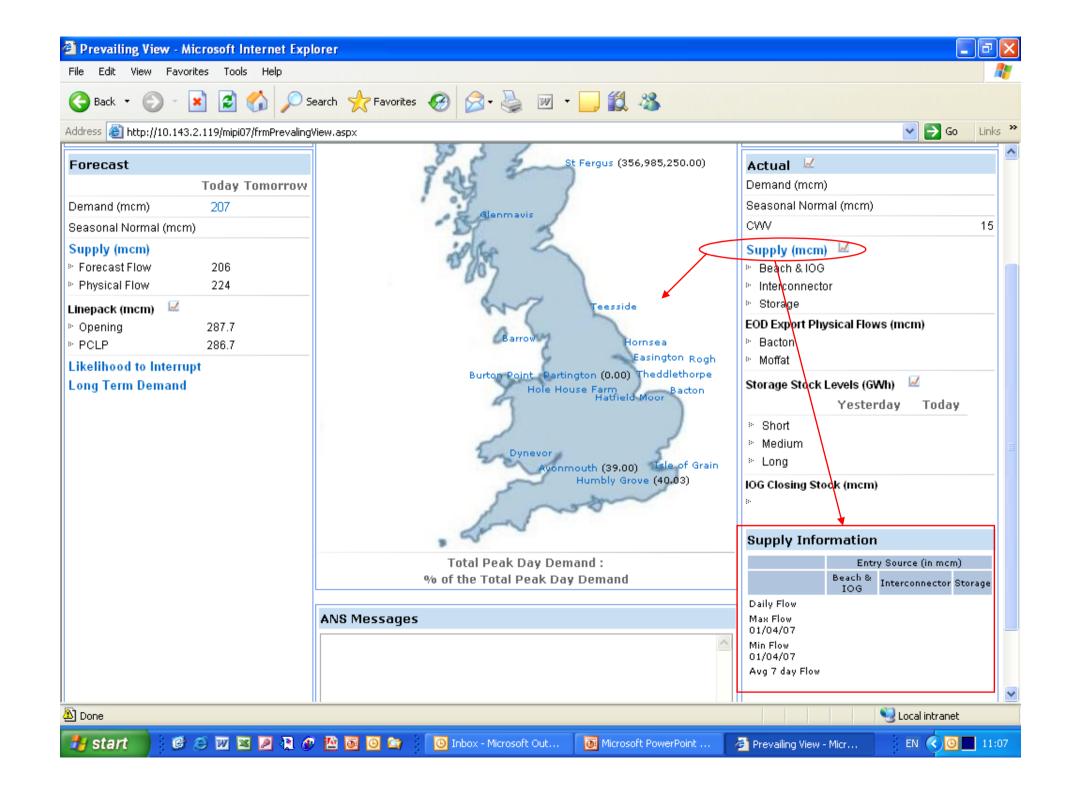
- Gives a single screen snapshot of the latest available information (forecast and actual)
- Updated throughout the day as new information becomes available
- Forecast information on the left of the screen
- Actual information on the right-hand side
- Scrolling notes on the top (last 5)
- Provides access to graphs of historical data
- Click on 'blue' fields to get more detail and interactive maps where information is disaggregated
 - Map interactive at some levels

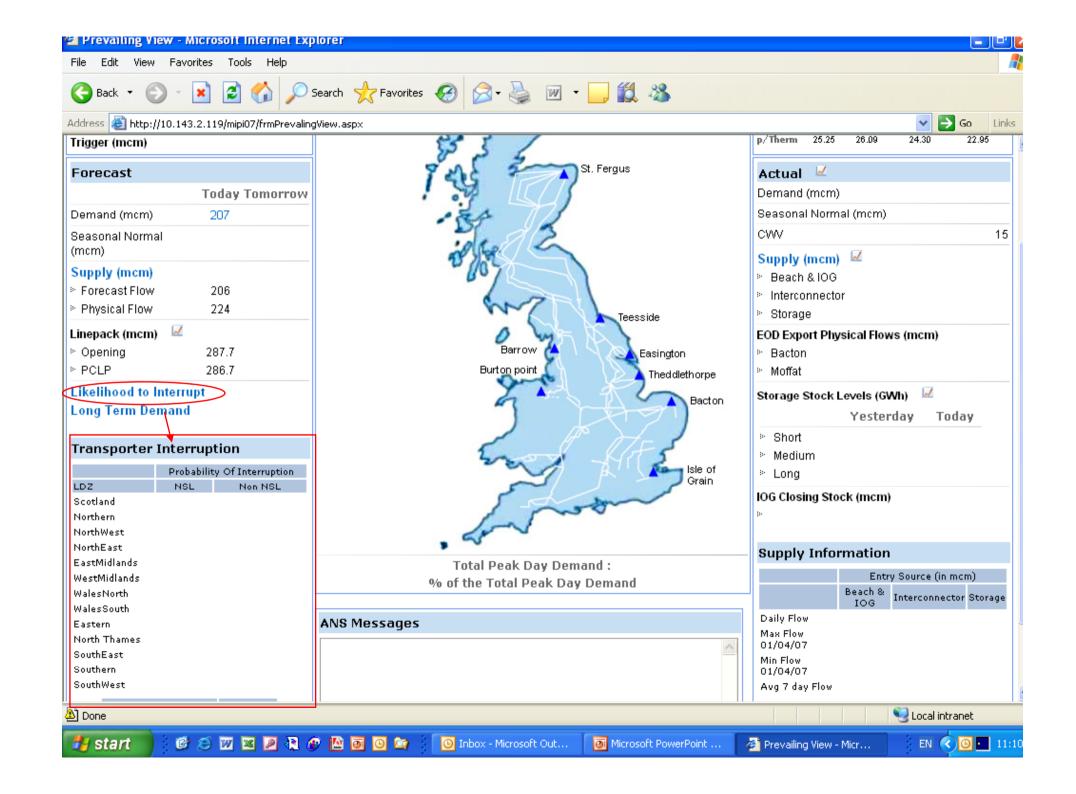


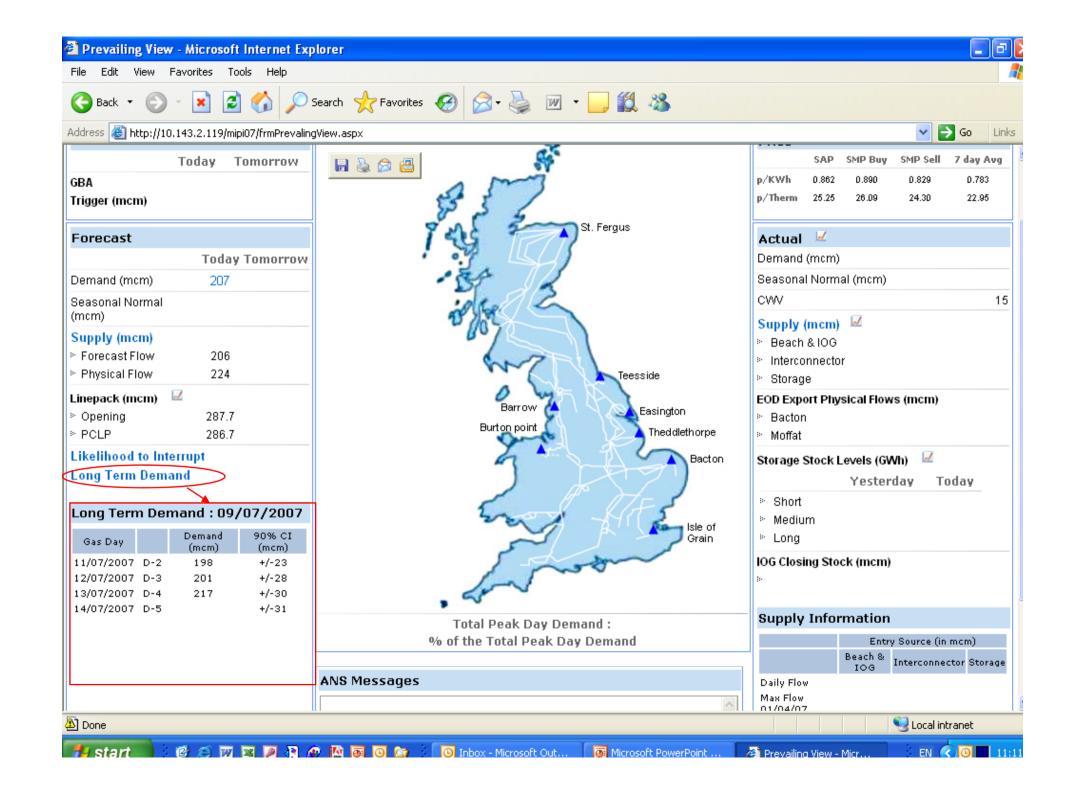






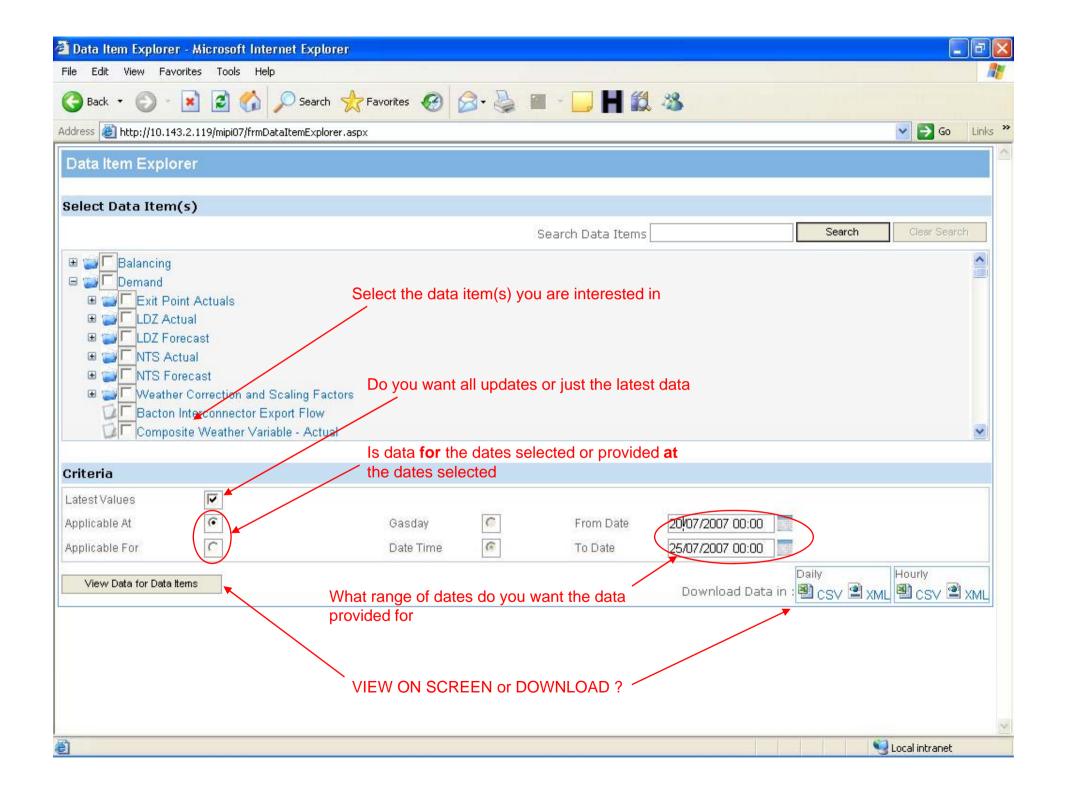


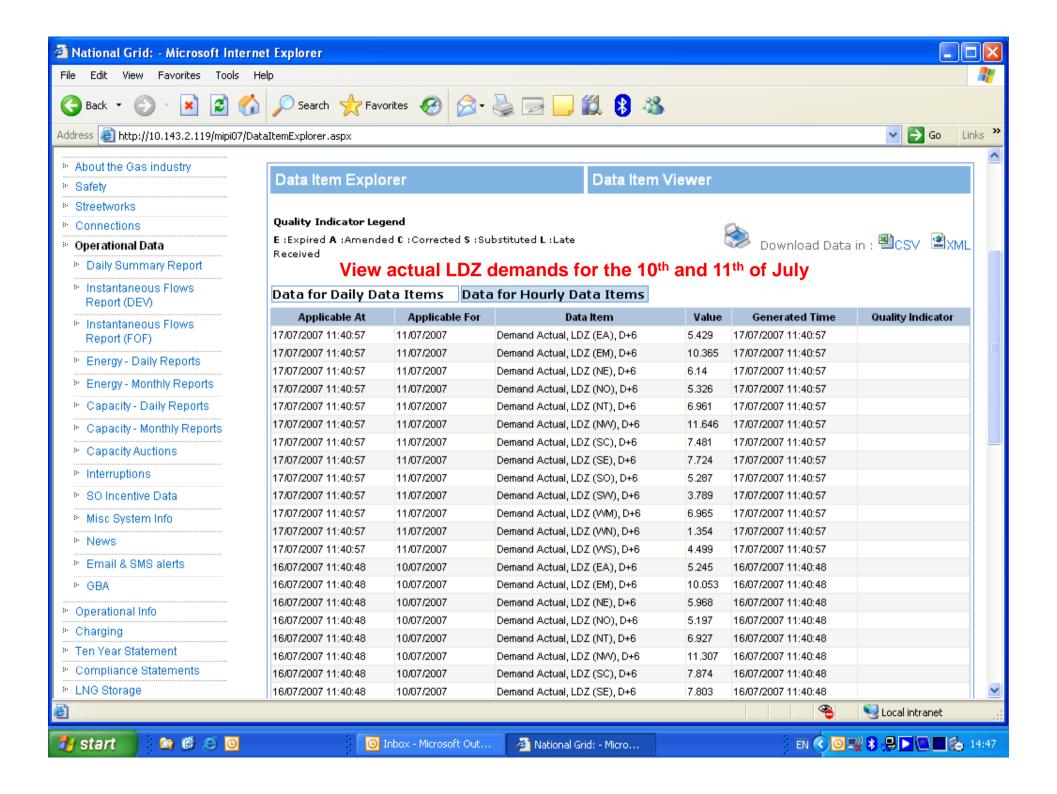




Functionality: Data Item Explorer







....or download them as a CSV

DailyDataItems	
ApplicableAt ApplicableFor DataItem	Value GeneratedTime QualityIndicator
17/07/2007 11:40	5.429 17/07/2007 11:40
17/07/2007 11:40	10.365 17/07/2007 11:40
17/07/2007 11:40	6.14 17/07/2007 11:40
17/07/2007 11:40	5.326 17/07/2007 11:40
17/07/2007 11:40	6.961 17/07/2007 11:40
17/07/2007 11:40	11.646 17/07/2007 11:40
17/07/2007 11:40	7.481 17/07/2007 11:40
17/07/2007 11:40	7.724 17/07/2007 11:40
17/07/2007 11:40	5.287 17/07/2007 11:40
17/07/2007 11:40	3.789 17/07/2007 11:40
17/07/2007 11:40	6.965 17/07/2007 11:40
17/07/2007 11:40	1.354 17/07/2007 11:40
17/07/2007 11:40	4.499 17/07/2007 11:40
16/07/2007 11:40	5.245 16/07/2007 11:40
16/07/2007 11:40	10.053 16/07/2007 11:40
16/07/2007 11:40 10/07/2007 Demand Actual, LDZ (NE), D+6	5.968 16/07/2007 11:40
16/07/2007 11:40 10/07/2007 Demand Actual, LDZ (NO), D+6	5.197 16/07/2007 11:40
16/07/2007 11:40 10/07/2007 Demand Actual, LDZ (NT), D+6	6.927 16/07/2007 11:40
16/07/2007 11:40 10/07/2007 Demand Actual, LDZ (NW), D+6	11.307 16/07/2007 11:40
16/07/2007 11:40 10/07/2007 Demand Actual, LDZ (SC), D+6	7.874 16/07/2007 11:40
16/07/2007 11:40 10/07/2007 Demand Actual, LDZ (SE), D+6	7.803 16/07/2007 11:40
16/07/2007 11:40 10/07/2007 Demand Actual, LDZ (SO), D+6	5.508 16/07/2007 11:40
16/07/2007 11:40	4.231 16/07/2007 11:40
16/07/2007 11:40	6.753 16/07/2007 11:40
16/07/2007 11:40 10/07/2007 Demand Actual, LDZ (WN), D+6	1.363 16/07/2007 11:40
16/07/2007 11:40 10/07/2007 Demand Actual, LDZ (WS), D+6	4.611 16/07/2007 11:40
12/07/2007 11:40	5.429 12/07/2007 11:40
12/07/2007 11:40	10.365 12/07/2007 11:40
12/07/2007 11:40	6.14 12/07/2007 11:40 nationalgrid
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....or maybe XML is what you are looking for

<DataItems> <DailvDataItems> <ApplicableAt>17/07/2007 11:40:57/ApplicableAt> <ApplicableFor>11/07/2007 <DataItem>Demand Actual, LDZ (EA), D+6/DataItem> <Value>5.429</Value> <GeneratedTime>17/07/2007 11:40:57</GeneratedTime> <QualityIndicator xml:space="preserve"></QualityIndicator> </DailyDataItems> - <DailyDataItems> <ApplicableAt>17/07/2007 11:40:57/ApplicableAt> <ApplicableFor>11/07/2007/ApplicableFor> <DataItem>Demand Actual, LDZ (EM), D+6</DataItem> <Value>10.365</Value> <GeneratedTime>17/07/2007 11:40:57</GeneratedTime> <QualityIndicator xml:space="preserve"></QualityIndicator> </DailyDataItems> - <DailyDataItems> <ApplicableAt>17/07/2007 11:40:57/ApplicableAt> <ApplicableFor>11/07/2007/ApplicableFor> <DataItem>Demand Actual, LDZ (NE), D+6/DataItem> <Value>6.14</Value> <GeneratedTime>17/07/2007 11:40:57</GeneratedTime> <QualityIndicator xml:space="preserve"></QualityIndicator> </DailyDataItems>





ias | > Electricity | > Wireless | > Metering | > Property | > Interconnectors | > Land and Development | > Grain LNG

About the Gas industry

Bafety

Streetworks

Connections

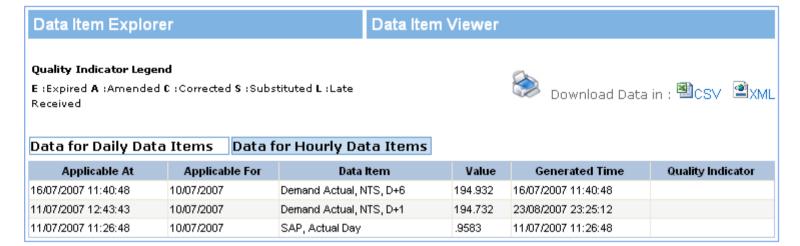
Operational Data

- · Daily Summary Report
- · Instantaneous Flows Report (DEV)
- Instantaneous Flows Report (FOF)
- Energy Daily Reports
- Energy Monthly Reports
- · Capacity Daily Reports
- Capacity Monthly Reports
- Capacity Auctions
- Interruptions
- SO Incentive Data
- Misc System Info
- News
- · Email & SMS alerts
- GBA

Operational Info

Charging

Fen Year Statement



Select combinations of items of your choice, eg Actual demand and SAP in a single query







About the Gas industry

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Connections

Operational Data

- Daily Summary Report
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Operational Info

Charging

Fen Year Statement

Compliance Statements

LNG Storage

Data Item Explorer

Data Item Viewer

Quality Indicator Legend

E :Expired A :Amended C :Corrected S :Substituted L :Late Received



Download Data in : CSV XML





Combinations of items that make sense to you can be selected

Data for Daily Data Items Data for Hourly Data Items

Applicable At	Applicable For	Data Item	Value	Generated Time	Quality Indicator
12/07/2007 05:03:19	11/07/2007	Demand Forecast, NTS, hourly update	194.115	12/07/2007 05:03:19	
12/07/2007 05:03:19	11/07/2007	Opening linepack (interim)	289.28394	12/07/2007 05:03:19	
12/07/2007 05:03:19	11/07/2007	Predicted Closing Linepack (PCLP1)	286.29414	12/07/2007 05:03:19	
12/07/2007 05:00:58	11/07/2007	System Entry Flows, National, Physical	187.79857	12/07/2007 05:00:58	
12/07/2007 04:02:45	11/07/2007	Demand Forecast, NTS, hourly update	194.13928	12/07/2007 04:02:45	
12/07/2007 04:02:45	11/07/2007	Opening linepack (interim)	289.28394	12/07/2007 04:02:45	
12/07/2007 04:02:45	11/07/2007	Predicted Closing Linepack (PCLP1)	286.26986	12/07/2007 04:02:45	
12/07/2007 04:01:02	11/07/2007	System Entry Flows, National, Forecast	191.082	12/07/2007 04:01:02	
12/07/2007 04:01:02	11/07/2007	System Entry Flows, National, Physical	186.84705	12/07/2007 04:01:02	
12/07/2007 03:02:08	11/07/2007	Demand Forecast, NTS, hourly update	194.51491	12/07/2007 03:02:08	
12/07/2007 03:02:08	11/07/2007	Opening linepack (interim)	289.28394	12/07/2007 03:02:08	
12/07/2007 03:02:08	11/07/2007	Predicted Closing Linepack (PCLP1)	285.89423	12/07/2007 03:02:08	
12/07/2007 03:01:26	11/07/2007	System Entry Flows, National, Forecast	191.082	12/07/2007 03:01:26	
12/07/2007 03:01:26	11/07/2007	System Entry Flows, National, Physical	187.04352	12/07/2007 03:01:26	
12/07/2007 02:02:54	11/07/2007	Demand Forecast, NTS, hourly update	194.35047	12/07/2007 02:02:54	
12/07/2007 02:02:54	11/07/2007	Opening linepack (interim)	289.28394	12/07/2007 02:02:54	
12/07/2007 02:02:54	11/07/2007	Predicted Closing Linepack (PCLP1)	285.98577	12/07/2007 02:02:54	
12/07/2007 02:01:09	11/07/2007	System Entry Flows, National, Forecast	191.00912	12/07/2007 02:01:09	
12/07/2007 02:01:09	11/07/2007	System Entry Flows, National, Physical	187.54378	12/07/2007 02:01:09	
12/07/2007 01:04:41	11/07/2007	Demand Forecast, NTS, hourly update	194.32967	12/07/2007 01:04:41	
12/07/2007 01:04:41	11/07/2007	Opening linepack (interim)	289.28394	12/07/2007 01:04:41	
4 0 807 20007 04 - 04 - 44	44 /07/2007 04:00:00	Dradiated Clasica Linensek (DCLD4)	100 00027	4.0.807.80007.04+0.4+44	



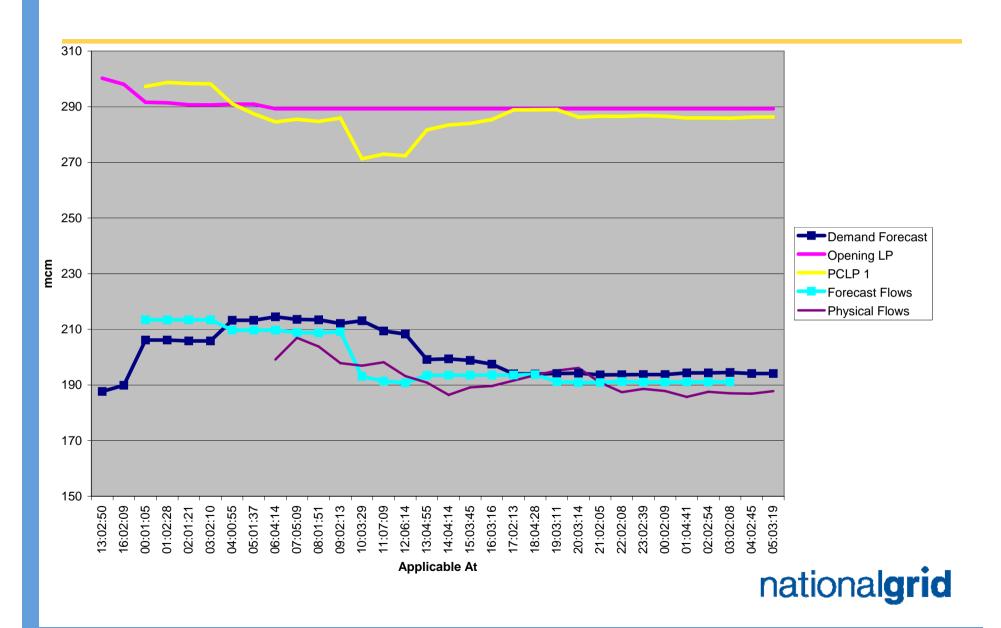


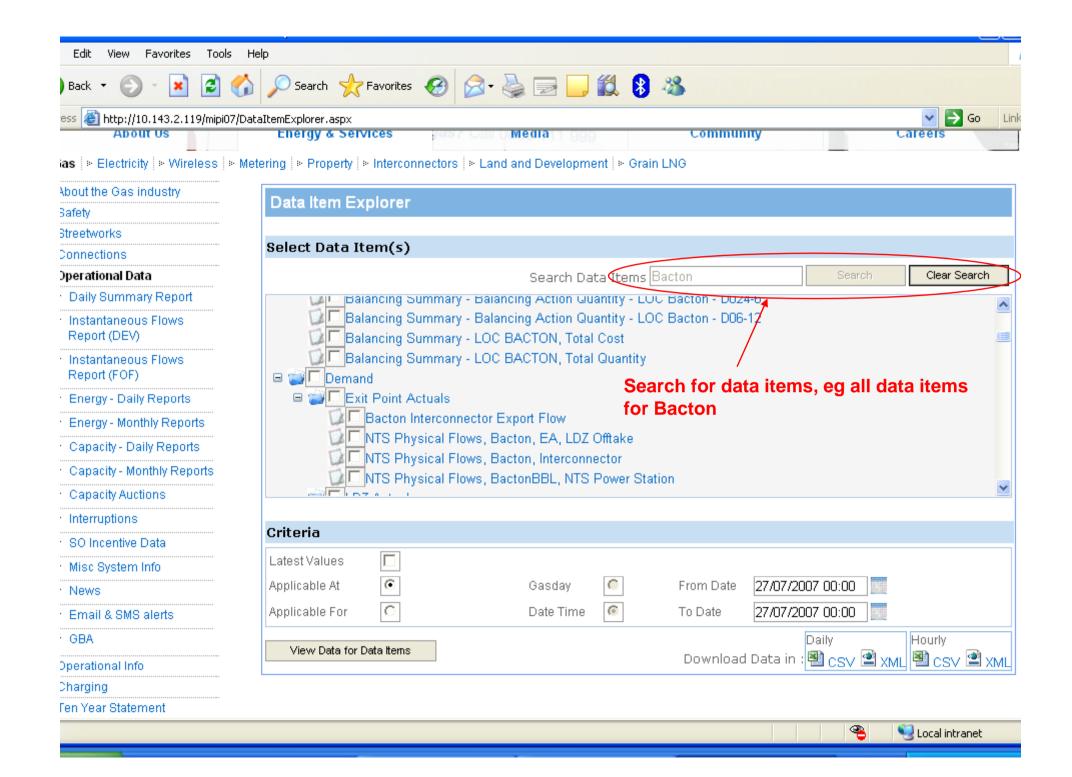
...downloaded to your own systems and manipulated.....

ApplicableAt	Demand Forecast	Opening LP	PCLP 1	Forecast Flows	Physical Flo
13:02:50	187.68648	300.21736			
16:02:09	189.90442				
00:01:05	206.14003	291.61432	297.33259	213.40362	
01:02:28	206.14004	291.40171	298.70847	213.40362	
02:01:21	205.83787	290.71128	298.3202	213.40362	
03:02:10	205.83787	290.63544	298.24437	213.40362	
04:00:55	213.26228	290.9112	291.09571	209.73622	
05:01:37	213.26228	290.9126	287.42972	209.73622	
06:04:14	214.47662	289.28394	284.58672	209.73622	199.1696
07:05:09	213.55517	289.28394	285.50817	208.84507	206.9503
08:01:51	213.42856	289.28394	284.74368	208.72165	203.8265
09:02:13	212.08727	289.28394	285.96157	209.13623	197.8642
10:03:29	213.11464	289.28394	271.27439	193.06666	196.9441
11:07:09	209.41524	289.28394	272.9786	191.37671	198.1741
12:06:14	208.32693	289.28394	272.37691	190.73671	193.2068
13:04:55	199.16535	289.28394	281.70599	193.48149	190.8668
14:04:14	199.36902	289.28394	283.43962	193.55009	186.404
15:03:45	198.85964	289.28394	284.0176	193.55009	189.1182
16:03:16	197.49009	289.28394	285.38715	193.55047	189.6091
17:02:13	193.99995	289.28394	288.87769	193.55047	191.5549
18:04:28	193.97827	289.28394	288.89937	193.73433	193.5194
19:03:11	194.09679	289.28394	288.96465	191.18646	195.1455
20:03:14	194.23979	289.28394	286.27385	190.87962	196.1395
21:02:05	193.64786	289.28394	286.55888	190.87962	190.8912
22:02:08	193.66738	289.28394	286.53936	191.23912	187.4161
23:02:39	193.72047	289.28394	286.84577	191.00912	188.5652
00:02:09	193.72884	289.28394	286.6074	191.00912	187.818
01:04:41	194.32967	289.28394	286.00657	191.00912	185.7387
02:02:54	194.35047	289.28394	285.98577	191.082	187.5438
03:02:08	194.51491	289.28394	285.89423	191.082	187.0435



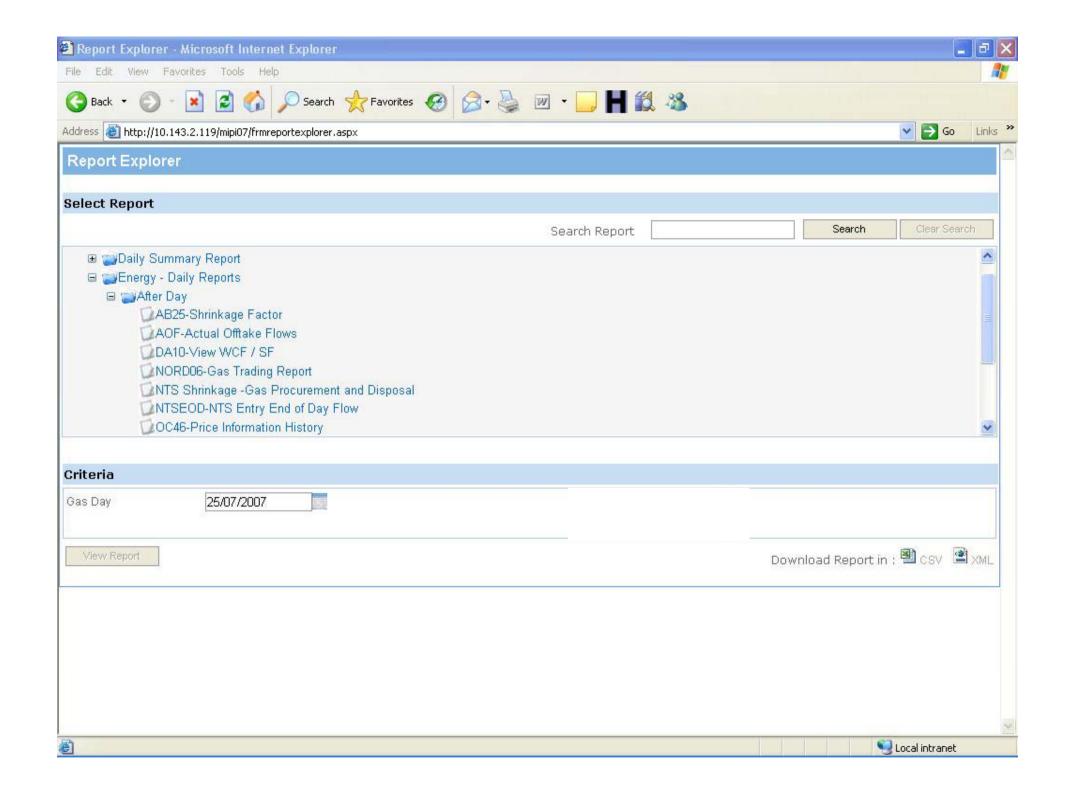
...and perhaps then graphed to make sense of it all.





Functionality: Report Explorer

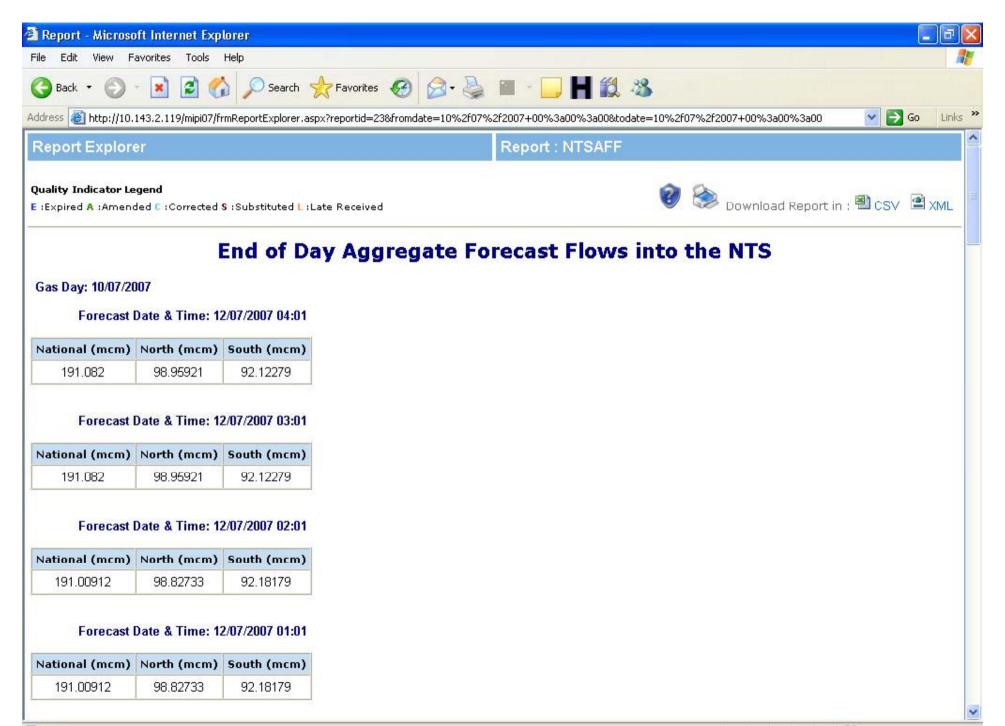


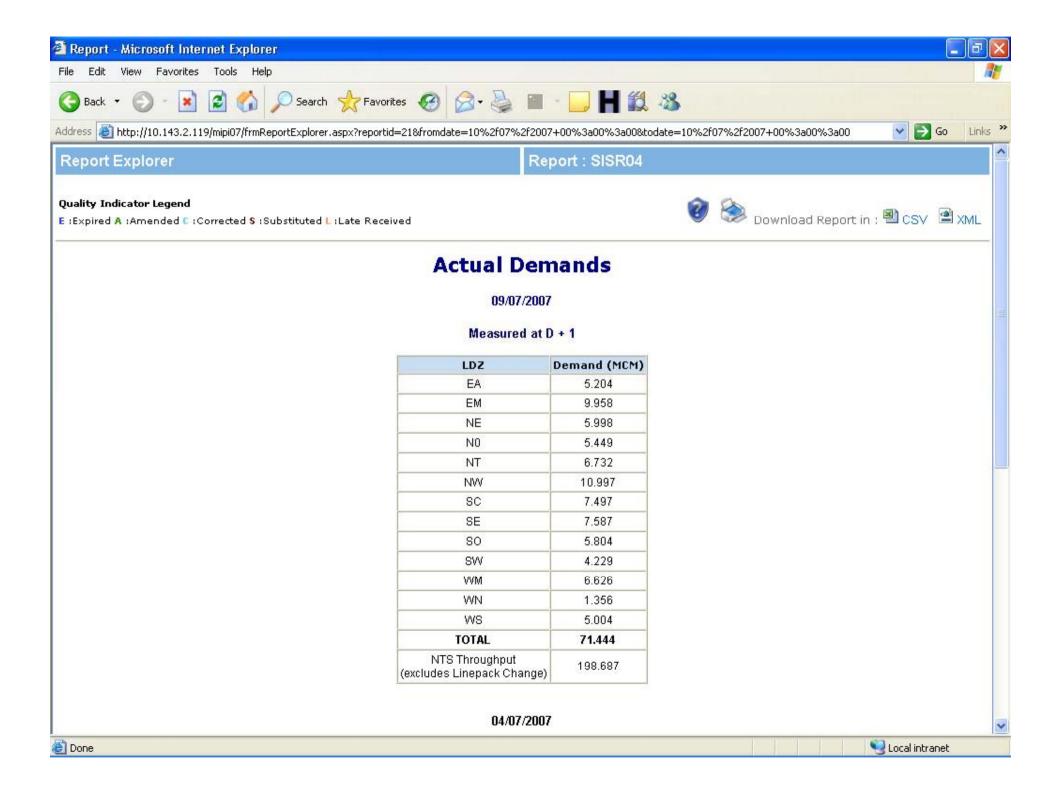


MIPI: Report explorer

- Gives access to predefined reports
- All of the reports transferred from IE3 are here, with content or layout changes kept to a minimum
- Intuitive 'tree' structure for reports
- Search facility to help find specific reports
- Select the date that you want the report for
- Do you want to just view the data or download it (and if so, what format is best for you?)
- Daily Summary Report available from here as well, but no date selection available (it is just for now)







Automated Programmable Interfaces (APIs)



MIPI: Automated Data Access

- Similar service to GMRS
- Web Services API for accessing data based on
 - Data Item Name (s)
 - Date Range
- Users will need to write their own clients and choose the data items they are interested in
- Supports Options provided in Data Item Explorer
- May wish to write separate clients for hourly and daily data
- HTTP Compression Enabled



MIPI: API supporting documentation

- Published on National Grid Site (1st Week of October 07)
 - API specification document (WSDL)
 - API User Guide
 - List of Data Item Names
 - API Sample File
- Technical session on APIs October
- API support provided
 - Hasanat Khan (Tel : 01455 895638)

(e-mail: HasanatKhan1@uk.ngrid.com)

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Data issues



MIPI: What Information is moving?

Report Id.	Report Name	Report Id.	Report Name
DSR	Daily Summary Report	SISR04	Actual Demands
NB05	System Nomination Balance	AB25	Shrinkage Factor
NB92	System Status Information	DA10	View WCF / SF
NTSAFF	Aggregate Forecast Flows into the NTS	OC46	Price Information History
NTSAPF	Aggregate Physical Flows into the NTS	NTS Entry End of Day Flow	NTS Entry End of Day Flow
NTSDE	D-2 to D-5 NTS Demand Forecast Report	NORD03	Entry Capacity Trading Report
SV01	Daily Shrinkage Factors and Quantities	NORD07	Capacity Availability Report
SISR03	Forecast Demands	INEC	Interruption by Exit Zone / Cause
NORD01	Daily Balance Report	NTS Shrinkage Gas Procurement and Disposal	
NORD06	Gas Trading Report	LTI	Likelihood To Interrupt



MIPI: What new Information will be available?

New UNC obligated data :

NTS Exit point flow data
UNC mod 121

Interconnector exit flows UNC mod 97a

LNG storage stocks
UNC mod 104

 Data that was previously only available in graphical form on Daily Summary report e.g. CWV and SND data

 Standing data used to give context to other data, e.g. maximum terminal forecasts and entry capacity baselines



MIPI: What about information that isn't moving?

- Majority of capacity information
- All capacity auction related information
- Data contained within existing Monthly reports
- Miscellaneous info
- Entry flow data (mod 006)
- News
- All the above information will be accessed as before via existing menus
- Information will be provided on the site to direct users to MIPI if they are looking for data that has moved

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Help!

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MIPI: Information Location

Available from the National Grid website

www.nationalgrid.com

 Located with other market data provided by National Grid within the Operational Data area of the site

www.nationalgrid.com/uk/gas/data

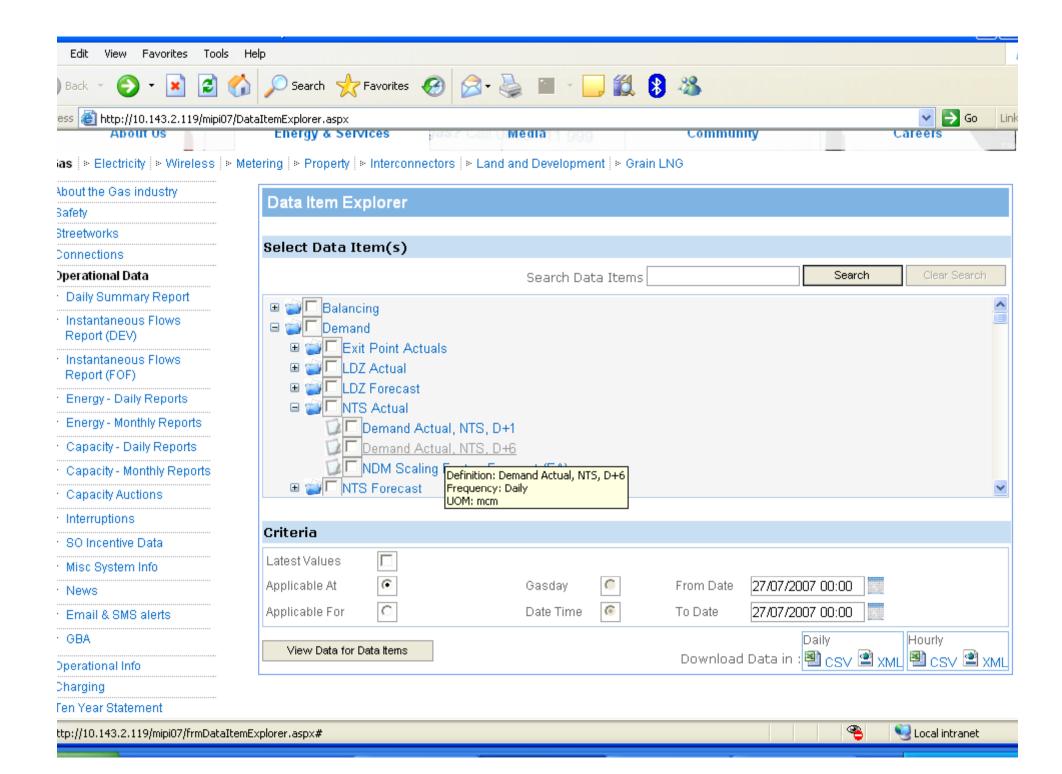
- Situated on new buttons entitled
 - Prevailing View
 - Data item explorer
 - Report explorer
- Supporting documentation found in
 - Supplementary help

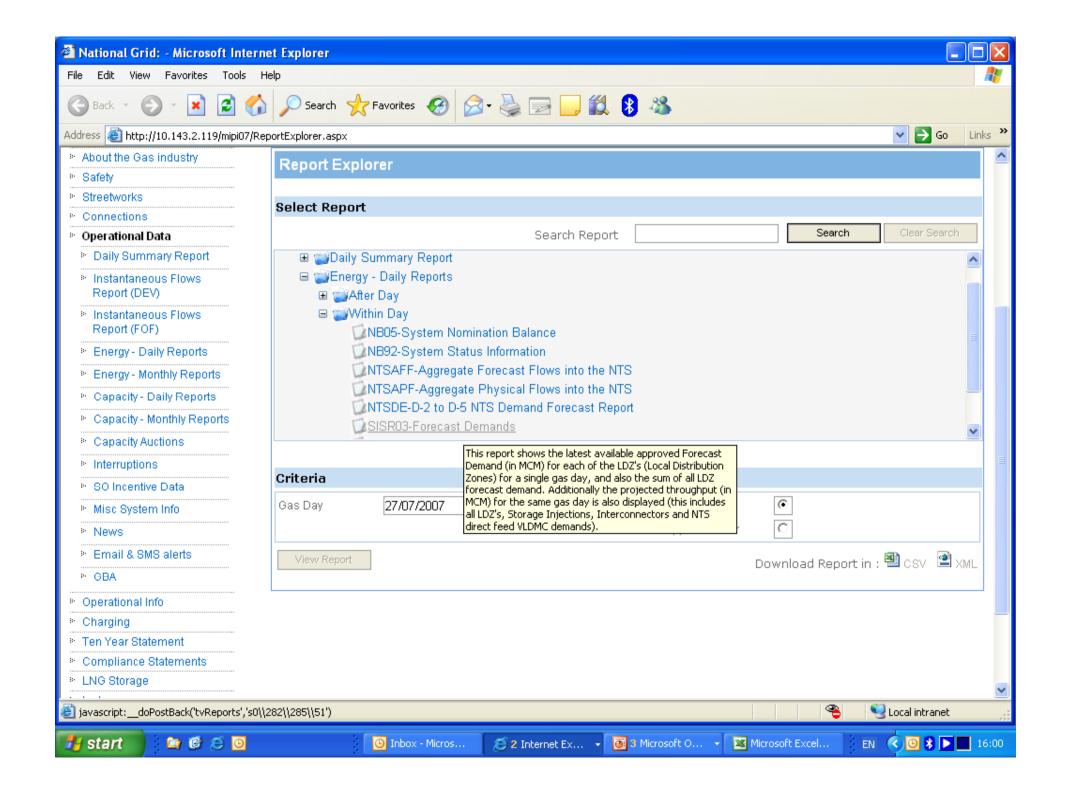


MIPI: Data and report definitions

- Every data item and report has a definition associated with it that helps the users understand the data and decide which item they want
- This information is accessed by hovering the mouse over the data item (in data item explorer) or report (in report explorer)
- For data items this information will include
 - a short data definition,
 - the approximate publication time,
 - the publication frequency
 - Unit Of Measure (UOM)
- For reports this information includes
 - A description of the data items included in the report
 - The approximate publication time
 - The publication frequency
 - The reason for report publication (eg UNC obligation xx.xx.xx)





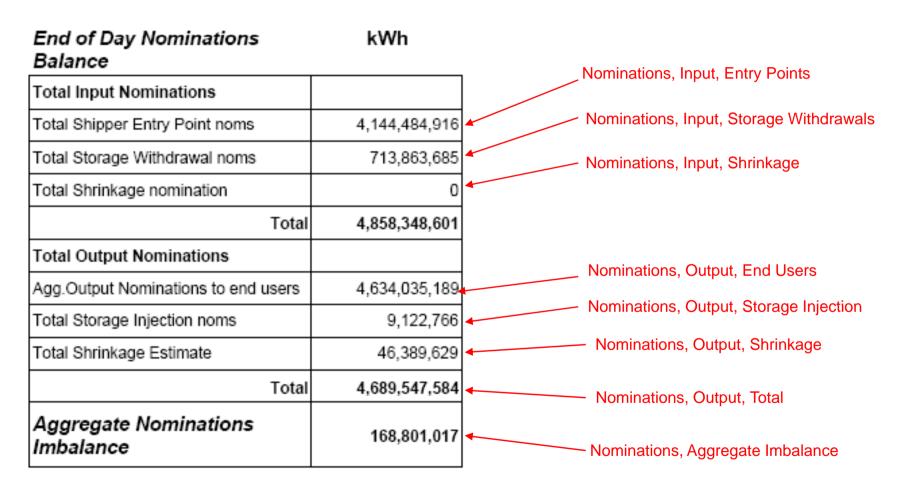


Data item naming

- Data items have been given names that hopefully are intuitive
- The individual data items could not always keep the name used in the report they originate from as the report often gives context to the data item
- A presentation has been produced which shows how the data item name maps to the report (some examples given below)
- A full list of data items will be provided via the website before go live
- If you still can't find what you want, try using the search facility within data item and report explorers
- ...but you can always contact us if you need to



NORD01 - Daily Balance Report...





MIPI: Contacting us

E-mail address, website feedback form and phone number for technical questions:

- E-mail: sysop.centre.reporting@uk.ngrid.com
- Feedback form available within Operational Data on the website
- Telephone: 01926 654639 (answer-phone outside of normal office hours)
- FAQs
 - Available on the Operational Data page
- Notes and Website News updated as necessary



- The new system will deliver real improvements in system performance and functionality
- Please make the most of it
- ...and bear with us through the early days and the undoubted tweaks that will be needed to meet all of your expectations
- Thank you

