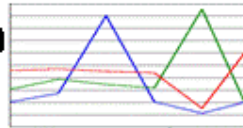


**Gas Information
Initiative**



nationalgrid

Systems Solution for UNC Modification 006 -
External User Information

Author: National Grid NTS
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1. Introduction:

Following consultation, UNC Modification Proposal 006: Publication of Near Real Time Data at UK sub-terminals is awaiting Authority decision¹. To meet the timetable proposed by the Modification Proposal, without prejudice to the Authority decision, National Grid has initiated specification of a systems solution to meet the Proposer's requirements.

This document has been produced by National Grid NTS to provide information to External Users regarding the proposed systems implementation and functionality that would support publication of Near Real-Time Flow Data from Sub Terminals and Storage Sites should an Authority decision be made to implement UNC Modification Proposal 006.

The document intends to provide an overview of the proposed functionality, expected resilience and performance of this proposed system solution, supplying outline definitions of timing, content and format of supplied data.

For ease of use the remainder of this document is presented in four high-level sections: -

Section 2: Data Acquisition & Publication

Section 3: User Functionality

Section 4: Resilience & Performance

Section 5: Data Presentation

¹ Authority decision on UNC mod 006 expected during April 06

2. Data Acquisition and Publication – What Will the New System Do?

This section provides clarity on the data included within the defined scope, how this data will be collated and published and how customers will access this data.

Data Included Within Scope:

Published data made available will include Flow Data from Terminals, Sub Terminals and Storage Sites². There may also be some limited flexibility to publish additional data in the future should this be required as a result of further UNC modification proposals.

Data Receipt, Collation and Publication:

Data will be provided by the Data Provider (Sub-Terminal or Storage Operators) who will deliver the information to National Grid NTS in accordance with current operational arrangements, via existing measurement and telemetry systems. National Grid NTS will configure the totals and grouping and add supplementary information.

The new system will publish two-minute telemetered flow data for Sub-Terminals and Storage Sites (Including totals and supplementary information e.g. context data, time stamps, etc...) to the Internet every twelve-minutes.

It is this data which will be available for on-line query, reporting and download for use to meet individual requirements.

² Includes; Terminals, sub-terminals and storage sites capable of flowing (in aggregate) in excess of 10mcm/d. Also includes all National Grid LNG Storage sites regardless of flow capability. Capability is defined by National Grid's central forecast, part of the TBE process.

3. User Functionality – What Can I Do with the New System?

The new system will offer flexible and user-configurable functionality via internet access, enabling the use of this newly available data in a variety of ways to meet varied requirements.

Within this section the available functionality is outlined, demonstrating the methods of data access and manipulation to deliver time-efficient and relevant data.

On-Line Data Access via Internet Domain:

The system will provide two convenient summary pages:

Firstly; it will publish a page showing all data in the most recent data snapshot 'batch' comprising configured and defined Sub-terminal and Storage flow values for the last 6 * 2 minute snapshots in tabular form, and the latest snapshot in graphical form. This page will have download functionality.

Secondly; the system will also publish a page, which can be configured by the user, to show the data in all 6 * 2 minute snapshots over the last 12 minutes, 1 hour or 24 hours. This will comprise graphical plots for each terminal, for each storage type and another for LNG importation facilities.

Efficient access to the data you require - Data Download on User Request:

A third page will provide a User-Configurable Data download function. User-composed queries will be available for download with the User's last download profile stored (Within the User's workstation) as a default setting for further downloads. This latter facility will facilitate efficient access to the most relevant information to meet your preferred requirement.

The data download will be in CSV format enabling the User to easily develop their tables and/or graphs as they require. All amended or substituted data will be appropriately flagged.

Automatic Update of Your Selected Data - Application Programming Interface:

For defined queries Users will be able to call an Application Programming Interface (API) built around a Web Services Framework. This will allow data snapshots to be delivered to the User automatically for access via the Internet and download. As a result we believe that the API will make it unnecessary to use automated 'screen-scraper' tools to obtain relevant data. Details of how to invoke the published Web Services will be provided.

Data Quality and Amendments:

As a result of numerous technical and operational reasons, the data published in near real time may, from time to time, be erroneous (e.g. loss of telemetry signal or a measurement system failure could lead to a failed reading³). Where any such errors are identified and subsequently amended within day, by National Grid NTS these data amendments will be made available for download and will be suitably flagged as amended data, by the system.

Help Texts

All screens will be annotated by suitable help texts that will explain to Users the contexts of the data being viewed and provide definitions of the various data items.

On-Line Data Retention:

Data will be available for download to Users for a period of two years following publication. No historic data will be migrated to the new system.

³ In the case of no data being received the system will publish the last received value, all such data will be flagged to highlight its status.

4. System Performance and Resilience:

The proposed systems solution has been defined with high-resilience to negative impacts and offering high levels of performance. This has been achieved through the following design elements:

Load Balancing – How Many Users Can Be Accommodated?

Full load balancing will be available over the operational infrastructure; this will deliver a high level of performance over the anticipated usage volumes. Up to 375 concurrent Users (Automated & non-automated) will be able to access the system with short response times across the full range of User functionality.

Auto-Failover:

The operational integrity of the system in the event of technical issues will be preserved due to the provision of automated failover between front-line operational infrastructure (Duty System) and second-line infrastructure (Standby System), providing minimal interruption to operational service. The system will be designed for 99.9% uptime (available 24/7/365).

No Scrapers Required for Data Updates – Faster System Response!

The specification and delivery of API and User-Configurable functions through User-composed queries, seeks to remove the need for ‘screen scraper’ tools. ‘Screen scrapers’ often impair system performance for all users on current industry information provision Internet sites.

5. Data Presentation - This Is How Your System Outputs May Look: -

As described earlier, the system will offer flexible and User configurable access to relevant data. The following examples provide an indication of how your data may appear when viewed on the web site⁴.

Sample 1: Instantaneous Flows into the NTS.

[Home](#) | [Contact Us](#) | [Our Other Sites](#)

> Gas | > Electricity | > Wireless | > Metering | > Property | > Interconnectors | > Land & Development | > Grain LNG

Instantaneous Flows Report

[Print-friendly version](#)

Instantaneous Flows into the NTS

Current Gas Day : Monday, 30-Jan-06

Notes for Today [Click here](#) for Notes

Flows into the NTS

Zone Supply

| System Entry Name | Instantaneous Flows (mcm/day) | | | | | |
|------------------------------|-------------------------------|----------|----------|----------|----------|----------|
| | 06:00 | 06:02 | 06:04 | 06:06 | 06:08 | 06:10 |
| Avonmouth - System Entry | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| Bacton - Philips | 9.98755 | 10.01123 | 10.11491 | 10.24528 | 10.42872 | 10.61217 |
| Bacton - Shell | 30.47342 | 30.60110 | 31.87790 | 32.00558 | 32.16002 | 32.31446 |
| Bacton Interconnector | 36.51360 | 36.59040 | 36.66720 | 36.79488 | 36.94932 | 37.05372 |
| Bacton Seal Subterminal | 21.60274 | 21.65794 | 21.71314 | 21.76834 | 21.82354 | 21.90850 |
| Barrow - BGE&P | 29.85459 | 31.05459 | 31.05459 | 31.05459 | 31.05459 | 32.03060 |
| Dynevor - System Entry | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00456 |
| Easington - BP Dimlington | 10.25160 | 10.27560 | 10.29960 | 10.39560 | 10.41960 | 10.44360 |
| Easington - Other | 9.85470 | 10.00015 | 10.52680 | 10.20289 | 10.00578 | 9.99753 |
| Glennhead - System Entry | 0.10563 | 0.10563 | 0.10563 | 0.11043 | 0.11043 | 0.12243 |
| Hornsea - System Entry | 11.85620 | 11.95462 | 11.82890 | 11.86542 | 11.48439 | 11.94654 |
| Isle of Grain Sub Terminal | 12.50343 | 12.50703 | 12.50943 | 12.51183 | 12.51195 | 12.51207 |
| Partington - System Entry | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 | 0.00000 |
| Rough - System Entry | 35.40821 | 35.40821 | 35.40905 | 35.40989 | 35.41073 | 35.39873 |
| ST Fergus - Mobil | 38.65370 | 38.89370 | 39.31901 | 39.35438 | 39.81527 | 40.01018 |
| ST Fergus - Shell | 24.92600 | 25.70313 | 26.55176 | 27.32663 | 28.13838 | 28.58776 |
| ST Fergus - Total Oil Marine | 61.09600 | 61.44000 | 61.62720 | 62.43000 | 63.08348 | 63.66097 |
| Teesside - Amoco | 18.24000 | 18.48000 | 18.96000 | 19.20000 | 19.56000 | 19.77500 |
| Teesside - Entron | 11.25863 | 11.47463 | 11.59943 | 10.87943 | 10.84343 | 10.84583 |
| Theddlethorpe - Conoco | 27.99000 | 28.20600 | 28.33080 | 28.25880 | 28.18360 | 28.22040 |

Terminal Supply

| Terminal Totals | Instantaneous Flows (mcm/day) | | | | | |
|---------------------|-------------------------------|-----------|-----------|-----------|-----------|-----------|
| | 06:00 | 06:02 | 06:04 | 06:06 | 06:08 | 06:10 |
| Bacton Total | 104.69221 | 105.07667 | 106.60211 | 107.05600 | 107.61648 | 108.14325 |
| Barrow Total | 29.85459 | 31.05459 | 31.05459 | 31.05459 | 31.05459 | 32.03060 |
| Easington Total | 18.43040 | 18.57440 | 18.77120 | 18.77120 | 18.73520 | 18.73280 |
| ST Fergus Total | 124.67470 | 126.03683 | 127.49797 | 129.11101 | 131.03714 | 132.25890 |
| Teesside Total | 29.49863 | 29.95463 | 30.55943 | 30.07943 | 30.40343 | 30.61833 |
| Theddlethorpe Total | 27.99000 | 28.20600 | 28.33080 | 28.25880 | 28.18360 | 28.22040 |

Total Supply

| Total System Supply | Instantaneous Flows (mcm/day) | | | | | |
|---------------------------------|-------------------------------|-----------|-----------|-----------|-----------|-----------|
| | 06:00 | 06:02 | 06:04 | 06:06 | 06:08 | 06:10 |
| Total System Supply (all zones) | 390.52463 | 394.43482 | 398.40624 | 399.93401 | 402.60078 | 405.54569 |

[Entry Zone](#)

[Graphs](#)

[User defined download](#)

[Click here](#) to download data

Publish Timestamp : DD/MM/YY HH : MM

Definitions

⁴ The final layout has not yet been designed. These are examples displayed for information only and compressed in order to fit onto the printed page. All data shown is dummy data.

Sample 2: Flows by Entry Zone (MCM/Day).

[Print-friendly version](#)

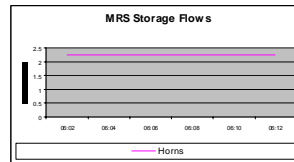
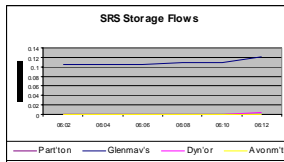
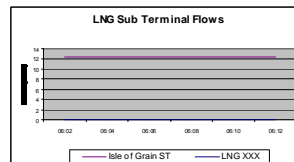
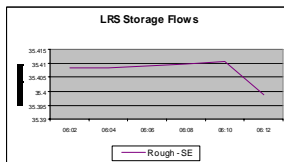
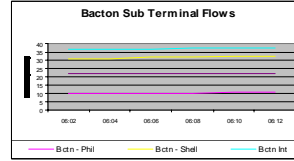
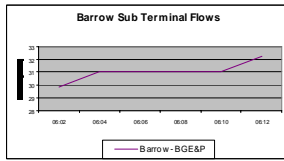
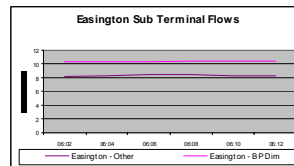
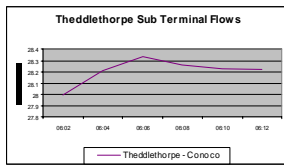
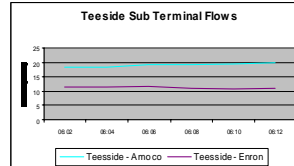
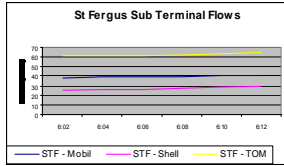
Entry Zone Graphs

Current Gas Day : Monday, 30-Jan-06

Flows by Entry Zone (mcm/day)

Select time period

| | |
|-------------|---|
| Last Update | X |
| Last Hour | |
| Last 24 hrs | |



[User defined download](#)

[Return to main Instantaneous Flows Page](#)

Definitions

Sample 3: User Defined Download.

User Defined Download

Current Gas Day : Monday, 30-Jan-06

Select time period

| | |
|-------------|--|
| Last Update | |
| Last Hour | |
| Last 24 hrs | |

Or user defined time period

| | | |
|------|-------|----------|
| From | 06:00 | 30/01/06 |
| To | 06:10 | 30/01/06 |

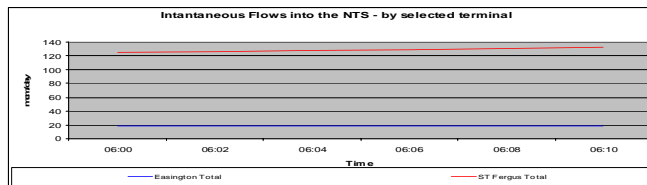
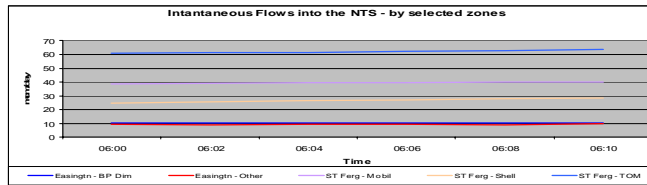
| | |
|----------------------|-------------------------------------|
| Latest Available | <input checked="" type="checkbox"/> |
| Originally published | <input type="checkbox"/> |

User to select required Terminal or Individual entry zones

| Select Zone | System Entry Name |
|-------------|------------------------------|
| | Avonmouth - System Entry |
| | Bacton - Phillips |
| | Bacton - Shell |
| | Bacton Interconnector |
| | Bacton Seal Subterminal |
| | Barrow - BGE&P |
| | Dynevor - System Entry |
| X | Easington - BP Dimlington |
| X | Easington - Other |
| | Glenmavis - System Entry |
| | Hornsea - System Entry |
| | Isle of Grain Sub Terminal |
| | Partington - System Entry |
| | Rough - System Entry |
| X | ST Fergus - Mobil |
| X | ST Fergus - Shell |
| X | ST Fergus - Total Oil Marine |
| | Teesside - Amoco |
| | Teesside - Enron |
| | Theddlethorpe - Conoco |
| | All Zones |
| | Bacton Terminal |
| | Barrow Terminal |
| X | Easington Terminal |
| X | ST Fergus Terminal |
| | Teesside Terminal |
| | Theddlethorpe Terminal |
| | All Terminals |

Click [here](#) to update graphs

Click [here](#) to download



[Entry Zone Graphs](#)

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Definitions