



Information Provision enhancement proposals

Invitation to share views on proposals to enhance
Operational Data provision service by National Grid

26th September 2018

nationalgrid

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Introduction

Scope of this Paper

Introduction

This Proposal has been prepared by National Grid Gas, in its role as owner and operator of the Gas National Transmission System (NTS) in Great Britain. In response to a number of recent industry engagements, National Grid has mobilised a programme of work to develop and implement improvements to the Information Provision service that it provides. The purpose of this document is to share the high level topics of this programme and invite views and participation into the decision making process for it. Involvement from customers and stakeholders is invited in the form of:

- Initial response to the questions within this document;
- Engagement within an industry working group to prioritise the plan of delivery.

This document has been structured into three topics areas to aid description of the background (problem statement), current situation and proposed way forward. The topics are:

Topic 1 -Standardising system maintenance window

- Feedback requested on the proposed timing and frequency of the window

Topic 2 - Closing data item gaps

- Invitation for industry to take part in a requirements and delivery workgroup

Topic 3 - Publication of additional data items

- Feedback requested on the additional data items proposed to be fed into the requirements phase of the programme, along with value-add that this will bring to support the prioritisation process once in delivery.

The proposed requirements scoped for this Programme and detailed within this document have been developed taking account of feedback from Customers and Stakeholders. Engagement has included:

- Gas Transmission Workgroup consultation on Gas Quality;
- Gas Operational Forum meetings;
- Bilateral meetings;
- Shaping the Future of the Gas Transmission Network events;
- There has also separately been an industry webinar discussion on topic 1, the 'standardisation of system maintenance window' which has been included here for ease of reference.

National Grid proposes this programme of enhancements to deliver in the current regulatory period (T1), which is set between 2012 and 2020. Subject to the scale of change the delivery could extend into the next regulatory period (T2) from 2021 onwards. Should this be the case, implementation will sit alongside all other work currently being scoped with the industry in support of National Grid Gas Transmission's T2 submission (Shaping the Future of the Gas Transmission Network).

This proposal opens for feedback on 26th September 2018 and will close on 6th November 2018. Should you have any queries or require further clarification in respect of this consultation, please contact Karen Thompson at National Grid.

How to respond

Written responses may be sent by email using the guideline questions in Appendix A if required to Karen.Thompson@nationalgrid.com. If you wish the details of your response to be kept confidential, please clearly indicate this. Alternatively, if you wish to provide feedback verbally, please use the contact details provided to make the arrangements for a meeting / conference call / video conference.

Next steps

National Grid will consider the views of industry participants expressed in response to this paper and would encourage all market participants to respond, even if you are in full agreement of the proposals as presented.

National Grid will aim to create a conclusions document with a view to presenting its findings initially back to the Gas Operational Forum and will signpost at the Transmission Workgroup prior to the first proposed Workgroup meeting. National Grid will also, if it considers it appropriate, work with Ofgem to conclude which options, if any, to implement; considering the resources available to National Grid, and the compatibility of proposals with its regulatory and contractual obligations. National Grid will also consider whether any proposals would need to be supported by a relevant UNC Modification Proposal.

Regards,

Karen Thompson, Operational Liaison Manager

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1

Standardising a System Maintenance Window

Standardising a System Maintenance Window

Background

The MIPI (Market Information Provision Initiative) system provides operational data via the National Grid website: <https://www.nationalgridgas.com/data-and-operations/transmission-operational-data>.

The data is accessed over 2.5 million times a day, 365 days a year using the following methods:

- Web browser viewing;
- Generating reports – pre-defined report (report explorer) or user defined reports (data item explorer);
- Using an Application Programming Interface (API) which is a software-to-software interface to extract data into another system; and
- Screen scraping.

The operational data has been made available from the evolution of obligated requirements and promotion of transparency of NTS operational data. This data is sourced from and sent to several systems and as such the data journey to and from MIPI has a complex system architecture around it.

This complexity means that the availability of data through MIPI can be affected at multiple times during a month due to MIPI and/or the source data systems requiring routine maintenance. Of note are two primary systems which feed operational data through to MIPI and these are:

- **Gas Control Suite (GCS)** – National Grid's Critical National Infrastructure (CNI) control system which sends and receives telemetry signals to the NTS as well as providing a platform that supports physical and commercial operations processes. This system is supported through National Grid's service partners.
- **Gemini** – The industry's commercial balancing platform managed and supported by Xoserve.

Outages on these systems are essential to carry out maintenance which includes routine software updates to ensure robust functionality and security resilience, disaster recovery tests, and changes to data feeds driven by customer or regulatory change requirements.

Your feedback has told us that the information that the MIPI system provides is very valuable and that the consistent availability of data is essential. Interruption to provision of data should therefore be minimised, and where necessary planned and understood.

Current situation

As a result of feedback received, National Grid has already implemented a number of improvements to the way in which these system outages are managed, along with associated contingency datasets. The current system maintenance approach is as follows:

- **Publication of maintenance windows in advance**, noting that in some cases emergency outages will be required with limited early warning;
- During any impacted period, provision of a **subset of data via ANS** (Automated Notification System) to pre-subscribed users: typically Shippers, Distribution Networks (DN's) and National Transmission System (NTS) Connected customers. This is a sub-set of data which would otherwise be mostly accessed via the 'prevailing view' page;
- Scheduling of maintenance windows during a time when, based on insight gathered over the past number of months, **it is believed there will be minimum impact to the industry. National Grid is** currently trialling a MIPI maintenance window after 18:00 and on a Tuesday, up to 2 times a month avoiding where possible the last week in the month. Note - the timing was recently moved to 18:00 based upon feedback that the previous timing of 16:00 may adversely affect within day trading activities.

Industry participants have fed back a mixture of views on optimal timing for this maintenance window, both in terms of the time of the day, the day of the week and the week within the month. The current process has been designed using a balanced approach to consider all industry requirements, as will any future enhancements.

Further enhancements in the pipeline

There are several enhancements to the management of system maintenance windows included within our future delivery plan:

December 2018

- Provision of a contingency dataset during system outages accessible for non-ANS users through the NG website
 - The scope of the dataset will vary due to nature of the planned maintenance, therefore at least 5 days in advance of a notified MIPI maintenance window National Grid will publish the scope of the contingency dataset to be made available. This will include specific impacts on data sets and understanding of when any data patching will be resolved
- Minimising the amount of disruption of operational data sets through alignment of maintenance windows with our control system (GCS).

January 2019 onwards

- Formalising MIPI contingency arrangements into UNC
 - Date to be confirmed subject to requirement for formal Modification Proposal with initial discussion planned for Transmission workgroup by January 2019.

National Grid would like to highlight that the timing and frequency of the current and future planned outages is based on feedback and impacts to within day industry processes. Changes to the plan will be considered if the proposed timings are problematic. The Gemini system has a 03:00- 05:00 Sunday maintenance window, so views are also required if this timing would be more aligned to the industry's requirements.



2

Gaps in the Industry Operational Data within MIPI System

Gaps in the Industry Operational Data within the MIPI System

Background

MIPI provides an extensive amount of Operational Information to the industry. To provide some context there are circa 13,000 different data items and around 60 pre-defined reports. National Grid currently provides information for a number of reasons:

- Special Condition 8F: Provision of Information of National Grid's NTS Licence;
- National Grid's obligated data set as defined by UNC Section V9, initiated through GB regulated requirements;
- Requirements to provide data provided by National Grid in its role as a TSO initiated through EU Legislation and EU Codes;
- Additional data provided by National Grid which was historically viewed as useful for the industry; and
- Distribution Network data and Storage Operator data which although is the responsibility of these industry sectors has been made available through MIPI because of a request from the regulator.

Current Situation

A number of queries are received with regards to interpretation of the different data sets provided via the MIPI system. Common query themes have included why MIPI presents different horizons of data post gas day, and why MIPI provides different articulations of datasets that appear the same but have subtle differences.

These examples are leading to concern as comparisons cannot easily be made when assessing the detail in some areas, which then in-turn results in errors in analysis or raises concerns about the accuracy of the data sets.

An example for where this is seen is:

NTS Demand/Distribution Demand – MIPI users cannot correlate between the two total figures. Industry expectation is such that they expect to see the same total in two subsets of data but the reality is that they are different data sets for different reasons. There is a difference between the NTS demand into the LDZ/Distribution Network and then LDZ/Distribution total demand figure, which is generally due to imbedded LDZ/Distribution Network supply.

As National Grid is not always responsible for the source data for the full MIPI data set it can take additional time to respond to specific data queries and to correct or provide additional data. The source of the data could be another party such as Distribution Network Company. If this is the case and change is proposed this would require a piece of focused work to gain full clarity for the industry on all available data. As National Grid mobilises the improvement programme it will be a priority to ensure the problematic areas are fully understood with their resolution prioritised accordingly.

Proposed approach for data item gaps

National Grid is aiming to ensure that confusion from interpretation of data sets and reports is removed as quickly as possible.

As National Grid progresses the formal programme of work it is important to ensure there is regular engagement and sign on to the approach from the industry. National Grid, therefore would propose an open industry working group to provide insight on user requirements and to inform prioritisation through delivery.

The proposed scope of the data item gap work has been split into shorter and longer term targets:

Within the next 6-months

- A plain English User Guide which enhances the current Data dictionary for all current and new data sets/reports. This will ensure all industry participants can fully understand all the operational data currently available and displayed through MIPI.
- Obtain a better understanding of where data or reports are not being utilised by the industry, and as such balance the efficiencies of maintaining such data against continually having focused improvement on the more highly utilised data sets.

Within the next 6- 12mths:

- Work to identify and implement any enhanced guidance, fixes or data gaps which are consistent with National Grid's regulatory and contractual obligations, and the resources available to it. This will aim to provide better clarity in interpretation of data and in certain cases require co-operation with both Distribution Network Companies and Storage Operators (and therefore the ability and timetable to deliver enhancements will be dependent on these other parties).



3

**Industry requests for additional
Operational Data**

Industry requests for additional Operational Data

Background

Over time operational data has been increasingly utilised, and the industry has highlighted through the T2 events how important operational data is in decision making. There is a clear shift in technology and analysis such that industry needs and expects more detailed information to help:

- Forecast ahead of the day and within day to facilitate which decisions could and should be made
- Undertake analysis after the day to facilitate better decisions going forward

Current Situation

Over the past 18 months National Grid has engaged industry to understand what specific data not currently available would support effective decision making. The question has also been asked about what data will also drive improvements in the transparency of National Grid operational decisions. The three data types that have been consistently fed back are:

- Prediction of pressure
- Gas Quality
- Transparency of instantaneous demand

There will be some elements of requested data which National Grid will be unable to accommodate due to its regulatory and contractual obligations, and/or the fact that investments may be required which are not possible within the resources available to it.

Within these parameters, National Grid will seek to propose a balanced approach that can evolve over time for each of the above categories. National Grid is particularly interested in industry feedback on additional categories and/or the priority of them. National Grid is requesting these views are articulated in response to these proposals.

Proposed Approach for provision of new industry data sets

Pressure Forecasts

National Grid has already started to publish week ahead pressure forecasts at Entry Points*. This started in early September 2018. This information is provided within an excel format on the Operational Data page, and historic data from the point of implementation is available. Although the feedback on this new data set has been limited to date, National Grid would like to understand whether there remains a desire for a further enhanced data set through regional pressure forecasts ahead of the Gas Day:

Description of Enhancement	Pros	Cons
Provision of regional pressure data at day-ahead	Could help to predict Entry and Exit Pressures to aid commercial and operational decision making.	Pressures vary throughout the day due to the operations of a within day strategy so pressure may vary from the forecasted range.

**Pressure forecasts are available in ‘Supplementary reports’ on our Operational Data page.*

Gas Quality

This has been a much-debated topic of information enhancement over the past two years and the preference has been for near real time data over historic data. It is important to note that National Grid does currently provide Calorific Value data after the day within the following report <http://mip-prod-web.azurewebsites.net/ReportExplorer?gasDate=2018-09-11&filterParameterType=GasDay&selectedNodeId=c6af2234-7ccb-4174-a72d-b8fecb4a5ff2>

The proposed approach for enhancement reflects an awareness of the desire from participants for more data, balanced against the fact that National Grid will be unable to accommodate all data requests due to its regulatory and contractual obligations, and/or the fact that investments may be required which are not possible within the resources available to it.

There may be future opportunity to further enhance granularity over time, however the proposal below is based upon a desire to provide useful Gas Quality data to the market as soon as possible especially as this has been talked about for some time.

Description of Enhancement	Pros	Cons
Provision of real time previous hour bar average) CV data at the following points: <ul style="list-style-type: none"> • St Fergus • Bacton • Teesside • Easington • Milford Haven 	Will inform what CV offtakes would expect to receive/have received. Is not at a sub-terminal level and hence does not breach bi-lateral agreements	CV would be measured at a certain point in time from a point in the Network but this would not dictate the exact CV at all locations nearby as this is dependent on NTS configuration. Consistency of data – It is also worth noting that data will be subject to update following meter validation processes completing after the day. Low Value of provision of such data for small market players.

Instantaneous Demand

Currently operational information provision for actual instantaneous flow is at a supply category level for categorised points in the network. All demand data currently available to the industry is based around physical flow notifications. The industry has indicated that there would be value in provision of instantaneous demand. Like Gas Quality enhancements this proposal is based on recognition of the confidentiality and potential regulatory restrictions around lower granularity and desire for National Grid to provide an enhanced set of data to the industry as soon as possible.

Description of Enhancement	Pros	Cons
Provision of instantaneous demand data at the following: NTS actual demand Category level demand at the following points; DN's, Power stations, Industrials, Storage Sites, Interconnector.	Better visibility for within day operational to supplement commercial nomination data.	To ensure this data is available for API's this would require IT cost and timescales for implementation are currently unclear.

Some elements of enabling the requested data to be available via MIPI would require regulatory and bi-lateral agreements or investment in infrastructure of systems. As such National Grid has proposed a balanced approach that can continually evolve to enhance over time for each of the above categories. It is essential however, that if this isn't an approach you support, or different categories are higher priority for you, that this is articulated in your response.



Appendix A

Guideline Questions for responses

Guideline Questions

Key Questions:

- Do you agree in the proposed system maintenance timings and approach?
 - If not is this because you believe the timing should align with current GEMINI outages, or another timing which minimises impact to your organisational outputs?
- Do you believe that National Grid has accurately represented the current situation with data gaps?
 - If not please articulate why, including context to the barriers you currently face with the data gaps.
- Do you believe National grid has accurately represented additional data categories that would be useful to your organisation?
 - If not, please identify what additional data categories would be useful to your organisation and why.
- Would you be interested in taking part in an Operational Data Enhancements working group to advise on delivery of the industry requirements.
- Are there any additional comments you would like to make with regards to how Operational Data currently provided either assists or presents barriers to your organisational outputs

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