

Data Enhancement Project

Transmission Working Group

08/07/2019

nationalgrid



Add in the planned MIPI and unplanned MIPI outage process.

Operational Data Enhancements Project

Ambition: Customer focused, data centric approach, not just meeting our obligated data requirements.

(1) **Agile solution, facilitating the expected increase in system data to support decarbonisation.**

- Upgrade of the MIPI system, including a new platform capable of hosting significant additional data

(2) **To deliver an industry data community platform to enable:**

- Reaching a wider group of industry participants providing anonymous feedback to evaluate data/market information requests.
- Compliment traditional communication channels. (TWG; Gas Operational Forum)
- To test concepts to improve transparency (such as data requests or new visualisations) prior to implementation
- Platform for wider communications such as “The Day in Brief” initiative.

<https://datacommunity.nationalgridgas.com/>

Operational Data Enhancements Project

What good looks like for 2019:

- The industry clarifies what data is required (NTS data/3rd party data/data gaps)
- National Grid understand who is using our data and why (the benefits across the industry).
- National Grid understand how the industry uses our data- API's, reports, webpage views etc.
- National Grid understand what data is not used and determine whether this is still relevant.
- Current and new operational data is made available on time and to agreed quality.
- Where availability of data is affected the industry are made aware of this.
- A solution is implemented such that when new data requirements are agreed these can be implemented efficiently (cost and time).
- Industry have developed the suite of operational data which will enable market players to become more efficient and hence pass on savings to end consumers

Gas System
Operator

01

Key Messages

nationalgrid



Industry Feedback

National Grid launched an industry consultation process in September 2018

- **Discussion Groups at the Gas Operational Forum**
- **Launching the Collaboration Website, posting new concepts and feedback questions**
- **1-1 Feedback from Industry participants**

NOTE: Feedback can be posted on the community website or if you would prefer a 1-1 please contact Karen Thompson and the Gas Operational Liaison team.

Summary of the feedback to date:

- **Data Procurement**
 - Large shippers use API's to download the National Grid Gas Data
 - Smaller shippers and occasional browsers use the Data Item Explorer
- **Reports**
 - Limited use
- **Data Visualization**
 - Improve Market understanding of the system status and its evolution.
 - Day in Brief commentary
- **Additional Data Requested**
 - Real time Demand Data
 - Post day hourly residual balancing data provided post day (D+1)
 - Data from external providers systems (UIG, SAP & SMP)
 - Gas Quality data
 - Localised Pressure data
- **Data Consistency**
 - Users value data consistency; Would value a final set of consistent supply and demand data
- **Data Quality**
 - Users value data quality; prefer Grid to use a blank to denote missing/erroneous data
- **Data Dictionary and User Guides**
 - Improvements to the data dictionary and a user guide

Next Steps - Additional Data – Current Grid View:

In Scope

- Instantaneous Aggregated NTS Demand ✓
- Post Day Hourly National Grid Residual Balancing Trades

Notes

- Providing trial data on the Grid Website
- Currently propose adding this to the existing MIPI platform later this year

Out of Scope

- Within day publication of National Grid Residual Balancing Trades.
- Target Linepack

Under Consideration

- Localised Pressure and Gas Quality data
- Third Party Data: Additional LDZ Data
- Other aggregations of real time demand data

Still in the discovery phase

- Value and Application vs Cost
- Level; Format; Frequency; Real Time or Post Day publication.

Energy Data Taskforce recommendations

The Energy Data Taskforce, commissioned by Government, Ofgem, and Innovate UK, has set out five key recommendations that will modernise the UK energy system and drive it towards a Net Zero carbon future within their report: **A Strategy for a Modern Digitalised Energy System:**

- 1: Digitalisation of the Energy System
- 2: Maximising the Value of Data
- 3: Visibility of Data
- 4: Coordination of Asset
- 5: Visibility of Infrastructure and Assets

Martin Cave, Ofgem chairman, said: “Data will play a crucial role in enabling competition and innovation to drive down prices for customers and provide them with new products and services.

“This is why Ofgem fully supports the Taskforce’s five recommendations to improve data use. We will be working with BEIS, consumer groups and the industry to ensure better use of data unlocks a brighter future for energy consumers.”

NTS Data Transparency

| NTS ITEM | Daily | Hourly | Real Time |
|------------------------|-------|--------|----------------|
| Beach Flows | ✓ | x | ✓ ¹ |
| LNG Flows | ✓ | x | ✓ |
| Storage Withdrawal | ✓ | x | ✓ ¹ |
| Interconnector Imports | ✓ | x | ✓ |
| LDZ Offtakes | ✓ | x | ✓ ² |
| CCGT | ✓ | x | ✓ ² |
| Industrial | ✓ | x | ✓ ² |
| Storage Injection | ✓ | x | ✓ ² |
| Interconnector Exports | ✓ | x | ✓ ² |
| Linepack | ✓ | ✓ | x |
| Storage Stock | ✓ | x | x |
| LNG Stocks | ✓ | x | x |
| NTS Shrinkage | ✓ | x | x |

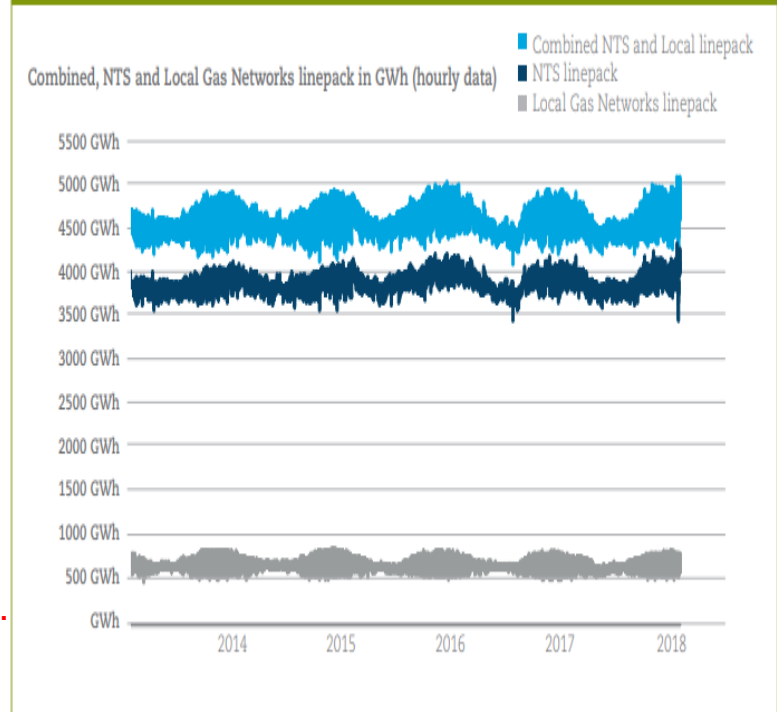
Note: (1) Not all terminals and sub-terminals are published currently; (2) Aggregate offtake level only

LDZ Data Transparency

| LDZ ITEM | Daily | Hourly | Real Time |
|--------------------|-------|--------|-----------|
| Direct Supply | x | x | x |
| Demand | ✓ | x | x |
| NDM Demand | ✓ | x | x |
| DM Demand | ✓ | x | x |
| UIG | x | x | x |
| Shrinkage | x | x | x |
| Linepack | x | x | x |
| Storage Injection | x | x | x |
| Storage Withdrawal | x | x | x |

Making this data public could facilitate the decarbonisation debate.
 Shippers would prefer all network data on one website

Figure 2: Linepack of NTS and Local Gas System 2013-01-01 to 2018-03-07



Source: Flexibility in Great Britain's gas networks: analysis of linepack and linepack flexibility using hourly data ; Grant Wilson and Paul Rowley

Link: <http://www.ukerc.ac.uk/publications/linepack.html>

Next Steps – Other Developments – Current Grid View

- **Data Hosting**
 - The MIPI system will be put on a new platform able to support the anticipated significant growth in the demand for data to support the changing needs of the industry.
- **Data Procurement**
 - Simplify Data Item Explorer (Used by smaller suppliers and occasional data users)
 - Minimise impact on existing API process.
- **Reports**
 - Reduce the number of Reports pointing users to the underlying data
- **Data Visualization**
 - New Data Visualisations: Testing proposals on the Community website.
 - Day in Brief; concept will continue to evolve on the community website.
- **Data Consistency**
 - Feasibility of publishing a final set of consistent post day demand and supply data.
- **Data Dictionary and User Guides**
 - Improvements to the data dictionary and a user guide to support a new data centric approach.

Next Steps – Governance process (NGT View)

- **Changes to National Grid Licence**
 - Currently don't think there will be a need to make changes.
- **Uniform Network Code Committee – Majority Vote (UNC TPD V 12.3)**
 - Data in Scope will require changes to the Operational Reporting Manual and Data Dictionary
- **Uniform Network Code Committee – Working Group -> Modification? (UNC TPD V 12.3)**
 - Removing the Reports (Pointing any residual users to the data)
 - MIPI Data Contingency and MIPI house keeping
- **Data Confidentiality (UNC TPD V 9.4.5)**
 - NGT have had feedback about providing NTS offtake point real time demand data. OFGEM may have to decide on this request (if some shippers object on confidentiality grounds), directing National Grid to make this data available by giving Condition A11(18) approval if OFGEM agrees with the proposal.- **NGT still in discussions with industry to gauge interest.**
 - National Grid have also had a request for Gas Data Quality data but at least one user has concerns about data confidentiality. – **NGT still in discussions with industry to gauge interest.**

Gas System
Operator

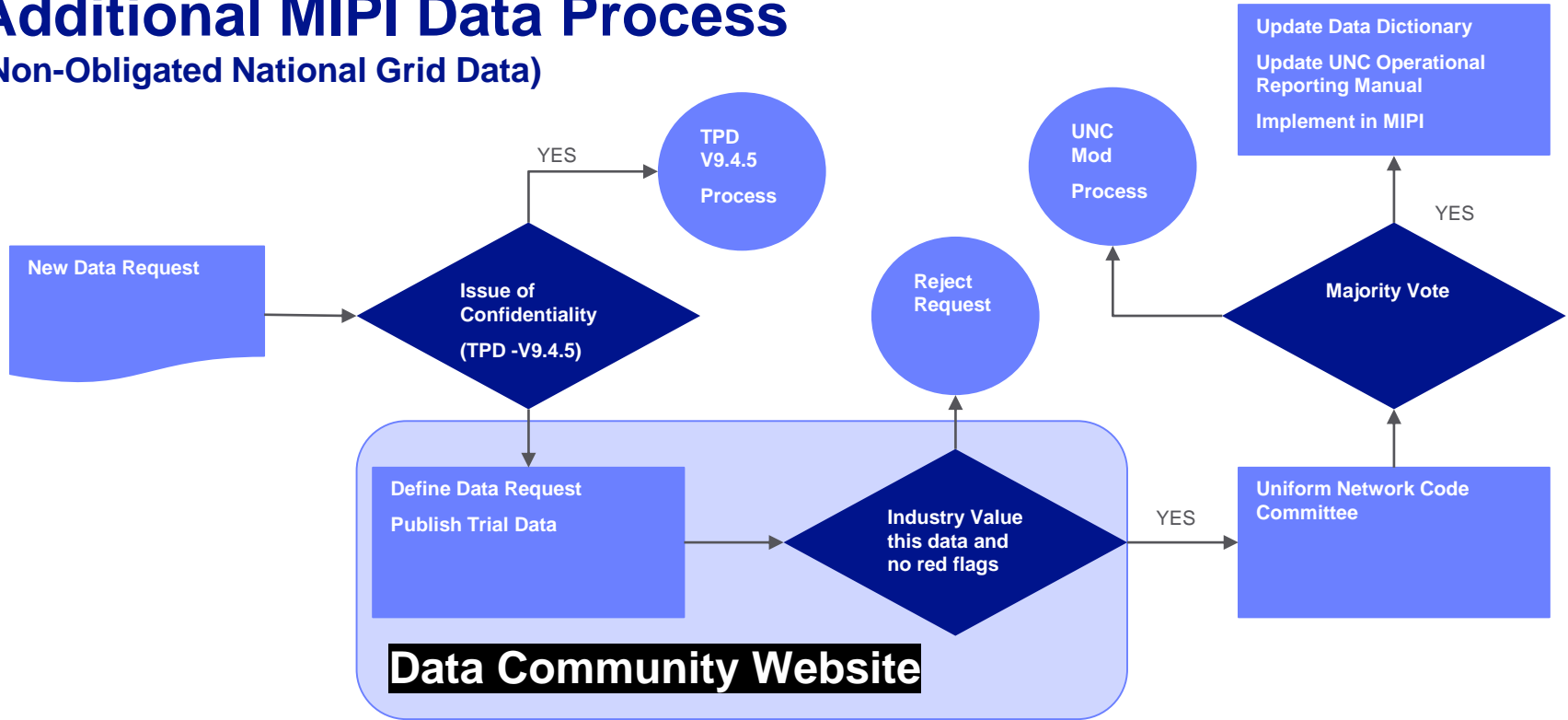
02

Future Market Data
Change process

nationalgrid

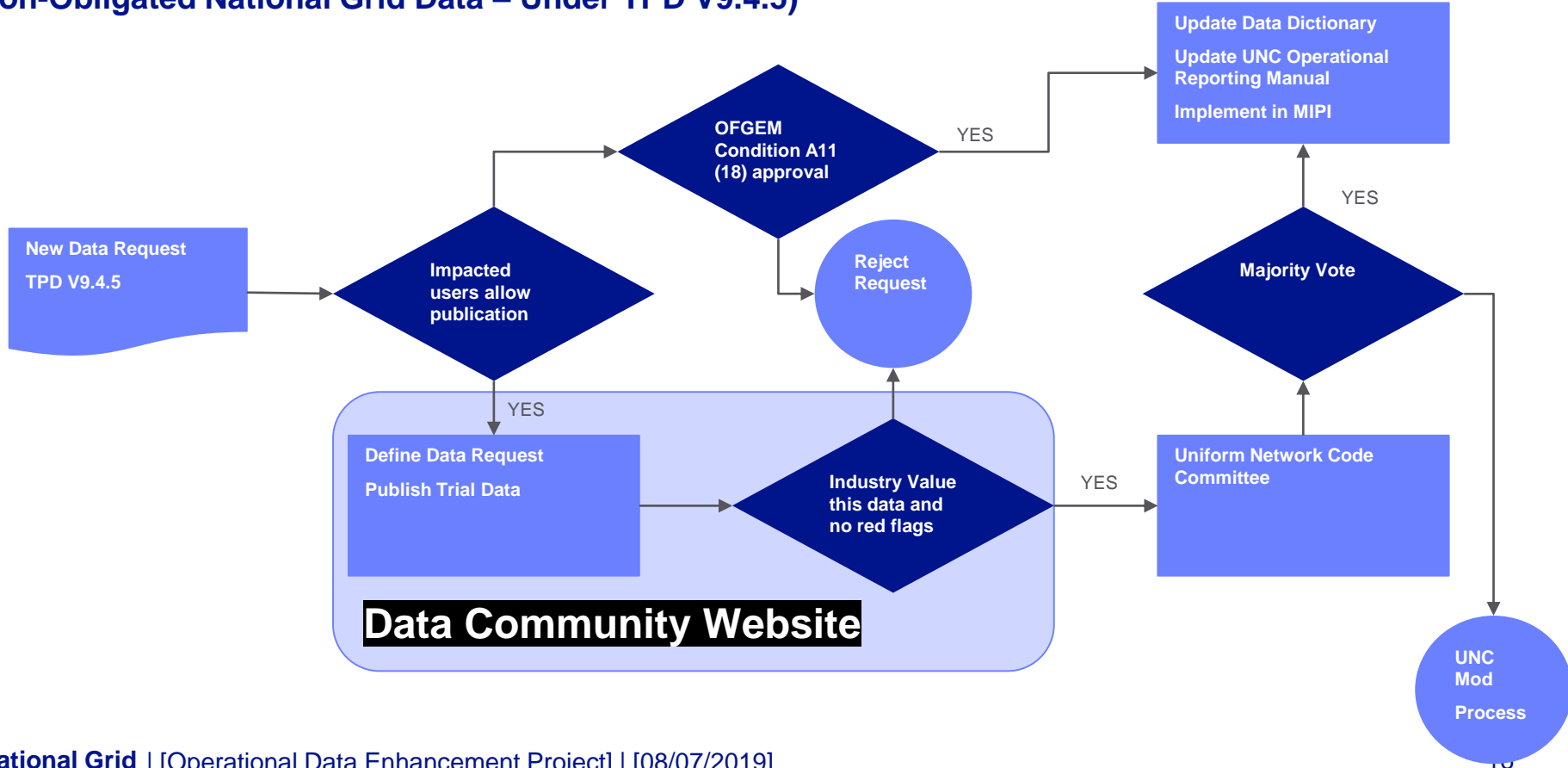


Additional MIPI Data Process (Non-Obligated National Grid Data)



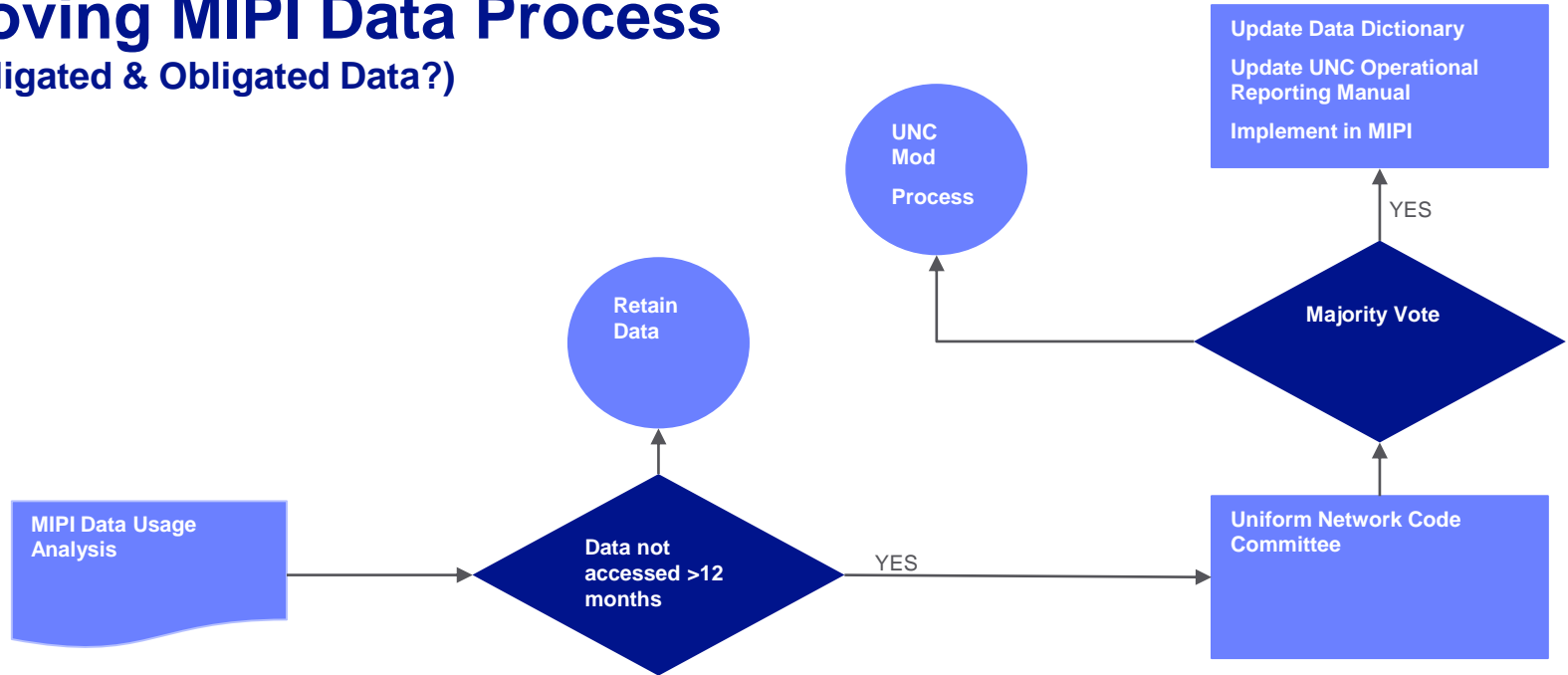
Additional MIPI Data Process

(Non-Obligated National Grid Data – Under TPD V9.4.5)



Removing MIPI Data Process

(Non-Obligated & Obligated Data?)



national**grid**