

# Northern Powergrid increases stakeholder engagement with energy data marketplace

143,000

monthly API calls

3,670

registered users

84

datasets

## CONTEXT:

### CREATING A NET ZERO FUTURE

Northern Powergrid manages the electricity distribution network for more than 8 million people in the UK's North East, Yorkshire, and northern Lincolnshire region. As part of the energy transition, it is transforming from being a network operator to become a Distribution System Operator (DSO), collaborating with stakeholders to deliver a smarter and more flexible energy system.

## CHALLENGE:

### DELIVERING TRANSPARENCY THROUGH DATA ACCESS

Data is a key enabler of effective future energy systems, enabling a wide range of stakeholders, from local authorities to generators, to make better-informed decisions that increase efficiency and drive decarbonization. To deliver benefits, data must be easily available, and understandable by all stakeholders.

*“We continue to recognise the critical role data plays in supporting our stakeholders and enabling the energy system transition. By placing stakeholder experience at the heart of our approach, we’ve made meaningful strides in improving the accessibility and usability of our open data portal.”*



**Paul Fitton**  
Director of Digital  
and Innovation



## DATA EXPERIENCE:

### BUILDING COLLABORATION THROUGH DATA SELF-SERVICE

As it moves towards becoming a DSO, Northern Powergrid knew that it had to extend the range and usability of the data it provides, understanding the needs of new stakeholder groups and meeting their specific requirements. Opening and sharing its data was a license imperative set by energy regulator Ofgem, but Northern Powergrid wanted to go further, sharing data through an accessible, transparent approach that made the right information available to stakeholders through self-service in formats that they could easily understand and use. It therefore looked to create an external data marketplace and chose to work with Opendatasoft on the program, thanks to its powerful technology and energy market experience.

The Northern Powergrid open data portal first went live in December 2022 and now offers an extensive range of information and visualizations for stakeholders, who include people who want to connect generating assets to the network, local authorities, academics, and employees of other energy and network companies. Organized under key themes, it provides a range of interactive features for users to help them access and utilize data effectively through self-service.



#### Meeting different stakeholder needs

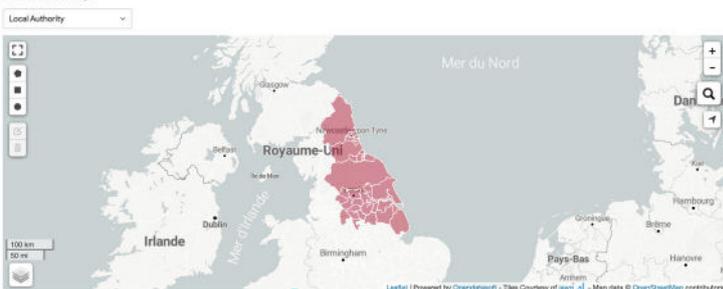
Northern Powergrid knew that many stakeholders, such as local authorities, were not experts in energy data and were unlikely to have interacted with the company before. It therefore had to deliver a tailored, intuitive experience designed around their needs.

As part of this it has created specific user pages for different audiences, providing direct access to relevant data, tools and information. These have been introduced for local authorities and community groups, flexibility service providers and connection developers. Additionally, an interactive dashboard for local authorities brings together all the data they require in a single place, avoiding the need to switch between datasets.

#### Local Authority Dashboard

Select your Local Authority of interest to view data from various sources, if you are unclear to which Local Authority covers your area of interest, please see the Local Authority Map below the selection.

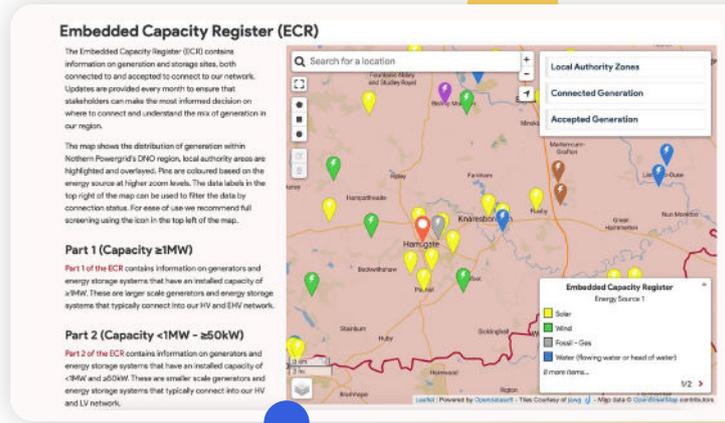
Select Local Authority:



## Accelerating the connection of new generation sites

Decarbonization relies on a distributed ecosystem of renewable and battery storage sites. Companies planning new generating sites therefore need to pick locations where the network has spare connection capacity so that they can provide power to the grid.

To help, the portal shares Northern Powergrid's Embedded Capacity Register (ECR) through an interactive, map-based visualization. This contains information on both connected generation and storage sites, and those waiting for connections.



This enables stakeholders to make informed decisions on where to connect - all through self-service. Additionally, Northern Powergrid collects information from the other system operators in England, Scotland and Wales to create a national picture of distributed generation, available as an interactive visualization and heatmap, filterable by generation source.

Redeveloped network availability heat maps provide stakeholders with easier to use, clearer visualisations of the opportunities for new connections to the network whilst highlighting any challenges posed by network constraints. This new methodology also offers greater insight into the data behind the visuals and is aligned with other datasets such as Northern Powergrid's ECR.

### National Combined ECR

Alongside the production of our ECR, we also collate data from ECRs published by all DNOs to create a National Combined ECR each month. This gives insight into distributed generation throughout England, Scotland and Wales.

The National Combined ECR was created to give stakeholders a simpler way to view the national picture and be able to compare various regions of the UK to one another. Please be aware that this is 3rd party data and Northern Powergrid are only responsible for the data quality of our own ECR. If you have any queries about the data you would need to contact the DNO responsible for that area\*.

Third party data sources can be found below:

- Electricity North West
- National Grid Electricity Distribution
- SP Energy Networks
- Scottish and Southern Electricity
- UK Power Networks

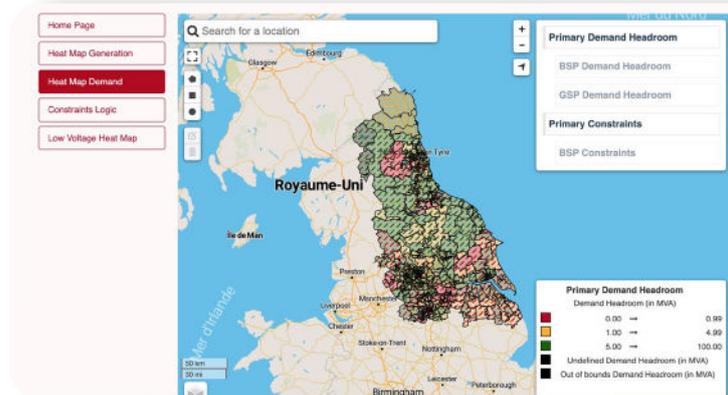
\*Northern Powergrid are responsible for data based in either the Northwest or Yorkshire areas.

The map on the right displays a heatmap of the National Combined ECR based on generation type. The data labels in the top-right of the map can be used to filter by generation type. For ease of use we recommend full screening using the icon in the top-left of the map.



## Encouraging and sharing reuses

As part of its drive to build a community around data, Northern Powergrid actively encourages and shares reuses of its data on its site. These include councils planning EV charging points, environmental organizations mapping infrastructure, and a combined dataset that brings together all UK-wide smart meter data in a single place.



## FOCUSING ON THE USER EXPERIENCE

As part of widening data access, Northern Powergrid has a strong, ongoing focus on ensuring accessing and benefiting from the portal is intuitive and seamless. It has worked closely with independent user experience experts to map different journeys through the marketplace, segmenting them into three groups. High level users, who are familiar with both data and industry jargon are enabled to search directly for data in the catalog. Medium level users can access information through data pages to give them context. Finally, low level users, such as local authorities, with limited or no industry experience or knowledge of data, are directed to user pages which bring together all relevant datasets.

## OPENDATASOFT:

### THE DATA MARKETPLACE FOR DATA SHARING AT SCALE

To provide its stakeholders with an engaging experience and maximize efficiency Northern Powergrid relies on three key strengths of Opendatasoft's solution and approach:

#### INTUITIVE, E-COMMERCE STYLE INTERFACE

While Northern Powergrid's network covers an area of 25,000 square kilometers, most users are only interested in data around a specific location, such as a town or local authority. The ability to view most datasets through a drill-down map enables users to easily pinpoint the area they want. AI-based search also helps to connect stakeholders with relevant data, understanding the intent and context behind their search to deliver the right information to them.

#### COLLABORATIVE SUPPORT THROUGH COMMUNITY

Opendatasoft is dedicated to helping its customers get the most from its solution - but knows that often key insights can come from other clients. To help deliver collaborative support, it has therefore created its Community engagement space, where users can ask questions and engage with their peers. Northern Powergrid is a strong supporter of the Community, sharing its experiences and learning from Opendatasoft's other energy customers in the UK, Europe, North America and Australia.

#### EASY ADMINISTRATION

Northern Powergrid's data portal contains over 2.08 million records spread across 84 datasets, as well as a range of feature pages, dashboards and statutory documents, such as its Long-Term Development Statement and Distribution Future Energy Scenarios. The Opendatasoft solution's ease of use makes it straightforward for the two-person Northern Powergrid team to manage the portal, with the ability to quickly update pages, data assets and visualizations, without having to rely on external support.

## RESULTS:

### ENABLING COLLABORATION ACROSS THE STAKEHOLDER COMMUNITY

Northern Powergrid is seeing major benefits from its data marketplace, including:

#### ▶ Growing data use by stakeholders

Thanks to the strength of the portal, ongoing stakeholder engagement and focus on the user experience there has been an enormous increase in usage. Around ten new users are registering for the portal every day, with average monthly external user numbers now reaching 4,000, making an average of 143,000 monthly API calls.

#### ▶ Self-service increases efficiency and speed

Previously, if stakeholders wanted to find out information they had to submit their questions to Northern Powergrid. Now they can self-serve, finding answers themselves, without needing to wait. For example, an EV charging point developer can carry out its own initial feasibility studies around potential sites, only needing to make contact when it has narrowed down its options. This also reduces the workload of Northern Powergrid staff by reducing incoming requests.

#### ▶ Success recognized by the regulator

As part of its journey to becoming a DSO, regulator Ofgem assesses Northern Powergrid's progress every year. In the latest exercise, data and information provision was the company's highest scoring area when evaluated both by a survey of stakeholders and an expert panel review.

*“Our focus on stakeholders has helped drive increased engagement, fostered greater use of our data products, and supported innovation across our regions. Through this, we're contributing to the development of a smarter, more decarbonised energy system—one that reflects the needs of the communities we serve.”*



**Paul Fitton**  
Director of Digital  
and Innovation



*“Data sharing underpins the shift to net zero but means that network operators need to engage with a wider range of stakeholders, many of whom are not energy specialists. Northern Powergrid's focus on interacting with stakeholders and understanding their needs is a perfect example of how to build an intuitive experience for all.”*



**Chloe Charland**  
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