



Gas Data Portal

SOAP to REST API Transition Guide

Version 1.0

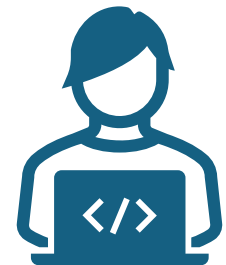
Introduction

In November 2024 we launched our new REST APIs which provide a modern method of consuming our operational data. We are now in the process of supporting our users to move away from the SOAP APIs and transition to the new REST API.

Our SOAP APIs will be decommissioned during the first half of 2026 and no longer be available for use. For many users who are currently using the SOAP API, we recognise that this will require planning, development and testing within your own processes and systems. Therefore, we have created this Technical User Guide to assist all users in their transition journey.

This Technical User Guide provides key information that outlines the relevant endpoints, code structures and response formats. We also have signposts to more detailed documentation via the API Developer Portal.

Many existing users have adopted the new REST APIs and are providing positive feedback. We hope this Technical User Guide provides the right information you need to start your transition to our REST APIs.



Our new REST APIs

National Gas are moving to REST APIs to enable customers to seamlessly access operational data from the National Gas service.

We offer 3 REST APIs:

- Published Data
- Instantaneous Flow
- Gas Quality Data

The description of each of the APIs is show in the table below:

Published Data	Instantaneous Flow	Gas Quality Data
This API gives access to published data about each data item related to gas transmission. For most data items, 5 years of rolling historical data can be accessed, however some items may have less than 5 years of historical data if publishing was introduced in this time. Details of all the data items available can be found by retrieving the catalogue via the API (see the endpoint /publications/catalogue) or in spreadsheet format from the transmission operational data page.	This API gives access to the latest published data for gas flowing onto the National Transmission System (NTS) by entry points. The data is captured in two-minute intervals, then published in a set every 12 minutes.	These APIs give access to Gas Quality Data for 7 different telemetric values. The data is provided for offtake Points, multi-junction & compressor points. For the data items, near real time data at a 12-minute refresh rate can be accessed, in addition to 3 years of rolling historical data for each data item.

Why move to REST?

REST (Representational State Transfer) has become the standard for modern APIs due to its lightweight architecture and seamless compatibility with web technologies. Unlike SOAP, which relies on complex XML structures and rigid protocols, REST uses standard HTTP methods and is easier to implement, test, and scale. This makes it ideal for agile development environments and cloud-native applications.

One of the key advantages of REST is its use of JSON (JavaScript Object Notation) as the default data format. JSON is lightweight, human-readable, and natively supported by most modern programming languages, making it faster to parse and easier to debug than XML.

Going forward **National Gas will be moving to REST APIs only**. We anticipate the SOAP APIs being decommissioned between April – May 2026. All new features and upgrades to our APIs will only be applied to our REST API services.



Making the move to REST APIs

To support users in making the move to REST APIs, we have a dedicated **National Gas API Developer Portal** which showcases each of our REST APIs, provides overviews and technical information. You can also try out our *Mocking Service* which simulates the behaviours of our APIs and the ability to try the API within the browser.

To access the API Developer Portal click this link [National Gas API Developer Portal](#).

How to use the API Developer Portal

When you click the above link, you will be navigated to our Gas Operational Data Homepage. Here you will have options of:

- API Overview
- API Specification

API Overview

Provides high level information for each of our APIs, information on API mock links, rate limits and error codes.

API Specification

Provides the key details for the APIs including the end points, HTTP methods, requests (code examples and headers) and responses examples. You are also able to access the mocking service from this section.

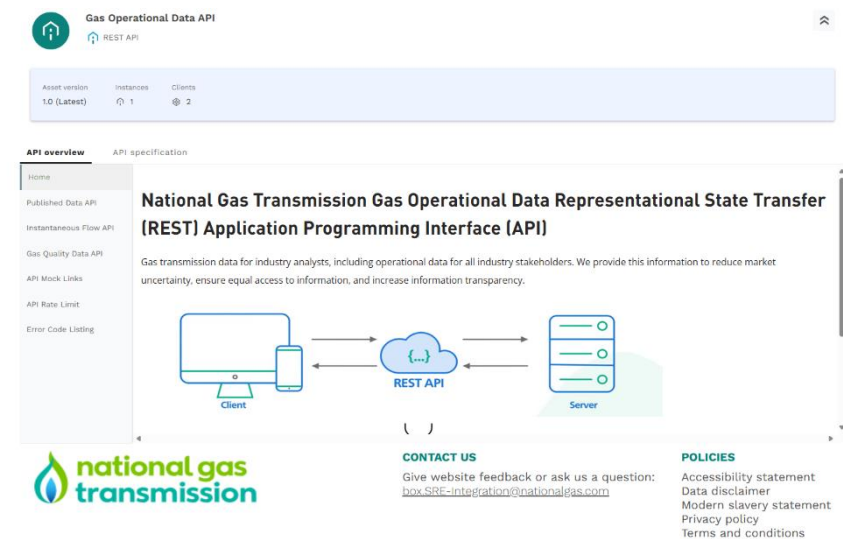


Figure 1- API Developer Portal

The API Specification offers code examples of requests using a selection of different programming languages. These can also be found within the API Specification section by clicking the relevant end point within the green box. To view the different coding examples, click on the code example header and select the different options within the language drop down menu as shown in the purple box.

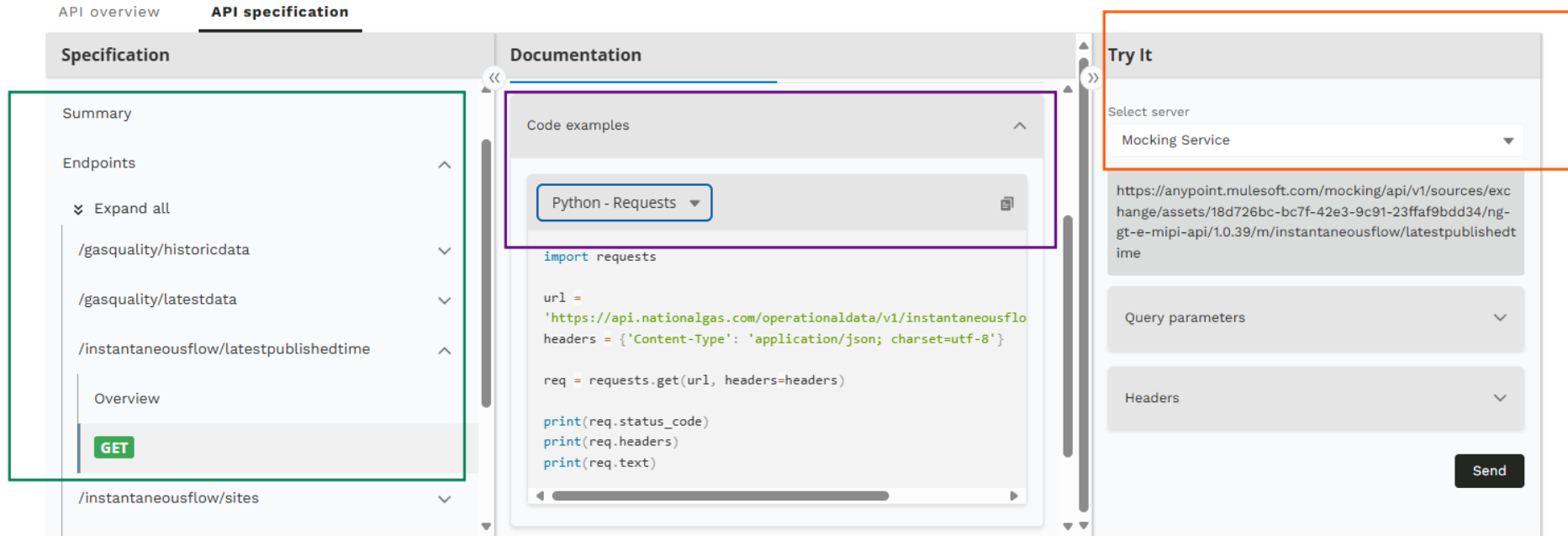


Figure 2 - API Specification

To use the Mocking Service, click the Try It header as shown in the orange box above. The mocking service returns the responses (both HTTP status codes and example payloads) that are detailed in the API specification and is valuable for testing or for simply exploring how our API behaves.

New users

If you are beginning from the start and do not currently use our SOAP APIs then the information below (along with the API Developer Portal) will help you to get started. Here you will have access to the structured REST API consumption template, framed with clear sections for URL, Request, and Response.

API Name	GET/POST	API Details		Response (Sample)
/operationaldata/v1/publications/ gasday	POST	URL endpoint	https://api.nationalgas.com/operationaldata/v1/publications/gasday	<pre>[{ "publicationId": "PUBOB28", "publicationName": "Demand Forecast, NTS, hourly update", "publications": [{ "applicableAt": "2024-03-01T04:01:47+00:00", "applicableFor": "2024-02-29", "value": "232.17380432650063", "generatedTimeStamp": "2024-03-01T04:01:48+00:00", "qualityIndicator": "", "substituted": "N", "createdDate": "2024-03-01T04:01:48+00:00" }, { }] }]</pre>
		Request body	<pre>{ "fromDate": "2024-03-01", "toDate": "2024-03-30", "publicationIds": ["PUBOB28"], "latestValue": "Y" }</pre>	
		Header	'Content-Type': 'application/json'	
/operationaldata/v1/publications/ publishedtime	POST	URL endpoint	https://api.nationalgas.com/operationaldata/v1/publications/publishedtime	
		Request body	<pre>{ "fromDate": "2024-03-01T00:00:00+01:00", "toDate": "2024-03-30T23:00:00+01:00", "publicationIds": ["PUBOB28"], "latestValue": "Y" }</pre>	
		Header	'Content-Type': 'application/json'	

API Name	GET/POST	API Details		Response (Sample)
/operationaldata/v1/instantaneousflow/ sites	GET	URL endpoint	https://api.nationalgas.com/operationaldata/v1/instantaneousflow/sites	<pre> "publishedTime": "2025-05-13T16:11:18+01:00", "currentGasDay": "2025-05-13", "instantaneousFlow": [{ "sites": [{ "siteName": "ALDBROUGH", "siteGasDetail": [{ "applicableAt": "2025-05-13T16:00:00+01:00", "flowRate": 0.0, "qualityIndicator": "", "scheduleTime": "2025-05-13T16:12:00+01:00" }, { }] }] } </pre>
		Request body	None	
		Header	None	
/operationaldata/v1/instantaneousflow/ latestpublishedtime	GET	URL endpoint	https://api.nationalgas.com/operationaldata/v1/instantaneousflow/latestpublishedtime	<pre> { "latestPublishedTime": "2025-05-13T15:47:18+01:00" } </pre>
		Request body	None	
		Header	None	

API Name	GET/POST	API Details		Response (Sample)
/operationaldata/v1/publications/catalogue	GET	URL endpoint	https://api.nationalgas.com/operationaldata/v1/publications/catalogue	<pre>{ "catalogueVersion": "API Data Item List v2.3.2", "lastChangeDate": "06-10-2024", "meta": { "title": "National Gas Transmission Operational Data", "contributor": "Customer Liaison Team (Box.OperationalLiaison@nationalgas.com)", "format": "JSON", "securityClassification": "Official – For public release", "containsPiidata": "No" }, "data": [{ "name": "Balancing", "subCategory": [{ "name": "Allocations", "parent": "Balancing", "catalogueEntries": [{ "name": "Allocations, Energy, Aggregate Entry Points, D+2", "parent": "Allocations", "publicationId": "PUBOBJ523", }, { }] }] }] }</pre>
		Request body	None	
		Header	None	

Existing users

If you are already using our SOAP APIs, you will need to update your API applications to ensure you have continued consumption of our gas operational data. This will include the:

- Endpoint structure
- Message format
- HTTP methods
- Error handling

The table below contains the one-to-one mapping between SOAP and REST API endpoints:

SOAP API Name	SOAP API Comments	REST API Name	REST API Comments
MarketInformation	This API provides the values/data for the publication data items	publications/gasday	gadday API provides the values/data based on the 'gasday'
		publications/publishedtime	publishedtime API provides the values/data based on the 'publistedtime'
EnergyWatch Instantaneous (body parameter = 'GetInstantaneousFlowData')	This API provides both data and timestamp for the instantaneous flow's latest batch published data	instantaneousflow/sites	This API provides both data and timestamp for the instantaneous flow's latest batch published data
EnergyWatch Instantaneous (body parameter = 'GetLatestPublicationTime')	This API provides the timestamp for the instantaneous flow's batch published data	instantaneousflow/latestpublishedtime	This API provides the timestamp for the instantaneous flow's latest batch published data

Data Item SOAP API to Publication Data REST API

The following tables contains the detailed information comparing both SOAP and REST endpoints.

SOAP API	SOAP API Comments	REST API	REST API Comments
URL: https://marketinformation.nationalgas.com/MIPIws-public/public/publicwebservice.asmx Method: POST	In the SOAP API, Publication names are used, whereas in REST APIs Publication IDs should be used. The mapping exists in the Catalogue link/API. In the SOAP API, the field (<DateType>) within the request body can be mapped to either 'GASDAY' or 'NORMALDAY'. Note: for this single SOAP API, there are two equivalent REST APIs setting this to GASDAY requires the <ApplicableForFlag> to be set to 'Y' (and for 'NORMALDAY' it must be set to 'N')	URL: https://api.nationalgas.com/operationaldata/v1/publications/publishedtime Method: POST	This REST API is mapped with SOAP API for <DateType> = 'NORMALDAY' Note: The field 'Applicable For' is updated to have just the value for the 'gasday', rather than with both gasyday and timestamp
Headers 'Content-Type': 'text/xml; charset=utf-8', 'Host': 'marketinformation.nationalgas.com', 'SOAPAction': 'http://www.NationalGrid.com/MIPI/GetPublicationDataWM'	The header 'Content-Type': 'text/xml; charset=utf-8', is mandatory It is mandatory to provide the required action, but this can be set in either the header or in the message body	Headers 'Content-Type': 'application/json'	

SOAP API	SOAP API Comments	REST API	REST API Comments
Sample SOAP Request body <pre> <?xml version="1.0" encoding="utf-8"?> <soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"> <soap:Body> <GetPublicationDataWM xmlns="http://www.NationalGrid.com/MIPI/"> <reqObject> <LatestFlag></LatestFlag> <ApplicableForFlag>N</ApplicableForFlag> <ToDate>2024-03-30T00:00:00</ToDate> <FromDate>2024-03-01T00:00:00</FromDate> <DateType>NORMALDAY</DateType> <PublicationObjectNameList> <string>Demand Forecast, NTS, hourly update</string> // "publicationId": "PUBOB28", </PublicationObjectNameList> </reqObject> </GetPublicationDataWM> </soap:Body> </soap:Envelope> </pre>		Sample REST Request body <pre> { "fromDate": "2024-03-01T00:00:00+01:00", "toDate": "2024-03-30T23:00:00+01:00", "publicationIds": ["PUBOB28"], "latestValue": "Y" } </pre>	1) The request field ApplicableForFlag value if set to 'Y' then data gets filtered based on ApplicableFor, whereas if the request's field ApplicableForFlag value if set to 'N' then data gets filtered based on ApplicableAt 2) The response will be filtered based on the API response's 'ApplicableAt' field 3) latestValue parameter Setting to the value 'Y' provides a latest data (single row) published, whereas the setting to the value 'N' will provide same response as earlier SOAP based on the from and to date parameters

SOAP API	REST API
Sample SOAP Response <pre> <?xml version="1.0" encoding="utf-8"?> <soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"> <soap:Body> <GetPublicationDataWMResponse xmlns="http://www.NationalGrid.com/MIPI/"> <GetPublicationDataWMResult> <CLSMIPIPublicationObjectBE> <PublicationObjectName>Demand Forecast, NTS, hourly update</PublicationObjectName> <PublicationObjectData> <CLSPublicationObjectDataBE> <ApplicableAt>2024-03-01T00:02:22Z</ApplicableAt> <ApplicableFor>2024-02-29T00:00:00Z</ApplicableFor> <Value>232.31944941968578</Value> <GeneratedTimeStamp>2024-03-01T00:02:23Z</GeneratedTimeStamp> <QualityIndicator></QualityIndicator> <Substituted>N</Substituted> <CreatedDate>2024-03-01T00:02:23Z</CreatedDate> </CLSPublicationObjectDataBE> </PublicationObjectData> </CLSMIPIPublicationObjectBE> </GetPublicationDataWMResult> </GetPublicationDataWMResponse> </soap:Body> </soap:Envelope> </pre>	Sample REST Response <pre> [{ "publicationId": "PUBOB28", "publicationName": "Demand Forecast, NTS, hourly update", "publications": [{ "applicableAt": "2024-03-01T04:01:47+00:00", "applicableFor": "2024-02-29", "value": "232.17380432650063", "generatedTimeStamp": "2024-03-01T04:01:48+00:00", "qualityIndicator": "", "substituted": "N", "createdDate": "2024-03-01T04:01:48+00:00" }, { "applicableAt": "2024-03-02T04:01:52+00:00", </pre>

Instantaneous Flow SOAP API to Instantaneous Flow REST API

The following tables contains the detailed information comparing both SOAP and REST endpoints.

SOAP API	SOAP API Comments	REST API
URL (POST method) https://energywatch.nationalgas.com/EDP-PublicUI/PublicPI/InstantaneousFlowWebService.asmx	For the SOAP API there is one endpoint, but the headers and request vary on how to call, whereas in the REST API, there are two equivalent endpoints.	URL (GET method) https://api.nationalgas.com/operationaldata/v1/instantaneousflow/sites
Request body for the selection option 'GetInstantaneousFlowData' <pre><?xml version="1.0" encoding="utf-8"?> <soap:Envelope xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/"> <soap:Body> <GetInstantaneousFlowData xmlns="http://www.NationalGrid.com/EDP/UI/" /> </soap:Body> </soap:Envelope></pre>		Request body None
Headers for the 'GetInstantaneousFlowData' 'SOAPAction': 'http://www.NationalGrid.com/EDP/UI/GetInstantaneousFlowData', 'Host': 'energywatch.nationalgas.com', 'Content-Type': 'text/xml; charset=utf-8'		Headers None

SOAP API	SOAP API Comments	REST API
Response for the body selection option 'GetInstantaneousFlowData' <pre> <?xml version="1.0" encoding="utf-8"?> <soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"> <soap:Body> <GetInstantaneousFlowDataResponse xmlns="http://www.NationalGrid.com/EDP/UI/"> <GetInstantaneousFlowDataResult> <ReportName xmlns="http://www.NationalGrid.com/EDP/BusinessEntities/Public">Instantane ous Flow Report</ReportName> <PublishedTime xmlns="http://www.NationalGrid.com/EDP/BusinessEntities/Public">2025-05- 13T15:35:19</PublishedTime> <EDPReportPage xmlns="http://www.NationalGrid.com/EDP/BusinessEntities/Public"> <PageName>page1</PageName> <CurrentGasDay>2025-05-13T00:00:00</CurrentGasDay> <EDPEnergyGraphTableCollection> <EDPEnergyGraphTableBE> <EDPEnergyGraphTableName>table1</EDPEnergyGraphTableName > <ItemPosition>1</ItemPosition> <EDPObjectCollection> <EDPObjectBE> <EDPObjectName>ALDBROUGH</EDPObjectName> <EnergyDataList> <EDPEnergyDataBE> <ApplicableAt>2025-05-13T15:24:00</ApplicableAt> <FlowRate>0</FlowRate> <QualityIndicator /> <ScheduleTime>2025-05-13T15:36:00</ScheduleTime> </EDPEnergyDataBE> <EDPEnergyDataBE> </EDPEnergyDataBE> </pre>		

Response for the body selection option 'GetInstantaneousFlowData' <pre> <?xml version="1.0" encoding="utf-8"?> <soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"> <soap:Body> <GetInstantaneousFlowDataResponse xmlns="http://www.NationalGrid.com/EDP/UI/"> <GetInstantaneousFlowDataResult> <ReportName xmlns="http://www.NationalGrid.com/EDP/BusinessEntities/Public">Instantaneou s Flow Report</ReportName> <PublishedTime xmlns="http://www.NationalGrid.com/EDP/BusinessEntities/Public">2025-05- 13T15:35:19</PublishedTime> <EDPReportPage xmlns="http://www.NationalGrid.com/EDP/BusinessEntities/Public"> <PageName>page1</PageName> <CurrentGasDay>2025-05-13T00:00:00</CurrentGasDay> <EDPEnergyGraphTableCollection> <EDPEnergyGraphTableBE> <EDPEnergyGraphTableName>table1</EDPEnergyGraphTableName> <ItemPosition>1</ItemPosition> <EDPObjectCollection> </pre>		Response <pre> "publishedTime": "2025-05-13T16:11:18+01:00", "currentGasDay": "2025-05-13", "instantaneousFlow": [{ "sites": [{ "siteName": "ALDBROUGH", "siteGasDetail": [{ "applicableAt": "2025-05- 13T16:00:00+01:00", "flowRate": 0.0, "qualityIndicator": "", "scheduleTime": "2025-05- 13T16:12:00+01:00" }, { }] }] } </pre>
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<EDPObjectBE> <EDPObjectName>ALDBROUGH</EDPObjectName> <EnergyDataList> <EDPEnergyDataBE> <ApplicableAt>2025-05-13T15:24:00</ApplicableAt> <FlowRate>0</FlowRate> <QualityIndicator /> <ScheduleTime>2025-05-13T15:36:00</ScheduleTime> </EDPEnergyDataBE> <EDPEnergyDataBE> </EDPEnergyDataBE>		
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URL (POST method) https:// energywatch .nationalgas.com/EDP-PublicUI/PublicPI/InstantaneousFlowWebService.asmx		URL (GET method) https://api.nationalgas.com/operationaldata/v1/instantaneousflow/latestpublishedtime
Headers for the body selection option 'GetLatestPublicationTime' 'Host': 'energywatch.nationalgas.com', 'Content-Type': 'text/xml; charset=utf-8'		Headers None
Request body for the selection option 'GetLatestPublicationTime' <?xml version="1.0" encoding="utf-8"?> <soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"> <soap:Body> < GetLatestPublicationTimeResponse xmlns="http://www.NationalGrid.com/EDP/UI/"> <GetLatestPublicationTimeResult>2025-05-13T15:59:18</GetLatestPublicationTimeResult> </GetLatestPublicationTimeResponse> </soap:Body> </soap:Envelope>		Request None

Response for the body selection option 'GetLatestPublicationTime' <pre> <?xml version="1.0" encoding="utf-8"?> <soap:Envelope xmlns:soap="http://schemas.xmlsoap.org/soap/envelope/" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema"> <soap:Body> <GetLatestPublicationTimeResponse xmlns="http://www.NationalGrid.com/EDP/UI/"> <GetLatestPublicationTimeResult>2025-05-13T15:35:19</GetLatestPublicationTimeResult> </GetLatestPublicationTimeResponse> </soap:Body> </soap:Envelope> </pre>		Response <pre> { "latestPublishedTime": "2025-05-13T15:47:18+01:00" } </pre>
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Catalogue API

We have introduced a new API which supports our Publication Data API. With this API you can retrieve the list of publication names (data items) and their associated publication IDs. The table below provides the detailed information for the API.

REST API	REST API Comments
URL (GET method) https://api.nationalgas.com/operationaldata/v1/publications/ catalogue	Newly introduced REST API. This has been introduced to provide the list of all the publication data items in an API format as well in addition to the excel download. Also, the list contains the mapping between Publication names and Publication Ids.
Request body None	
Headers None	
Response { "catalogueVersion": "API Data Item List v2.3.2", "lastChangeDate": "06-10-2024", "meta": { "title": "National Gas Transmission Operational Data", "contributor": "Customer Liaison Team (Box.OperationalLiaison@nationalgas.com)", "format": "JSON", }	

<pre> "securityClassification": "Official – For public release", "containsPiidata": "No" }, "data": [{ "name": "Balancing", "subCategory": [{ "name": "Allocations", "parent": "Balancing", "catalogueEntries": [{ "name": "Allocations, Energy, Aggregate Entry Points, D+2", "parent": "Allocations", "publicationId": "PUBOBJ523", }, { } } } </pre>	
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We also have a spreadsheet version where you can view the publication names and IDs. Please click the link: [API Data Catalogue](#).

Need Support?

We hope the Transition User Guide has provided the key information you require to help you with your transition.

The table below provides key links to resources available.

Name	Link
Gas Data Portal	https://data.nationalgas.com/
National Gas API Developer Portal	https://apideveloper.nationalgas.com/
API Data Catalogue	API Data Catalogue

If you require any additional help or have specific questions then please contact the Operational Liaison Team at box.operationalliaison@nationalgas.com.

