

User Manual

API access to AGSI / ALSI

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1. Introduction

GIE is offering an API service (Application Programming Interface) on its AGSI and ALSI transparency publication platforms at <https://agsi.gie.eu> and <https://alsi.gie.eu> which provides quick, continuous, and direct access to the database and allows you to filter, create queries and export the data as required. This means that you do not have to set up complex processes to download files from a remote location, or to crawl through the AGSI/ALSI web pages to extract the data from the various web site components. All of this can be directly downloaded, bypassing any web layer, by accessing the available REST APIs.

API Access

The API service is available to the public free of charge.

API data usage

All data published on AGSI & ALSI can be used or repackaged in any way you see fit but a clear indication on GIE as data source is mandatory. A mention of GIE, AGSI or ALSI (as applicable) as data source is a minimum requirement.

Example : indicate GIE (Gas Infrastructure Europe) or GIE AGSI / ALSI platform as data source underneath the data or insert (AGSI/ALSI/GIE) in the name of your datafeed / data ticker.

Registration on the AGSI or ALSI website is mandatory for non-data providers to be able to use the API. Registration will result in a personal API key that is required within the API URL. The only purpose of this registration is to enable us to assess and improve the performance of our systems where and if required (user count, user activity, most popular dataset types).

You can opt to have access to solely AGSI, ALSI or even both (using the same API key for AGSI and ALSI data extraction)

Your account information and settings can be updated (and canceled) at any time after signing in. Your data will be stored and securely handled as long as your account remains active.

API access for SSO/LSO data providers

Please note that all SSO / LSO accounts (*data providers*) using GIE as RRM (Registered Reporting Mechanism) for REMIT reporting towards ACER or who are providing data for the AGSI / ALSI publication can also generate an API key through their user account at <https://remit.gie.eu/users/profile>.

These accounts are already registered at GIE and are also already subscribed to our IT mailing lists (unless you have opted out). Data providers can use the same login credentials used for access to the REMIT portal once you have generated an API key in your REMIT user profile interface. You can opt to have access to solely AGSI, ALSI or even both.

Currently, API keys are set to never expire. This might change in the future.

API mailing list

If you would like to be kept up to date on any changes (Service Announcements) on the AGSI and ALSI platforms, you can opt to subscribe to our API mailing list in the registration form.

Technical implementation

API (Application Programming Interface) provides programmatic access to the data.

API access is provided in a REST-like interface (Representational State Transfer) exposing database resources in a JSON format. JSONP is currently not supported but is foreseen in the future to also allow for cross domain requests.

Additional documentation, examples, and guidance on how to use and implement the API service is provided below.

Data coverage

Daily storage and LNG data reporting

Only the daily storage and LNG inventory reporting on the platforms is made available through the API service. Unavailability reporting is currently not (yet) part of the API coverage (accessible only via the website).

Aggregated datasets

Both individual facility datasets and aggregated datasets (by company and country level) are available. Aggregated datasets are to be exported using the additional REST API parameters (see below).

Storage facilities and Storage Groups

Note that for storage data, a dataset can be either an individual storage facility, or a storage group (virtual storage) which is comprised of multiple storage facilities. The composition of a storage group can evolve and change over time (any changes will be reported through a Service Announcement).

(Storage) Facility Operators

Note that storage facilities can change ownership, which will result in the facility dataset being assigned to another SSO. Any such changes are reported through the Service Announcements.

Historical data usage (timeframe)

- new facilities and decommissioning
If a new (storage) facility comes online, or when a (storage) facility is being decommissioned or shut down, the related dataset start/end date is to be considered. Any such information is also reported through a Service Announcement, as it has an impact on the historical (aggregated) dataset coverage. Historical data for facilities that have changed ownership, or have been decommissioned or shut down, remains available through a dedicated separate code (typically starting with PRIOR).
- historical data range
Historical data has been requested from all SSO/LSO publishing on AGSI/ALSI for the following timeframe:
 - On AGSI: historical data since 01/01/2011 or since the date the storage facility has become operational and/or until the storage facility has been decommissioned or changed ownership.
 - On ALSI: historical data since 01/01/2012 or since the date the LNG terminal has become operational
- Historical data coverage
Additionally, note that on AGSI not all SSO have been able to provide the full historical data coverage. Some SSO only provide historical data since the start of REMIT reporting (07/04/2016). A detailed data overview is available at <https://agsi.gie.eu/data-definition>.
- Retroactive corrections
SSO and LSO can retroactively correct their data at any time. Whenever these changes are impactful and a notification or data clarification is provided by the operator, a corresponding notification will be posted on the platforms (see NEWS section)

2. Data field library

2.1 EIC listing

Energy Identification Codes (EIC codes) for dataset identification

Each dataset published on AGSI / ALSI can be uniquely identified using a combination of the operator EIC code (EIC type X) and the facility EIC code (EIC type W or Z). A storage facility can be operated by multiple companies (each of which manage a share of the storage facility)

To call up a listing & overview of applicable EIC codes, use :
`/api/about?show=listing`

Field identifier	Description	Data type
name	Name of the company	string
short_name	Short name of the company	string
type	Type of the company (SSO, LSO, TSO)	string
eic	EIC of the company	string (EIC)
country	Slug (code) of the country	string (2 characters)
url	URL to get the data through API	URL
facilities	Array of underlying facilities	array
name	Name of the underlying facilities	string
type	Type of the facility	string
eic	EIC of the facility	string (EIC)
country	Slug (code) of the country	string (2 characters)
company	Company EIC code	string (EIC)
url	URL to get the data through API	URL

```
[
- {
    name: "astora GmbH",
    short_name: "astora",
    type: "SSO",
    eic: "21X000000001160J",
    country: "AT",
    url: "https://agsi.gie.eu/api?country=AT&company=21X000000001160J",
- facilities: [
    - {
        name: "UGS Haidach (astora)",
        type: "Storage Facility",
        eic: "21W000000000078N",
        country: "AT",
        company: "21X000000001160J",
        url: "https://agsi.gie.eu/api?country=AT&company=21X000000001160J&facility=21W000000000078N"
    }
]
},
- {
    name: "GSA LLC",
    short_name: "GSA"
```

For more information, or a hierarchical listing, omit the '?show=listing' parameter:
/api/about

Field identifier	Description	Data type
company_type	Type of the underlying companies (SSO, LSO, TSO)	string
type	Europe / Non-Europe	string
country	Name of the country	string
image	base64 encoded image (logo)	string (base64 encoded)
short_name	Short name of the company	string
name	Name of the company	string
url	URL of the company's website	URL
eic	EIC of the company	string (EIC)
facilities	Array of facilities	array
eic	EIC of the facility	string (EIC)
name	Name of the facility	string
country	Array with facility's country data	array
code	Country code	string (2 characters)
name	Name of the country	string
type	Facility type	string
data	Data array with more information	array
type	Company type (SSO, LSO, TSO)	string
country	Array with company's country data	array
code	Country code	string (2 characters)
name	Country name	string
code	Europe (EU) / Non-Europe (NE)	string (2 characters)
name	Europe / Non-Europe	string

```
{
  - SSO: {
    - Europe: {
      - Austria: [
        - {
          image:
            "iVBORw0KGgoAAAANSUhEugAAAIwAAAAzCAYAAABFXOCeAAAAGXRFWHRtb2Z0d2FyZQB8ZG9iZS8JbWFnZVJlYWRScc1lPAA
          short_name: "astora",
          name: "astora GmbH",
          url: "http://www.astora.de",
          eic: "21X000000001160J",
          - facilities: [
            - {
              eic: "21W000000000078N",
              name: "UGS Haidach (astora)",
              - country: {
                code: "AT",
                name: "Austria"
              },
              type: "Storage Facility"
            }
          ],
          - data: {
            type: "SSO",
            - country: {
              code: "AT",
              name: "Austria"
            },
            code: "EU",
            name: "Europe"
          }
        },
        - {
          image:
```

2.2 News listing

All NEWS items published on AGSI / ALSI are also made available through the API service :

/api/news

Field identifier	Description	Data type	Example
last_page	Amount of pages available for the query	numeric	25
total	Amount of data entries for the page	numeric	30
data	Array of data entries	array	
url	String to get the specific news item	string	4581
start_at	Start of when the service announcement is taking place.	datetime	2022-04-21 10:45:00
end_at	End of when the service announcement is taking place. Null if not applicable.	datetime / null	null
title	Title of the service announcement	string	Update for data platforms
summary	Summary of the service announcement	string	There will be an update for the data platforms on April 21, 2022
details	Details of the service announcement	text	Just some more details on the service announcement. Usually a longer text.

```
{
  - data: [
    - {
      url: "4581",
      start_at: "2022-04-21 10:45:00",
      end_at: null,
      title: "EWE - Reporting end for dataset EIC 21W0000000001067 - UGS Nüttermoor L GUD as of 21 April 2022",
      summary: "",
      details: "<p>EWE is ending its reporting for dataset EIC 21W0000000001067 - UGS Nüttermoor L GUD as of 21 April 2022.<br>Historical data will remain available.</p><p>cfr. earlier announcement:<br>As of 1.4.2022, the capacities of the "UGS EWE-Zone L" (21W0000000001075) with connection to the transmission system of GTG Nord and the capacities of "<span style='\"background-color: initial;\">UGS Nüttermoor L GUD" (21W0000000001067) with connection to the transmission system of Gasunie Deutschland will be aggregated under the "UGS EWE-Zone L" (21W0000000001075).</span></p>"
    },
    - {
      url: "4580",
      start_at: "2022-04-21 08:00:00",
      end_at: null,
      title: "Ukrainian dataset available again - covering aggregation of all storage facilities",
      summary: "",

```

-Source [Online](#)

Add the URL parameter to get a specific item.

/api/news?url=4581

```
{
  - data: [
    - {
      url: "4581",
      start_at: "2022-04-21 10:45:00",
      end_at: null,
      title: "EWE - Reporting end for dataset EIC 21W0000000001067 - UGS Nüttermoor L GUD as of 21 April 2022",
      summary: "<p>EWE - Reporting end for dataset EIC 21W0000000001067 - UGS Nüttermoor L GUD as of 21 April 2022</p>",
      details: "<p>EWE is ending its reporting for dataset EIC 21W0000000001067 - UGS Nüttermoor L GUD as of 21 April 2022.<br>Historical data will remain available.</p><p>cfr. earlier announcement:<br>As of 1.4.2022, the capacities of the "UGS EWE-Zone L" (21W0000000001075) with connection to the transmission system of GTG Nord and the capacities of "<span style='\"background-color: initial;\">UGS Nüttermoor L GUD" (21W0000000001067) with connection to the transmission system of Gasunie Deutschland will be aggregated under the "UGS EWE-Zone L" (21W0000000001075).</span></p>"
    }
  ]
}
```

-Source [Online](#)

The following data fields are published on AGSI:

2.3 AGSI

- Facility Report listing

/api

Field identifier	Description	Data type	Example
last_page	Amount of pages available for the query	numeric	25
total	Amount of data entries for the page	numeric	30
dataset	Breadcrumb for the dataset	URL	EU > DE
gas_day	The current Gas Day Start date	date	2022-04-04
data	Array of data entries	array	
name	Name of the data entry	string	Germany
code	The code or EIC of the data entry	string	DE
{consumption}	{optional} Consumption level, only for countries (4 digits accuracy)	TWh	995.2753
{consumptionFull}	{optional} Consumption full, only for countries	%	6.44
url	The portion used in the URL on AGSI/ALSI for direct linking	string	21Z000000000271O/DE/21X000000001160J
gasDayStart	The start of the gas day reported upon	date	2015-11-02
gasInStorage	Total amount of gas in storage at the facility, status at end of gas day (4 digits accuracy)	TWh	853.4219
injection	Injection during gas day (2 digits accuracy)	GWh/d	238.66
netWithdrawal	Net Withdrawal (withdrawal - injection) during gas day (2 digits accuracy)	GWh/d	267.84
withdrawal	Withdrawal during gas day (2 digits accuracy)	GWh/d	2182.49
workingGasVolume	Maximum amount that can be stored at the facility (technical capacity) (4 digits accuracy)	TWh	1022.7059
injectionCapacity	Maximum technical injection capacity (2 digits accuracy)	GWh/d	9973.17
withdrawalCapacity	Maximum technical withdrawal capacity (2 digits accuracy)	GWh/d	17599.82
status	E (estimated) C (confirmed) N (no data)	E / C / N	C
trend	injection - withdrawal)/WGV	+ / -	-0.1
full	Storage / WGV (in%)	%	83.45
info	Service Announcement (if applicable)	array	
{children}	Underlying data children (if applicable)	array	

- Unavailability Report listing

/api/unavailability

Field identifier	Description	Data type	Example
last_page	Amount of pages available for the query	numeric	25
total	Amount of data entries for the page	numeric	30
data	Array of data entries	array	
published	Publish datetime of the data entry	datetime	2022-04-21 09:59:51
country	Name of the country	string	Germany
SSO	Name of the reporting SSO	string	Uniper Energy Storage
facility	Name of the reporting facility	string	UGS Bierwang
start	Start of the unavailability	datetime	2022-04-20 09:00:00
end	End of the unavailability	datetime	2022-04-20 18:00:00
volume	Unavailable volume (3 digits accuracy)	TWh	0.000
injection	Unavailable injection (1 digit accuracy)	GWh/d	0.0
withdrawal	Unavailable withdrawal (1 digit accuracy)	GWh/d	0.0
description	Description of the unavailability	text	Maintenance on presser valve.
end_flag	Estimated or Confirmed	Estimated / Confirmed	Confirmed
type	Planned or Unplanned	Planned / Unplanned	Planned

The following data fields are published on ALSI:

2.4 ALSI

- Facility Report listing

Field identifier	Description	Data type	Example
last_page	Amount of pages available for the query	numeric	25
total	Amount of data entries for the page	numeric	30
dataset	Breadcrumb for the dataset	URL	EU > BE
gas_day	The current Gas Day Start date	date	2022-04-04
data	Array of data entries	array	
name	Name of the data entry	string	Belgium
code	The code or EIC of the data entry	string	DE
url	The portion used in the URL on AGSI/ALSI for direct linking	string	21Z00000000000082/BE/21X000000001006T
gasDayStart	The start of the gas day reported upon	date	2015-11-02
inventory	Aggregated amount of LNG in the LNG tanks, status at end of gas day (2 digits accuracy)	10 ³ m ³ LNG	853.42
sendOut	Aggregated gas flow out of the LNG facility, send-out during gas day (1 digits accuracy)	GWh/d	238.6
dtmi	Declared Total Maximum Inventory, (LNG storage capacity) (2 digits accuracy)	10 ³ m ³ LNG	267.84
dtrs	Declared Total Reference Send-out, (Send-out capacity) (1 digits accuracy)	GWh/d	2182.4
Info	Service Announcement (if applicable)	array	
{children}	Underlying data children (if applicable)	array	

3. Data

3.1 Data quality indicators

The data quality status (Estimated/Confirmed/No Data) is part of the available datasets, as well as the Service Announcements (SA) linked to each dataset.

Any applicable Service Announcements are available through the info data field as an URL linking to the related news item.

3.2 Dataset identification

Each storage system operator (SSO) and LNG terminal operator (LSO) and its listed facilities are identified using EIC codes.

The datasets are identified using the EIC codes as used for REMIT reporting and/or used for data provision to GIE for those SSO/LSO not using GIE as RRM (Registered Reporting Mechanism) for REMIT or for SSO/LSO not falling under the REMIT regulation.

The mapping table for these EIC codes is available at (after login).

Please note that the EIC code database is subject to updates and EIC codes used on AGSI or ALSI can change over time. For example: Facilities can change operator, new facilities can become operational or be decommissioned, a facility can be moved within a (virtual) storage group and change code, etc.

The EIC codebase is expected to be updated further in accordance with REMIT regulation (using only ACER approved EIC codes where applicable).

If such changes would have occurred, we will be able to inform you through the API mailing list.

3.3 Units of Measurement and data definitions

Additional information on units of measurement and specific data definitions are available at: <https://agsi.gie.eu/data-definition>

3.4 Data updates – publication timing and processing

The data is available in daily frequency and represents gas in Storage / LNG at the end of the previous gas day. Data is updated every day at 19:30 CET and a second time at 23:00. Some SSO/LSO are not able to provide their data before 19:30 but these will be included in the second publication time.

4. Assistance

4.1 Technical assistance (API)

Any technical inquiries related to the implementation of the API service can be addressed to api@gie.eu. Our IT team will be happy to assist you.

4.2 Data clarification

Any inquiries on data published through AGSI / ALSI can be addressed to transparency@gie.eu. Note that for inquiries related to a specific SSO or LSO, the operator may need to be contacted directly, as GIE cannot speak on their behalf.

AGSI / ALSI offers you the possibility to be kept up to date via our Service Announcement mailings. Please provide your contact details using the subscription form, and you will be informed by e-mail whenever news or updates are made available.

AGSI: <https://agsi.gie.eu/subscribe>

ALSI : <https://alsi.gie.eu/subscribe>

The data GIE provides through its AGSI and ALSI Transparency Platforms is further completed by additional related data such as the Storage Map, LNG Map and Storage and LNG Investment Database available at <https://www.gie.eu/publications/maps/> and <https://www.gie.eu/transparency/databases/>

5. Disclaimer

All data is provided by the contributors on a voluntary basis and free of charge. The Data provided by AGSI / ALSI is for information only. GIE is using reasonable efforts to invest in ensuring the correctness, completeness, and timeliness of the information provided herein. Data have been carefully checked, are updated at regular intervals and may be subject to changes, removal, or amendments without prior notice.

GIE neither assumes any warranty or liability for the correctness and completeness of information/services and entries nor for the mode of presentation.

6. Tutorial

6.1 Account setup

Accounts, free of charge, can be set up on both ALSI and AGSI by going to API in the menu (/account). Here you can either register a new account or log in to an existing one.

To register, the details needed are:

- First name
- Last name
- Email address
- Password
- Company
- Telephone number (optional)
- Access restriction: you can choose to only be able to access the website you are registering on or both
- Your consent
- Subscription to the mailing list (optional)

Log In

Login to access and edit your account or subscription settings, access the API documentation and get your API key

 email

 password

Login

Forgot password?

Register

Register to get access to the API documentation and get an API key Required fields

 first name

 last name

 email

 password

 company

 telephone

 Access to:

☒ ALSI+ ☐ Both AGSI+ and ALSI

☐ I consent to GIE to collect data in order to track my usage of the API service

☐ I would like to **subscribe to the API Service mailing list** in order to receive Service Announcements and updates

You need to give your consent before being able to register.

Register

6.2 API page

After a successful log in, the API Account page will be available. Here you can view/download the latest API manual, view your API key, change some settings in your account and view/download the EIC listing. You can also delete your account if it is not linked to a REMIT account. If it is linked, please send an email to api@gie.eu to request deletion of your account.

6.3 EIC code mapping

The EIC listing (code mapping) is available on your account page. Here you can find direct links to API calls for specific companies/facilities.

Download EIC listing:

[CSV](#)[JSON](#)[XLSX](#)[PDF](#)[API](#)

Country 	Type	EIC Code	Short Name	Name
BE	LSO	21X000000001006T	Fluxys LNG	Fluxys LNG S.A.
BE	LNG Terminal	21W0000000001245		Zeebrugge LNG Terminal
HR	LSO	31X-LNG-HR----7	LNG Croatia	LNG Hrvatska d.o.o.
HR	LNG Terminal	21Z000000000510W		Krk LNG Terminal (FSRU)
FR	LSO	21X0000000010679	Elengy	Elengy S.A.
FR	LNG Terminal	21Z000000000028X		Fos Tonkin LNG Terminal
FR	LNG Terminal	21Z000000000029V		Montoir de Bretagne LNG Terminal
FR	LSO	21X000000001331I	Dunkerque LNG	SAS Dunkerque LNG
FR	LNG Terminal	21W0000000000451		Dunkerque LNG Terminal
FR	LSO	21X000000001070K	FOSMAX LNG	SAS FOSMAX LNG
FR	LNG Terminal	21Z000000000148N		Fos Cavaou LNG Terminal
GR	LSO	21X-GR-A-A0A0A-G	DESFA	Hellenic Gas Transmission System Operator S.A.
GR	LNG Terminal	21W000000000040B		Revythoussa LNG Terminal
IT	LSO	26X00000117915-0	GNL Italia	GNL Italia S.p.A.
IT	LNG Terminal	21Z0000000000430		Panigaglia LNG Terminal
IT	LSO	21X000000001109G	OLT Offshore LNG Toscana	OLT Offshore LNG Toscana S.p.A
IT	LNG Terminal	21W0000000000443		FSRU OLT Offshore LNG Toscana
IT	LSO	21X000000001360B	Adriatic LNG	Terminale GNL Adriatico S.r.l.
IT	LNG Terminal	21W000000000092W		Porto Levante LNG

6.4 Importing data – cURL

Using the links from the previous pages and your API key, you can send requests to the API to get the data in JSON format:

```
curl https://agsi.gie.eu/api?type=eu --header "x-key: YOUR_API_KEY"
{"last_page":159,"total":30,"dataset":"EU","gas_day":"2022-04-19",
"data":[{"name":"EU","code":"eu","url":"eu","gasDayStart":"2022-04-19",
"gasInStorage":326.9226,"consumption":4151.8372,"consumptionFull":7.87,"injection":
```

If the API key is not supplied or incorrect, no data is returned.

To automatically loop over the API results, a bash file is needed. We cannot support this much further.

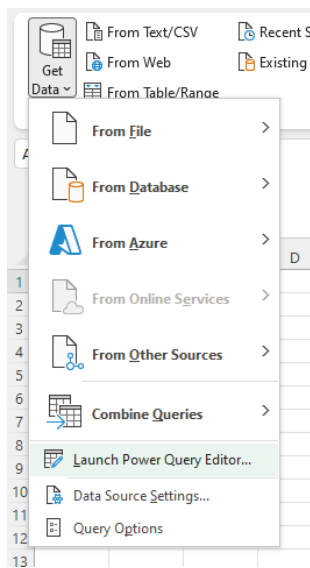
6.5 Importing data – Excel

To access the data from an external source, you need to send the x-key as a parameter in your header.

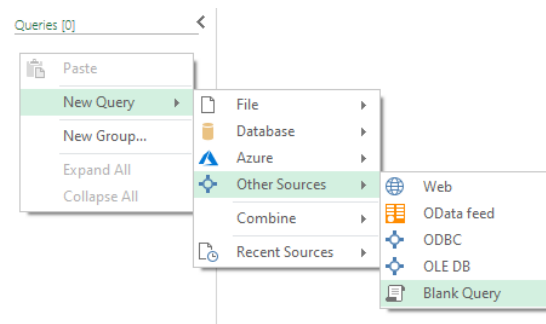
When using Excel, you can import the data using the following code snippet. By changing the URL and parameters, you can finetune it to your needs. This example uses the paging logic present in API V2.

Steps are as follows:

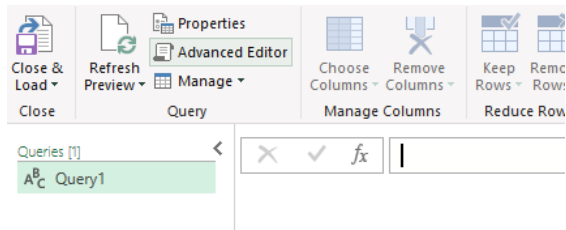
1 – Create a new workbook (or tab) and go to Data > Get Data > Launch Power Query Editor.



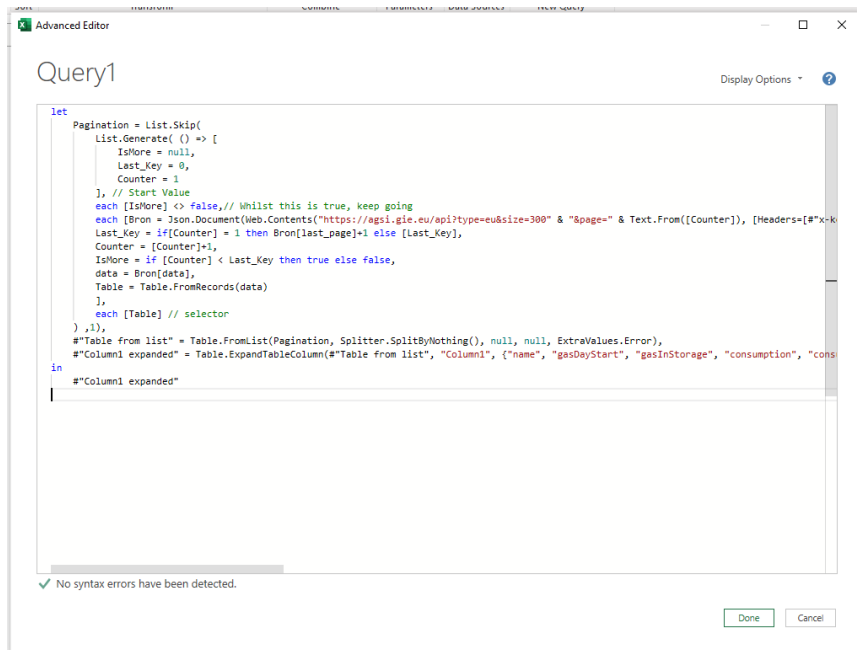
2 – Right click underneath 'Queries' and choose New Query > Other Sources > Blank Query



3 – When the new blank query is created, click on Advanced Editor:



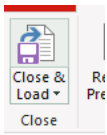
4 – Copy paste (and edit where needed) the query provided below in the opened Editor:



The highlighted code can be changed without causing the pagination to break (YOUR_API_KEY has to be changed into your actual key otherwise it won't fetch any data).

```
let
    Pagination = List.Skip(
        List.Generate( () => [
            IsMore = null,
            Last_Key = 0,
            Counter = 1
        ], // Start Value
        each [IsMore] <> false, // Whilst this is true, keep going
        each [Bron = Json.Document(Web.Contents("https://agsi.gie.eu/api?type=eu&size=300" & "&page=" &
Text.From([Counter])), [Headers=[{"x-key"="YOUR_API_KEY"}]]), // retrieve results per call
        Last_Key = if [Counter] = 1 then Bron[last_page]+1 else [Last_Key],
        Counter = [Counter]+1,
        IsMore = if [Counter] < Last_Key then true else false,
        data = Bron[data],
        Table = Table.FromRecords(data)
        ],
        each [Table] // selector
    ), 1),
    #"Table from list" = Table.FromList(Pagination, Splitter.SplitByNothing(), null, null, ExtraValues.Error),
    #"Column1 expanded" = Table.ExpandTableColumn(#"Table from list", "Column1", {"name", "gasDayStart",
"gasInStorage", "consumption", "consumptionFull", "injection", "withdrawal", "workingGasVolume",
"injectionCapacity", "withdrawalCapacity", "status", "trend", "full"}, {"name", "gasDayStart", "gasInStorage",
"consumption", "consumptionFull", "injection", "withdrawal", "workingGasVolume", "injectionCapacity",
"withdrawalCapacity", "status", "trend", "full"})
in
    #"Column1 expanded"
```

5 – Click on Done and Close & Load and let Excel load all the data. Depending on the request, this can take a short while.



The same query can be used for **Power BI**. We cannot support this much further.

6.6 Illustrative example using a browser

To extract data from the system, you can click on one of these links:

AGSI <https://agsi.gie.eu/api?type=eu>

ALSI <https://alsi.gie.eu/api?type=eu>

Click “Save As” to download the file. You have just downloaded the values from website.

The above URLs are illustrating that an API (Application Program Interface) can be used as nothing more than a Web address. When you entered this web address in your browser, the browser retrieves the data you want, just like it would access a web site. The result can be either viewed within the browser or saved as a file on your computer.

JSON web browser plugins

You can use a JSON formatter browser plugin to see the data call results directly in your browser.

7. REST API Parameters

A REST API enables you to filter the data by adding parameters directly to the Web address, where other systems would require you to go through a series of forms or web pages.

Below are some examples on how these can be used:

Parameter	Description	Accepted value(s)
page	Number of the page you want to get the data from. Starts from number 1	positive numeric value
reverse	Reverse the data return	true / false / 0 / 1
size	Amount of data entries per page. Default is 30, max accepted value is 300	positive numeric value
from	Start Gas Day Start date	date
to	End Gas Day Start date	date
start	Unavailability reports only: Start of Unavailabilities	date
end	Unavailability reports only: End of Unavailabilities	date
date	Facility reports only: Specific Gas Day Start date	date
type	Facility reports: Europe, Non-EU or Additional Information data entries Unavailability reports: Unplanned / Planned	EU / NE / AI Unplanned / Planned
end_flag	Unavailability reports only: Filter on end flag type	confirmed / estimate
country	Country code	ex: DE
company	Company EIC code, must be used with the company's country code and country parameter	EIC ex: 21X000000001160J
facility	Facility EIC code, must be used with the country and company codes and country/company parameters	EIC ex: 21W000000000081Y

The correct way to use these parameters is by adding them to the URL as query string parameters / URL variables:

Examples:

/api?country=de&date=2022-03-31

```
{
  last_page: 1,
  total: 1,
  dataset: "<a href='/historical/eu'>EU</a> > DE",
  gas_day: "2022-04-04",
  - data: {
    name: "Germany",
    code: "DE",
    consumption: "995,2735",
    consumptionFull: "6.33",
    url: "DE",
    gasDayStart: "2022-03-31",
    gasInStorage: "63,9469",
    injection: "563,62",
    withdrawal: "591,99",
    workingGasVolume: "243,4311",
    injectionCapacity: "3943,99",
    withdrawalCapacity: "6724,93",
    status: "C",
    trend: "-0.01",
    full: "26.27",
    info: []
  }
}
```

/api?facility=21Z000000000102A&country=BE&company=21X-BE-A-A0A0A-Y&from=2022-03-06&to=2022-04-04&page=1&size=30

```
{
  last_page: 1,
  total: 30,
  dataset: "<a href='/historical/eu'>EU</a> > <a href='/historical/BE'>BE</a> > <a href='/historical/21X-BE-A-A0A0A-Y/BE'>Fluxys</a> > UGS Loenhout",
  gas_day: "2022-04-04",
  - data: [
    - {
      name: "UGS Loenhout",
      code: "21Z000000000102A",
      url: "21Z000000000102A/BE/21X-BE-A-A0A0A-Y",
      gasDayStart: "2022-04-04",
      gasInStorage: "1,3399",
      injection: "4,37",
      withdrawal: "0,00",
      workingGasVolume: "9,0098",
      injectionCapacity: "88,14",
      withdrawalCapacity: "135,60",
      status: "E",
      trend: "0.05",
      full: "14.87",
      info: []
    },
    - {
      name: "UGS Loenhout",
      code: "21Z000000000102A",
      url: "21Z000000000102A/BE/21X-BE-A-A0A0A-Y",
      gasDayStart: "2022-04-03",
      gasInStorage: "1,3355",
      injection: "4,37",
      withdrawal: "0,00",
      workingGasVolume: "9,0098",
      injectionCapacity: "88,14",
      withdrawalCapacity: "135,60",
      status: "C",
      trend: "0.05",
      full: "14.82",
      info: []
    },
    - {
      name: "UGS Loenhout",
      code: "21Z000000000102A",
      url: "21Z000000000102A/BE/21X-BE-A-A0A0A-Y",
      gasDayStart: "2022-04-02",
      info: []
    }
  ]
}
```

Omitting the 'from' and 'to' parameters will get results from the start of reporting entries until the current GasDayStart.

Note:

- To get data from **EU/NE/AI**, you use the '**type**' parameter;
/api?type=eu&date=2022-03-31
- To get data from a **country**, you use the '**country**' parameter;
/api?country=de&date=2022-03-31
- To get data from a **company**, you need to use both the '**country**' and '**company**' parameter
/api?country=de&company=21X000000001160J&date=2022-03-31
- To get data from a **facility**, you need to use the '**country**', '**company**' and '**facility**' parameters
/api?country=de&company=21X000000001160J&facility=21Z000000000271O&date=2022-03-31

7.2 Pagination

A lot of the time, when making calls to the API, there'll be a lot of results to return. For that reason, we paginate the results to make sure responses are easier to handle. Therefore, each API call returns an 'last_page' parameter so your program will know how long to loop over the results to get all the data. There is a default limit on results (30 per page), but we recommend you always explicitly set the 'size' parameter to ensure you know how many results per page you'll get. Of course, the number of records on the last page can vary. Do note that the 'size' is capped at 300.

```
{
  last_page: 159,
  total: 30,
  dataset: "EU",
  gas_day: "2022-04-19",
  - data: [
    - {
      name: "EU",
      code: "eu",
      url: "eu",
      gasDayStart: "2022-04-19",
      gasInStorage: "376 0776"
```

As you can see in the example above (API call: <https://agsi.gie.eu/api?continent=EU&page=1&size=30>), there are 159 pages to loop over. Increasing the size, will decrease the number of pages:

```
{
  last_page: 16,
  total: 300,
  dataset: "EU",
  gas_day: "2022-04-19",
  - data: [
    - {
      name: "EU",
      code: "eu",
      url: "eu",
      gasDayStart: "2022-04-19",
      gasInStorage: "376 0776"
```

7.3 Rate limiting

To ensure data quality and timely access to our API and website, we enabled rate limiting on API calls. Rate limiting is used for limiting network traffic as it puts a cap on how often someone can repeat an action within a certain timeframe and can help stop certain kinds of malicious bot activity.

Any API account that exceeds 60 API calls per minute will automatically be put in a waiting queue and get a 'too many requests' error message for a duration of 60 seconds, each time. We will also monitor the accounts in this queue and if data calls are not adjusted properly and timely, we will affect a permanent ban on these accounts, by placing these accounts on our blacklist as 'DDOS attack' users.

These measures are intended and required to assure operational reliability and an effective and performant system to our complete userbase. Calling the API excessively is pointless as our AGSI and ALSI transparency platforms only process and publish new data ONCE a day at 19:30 publication time.

As each pull of a new page is considered a new API call, consider building in a delay of data pulling should your system go over the 60 calls per minute threshold.

The rate limiting is based on tracking the IP addresses that requests are coming from and tracking how much time elapses between each request. It measures the amount of time between each request from each IP address and the number of requests within a specified timeframe. If there are too many requests from a single IP within the given timeframe, the rate limiting solution will not fulfill the IP address's requests for the next 60 seconds.

8. Testing

A separate testing environment is available

Testing of your API calls currently only available for ALSI.

This can be done on <https://alsitest.gie.eu>

A similar testing environment for AGSI will be made available shortly.

Workings are the same as on production; accounts are linked to our test database but the data visible is the same data as on production. To call the test API, use the following API link;

<https://alsitest.gie.eu/api>

Bugs or remarks found on the test platform can be sent to api@gie.eu

9. FAQ

- **Can you help with our requests in jQuery/PHP/cURL/Python/Excel/PowerBI...?**

We can not support programming related questions, but we'll always try to help to the best of our abilities.

- **The displayed data is incorrect, can you fix it**

We do not alter data send in by the SSO/LSO. Unless it is a programmatic related error (double counts for instance), we can only relay the issue back to the SSO/LSO in question and wait for them to update their data.

10. Document versions

V001

March 2018 – First release

V002

September 2018 – Removal of completeness data field as it is considered obsolete by GIE.

V003

October 2018 – Change of API URLs to accommodate facilities with duplicate EIC codes, belonging to different companies in the same country.

V004

October 2019 – Addition of Excel tutorial and small document changes; chapters, repositioning text blocks

V005

April 2022 – V2 of the API for AGSI only. New API calls for AGSI, ALSI will be changed soon as well. Missing chapters will be added soon, please use V4 for these.

V006

April 2022 – V2 further explained with working example code for Excel. Added FAQ

V007

October 2022 – V2 applied to ALSI. Added more parameters for filtering

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