User Manual

API access to AGSI+ / ALSI[1]

21 April 2022 / v006

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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 <u>free of charge</u>.

<u>Registration on the AGSI+ or ALSI website is mandatory for non-data providers</u> 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).

Your account information and settings can be updated (and canceled) at any time after signing in. Your data will be stored and securely handles if 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.

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[1] V4 is still applicable for ALSI. This will be changed soon in a later version

Data coverage

Daily storage and LNG data reporting
Only the daily storage and LNG data reporting as currently available on the platforms is made available. Unavailability reporting is currently not (yet) part of the API coverage.

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:

  o 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.

  o 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.

2. Data field library

2.1 EIC listing

/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	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:
                    "iVBORw0KGgoAAAANSUhEUgAAAIwAAAAzCAYAAABFXOCeAAAAGXRFWHRTb2Z0d2FyZQBBZG9iZSBJbWFnZVJlYWR5ccllPAA/
                    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

/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: "",
```

Add the URL parameter to get a specific item.
/api/news?turl=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>"
      }
    ]
}
```

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
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	

- 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
TO BE DETERMINED			

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 whenever a new Service Announcement or update from one of our data providers is posted on the website. 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

GIE is also providing additional related data such as the Storage Map, LNG Map and Storage and LNG Investment Database at http://www.gie.eu/maps-data/

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

Will be available soon.

6.2 API page

Will be available soon.

6.3 EIC code mapping

Will be available soon.

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.
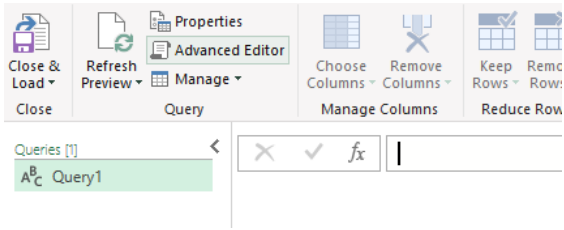
Steps are as follows:

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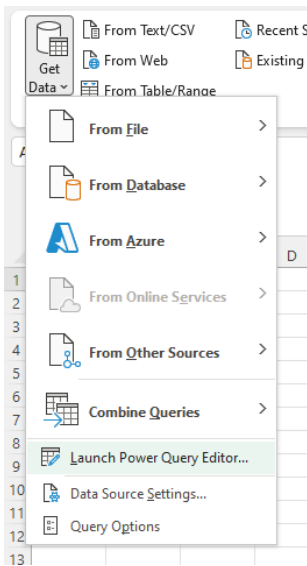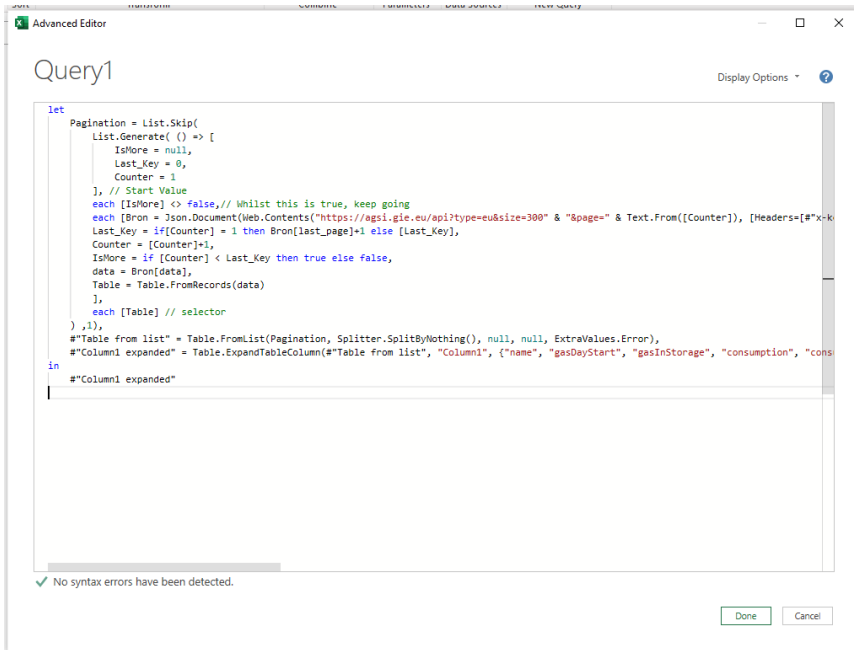

2 – Right click underneath 'Queries' and choose New Query > Other Sources > Blank Query
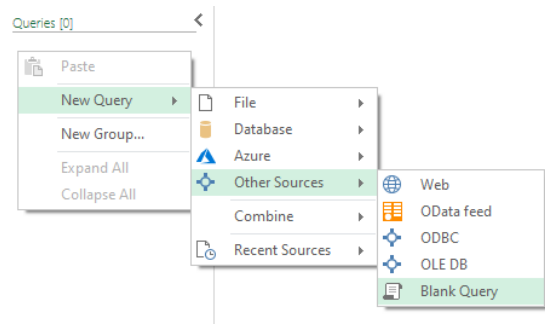
3 – When the new blank query is created, click on Advanced Editor:

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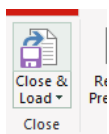
The same query can be used for **Power BI**. We cannot support this much further.

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

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
date	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",
```

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: "326.9226",
```

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: "326.9226"
```

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. 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.

9. 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

10. Table of Contents