

USER GUIDE

GENERATION INSTALLED CAPACITIES API

Version 1.2.0

Effective date: May 20, 2025

CONTENTS

1	INTRODUCTION	4
1.1	Definitions	4
1.2	Technical support	4
2	FUNCTIONAL DESCRIPTION OF THE GENERATION INSTALLED CAPACITIES API	5
2.1	General description.....	5
2.2	Prerequisites for using the APIs	5
2.2.1	Data confidentiality	5
2.2.2	Termination	5
2.3	capacities_per_production_type resource	5
2.4	Capacities_per_production_unit resource.....	5
2.5	capacities_cpc resource	5
3	ACCESSING THE API	6
4	RESOURCE EXPOSED BY THE “GENERATION INSTALLED CAPACITIES” API	7
4.1	Capacities_per_production_type resource.....	7
4.1.1	GET /capacities_per_production_type.....	7
4.1.1.1	Call methods	7
4.1.1.2	Inputs	8
4.1.1.3	Outputs.....	9
4.1.1.4	Control rules.....	10
4.1.1.5	Error codes.....	12
4.2	Capacities_per_production_unit resource.....	13
4.2.1	GET /capacities_per_production_unit	13
4.2.1.1	Call methods	13
4.2.1.2	Inputs	14
4.2.1.3	Outputs.....	15
4.2.1.4	Control rules.....	17
4.2.1.5	Error codes.....	19
4.3	Capacities_cpc resource	20
4.3.1	GET /capacities_cpc	20
4.3.1.1	Call methods	20
4.3.1.2	Inputs	21
4.3.1.3	Outputs.....	22
4.3.1.4	Control rules.....	23
4.3.1.5	Error codes.....	25
5	DETAILS OF ERRORS	26
5.1	Functional errors	27
5.1.1	capacities_per_production_type	27
5.1.2	capacities_per_production_unit.....	28
5.1.3	capacities_cpc	30

5.2 Technical errors.....	31
6 APPENDICES _____	33
6.1 Sample Files.....	33
6.2 Language – Translations of names.....	33
END OF DOCUMENT _____	33

1 Introduction

This document describes the Generation Installed Capacities API that RTE provides in order to expose installed generating capacity data. The data available is produced by RTE by aggregating the installed capacities of production units of more than 1 MW sent by generators for each sector. The published capacities are totals of all the capacities of production units belonging to generators which are members of the UFE initiative. This information is updated at least once a year, during the last week of the year.

Reference documents

Short reference	Name of the document	Complete reference
[R1]	Terms of use for RTE's APIs	Access link

1.1 Definitions

The terms used in this User Guide (the first letters of which are always capitalised) are defined below. Otherwise, their definitions are given in the General Conditions of Use [R1]:

API	Application Programming Interface
Authentication	Protection Mode for ensuring that the identity of the Sender or Receiver has been verified by RTE, and that they are authorised to access the IT system and use the Applications.
Sender	Party which sends a Message.
Message	Set of computer data used to transmit information, structured in accordance with a particular order that is specified in the User Guide. A Message can be sent by the User or by RTE.
Operation	An operation is the way in which the client interacts with the API's resource. An HTTP verb is always used (for example: GET for reading)
Party or Parties	Within the framework of the User Guide, these terms refer to either RTE or the User individually, or to both RTE and the User collectively.
Receiver	Party which receives the Sender's Message.
Resource	A resource is the data in relation to which the client application interacts.
URL	Uniform Resource Locator: character string based on a specific format used to locate a resource on a network and specify what protocol should be used on this resource.
User(s)	Legal entity which has agreed to RTE's General Terms and Conditions for Using APIs and which has been granted access to RTE's IT system for the purposes of using the APIs it has made available.

1.2 Technical support

In the event of difficulties accessing or using an API, Users can contact the telephone support services provided by RTE in accordance with the technical conditions detailed in the General Terms and Conditions of Use.

2 Functional description of the Generation Installed Capacities API

2.1 General description

This API provides the services below for obtaining data about installed generating capacity is. The data available is produced by RTE by aggregating the installed capacities of production units of more than 1 MW sent by generators for each sector. The published capacities are totals of all the capacities of production units belonging to generators which are members of the UFE initiative. This information is updated at least once a year, during the last week of the year.

2.2 Prerequisites for using the APIs

The Generation Installed Capacities API is for stakeholders operating on the electricity market and the general public. However, users of the API will need to create an account on RTE's digital portal. Once they have set up an account, they'll be able to get their OAuth 2.0 credentials. These credentials are then required whenever calls are made to the APIs.

2.2.1 Data confidentiality

The information contained in the Messages may not be used for any purpose other than the ones described in the General Terms and Conditions of Use [R1].

2.2.2 Termination

A subscription to an API is automatically terminated when the user deletes their account on RTE's digital portal.

Should the User wish to cease using an API without terminating their subscription, they simply need to stop sending calls to it.

2.3 capacities_per_production_type_resource

This service is for obtaining data about the installed capacities of production units of more than 1 MW sent by generators.

2.4 Capacities_per_production_unit_resource

This service is for obtaining data about the installed capacities of power stations of more than 100 MW, located on the French mainland, excluding Corsica.

2.5 capacities_cpc_resource

This service is for obtaining data about the installed capacities of production units that are bound by purchase obligation agreements with EDF.

3 Accessing the API

The REST protocol is used to access the API described in this document.

As is the case for all of the APIs provided by RTE, accessing and using them are subject to the provisions of the General Terms and Conditions of Use **[R1]**.

The authorisation method for accessing the APIs is the OAuth framework, the applications of which are described in the [FAQs](#).

4 Resource exposed by the “Generation Installed Capacities” API

4.1 Capacities per production type resource

4.1.1 GET /capacities per production type

4.1.1.1 Call methods

The resource is exposed in the following way:

Exposure	REST / JSON
Method	GET
Resource URL	https://digital.iservices.rte-france.com/open_api/generation_installed_capacities/v1/capacities_per_production_type?start_date=2015-01-01T00:00:00%2B01:00&end_date=2023-01-14T00:00:00%2B01:00&production_type=OTHER_RENEWABLE
Sandbox URL <small>(1)</small>	https://digital.iservices.rte-france.com/open_api/generation_installed_capacities/v1/sandbox/capacities_per_production_type

(1) The sandbox does not take the input parameters into account

Call recommendations

The purpose of this operation is to be able to retrieve installed capacities aggregated by sector. For nominal use, the period's fields do not need to be filled in. The service automatically returns the installed capacities for the current year. Cf. [CPPT-RG01](#). The search can:

- either focus on all sectors if none of the input fields are filled in
- or a list of sectors can be specified.

It is advisable to make one call per day in December to retrieve aggregated installed capacities per sector and two calls per month during the other months of the year in order to retrieve any updates.

This service provides all data available after **01/01/2015**. Data for periods before this date is not available.

4.1.1.2 Inputs

NAME	DESCRIPTION	CARD.	TYPE	VALUES / FORMAT	RULES
start_date	Start date for data searched for	0..1	date (2)	YYYY-MM-DDThh:mm:sszzzzz	CPPT-RG01 CPPT-RG03
end_date	End date for data searched for	0..1	date (1) (2)	YYYY-MM-DDThh:mm:sszzzzz	CPPT-RG01 CPPT-RG03
production_type	Generating sector	0..n	enum (3)	Possible values: BIOMASS FOSSIL_BROWN_COAL_LIGNITE FOSSIL_COAL_DERIVED_GAS FOSSIL_GAS FOSSIL_HARD_COAL FOSSIL_OIL FOSSIL_OIL_SHALE FOSSILPEAT GEOTHERMAL HYDRO_PUMPED_STORAGE HYDRO_RUN_OF_RIVER_AND_PONDAGE HYDRO_WATER_RESERVOIR MARINE NUCLEAR OTHER_RENEWABLE SOLAR WASTE WIND_OFFSHORE WIND_ONSHORE OTHER	CPPT-RG02 CPPT-RG04 CPPT-RG07

(1) By convention, the **end_date** data is excluded from the search, data from the Service's response.

(2) If the **start_date** has passed, then the **end_date** should be passed as a parameter.

(3) Several of these values can be passed as a parameter, separated by a comma: ..

.&field=VALUE1,VALUE2

Call examples:

URL:

```
GET /open_api/generation_installed_capacities/v1/capacities_per_production_type
```

HTTP/1.1

Headers:

Host: digital.iservices.rte-france.com

Authorization: Bearer CNAPbfmg7GjvtqTT1KqPm8ykP6R8YJFfJPnyjqW8p1v2PW2UX6bF8z

Body:

4.1.1.3 Outputs

NAME	CARD.	DESCRIPTION				
capacities_per_production_type	1..1					
NAME	CARD.	DESCRIPTION	TYPE	VALUES / FORMAT		RULES
start_date	1..1	Start date for data requested	date	YYYY-MM-DDThh:mm:sszzzzz		CPPT-RG01 CPPT-RG03
end_date	1..1	End date for requested data	date	YYYY-MM-DDThh:mm:sszzzzz		CPPT-RG01 CPPT-RG03
values	1..1	One value per year interval. Table of values {JSON} structured as shown below:				
0..n	0..n	NAME	CARD.	DESCRIPTION	TYPE	VALUES / FORMAT
		start_date	1..1	Time interval start	date	YYYY-MM-DDThh:mm:sszzzzz
		end_date	1..1	Time interval end	date	YYYY-MM-DDThh:mm:sszzzzz
		type	1..1	Generating sector	enum	One of the following values: BIOMASS FOSSIL_BROWN_COAL_LIGNITE FOSSIL_COAL_DERIVED_GAS FOSSIL_GAS FOSSIL_HARD_COAL FOSSIL_OIL FOSSIL_OIL_SHALE FOSSILPEAT GEOTHERMAL HYDRO_PUMPED_STORAGE HYDRO_RUN_OF_RIVER_AND_POUNDAGE HYDRO_WATER_RESERVOIR MARINE NUCLEAR OTHER_RENEWABLE SOLAR WASTE WIND_OFFSHORE WIND_ONSHORE OTHER
		value	1..1	Installed capacity in MW	float	Decimal.
		updated_date	1..1	Date updated	date	YYYY-MM-DDThh:mm:sszzzzz

JSON return format:

```
GET /open_api/generation_installed_capacities/v1/capacities_per_production_type
```

```
HTTP/1.1 200 OK
{"capacities_per_production_type": [
    {
        "start_date": "2015-01-01T00:00:00+01:00",
        "end_date": "2016-01-01T00:00:00+01:00",
        "values": [{"start_date": "2015-01-01T00:00:00+01:00",
                    "end_date": "2016-01-01T00:00:00+01:00",
                    "type": "FOSSIL_GAS",
                    "value": 6121,
                    "updated_date": "2015-07-05T00:30:00+02:00"
                },
                {"start_date": "2015-01-01T00:00:00+01:00",
                    "end_date": "2016-01-01T00:00:00+01:00",
                    "type": "OTHER",
                    "value": 62,
                    "updated_date": "2015-07-05T00:30:00+02:00"
                }
            ]
}
```

4.1.1.4 Control rules**Control rules for different input parameters:**

Input parameter			Description	Number
production_type	start_date	end_date		
empty	empty	empty	If no input parameter is given, the service returns the installed capacity for the current year	CPPT-RG01
filled in	empty	empty	If the production_type field is filled in, the response only contains data for the requested sector.	CPPT-RG02
			If listed type parameters (production_type) are entered with several identical values, duplicates will be deleted.	CPPT-RG07
empty	filled in	filled in	If the start_date and end_date parameters are given, the service returns the installed capacities for this period.	CPPT-RG03
filled in	filled in	filled in	The production_type AND the start_date / end_date pair can both be passed as parameters for the Service.	CPPT-RG04

Output control rules applied:

Number	Description
CPPT-RG05	The output data is ordered from the most recent start_date to the oldest.
CPPT-RG06	As the service's output, the installed capacities are returned as linked to calendar year.

4.1.1.5 Error codes

The following table lists the error codes which may be returned when the resource is called. Details of these errors are described in chapter 5 Details of errors.

Type of error	Error code	Details
Functional	GENINSCAP_CPPT_F01	§5.1.1
Functional	GENINSCAP_CPPT_F02	§5.1.1
Functional	GENINSCAP_CPPT_F03	§5.1.1
Functional	GENINSCAP_CPPT_F04	§5.1.1
Functional	GENINSCAP_CPPT_F05	§5.1.1
Functional	GENINSCAP_CPPT_F06	§5.1.1
Technical	401	§5.2
Technical	403	§5.2
Technical	404	§5.2
Technical	408	§5.2
Technical	413	§5.2
Technical	414	§5.2
Technical	429	§5.2
Technical	500	§5.2
Technical	503	§5.2
Technical	509	§5.2

4.2 Capacities per production unit resource

4.2.1 GET /capacities per production unit

4.2.1.1 Call methods

The resource is exposed in the following way:

Exposure	REST / JSON
Method	GET
Resource URL	<code>https://digital.iservices.rte-france.com/open_api/generation_installed_capacities/v1/capacities_per_production_unit ?start_date=2023-02-01T00:00:00%2B01:00&end_date=2023-02-14T00:00:00%2B01:00</code>
Sandbox URL (1)	<code>https://digital.iservices.rte-france.com/open_api/generation_installed_capacities/v1/sandbox/capacities_per_production_unit</code>

⁽¹⁾ The sandbox does not take the input parameters into account

Call recommendations

The purpose of this operation is to be able to retrieve installed capacities per power station. For nominal use, the period's fields do not need to be filled in. The service automatically returns the installed capacities for all power stations in operation ("end_date" field empty or not present) Cf. [CPPU-RG01](#).

It is advisable to make one call per day to retrieve installed capacities aggregated per sector.

This service provides all data available after **01/01/1935**. Data for periods before this date is not available.

4.2.1.2 Inputs

NAME	DESCRIPTION	CARD.	TYPE	VALUES / FORMAT	RULES
start_date	Start date for data searched for	<i>0..1</i>	date (2)	YYYY-MM-DDThh:mm:sszzzzz	CPPU-RG01 CPPU-RG02
end_date	End date for data searched for	<i>0..1</i>	date (1) (2)	YYYY-MM-DDThh:mm:sszzzzz	CPPU-RG01 CPPU-RG02

- (1) By convention, the **end_date** data is excluded from the search, data from the Service's response.
(2) If the **start_date** has passed, then the **end_date** should be passed as a parameter.

Call examples:

URL:

```
GET /open_api/generation_installed_capacities/v1/capacities_per_production_unit
```

HTTP/1.1

Headers:

Host: digital.iservices.rte-france.com

Authorization: Bearer CNAPbfmg7GjvtqTT1KqPm8ykP6R8YJFfJPnyjqW8p1v2PW2UX6bF8z

Body:

4.2.1.3 Outputs

NAME	CARD.	DESCRIPTION				
capacities_per_production_unit	1..1					
	NAME	CARD.	DESCRIPTION	TYPE	VALUES / FORMAT	RULES
start_date	1..1	Start date for data requested	date	YYYY-MM-DDThh:mm:sszzzzz	CPPU-RG01 CPPU-RG02	
end_date	0..1	End date for requested data	date	YYYY-MM-DDThh:mm:sszzzzz	CPPU-RG01 CPPU-RG02	
production_unit	1..1	Object {JSON} structured as shown below:				
	0..n	NAME	CARD.	DESCRIPTION	TYPE	VALUES / FORMAT
		code_eic	1..1	EIC code of the power station	string	Character string
		name	1..1	Name of the power station	string	Character string
		location	1..1	Location of the power station	string	Character string
		Code_eic_producteur	1..1	Producer EIC Code	string	Character string
		Name_produc tEUR	1..1	Producer name	string	Character string
values	1..1	Table of values {JSON} structured as shown below:				
	0..n	NAME	CARD.	DESCRIPTION	TYPE	VALUES / FORMAT
		start_date	1..1	Start time interval	date	YYYY-MM-DDThh:mm:sszzzzz
		end_date	1..1	End time interval	date	YYYY-MM-DDThh:mm:sszzzzz
		installed_capacity	1..1	Installed capacity in MW	float	Decimal.
		voltage_level_connection	1..1	Connection voltage level (in KV)	float	Decimal.
		production_type	1..1	Generating sector	enum	One of the following values: BIOMASS FOSSIL_BROWN_COAL_LIGNITE FOSSIL_COAL_DERIVED_GAS FOSSIL_GAS FOSSIL_HARD_COAL FOSSIL_OIL FOSSIL_OIL_SHALE FOSSIL_PEA GEOTHERMAL HYDRO_PUMPED_STORAGE

						HYDRO_RUN_OF_RI VER_AND_POUNDA GE HYDRO_WATER_RS ERVOIR MARINE NUCLEAR OTHER_RENEWABL E SOLAR WASTE WIND_OFFSHORE WIND_ONSHORE OTHER
		updated_date	1..1	Date updated	date	YYYY-MM- DDThh:mm:sszzzzz

JSON return format:

```
GET /open_api/generation_installed_capacities/v1/capacities_per_production_unit
```

```
HTTP/1.1 200 OK
{
  "capacities_per_production_unit": [
    {
      "start_date": "2022-03-01T00:00:00+01:00",
      "end_date": "2022-03-20T00:00:00+01:00",
      "production_unit": {
        "code_eic": "17W100P100P0341J",
        "name": "Pont-sur-Sambre",
        "location": "France",
        "code_eic_producteur": "17X100A100R0172T",
        "name_producteur": "TOTAL DIRECT ENERGIE"
      },
      "values": [
        {
          "start_date": "2019-08-09T00:00:00+02:00",
          "end_date": "2022-05-16T00:00:00+02:00",
          "installed_capacity": 412,
          "voltage_level_connection": 225,
          "type": "FOSSIL_GAS",
          "updated_date": "2022-06-02T11:49:52+02:00"
        }
      ]
    }
  ]
}
```

4.2.1.4 Control rules**Control rules for different input parameters:**

Input parameter		Description	Number
start_date	end_date		
empty	empty	If no input parameter is given, the service returns the installed capacity for the power stations in operation.	CPPU-RG01
filled in	filled in	If the start_date and end_date parameters are given, the service returns the installed capacities for power stations in operation during this period.	CPPU-RG02

Output control rules applied:

Number	Description
CPPU-RG03	The output data is sorted by the production_type fields in alphabetical order, then by name in alphabetical order.

4.2.1.5 Error codes

The following table lists the error codes which may be returned when the resource is called. Details of these errors are described in chapter 5 Details of errors.

Type of error	Error code	Details
Functional	GENINSCAP_CPPU_F01	§5.1.2
Functional	GENINSCAP_CPPU_F02	§5.1.2
Functional	GENINSCAP_CPPU_F03	§5.1.2
Functional	GENINSCAP_CPPU_F04	§5.1.2
Functional	GENINSCAP_CPPU_F05	§5.1.2
Functional	GENINSCAP_CPPU_F06	§5.1.2
Technical	401	§5.2
Technical	403	§5.2
Technical	404	§5.2
Technical	408	§5.2
Technical	413	§5.2
Technical	414	§5.2
Technical	429	§5.2
Technical	500	§5.2
Technical	503	§5.2
Technical	509	§5.2

4.3 Capacities_cpc resource

4.3.1 GET /capacities_cpc

4.3.1.1 Call methods

The resource is exposed in the following way:

Exposure	REST / JSON
Method	GET
Resource URL	<code>https://digital.iservices.rte-france.com/open_api/generation_installed_capacities/v1/capacities_cpc?start_date=2015-01-01T00:00:00%2B01:00&end_date=2016-01-01T00:00:00%2B01:00&department_code=FR&network_connection=RPT&production_type=SOLAR,BIOMASS,HYDRO</code>
Sandbox URL (1)	<code>https://digital.iservices.rte-france.com/open_api/generation_installed_capacities/v1/sandbox/capacities_cpc</code>

⁽¹⁾ The sandbox does not take the input parameters into account

Call recommendations

The purpose of this operation is to be able to retrieve installed capacities of the facilities bound by purchase obligations. For nominal use, the period's fields do not need to be filled in. The service automatically returns the installed capacities that have been most recently updated Cf. [CCPC-RG01](#). The search can:

- either focus on all departments, or networks and all sectors if none of the input fields are filled in
- or a list of departments, a network and/or a list of sectors can be specified.

It is advisable to make one call per day to retrieve aggregated installed capacities of facilities bound by purchase obligations.

This service provides all data available after **09/02/2015**. Data for periods before this date is not available.

4.3.1.2 Inputs

NAME	DESCRIPTION	CARD.	TYPE	VALUES / FORMAT	RULES
start_date	Start date for data searched for	<i>0..1</i>	date (2)	YYYY-MM-DDThh:mm:sszzzzz	CCPC-RG01 CCPC-RG06
end_date	End date for data searched for	<i>0..1</i>	date (1) (2)	YYYY-MM-DDThh:mm:sszzzzz	CCPC-RG01 CCPC-RG06
department_code	Department code	<i>0..n</i>	<i>enum (3)</i>	Possible values: Codes of departments in accordance with the ISO 3166-2 standard. Use FR for aggregated France data.	CCPC-RG02 CCPC-RG03 CCPC-RG07
network_connection	Connection network	<i>0..2</i>	<i>enum (3)</i>	Possible values: RPD RPT	CCPC-RG04 CCPC-RG07
production_type	Generating sector	<i>0..n</i>	<i>enum (3)</i>	Possible values: WIND SOLAR HYDRO COGENERATION BIOGAZ BIOMASS INCINERATION GEOTHERMAL OTHERS	CCPC-RG05 CCPC-RG07

(1) By convention, the **end_date** data is excluded from the search, data from the Service's response.

(2) If the **start_date** has passed, then the **end_date** should be passed as a parameter.

(3) Several of these values can be passed as a parameter, separated by a comma: ..

.&field=VALUE1,VALUE2

Call examples:

URL:

GET /open_api/generation_installed_capacities/v1/capacities_cpc

HTTP/1.1

Headers:

Host: digital.iservices.rte-france.com

Authorization: Bearer CNAPbfmg7GjvtqTT1KqPm8ykP6R8YJFfJPnyjqW8p1v2PW2UX6bF8z

Body:

4.3.1.3 Outputs

NAME		CARD.	DESCRIPTION					
capacities_cpc								
0..n	NAME	CARD.	DESCRIPTION	TYPE	VALUES / FORMAT	RULES		
	updated_date	1..1	Date updated	date	YYYY-MM-DDThh:mm:sszzzzz	CCPC-RG08		
	department_code	1..1	Department code	enum	Department codes ISO 3166-2 standard	CCPC-RG09		
	network_connection	1..1	Connection network	enum	One of the following values: RPD RPT	CCPC-RG09		
	production_type	1..1	Generating sector	enum	One of the following values: WIND SOLAR HYDRO COGENERATION BIOGAZ BIOMASS INCINERATION GEOTHERMAL OTHERS	CCPC-RG09		
	value	1..1	Installed capacity aggregated by department, network and sector (in KW)	int	Integer.	CCPC-RG09		

JSON return format:

GET /generation_installed_capacities/v1/capacities_cpc
<pre>HTTP/1.1 200 OK {"capacities_cpc": [{"updated_date": "2016-02-01T00:00:00+01:00", "department_code": "FR", "network_connection": "RPD", "production_type": "BIOGAS", "values": 323012}, {"updated_date": "2016-02-01T00:00:00+01:00", "department_code": "FR", "network_connection": "RPT", "production_type": "BIOGAS", "values": 2925}, { ... }]}</pre>

4.3.1.4 Control rules

Control rules for different input parameters:

Input parameter					Description	Number
start_date	end_date	department_code	network_connection	production_type		
empty	empty	empty	empty	empty	If no input parameters are entered, the Service will return the most recently updated installed capacities. If a couple (sector, department) no longer has any facilities bound by obligations to purchase, but did have previously, the service will no longer return this sector in nominal mode. To retrieve the history, the CCPC-RG06 rule should be used.	CCPC-RG01
filled in	filled in	filled in	filled in	filled in	For the department_code field, the FR value has been added to the ISO department codes to signify that aggregated data for France is being requested.	CCPC-RG02
filled in	filled in	filled in	filled in	filled in	The department_code , network_connection , production_type and the start_date / end_date pair can be passed as parameters for the Service.	CCPC-RG07
filled in	filled in	filled in	filled in	filled in	If listed type fields are entered with several identical values, duplicates will be deleted.	CCPC-RG10

empty	empty	filled in	empty	empty	If the department_code field is filled in as a service parameter, the response only contains data for the requested department.	CCPC-RG03
empty	empty	empty	filled in	empty	If the network_connection field is filled in as a service parameter, the response only contains data for the requested network.	CCPC-RG04
empty	empty	empty	empty	filled in	If the production_type field is filled in as a service parameter, the response only contains data for the requested sector.	CCPC-RG05
filled in	filled in	empty	empty	empty	If the start_date and end_date fields are filled in, the service returns the installed capacities that have an update date within this period.	CCPC-RG06

Output control rules applied:

Number	Description
CCPC-RG08	The output data is ordered by the updated_date field, from the most recent to the oldest, then by department_code in alphabetical order, then by production_type in alphabetical order, then by network_connection in alphabetical order.
CCPC-RG09	If the service cannot find a response that satisfies all the parameters passed, it returns all the fields except updated_date and value . If the service cannot find any response, it returns the EC45_ERR01 error.

4.3.1.5 Error codes

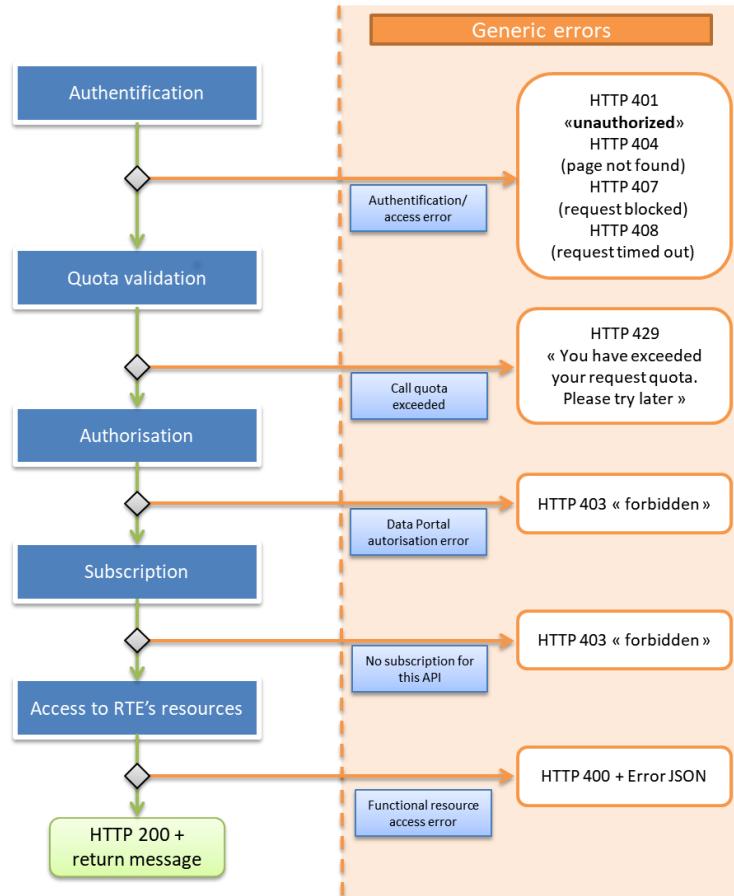
The following table lists the error codes which may be returned when the resource is called. Details of these errors are described in chapter 5 Details of errors.

Type of error	Error code	Details
Functional	GENINSCAP_CCPC_F01	§5.1.3
Functional	GENINSCAP_CCPC_F02	§5.1.3
Functional	GENINSCAP_CCPC_F03	§5.1.3
Functional	GENINSCAP_CCPC_F04	§5.1.3
Functional	GENINSCAP_CCPC_F05	§5.1.3
Functional	GENINSCAP_CCPC_F06	§5.1.3
Technical	401	§5.2
Technical	403	§5.2
Technical	404	§5.2
Technical	408	§5.2
Technical	413	§5.2
Technical	414	§5.2
Technical	429	§5.2
Technical	500	§5.2
Technical	503	§5.2
Technical	509	§5.2

5 Details of errors

The diagram below shows the codes returned to the API's User depending on the sequencing of calls.

This paragraph details the generic errors that are common to all of the API's resources. As such, it does not describe request errors (HTTP 400 code). These errors are described resource by resource in the corresponding paragraph.



In the event of an error encountered during the authentication phase (while validating the username and password), an HTTP 401 "unauthorised" code is returned to the caller.

The second stage involves checking that the user has not exceeded the maximum number of calls authorised for the organisation. If exceeded, the caller is notified with an HTTP 429 code. In such cases, the response from the server will contain a "Retry-After:" header giving the time (in seconds) that the client will need to wait before resubmitting their request.

The third stage involves checking that the caller (identified by its OAuth2 token or its PKI certificate) has created an application on the Data Portal. Otherwise, the caller is informed by an HTTP 403 "forbidden" code.

The fourth stage involves checking that the API is associated with the application (subscription). Otherwise, the caller is informed by an HTTP 403 "forbidden" code.

The fifth stage involves accessing RTE's resources. Various functional errors may occur. These are communicated to the User as JSON errors by an HTTP 400 code.

In the event of a technical incident upon the request treatment the caller is informed by an HTTP 500 code.

JSON structure:

```
{
  "error": "short_name, error's explicit description",
  "error_description": "long name, readable by a user",
  "error_uri": "URI to the API user guide or the FAQ/documentation on the Data Portal"
  "error_details": {
    "transaction_id": "unique call identifier, useful in the event of an incident"
  }
}
```

- The short description ("error") is a code which enables the calling application to automatically process error messages. It is represented by a series of words separated by "_".
- The long description ("error description") is a description enabling users to understand the source of the error more precisely. This name needs to be approved by the business line so as to ascertain that it is explicit enough.
- The URI to the user guide is present so as to provide more explanations depending on the API called.
- The transaction_id field: provides a unique call identifier. This identifier can be communicated to RTE's support services if there is an incident.

5.1 Functional errors

5.1.1 capacities_per_production_type

The table below lists the functional errors returned by the resource for an error in a request (HTTP 400 code):

GENINSCAP_CPPT_F01	
Message	If one of the fields "\start_date\" or "\end_date\" is used, the two fields are mandatory. Please used either fields or neither.
RG	If either of the start_date and end_date parameters are passed on their own, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_per_production_type?start_date=2023-02-01T00:00:00%2B02:00
GENINSCAP_CPPT_F02	
Message	The field "\start_date\" in the API input is more recently than the field "\end_date\". Please correct the values of these fields.
RG	If the start_date field is more recent than the end_date field, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_per_production_type?start_date=2023-02-16T00:00:00%2B01:00&end_date=2023-02-14T00:00:01%2B01:00

GENINSCAP_CPPT_F03	
Message	The API does not provide feedback on such a long period in one call. To retrieve all the data please make it with several calls to the API.
RG	If the period is greater than 366 days, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_per_production_type?start_date=2015-01-01T00:00:00%2B02:00&end_date=2017-06-02T00:00:00%2B02:00
GENINSCAP_CPPT_F04	
Message	The value of "\end_date\" field is incorrect. It is not possible to recover data to this term.
RG	If end_date is greater than 1 January of the next year, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_per_production_type?start_date=2026-01-02T00:00:00%2B02:00&end_date=2026-02-10T00:00:00%2B02:00
GENINSCAP_CPPT_F05	
Message	The period filled by fields "start_date" and "end_date" is too short to return values. Please check the user guide to verify the minimum period for this API.
RG	If the time interval between start_date and end_date is less than 1 calendar year, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_per_production_type?start_date=2024-06-01T00:00:00%2B02:00&end_date=2024-06-01T12:00:00%2B02:00
GENINSCAP_CPPT_F06	
Message	One of the dates in the API input does not follow the format described in the user guide. Please verify compliance with the format for each field.
RG	If the start_date or end_date are not in the expected format, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_per_production_type?start_date=2023-02-01&end_date=2023-02-14

5.1.2 capacities per production unit

The table below lists the functional errors returned by the resource for an error in a request (HTTP 400 code):

GENINSCAP_CPPU_F01	
Message	If one of the fields \"start_date\" or \"end_date\" is used, the two fields are mandatory. Please used either fields or neither.
RG	If either of the start_date and end_date parameters are passed on their own, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_per_production_unit?start_date=2023-02-01T00:00:00%2B01:00
GENINSCAP_CPPU_F02	
Message	The field \"start_date\" in the API input is more recently than the field "end_date". Please correct the values of these fields.
RG	If the start_date field is more recent than the end_date field, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_per_production_unit?start_date=2023-02-16T00:00:00%2B01:00&end_date=2023-02-14T00:00:01%2B01:00
GENINSCAP_CPPU_F03	

Message	The API does not provide feedback on such a long period in one call. To retrieve all the data please make it with several calls to the API.
RG	If the period is greater than 366 days, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_per_production_unit?start_date=2022-02-01T00:00:00%2B01:00&end_date=2023-02-14T00:00:01%2B01:00
GENINSCAP_CPPU_F04	
Message	The value of \" end_date \" field is incorrect. It is not possible to recover data to this term."}
RG	If end_date is greater than 1 January of the next year, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_per_production_unit?start_date=2025-04-02T00:00:00%2B02:00&end_date=2026-02-01T00:00:00%2B02:00 pour un appel le 30/10/2015
GENINSCAP_CPPU_F05	
Message	The period filled by fields \" start_date \" and \" end_date \" is too short to return values. Please check the user guide to verify the minimum period for this API.
RG	If the time interval between start_date and end_date is less than 1 calendar day, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_per_production_unit?start_date=2023-02-01T00:00:00%2B01:00&end_date=2023-02-01T00:00:01%2B01:00
GENINSCAP_CPPU_F06	
Message	One of the dates in the API input does not follow the format described in the user guide. Please verify compliance with the format for each field.
RG	If the start_date or end_date are not in the expected format, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_per_production_unit?start_date=2023-02-01&end_date=2023-02-14

5.1.3 capacities_cpc

The table below lists the functional errors returned by the resource for an error in a request (HTTP 400 code):

GENINSCAP_CCPC_F01	
Message	If one of the fields \"start_date\" or \"end_date\" is used, the two fields are mandatory. Please used either fields or neither.
RG	If either of the start_date and end_date parameters are passed on their own, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_cpc?start_date=2023-02-01T00:00:00%2B02:00
GENINSCAP_CCPC_F02	
Message	The field \"start_date\" in the API input is more recently than the field \"end_date\". Please correct the values of these fields.
RG	If the start_date field is more recent than the end_date field, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_cpc?start_date=2023-02-16T00:00:00%2B02:00&end_date=2023-02-14T00:00:00%2B02:00
GENINSCAP_CCPC_F03	
Message	The API does not provide feedback on such a long period in one call. To retrieve all the data please make it with several calls to the API.
RG	If the period is greater than 366 days, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_cpc?start_date=2023-02-01T00:00:00%2B02:00&end_date=2024-03-06T00:00:00%2B02:00
GENINSCAP_CCPC_F04	
Message	The value of "end_date" field is incorrect. It is not possible to recover data to this term."}
RG	If end_date is greater than D+1 compared with the system date, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_cpc?start_date=2015-10-31T00:00:00%2B02:00&end_date=2015-11-09T00:00:00%2B02:00 pour un appel le 30/10/2015
GENINSCAP_CCPC_F05	
Message	The period filled by fields "start_date" and "end_date" is too short to return values. Please check the user guide to verify the minimum period for this API.
RG	If the time interval between start_date and end_date is less than 1 calendar day, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_cpc?start_date=2023-02-01T00:00:00%2B01:00&end_date=2023-02-01T00:01:00%2B01:00
GENINSCAP_CCPC_F06	
Message	One of the dates in the API input does not follow the format described in the user guide. Please verify compliance with the format for each field.
RG	If the start_date or end_date are not in the expected format, the Service generates this error.
Call example	GET /open_api/generation_installed_capacities/v1/capacities_cpc?start_date=2023-02-01&end_date=2023-02-14

5.2 Technical errors

401	
HTTP code	401
Message	Unauthorized
Description	Error generated when authentication has failed
403	
HTTP code	403
Message	Forbidden
Description	Error generated if the caller is not authorised to call the resource
404	
HTTP code	404
Message	Not Found
Example of a call	The resource called does not exist or no data was found
408	
HTTP code	408
Message	Request Time-out
Example of a call	Error generated when there is no response from the service called or when the call to the service times out (http 408).
413	
HTTP code	413
Message	Request Entity Too Large
Example of a call	The size of the request exceeds 5 MB
414	
HTTP code	414
Message	Request-URI Too Long
Example of a call	The URI sent by the caller is longer than 512 characters.
429	
HTTP code	429
Message	Too Many Requests

Call example	The maximum number of calls has been made in a given period of time.
500	
HTTP code	500
Message	Internal Server Error
Call example	Any other technical error. (This error is accompanied by a JSON message with an error_code and error_description field)
503	
HTTP code	503
Message	Service Unavailable
Call example	Error generated during maintenance (HTTP 503).
509	
HTTP code	509
Message	Bandwidth Limit Exceeded.
Call example	The total number of client requests has reached the maximum limit.

6 Appendices

6.1 Sample Files

Once the User is logged on the Data Portal, sample files (including API responses) are available online on the API description page.

6.2 Language – Translations of names.

ENGLISH	FRENCH
start_date	date_debut
end_date	date_fin
updated_date	date de mise à jour
value	valeur
BIOMASS	BIOMASSE
FOSSIL_BROWN_COAL_LIGNITE	LIGNITE
FOSSIL_COAL_DERIVED_GAS	GAZ ISSU DU CHARBON
FOSSIL_GAS	GAZ
FOSSIL_HARD_COAL	CHARBON
FOSSIL_OIL	FIOUL
FOSSIL_OIL_SHALE	PETROLE DE SCHISTE
FOSSILPEAT	TOURBE
GEOTHERMAL	GEOTHERMIQUE
HYDRO_PUMPED_STORAGE	HYDRAULIQUE_STEP
HYDRO_RUN_OF_RIVER_AND_POUNDAGE	HYDRAULIQUE_FILEDELEAU_ECLUSEE
HYDRO_WATER_RESERVOIR	HYDRAULIQUE_LACS
MARINE	MARINE
NUCLEAR	NUCLEAIRE
OTHER_RENEWABLE	AUTRE-RENOUVELABLE
SOLAR	SOLAIRE
WASTE	DECHETS INDUSTRIELS
WIND_OFFSHORE	EOLIEN_OFFSHORE
WIND_ONSHORE	EOLIEN_TERRESTRE
OTHER	AUTRE

END OF DOCUMENT