

END USER DOCUMENTATION

Publication changes on Elia.be and OpenData with ICAROS go-live

A document to provide information on changed publications related to congestion management and to the generation and outages of technical units following iCAROS (Integrated Coordination of Assets for Redispatching and Operational Security) go-live.

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1. Introduction

1.1 Context & purpose of the document

Elia currently publishes information related to the generation and outages of technical units covered by a SA (Scheduling Agent) and OPA (Outage Planning Agent) contract as well as data related to congestion management. With the Go-Live of iCAROS Phase I, some of these publications will be modified.

In addition to the above, Elia also takes this opportunity to improve some of these publications, even if they are not directly impacted by the entry into force of the new iCAROS design.

This document gives more details on both the new and the adapted publications on Elia.be, OpenData & B2B XML Services (or GridData).

1.2 ICAROS Go Live

For the Go-Live of iCAROS Phase I, test datasets will be provided on OpenData so that implementation of the new APIs is already possible before the go live. Those test datasets will also be kept at go live and will start filling with data the moment of the go live.

The go-live date is on 22/05/2024. All the changes detailed below will take place on that date at midnight.

2. General Principles

2.1 OpenData principles

Publications on OpenData are as highly aligned with Elia.be publications but differences are possible. New historical datasets will be implemented after the go-live date. The current historical datasets will contain pre-iCAROS data and, per publication, new historical dataset will contain post-iCAROS data.

Test datasets have been put in place for users to better understand the changes that will take place after the go-live. These datasets are to be used for informational purposes only. The data values are not reflecting any grid and market values.

The test datasets can be found here and will have ICAROS TEST in their title:

<https://opendata.elia.be/explore/?refine.theme=MARI%20ICAROS%20TEST%20Datasets>

3. Publications

3.1 Generation domain publications

The main changes in these publications are the new “publication fuel types” that are aligned with the updated fuel types introduced in the new contractual framework of iCAROS. See below for the detailed change per dataset. For generating facilities – actual installed power by unit – The existing links to the XLS and HTML exports will be replaced by the opendata dataset ods179. This opendata dataset will be updated everyday with the latest production park overview. It will also present the latest production park overview per year – so the situation at 31/12/year.

3.1.1 Schedules of technical units

Location

Publication Title	URL
Generation schedules Elia.be – (no change in URL)	https://www.elia.be/en/grid-data/power-generation/generation-schedules
Generation schedules Historical Opendata – (no change) ⇒ Pre-ICAROS will be added in the title	https://opendata.elia.be/explore/dataset/ods034/information/
Day-ahead schedules of contracted technical units – aggregated by fuel type Historical Post – ICAROS Opendata (new)	https://opendata.elia.be/explore/dataset/ods176/information/
Generation schedule GridData (no change in URL)	https://griddata.elia.be/eliabecontrols.prod/interface/generations/SchedulebyFuelTypeQuarterHour/

Column names and definitions

Current Name	Status	OpenData	Definition
Datetime	Unchanged	Datetime	Time at which the interval starts.
Resolution	Unchanged	Resolution	Length of the time slot.
Fuel code	New title & definition	Fuel type publication	Classification of fuels used for production, in the context of production publications on Elia.be. The fuel type list used for publication is: <ul style="list-style-type: none"> • Nuclear • Natural Gas • Other Fossil Fuels (Diesel, Fuel Oil, Gasoline, Kerosine) • Biofuels

- Water
- Solar
- Wind Offshore
- Wind Onshore
- Other (Waste for incineration, Electricity, Industrial Process Off-Gas, Process Heat)

Day Ahead Generation Schedule	New title & definition	Day ahead schedule	The set of values (in MW) provided in day ahead 3 pm, on a quarter-hourly basis, representing the most accurate expected Injection and/or Offtake of a Technical Unit for a considered Day, without taking into account any participation in the provision of Balancing Services or Redispatching Service.
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3.1.2 Energy generated by contracted units

Location

Publication Title	URL
Energy generated Elia.be – (no change in URL)	https://www.elia.be/en/grid-data/power-generation/energy-generated-by-contracted-power-units
Energy generated Historical Opendata – (no change) ⇒ Pre-ICAROS will be added in the title	https://opendata.elia.be/explore/dataset/ods033/information/
Power generated by contracted technical units – aggregated by fuel type Historical Post – ICAROS Opendata (new)	https://opendata.elia.be/explore/dataset/ods177/information/
Energy generated GridData (no change in URL)	https://griddata.elia.be/eliabecontrols.prod/interface/generations/generatedcipupowerbyfueltypebyquarterhour/

Column names and definitions

Current Name	Status	OpenData	Definition
Datetime	Unchanged	Datetime	Time at which the interval starts.
Resolution	Unchanged	Resolution	Length of the time slot.

Fuel code	New title & definition	Fuel type publication	Classification of fuels used for production, in the context of production publications on the Elia.be website. The fuel type list used for publication is: <ul style="list-style-type: none"> • Nuclear • Natural Gas • Other Fossil Fuels (Diesel, Fuel Oil, Gasoline, Kerosine) • Biofuels • Water • Solar • Wind Offshore • Wind Onshore • Other (Waste for incineration, Electricity, Industrial Process Off-Gas, Process Heat)
Generated Power	Unchanged	Generated power	Sum of the generated power of contracted technical units aggregated by Fuel type publication.
Generated Power Total	New title & definition	Total generated power	Sum of the generated power of all contracted technical units.

3.1.3 Available generation capacity forecast

Location

Publication Title	URL
Available generation capacity forecast Elia.be – (removed)	https://www.elia.be/en/grid-data/power-generation/available-generation-capacity-forecast
Forecast available capacity by contracted power units - aggregated by fuel type Historical Opendata – (removed)	https://opendata.elia.be/explore/dataset/ods037/information/
Forecast available capacity by contracted power units exceeding 100 MW Historical Opendata – (removed)	https://opendata.elia.be/explore/dataset/ods038/information/
Available capacity forecast of all units aggregated by fuel type GridData (removed)	https://griddata.elia.be/eliabecontrols.prod/interface/powergeneration/generation/forecast/oneday
Available capacity forecast by unit exceeding 100 MW GridData (removed)	https://griddata.elia.be/eliabecontrols.prod/interface/powergeneration/generation/capacities/forecast/bypowerunit

3.1.4 Contracted technical units

Location

Publication Title	URL
Actual installed power aggregated by fuel type Elia.be – (no change in URL)	https://www.elia.be/en/grid-data/power-generation/generating-facilities
Actual Belgium's installed power generation - aggregated by fuel type Historical Opendata – (removed)	https://opendata.elia.be/explore/dataset/ods035/information/
Actual installed power aggregated by fuel type GridData (no change in URL)	https://griddata.elia.be/eliabecontrols.prod/interface/powergeneration/installed/power/oneday
Actual installed power - by unit and by fuel type Historical Opendata (removed)	https://opendata.elia.be/explore/dataset/ods036/information/
Individual data of contracted technical units Historical Opendata (new)	https://opendata.elia.be/explore/dataset/ods179/information/

Column names and definitions

Current Name	Status	OpenData	Definition
Datetime	Unchanged	Datetime	Time at which the interval starts.
BRP	Removed	BRP	/
Unit name	New title & definition	Technical unit	The name of the technical unit.
Production Unit Type	New title & definition	Unit type	The technical unit can be one of the following categories: <ul style="list-style-type: none"> • CAP (Capacitor Battery) • CC (Combined Cycle GT+ST) • CE (Internal Combustion Engine) • CHEM (Chemical Battery) • FC (Fuel Cell) • GT (Gas Turbine) • HP (Hydraulic Pump Unit) • HPT (Hydraulic Pump and Turbine Unit)

- HT (Hydraulic Turbine Unit)
- NUC (Nuclear Plant)
- PV (Photovoltaic Park)
- RoR (Hydraulic Unit Run of River)
- ST (Steam Turbine)
- TJ (Turbo Jet)
- WOF (Wind Park Offshore)
- WON (Wind Park Onshore)

Technical Pmax	New title & definition	Technical Pmax	Maximum power in MW that can be injected or taken off by the technical unit into or from Elia grid.
Fuel code	New title & definition	Fuel type publication	<p>Classification of fuels used for production, in the context of production publications on the Elia.be website. The fuel type list used for publication is:</p> <ul style="list-style-type: none"> • Nuclear • Natural Gas • Other Fossil Fuels (Diesel, Fuel Oil, Gasoline, Kerosine) • Biofuels • Water • Solar • Wind Offshore • Wind Onshore <p>Other (Waste for incineration, Electricity, Industrial Process Off-Gas, Process Heat)</p>

3.2 Outages domain publications

The publication of the Outage Plans for the production units are updated on both OpenData and Elia.be.

3.2.1 Planned and unplanned production outages

Location

Publication Title	URL
Planned and unplanned outages affecting generation units Elia.be – (no change in URL)	https://www.elia.be/en/grid-data/power-generation/planned-and-unplanned-outages
Forced unavailabilities of contracted power units Historical Opendata (dataset before go-live)–(removed)	https://opendata.elia.be/explore/dataset/ods039/information/
Planned unavailabilities of contracted power units Historical Opendata (dataset before go-live)– (removed)	https://opendata.elia.be/explore/dataset/ods040/information/
Forced unavailabilities of contracted power units Historical Opendata – (new)	https://opendata.elia.be/explore/dataset/ods180/information/
Planned unavailabilities of contracted power units Historical Opendata – (new)	https://opendata.elia.be/explore/dataset/ods181/information/
Forced unavailabilities of contracted power units GridData (no change in URL)	https://griddata.elia.be/eliabecontrols.prod/interface/powergeneration/unplanned/outagesofunits?isDeleted=false
Planned unavailabilities of contracted power units GridData (no change in URL)	https://griddata.elia.be/eliabecontrols.prod/interface/powergeneration/planned/outagesofunits?isDeleted=false

Column names and definitions

Current Name	Status	OpenData	Definition
Start	Unchanged	Start	The start date time of an outage.
End	Unchanged	End	The end date and time of an outage.
Time Series Start	Unchanged	Time Series Start	The start time of a subset of the outage period in which the available power is constant.
Time Series End	Unchanged	Time Series End	The end time of a subset of the outage period in which the available power is constant.

Fuel code	Removed	Fuel Code	/
Unit name	New title	Unit	The name of the technical unit.
Unit EIC code	New	Unit EIC code	The Energy Identification Code (EIC) identifying the unit. The EIC is a code used across the European Union to identify participants and energy resources in the energy sector.
Pmax available	New title & definition	Technical Pmax	Maximum power (in MW) that can be injected or taken off by the technical unit into or from Elia grid.
Pmax available after the outage	New title	Pmax available during the outage	The maximum power (in MW) that can be injected or taken off by the technical unit into or from the ELIA Grid during the time series outage period, taking into account the restrictions in power known at the time of notification to ELIA.
Reason	Unchanged	Reason	Cause of the production/generation unit unavailability.
Outage ID	New	MRID	Master Resource Identifier of the outage message as received by Elia.
Outage version	New	Outage version	Version of the outage message received by Elia.
Last updated	UnchaYes. Documnged	Last updated	Date and time at which the data was last updated.
Status	Unchanged	Status	Status of unavailability of the technical unit. A Dismissed outage is a cancelled outage, which means that the unavailability will not have occurred, unlike an Active outage.

3.3 Congestion management

Congestion datasets will be split:

- No change to Internal redispatching;
- Cross-border redispatching is split in two datasets: local and import/export;
- Countertrading is split in two datasets: local and import/export.

'Red Zones' dataset in OpenData will become 'Congestion Risk Indicator (CRI)'. No change is brought to the dataset itself, only to its description.

3.3.1 Internal redispatching

Location

Publication Title	URL
Internal redispatching Elia.be – (no change in URL)	https://www.elia.be/en/grid-data/congestion-management/activations
Congestion management activations - Internal redispatching Historical Opendata – (no change in URL)	https://opendata.elia.be/explore/dataset/ods071/information/
Internal redispatching GridData (no change in URL)	https://griddata.elia.be/eliabecontrols.prod/interface/CongestionManagement/InternalRedispatching

Column names and definitions

Current Name	Status	OpenData	Definition
Datetime	Unchanged	Datetime	Time at which the interval starts.
Activation	Unchanged	Activation	Energy resulting from an action of the control area operator where the congestion is located by altering the generation and/or load pattern in order to change physical flows in the transmission system and relieve a physical congestion. Changes of affected generation/load capacity to relieve a physical congestion.
Action	Unchanged	Action	Indicates if the activation is an increase or a decrease of energy injected into the network.
Reason	Unchanged	Reason	Reason of the activation.
Overloaded element	Unchanged	Overloaded element	Network grid element affected by the activation.

3.3.2 Cross-border redispatching

Location

Publication Title	URL
Cross-border redispatching Elia.be – (no change in URL)	https://www.elia.be/en/grid-data/congestion-management/activations
Congestion management activations - Cross-border redispatching Historical Opendata – (no change) ⇒ Pre-ICAROS will be added in the title	https://opendata.elia.be/explore/dataset/ods072/information/
Congestion management activations - Cross-border – local redispatching Historical Opendata – (new)	https://opendata.elia.be/explore/dataset/ods170/information/
Congestion management activations - Cross-border – import/export redispatching Historical Opendata – (new)	https://opendata.elia.be/explore/dataset/ods171/information/
Cross-border redispatching GridData (removed)	https://griddata.elia.be/eliabecontrols.prod/interface/CongestionManagement/CrossBorderRedispatching
Cross-border redispatching - local GridData (new)	https://griddataacc.elia.be/eliabecontrols.acc/interface/CongestionManagement/CrossBorderRedispatchingLocal
Cross-border redispatching – import/export GridData (new)	https://griddataacc.elia.be/eliabecontrols.acc/interface/CongestionManagement/CrossBorderRedispatchingOtherTso

Column names and definitions

Current Name	Status	OpenData	Definition
Datetime	Unchanged	Datetime	Time at which the interval starts.
In area	Unchanged	In area	Area into which the energy flows.
Out area	Unchanged	Out area	Area from where the energy flows.
Activation	Unchanged	Activation	Power resulting from an action of operators in one or several control areas consisting in altering the generation and/or load pattern in order to change physical flows in the transmission system and relieve a physical congestion.
Reason	Unchanged	Reason	Reason of the activation.
Overloaded element	Unchanged	Overloaded element	Network grid element affected by the activation.

3.3.3 Countertrading

Location

Publication Title	URL
Countertrading Elia.be – (no change in URL)	https://www.elia.be/en/grid-data/congestion-management/activations
Congestion management activations - countertrading Historical Opendata – (no change) ⇒ Pre-ICAROS will be added in the title	https://opendata.elia.be/explore/dataset/ods073/information/
Congestion management activations - countertrading – local Historical Opendata – (new)	https://opendata.elia.be/explore/dataset/ods172/information/
Congestion management activations - countertrading – import/export Historical Opendata – (new)	https://opendata.elia.be/explore/dataset/ods173/information/
Countertrading GridData (removed)	https://griddata.elia.be/eliabecontrols.prod/interface/CongestionManagement/CountertradingExport
Cross-border redispatching - local GridData (new)	https://griddataacc.elia.be/eliabecontrols.acc/interface/CongestionManagement/CountertradingExportLocal
Cross-border redispatching – import/export GridData (new)	https://griddataacc.elia.be/eliabecontrols.acc/interface/CongestionManagement/CountertradingExportOtherTso

Column names and definitions

Current Name	Status	OpenData	Definition
Datetime	Unchanged	Datetime	Time at which the interval starts.
In area	Unchanged	In area	Area into which the energy flows.
Out area	Unchanged	Out area	Area from where the energy flows.
Activation	Unchanged	Activation	Power resulting from an action of operators in one or several control areas consisting in altering the generation and/or load pattern in order to change physical flows in the transmission system and relieve a physical congestion.
Reason	Unchanged	Reason	Reason of the activation.
Overloaded element	Unchanged	Overloaded element	Network grid element affected by the activation.

3.3.4 Congestion Risk Indicator – Red Zones

Location

Publication Title	URL
Red Zones Elia.be	https://www.elia.be/en/grid-data/congestion-management/red-zones
Congestion risks 'Red Zones' per electrical zone of the Belgian grid Historical Opendata – (no change) ⇒ Change in title to include CRI Congestion Risk Indicator ⇒ Change in dataset description	https://opendata.elia.be/explore/dataset/ods076/information/

Column names and definitions

Current Name	Status	OpenData	Definition
Datetime	Unchanged	Datetime	Time at which the interval starts.
Zone name	Unchanged	Zone name	The name of the zone.
CRI level upward	New	CRI level in upward direction	A CRI in the upward direction indicates a congestion risk if the net injection in the electrical zone would increase. The increase of net injection in the electrical zone is limited depending on the risk severity.
Increment cap	Unchanged	Cap in upward direction	Maximum increase of active power net injection allowed in an Electrical Zone with a medium CRI level in upward direction without creating a Congestion.
CRI level downward	New	CRI level in downward direction	A CRI in the downward direction indicates a congestion risk if the net injection in the electrical zone would decrease. The decrease of net injection in the electrical zone is limited depending on the risk severity.
Decrement cap	Unchanged	Cap in downward direction	Maximum decrease of active power net injection allowed in an Electrical Zone with a medium CRI level in downward direction without creating a Congestion.