

# iCaros : Integrated Coordination of Assets for Redispatching and Operational Security

Second fine-tuning workshop  
22 May 2019

Elia, Belgium's electricity transmission system operator > Users' group > Working Group Balancing > iCAROS > Implementation Project iCAROS

## IMPLEMENTATION PROJECT iCAROS

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A **dedicated project team** has been set-up to implement the consulted iCAROS design and discuss with the relevant stakeholders the important topics of this implementation.

**Stakeholder communication : Implementation Project iCAROS**

Information and documentation exchanged in the framework of the Implementation Project iCAROS can be found on this page.

- » **Stakeholder communication - iCAROS - 1st Fine-tuning Workshop - 02/04/2019**
  - a. [Slides](#)
  - b. [Minutes](#)
- » **Stakeholder communication - iCAROS - 1st implementation Workshop - 27/06/2018**
  - a. [Slides](#)
  - b. [Minutes](#)

- Plenary Meetings
- WG System Operation and European Market Design
- WG Belgian Grid
- Working Group Balancing**
  - Agenda
  - Projects & Publications
  - Task Force BidLadder
  - Task Force Implementation Strategic Reserves
  - iCAROS
    - Task Force iCAROS
    - Implementation Project iCAROS

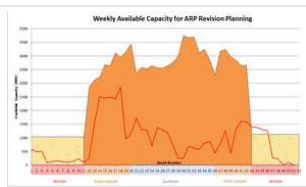


Outage Planning Agent

## Purpose of outage planning

### Adequacy check

The goal is to reduce the risks for scarcity throughout the year.



### Local Congestion Check

The goal is to reduce the risk that insufficient flexibility would be available in case of congestions.

⇒ Avoid simultaneous unavailability of main PU in the same electrical zone

### Maintenance planning check

Based on the outage planning Elia checks when specific works for maintenance on the Elia grid can be planned.

### Risk assessment for unavailability of Ancillary Services

Avoid the simultaneous unavailability of a number of units delivering ancillary services (FCR, aFRR, mFRR, etc.)

## Outage Planning Agent

**Who ? Grid User or a Third Party** appointed by the GU

- By default, the **Grid User** (signatory of connection contract) is the OPA
- The Grid User may delegate the task to a **Third Party** (market party).

Grid User (default)

↓

Third party

**What ?**

- The **task of planning the availability status** of a (relevant) power generating module, storage device unit, or demand facility
- The **task of delivery active power capacity restrictions**, i.e., temporary deviations from the structural Pmax & Pmin

**Which assets ? (Mandatory)**

- PGM B/C/D
- Storage B/C/D
- TSO-connected Demand facilities

**Responsibilities**

OPA = contact person for Elia regarding Outage Planning

Grid user = coordinator with other providers/agents.

**Grid user remains liable**

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## Processes per type of asset

There are two types of processes that follow two types of calendar:

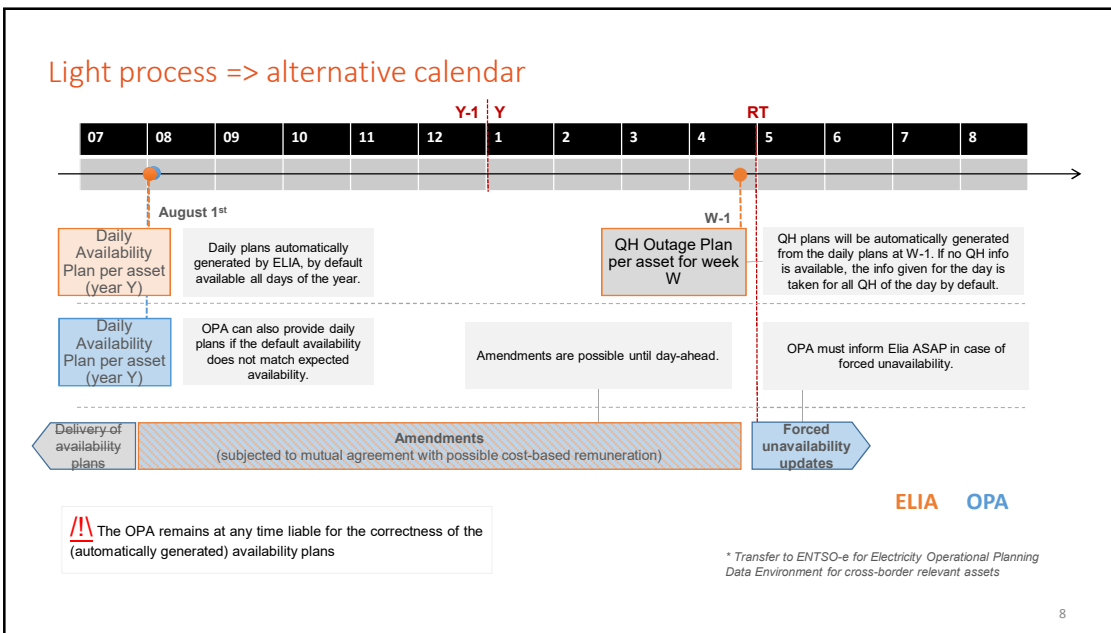
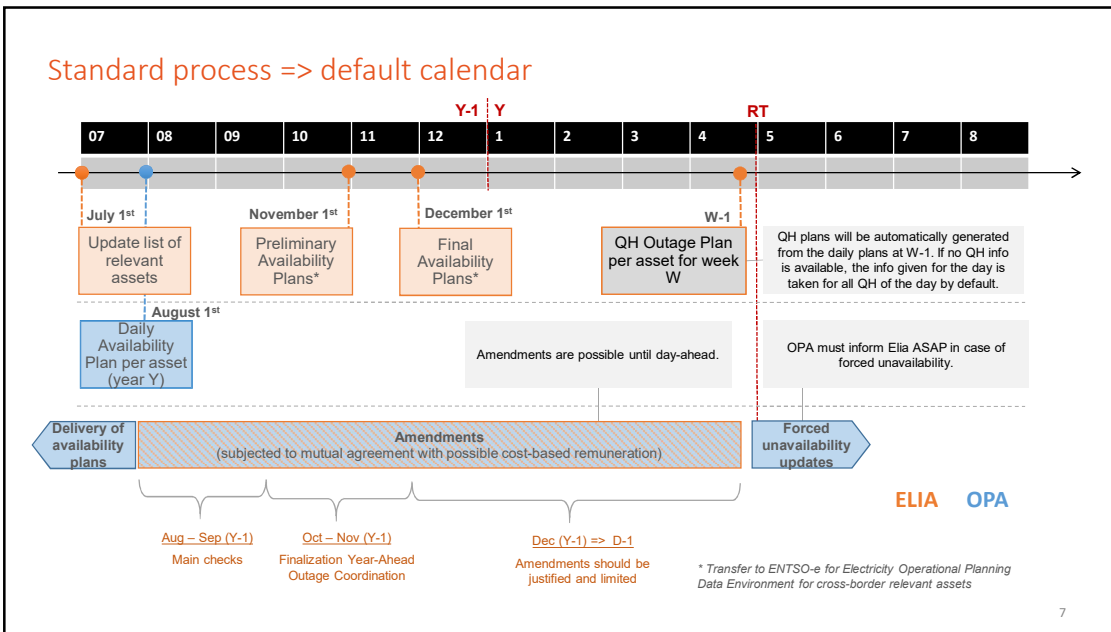
- Default calendar : standard process
- Alternative calendar : light process

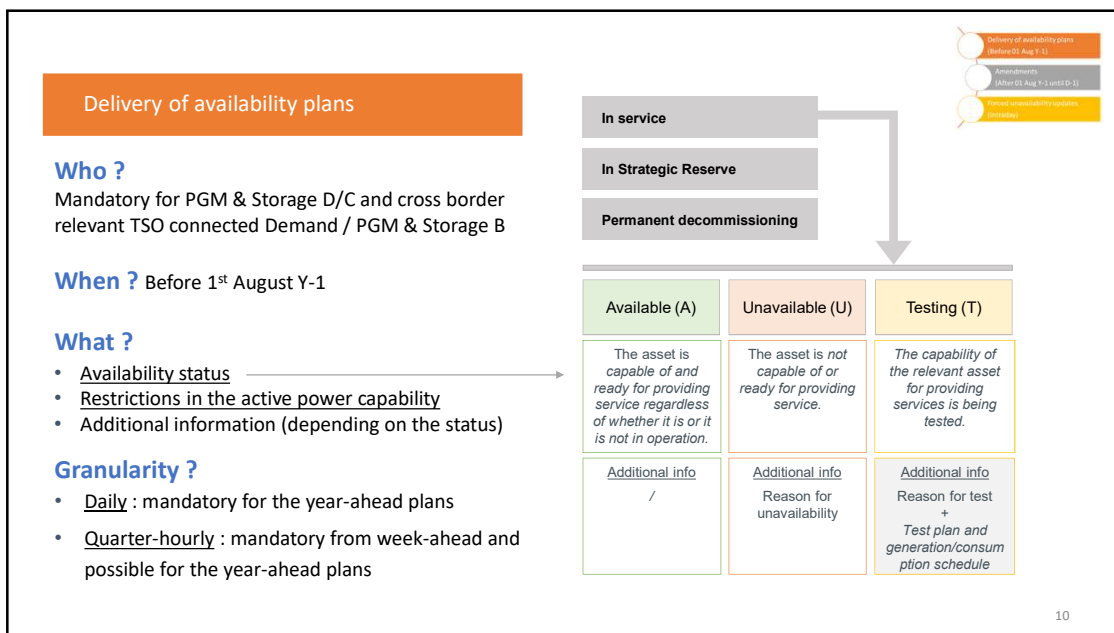
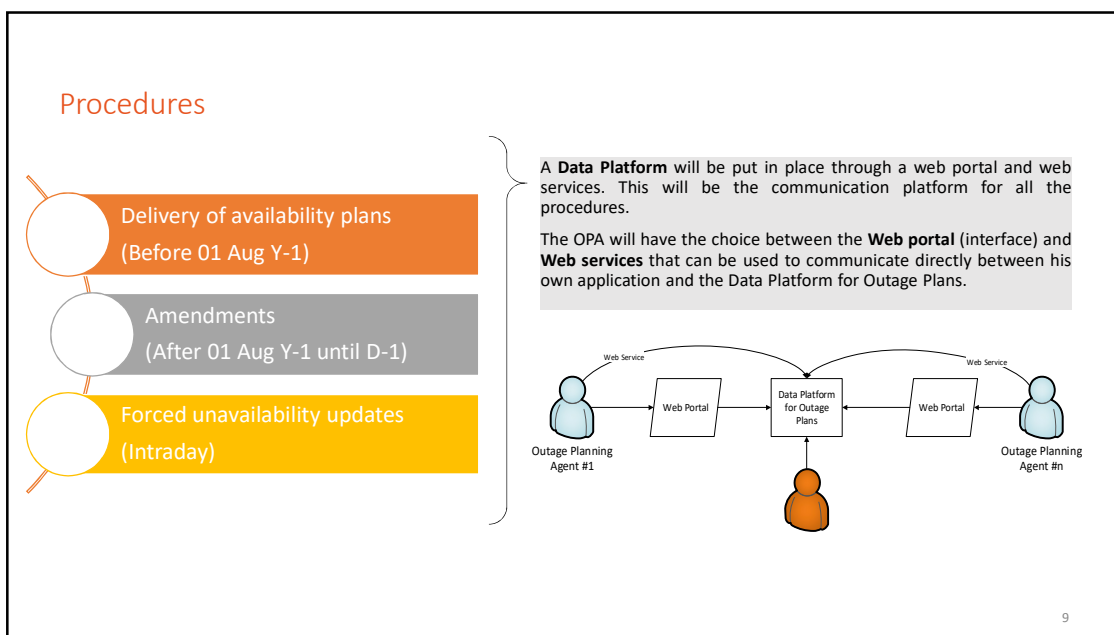
	PGM & Energy Storage D/C	PGM & Energy Storage B	TSO connected Demand Facilities
Cross-border relevant	Standard process	Standard process	Standard process
Non cross-border relevant	Standard process	Light process	Light process

For the light process, ELIA assumes default information for the availability plans for all days of the year :

- Availability status = "Available"
- Active power capability restriction = none (therefore the full installed capacity is presumed to be available)

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### Delivery of availability plans

Priorities for the daily availability status :

- **Testing** : if at least one quarter-hour is “Testing”
- **Unavailable** : if at least one quarter-hour is “Unavailable” and no quarter-hour is “Testing”
- **Available** : if all quarter-hours are in “Available”

Day D								Day D+1							Day D+2				
T								U							A				

QH1	QH2	QH3	QH4	QH5	QH6	QH7	QH8	...	QH1	QH2	QH3	QH4	QH5	...	QH1	QH2	QH3	QH4	QH5	...
U	U	U	T	T	T	A	A	...	A	A	A	U	U	...	A	A	A	A	A	...

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### Delivery of availability plans

From daily to quarter-hourly plans :

If no quarter-hourly plan has been provided as of week-ahead, it will be automatically generated from the daily plan by applying the (daily) status and restriction to all quarter-hours in that day.

	Day D					Day D+1							Day D+2						
	QH1	QH2	QH3	QH4	QH5	...	QH1	QH2	QH3	QH4	QH5	QH6	QH7	...	QH1	QH2	QH3	QH4	QH5
Status	U					U	U	U	T	T	A	A	...	A					
Capacity	0					0	0	0	100	100	100	100	...	100					

	Day D					Day D+1							Day D+2							
	QH1	QH2	QH3	QH4	QH5	...	QH1	QH2	QH3	QH4	QH5	QH6	QH7	...	QH1	QH2	QH3	QH4	QH5	...
Status	U	U	U	U	U	...	U	U	U	T	T	A	A	...	A	A	A	A	A	...
Capacity	0	0	0	0	0	...	0	0	0	100	100	100	100	...	100	100	100	100	100	...

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Amendments

(ELIA → OPA)

**Who ?** ELIA

**Who ?** OPA

**When ?** Between 1st August Y-1 and Day-ahead

**What ?**

- Request alternative period for unavailability and provide periods to avoid
- Accept or refuse the proposed alternative period

**What ?**

- Propose alternative period for an unavailability with possible associated conditions and/or costs
- Update the availability plan

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Amendments

(OPA → ELIA)

**Who ?** All Outage Planning Agents

**Who ?** ELIA

**When ?** Between 1st August Y-1 and Day-ahead

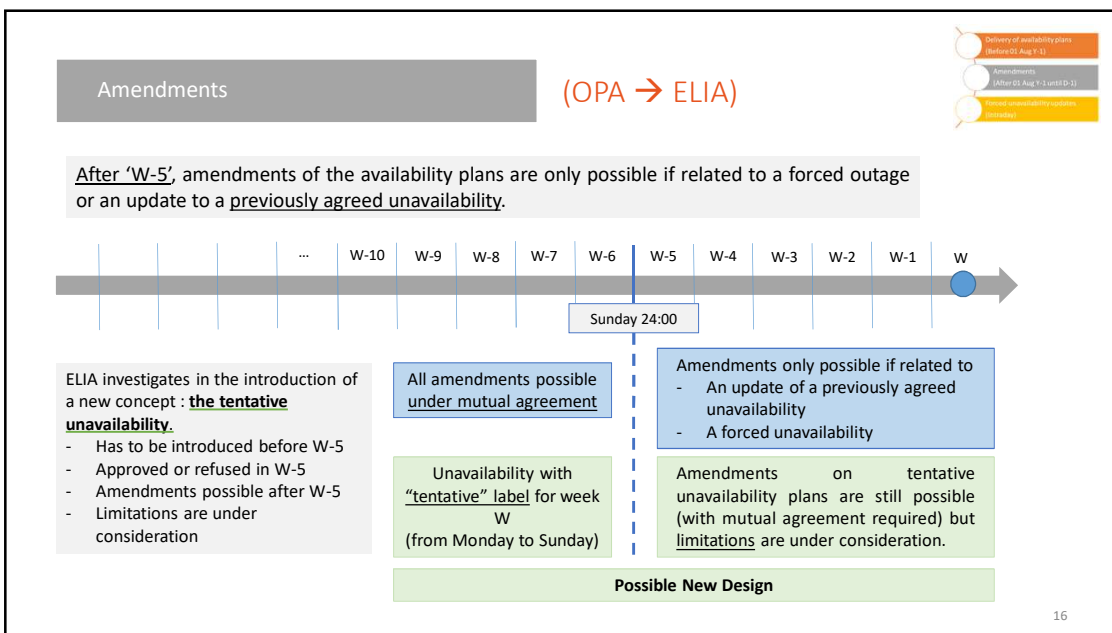
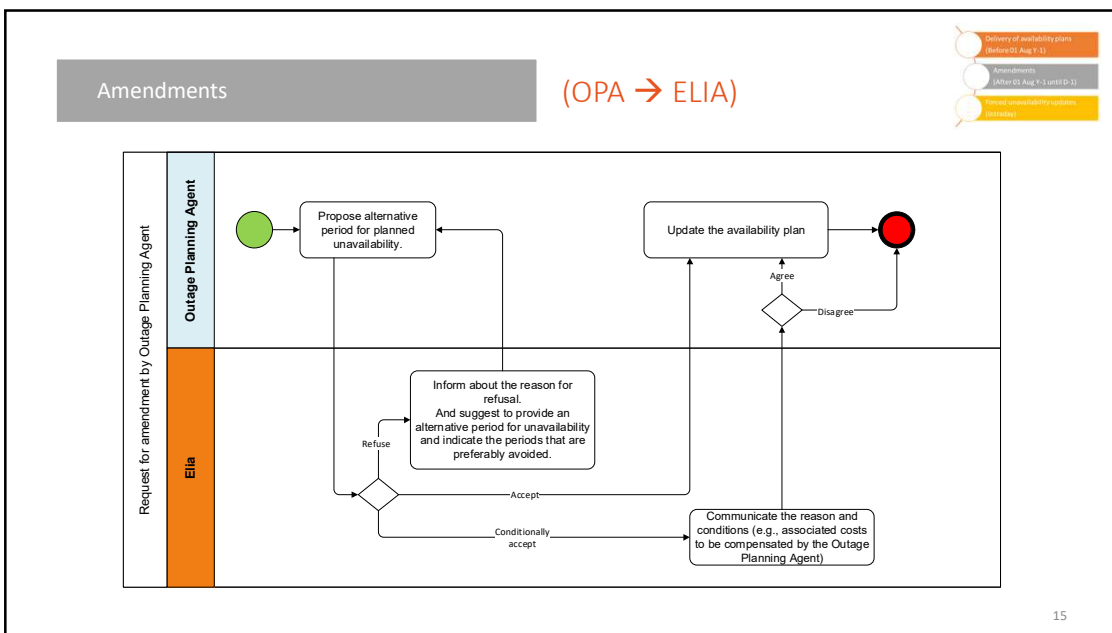
**What ?**

- Propose modification of the availability plan
- Agree/Disagree on associated costs
- Update the availability plan

**What ?** Respond to amendment (maximum 10 working days)

- **Accept**
- **Conditionally accept** : inform about the reason and provide associated costs
- **Refuse** : inform about the reason and provide periods of unavailability to avoid


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Amendments

Remuneration



The requested cost for amendments has to be :


- Reasonable
- Directly-related to the requested amendment
- Demonstrable

Rules for multiple amendments :

- If an amendment makes the previous amendment requested by the **other party** void, then the requesting party should **pay back** the remuneration that was paid for the earlier amendment.
- If an amendment annuls a previously requested amendment by the **same party**, the remuneration for the first amendment should **not be paid back**.

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Forced unavailability updates



**Who ?** All Outage Planning Agents

**When ?**

- In real-time, as soon as possible

**What ?**

- Inform Elia in case of forced unavailability (forced outage or forced restriction on the active power capability) on an asset
- Communicate the reason for the forced unavailability and the time to regain (fully) available

A forced-outage always occurs in real-time, the OPA has the responsibility to inform ELIA as soon as possible and to indicate how long the effect will last.

This will be done through the data-platform.

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# Backup



## Schedules of tests

**Who ?** All Outage Planning Agents when there is a “Testing” status on an asset

**When ?** Between one month and one week before the begin of the “Testing” status

**What ?**

- A detailed test plan (the requirements for the test plan will be described in the Terms & Conditions for the Outage Planning Agent)
- An indicative generation schedule (for PGM) or also consumption schedule (for energy storage devices) or an indicative consumption schedule (for Demand facilities)
- Uncertainties about the test plan/schedule

**Granularity ?** Quarter-hourly

## Remuneration for amendments

The requested cost for amendments has to be

- **Reasonable :**  
*the remuneration concerns an additional cost or loss of revenue that cannot be recovered elsewhere, based on certain information available at the moment of the request*
- **Directly-related to the requested amendment :**  
*the remuneration must be for a cost directly linked to the requested amendment, a cost that would not be incurred if the amendment was not requested*
- **Demonstrable:**  
*the remuneration must be supported by documents justifying the amount at the moment of the price offer, it can also be demonstrated based on past experiences with similar amendments.*



## Contractual responsibility after implementation iCAROS design

The Grid User appoints an Outage Planning Agent in the **Connection Agreement**. The designated party will be responsible for the outage planning of the assets in the Connection Agreement subject to outage planning obligation.

The Outage Planning Agent sign with Elia a regulated **T&C Outage Planning Agent**.

The Grid User remains liable for :

- assuring that the OPA delivers the service in compliance with the European Guidelines
- the execution of the Outage Plans in real-time

**The Grid User therefore remains liable for the consequences of deviations from the availability plan in real-time**

