



iCAROS phase 2 – Availability Planning

Workshop

21/10/2024

Agenda

1. Introduction
2. Availability planning process - Generalities
3. Evolution of availability planning process for production and storage facilities with a power higher than or equal to 25MW
4. New availability planning process for production and storage facilities with a power lower than 25MW and higher than or equal to 1MW
5. New availability planning process for demand sites
6. Next steps



iCAROS : what is it?

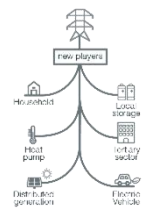
The Coordination and Congestion Management of system relevant assets of grid users, new way of working : the **iCAROS** project

Goal



Ensure an efficient and future proof coordination of system relevant assets and congestion management

Why?



To expand the coordination of system relevant assets and congestion management to all system relevant asset types of grid users and to all relevant voltage levels

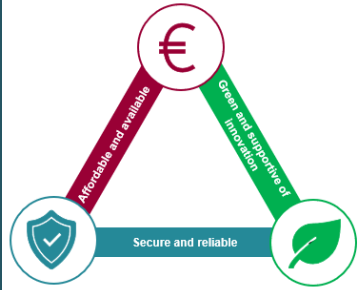


To be compliant with European legislation (SOGL, CEP, EBGL)



To split roles and responsibilities in the market

READY FOR
50% INCREASE BY 2032



How?



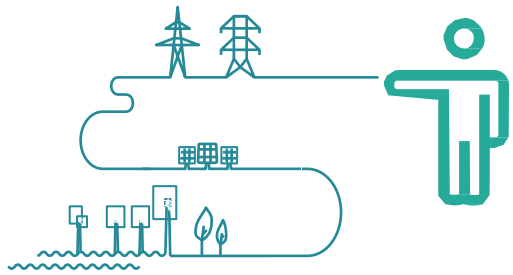
The implementation of a new up scalable state of the art design & a new contractual framework in line with the digital transformation strategy

iCAROS = Integrated Coordination of Assets for Redispatching and Operational Security

Business Scope

Exchange of operational data [from LT to RT]

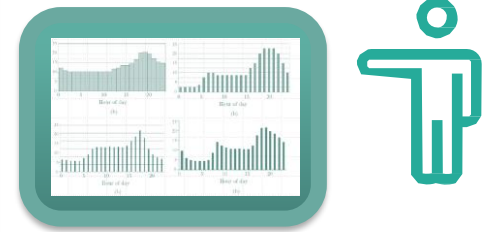
Availability Planning of grid users' assets



Provision of availability statuses and active power restrictions

Available (A)	Unavailable (U)	Testing (T)
	Forced Outage (FO)	

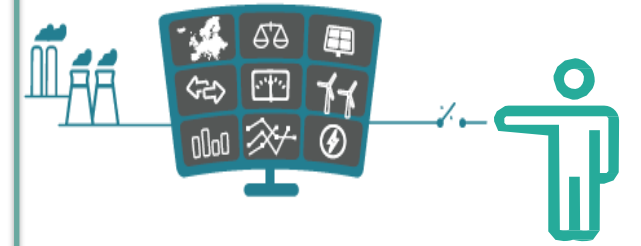
Scheduling of grid users' assets



Provision of active power schedules

	00.00	00.15	...	23.30	23.45
Schedule (MW)	-45,1	-42,2	-45,1	-42,2

Congestion management – costly RD provided by grid users assets



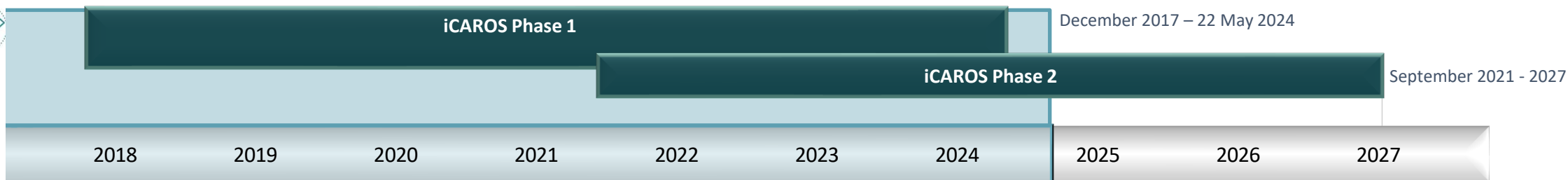
Provision and activation of redispatching bids (active power upwards and downwards)

Delivery point(s)	DP1
ID	RD001
Direction	Upwards
Bid price	50 € / MWh
(max) Bid volume	100 MW

iCAROS Phased Implementation : current focus phase 2

Best response as TSO to make electrification happen

Pillar 3 
Unlock consumer flexibility to follow variable RES



Phase 1
22 May 2024

- large TSO production units (≥ 25 MW) and inclusion of batteries

Phase 2
2025 -2027
Multiple sprints
TSO/DSOs co-creation

- TSO production units (≥ 1 MW)
- TSO load (except RD bids)
- Operational planning for production DSO units (≥ 1 MW)

Phase 3
2027 -
Multiple sprints
TSO/DSOs co-creation

- TSO & DSO production units (≥ 1 MW)
- Voluntary for TSO load (except operational planning)

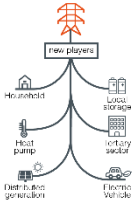


Availability planning process – iCAROS phase 2

Objectives



- **Propose a simplified and uniform process** to provide availability plans to Elia



- **Extend the availability planning process** for production and storage facilities above 1 MW* and demand sites** **to cover operational needs**



- Ensure **compliance** with European regulation (such as SOGL) and Belgian regulation (such as Code of Conduct and Regional Technical grid codes)



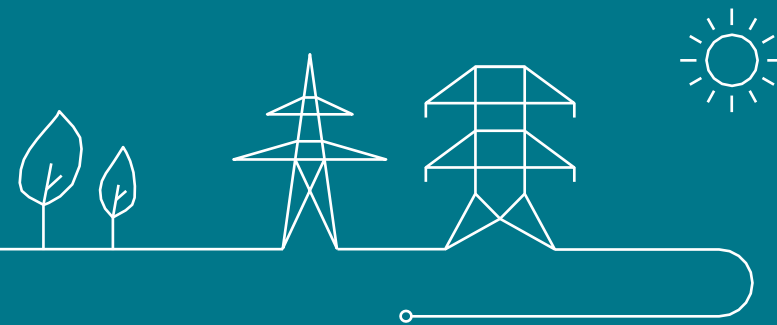
- Alignment of provision of data with **requirements related to transparency**



* Connected to TSO or CDSO (connected to TSO) grid

** Directly connected to TSO grid

Availability planning process



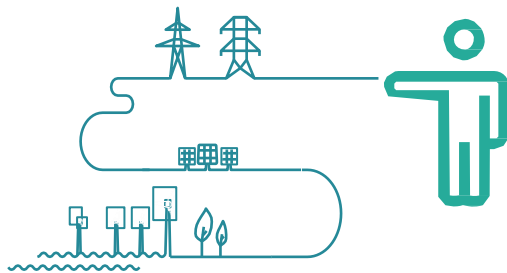
iCAROS = Integrated Coordination of Assets for Redispatching and Operational Security

Business Scope

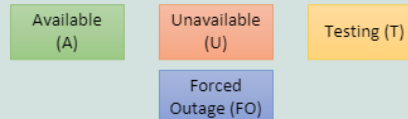
Exchange of operational data [from LT to RT]

Focus on TSO/CDSO connected production & storage facilities and on TSO connected demand sites

Availability Planning of grid users' assets



Provision of availability statuses and active power restrictions



Scheduling of grid users' assets



Provision of active power schedules

	00.00	00.15	23.30	23.45
Schedule (MW)	-45,1	-42,2	-45,1	-42,2

Congestion management – costly RD provided by grid users assets



Provision and activation of redispatching bids (active power upwards and downwards)

Delivery point(s)	DP1
ID	RD001
Direction	Upwards
Bid price	50 € / MWh
(max) Bid volume	100 MW



Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation – **SOGL**

Part III Title 3 (mainly articles 89 to 103)



- Gedragscode Elektriciteit /Code de bonne Conduite Electricité from the **CREG**
Articles 123 to 127
- Technisch Reglement Plaatselijk Vervoernet van Elektriciteit from the **VREG**
Section IV.4.9 and IV.4.10
- Règlement technique - Réseau de transport régional d'électricité from **BRUGEL**
Articles 163 to 168



What? – Availability planning information

- Providing information concerning the **planned or forced unavailability of Technical Facilities**
 - **Availability statuses** as defined in the SOGL
 - **Active power capacity restrictions**, i.e., technical restrictions impacting the structural maximum power (P_{max})



Available (A)	Unavailable (U)	Testing (T)	Forced Outage (FO)*
The Delivery Point to which a Technical Unit is associated is capable of and ready for injecting or offtaking active power regardless of whether it is in operation or not	The Delivery Point to which a Technical Unit is associated is not capable of or ready for injecting or offtaking active power due to a full planned unavailability	The capability of the relevant Delivery Point to which a Technical Unit is associated, for injecting or offtaking active power is being tested	The Delivery Point to which a Technical Unit is associated is not capable of or ready for injecting or offtaking active power due to a full or partial unexpected unavailability



*While existing in SOGL, the FO status is introduced to be in line with Transparency Regulation that requires a specific distinction between planned and unplanned unavailabilities

Who? - Outage Planning Agent (OPA)

- Elia Grid User itself

Grid User = OPA



GU signs the OPA contract with Elia

- A third party designated by the Elia Grid User

Grid User



Designation of a third party as OPA via common declaration



Third party signs the OPA contract with Elia

For **CDS-connected facility**: the **CDS grid user** takes the outage planning designation responsibility

- The **involvement and role of the CDSO** in the process is still to be defined
- A specific meeting will be organized with CDSO/CDS Grid User to finalize the design



Why ? - Input for operational processes

Maintenance planning check

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

→ Accurate data allow Elia to optimize the planning and avoid as much as possible interference with OPA maintenance plans

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 Technical Units in the same electrical zone

Adequacy check

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



Risk assessment for unavailability of Ancillary Services

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



How? – Provision of Availability Plan

- The **availability plan** consists of providing to Elia for all delivery points for day D:
 - An **availability status** (A, U, T or FO)*
 - A corresponding **maximum power available** (P_{max_avail})

OPA		00.00	00.15	00.30	00.45	01.00				23:00	23.15	23.30	23.45
		Availability plan status	A	A	U	U	U		T	T	T	A		
$P_{max, avail}$ (MW)	100	100	0	0	0		20	50	80	100				

Time granularity

- The granularity of the information is either **daily or quarter-hourly** in accordance with article 92 of the SOGL
 - Granularity depends on the timings of the process for provision of data (cfr next slides)

Provision of data

- Information is to be provided at Delivery Point (DP) level
 - Definition of DP for demand sites and integrated sites are to be defined (cfr specific slides)

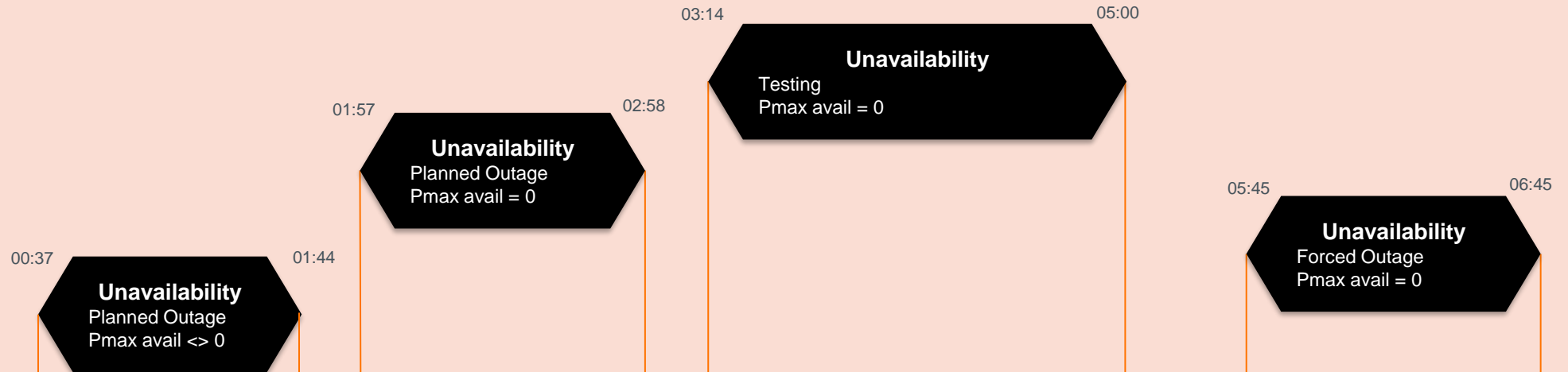


* From an implementation point of view, Elia assumes a delivery point is Available unless stated otherwise. The OPA is thus expected to indicate when the unit will be **unavailable (in testing/forced outage/planned outage)** through an unavailability event of a certain duration. This event can be shortened, prolonged or cancelled when updated

Unavailability events vs. availability plan

Unavailabilities

Sent by OPA



XX/XX/2024	00:00	00:15	00:30	00:45	01:00	01:15	01:30	01:45	02:00	02:15	02:30	02:45	03:00	03:15	03:30	03:45	04:00	04:15	04:30	04:45	05:00	05:15	05:30	05:45	06:00	06:15	06:30	06:45
Availability plan	A	A	A	A	A	A	A	U	U	U	U	U	U	T	T	T	T	T	T	T	T	A	A	FO	FO	FO	FO	FO
	Tech	Tech	Avail	Avail	Avail	Avail	Avail	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Tech	Tech	0	0	0	0	0

Availability Plan

Derived by Elia

At which level? - iCAROS terminology

Technical Unit (TU): Device or aggregation of devices connected directly or indirectly to the synchronous electrical network that produces and/or consumes electricity.

Technical Facility (TF): Complete set of Technical Unit(s) which are operationally linked and which, combined together in one or several operating modes, can consume or generate electricity on its own.

Operating Mode (OM): Any subset of Technical Units, being part of the same Technical Facility, that can generate or consume electricity on its own.

Delivery Point (DP)

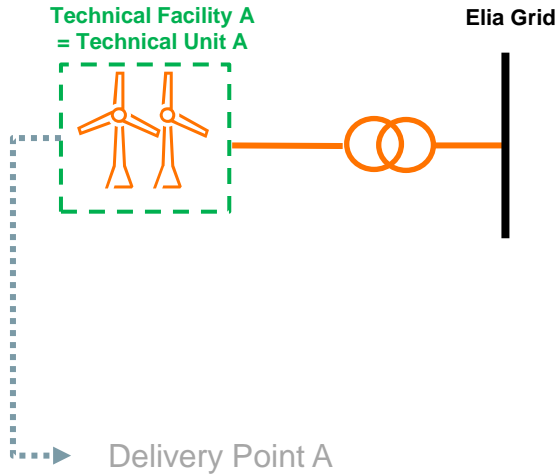
- By default, the Delivery Points are defined at the level of the Technical Units
- For a Technical Facility (sPGM) composed of several Technical Units, the Delivery Point can exceptionally be defined at the level of the TF if the conditions listed below are simultaneously fulfilled:
 - All Technical Units of the TF can only be operated simultaneously;
 - All Technical Units of the TF are linked to the same Access Point.

	Concept used for
TF	Defining the obligation to participate to service
OM	Submission of Redispatching bids (combination of DP belonging to the same TF)
DP	Submission of availability statuses

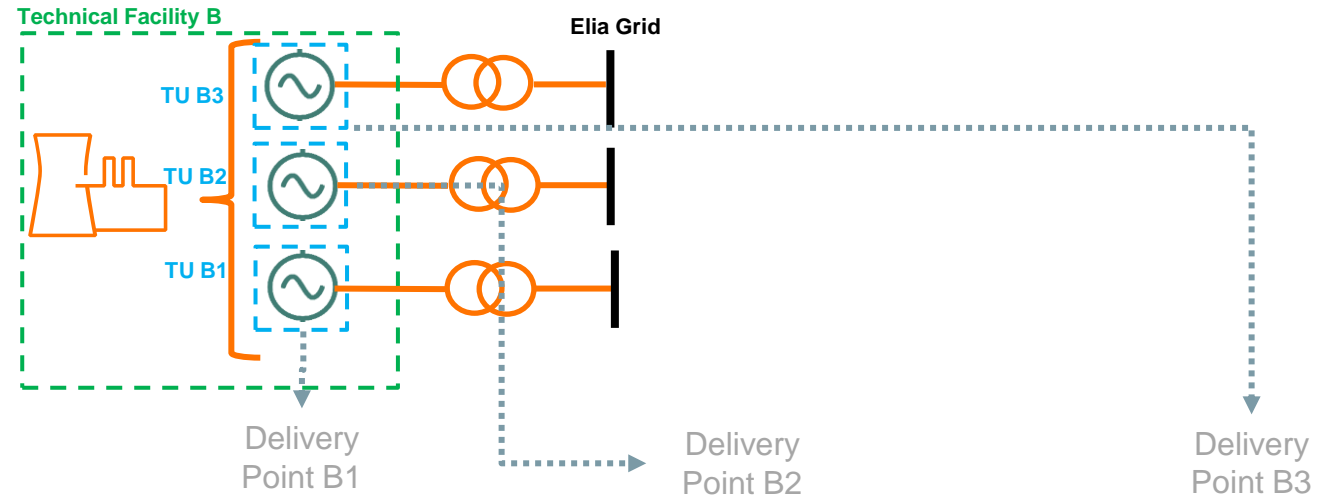


iCAROS terminology - Examples

1) A **wind park A** which is a Power Park Module (PPM) whose primary energy source is wind*

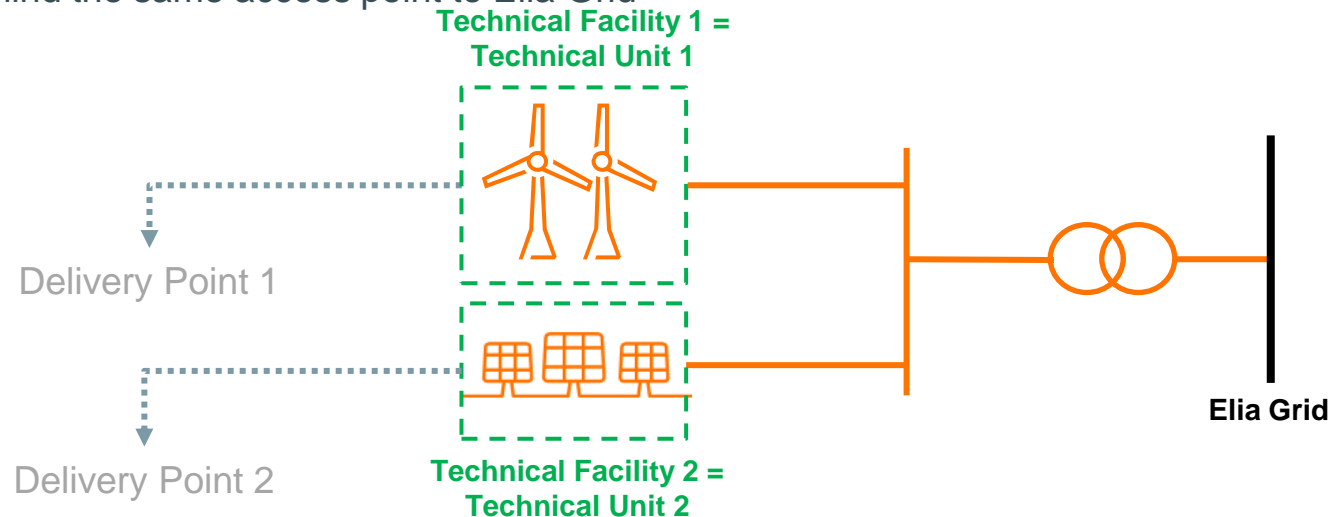


2) A **CCGT B** which is a synchronous Power Generating Module composed of three Technical Units (TU): two gas turbines and one steam turbine

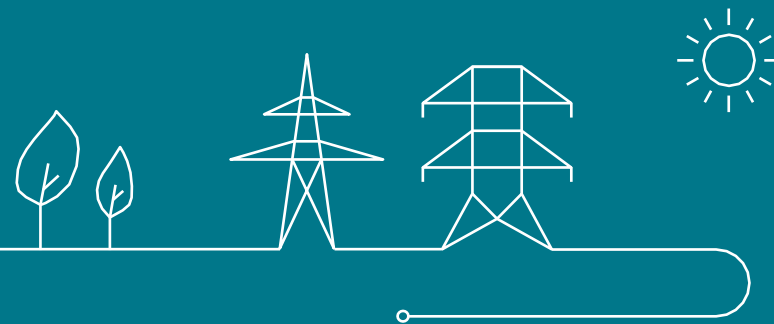


*Specific configuration is possible in case multiple BRPs are designated

3) A **wind park** which is a Power Park Module (PPM) whose primary energy source is wind and a **solar park** which is a PPM whose primary energy source is sun connected behind the same access point to Elia Grid



Evolution of availability planning process for production & storage facilities $\geq 25\text{MW}$

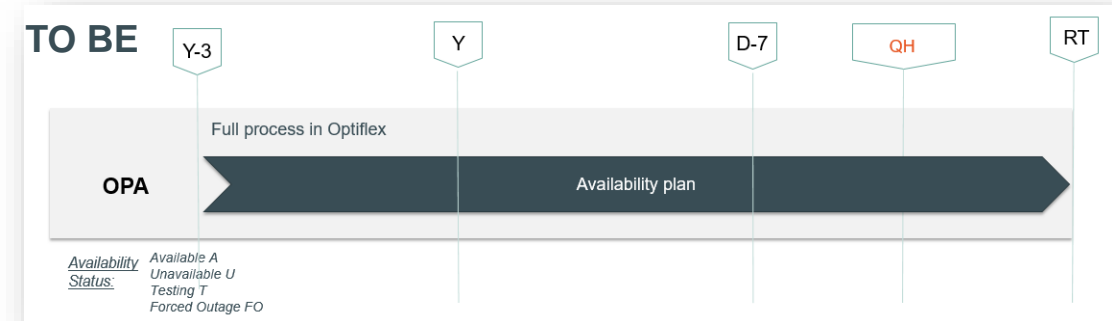
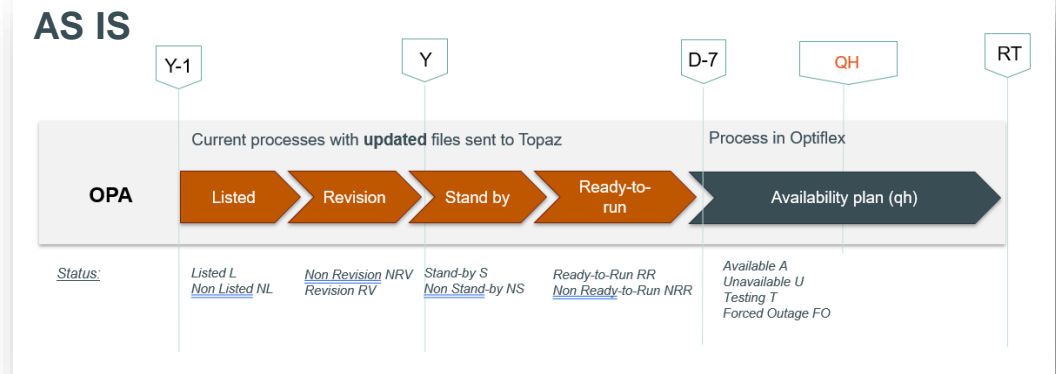


Availability planning process – iCAROS phase 2

Target design for production and storage facilities

Target design

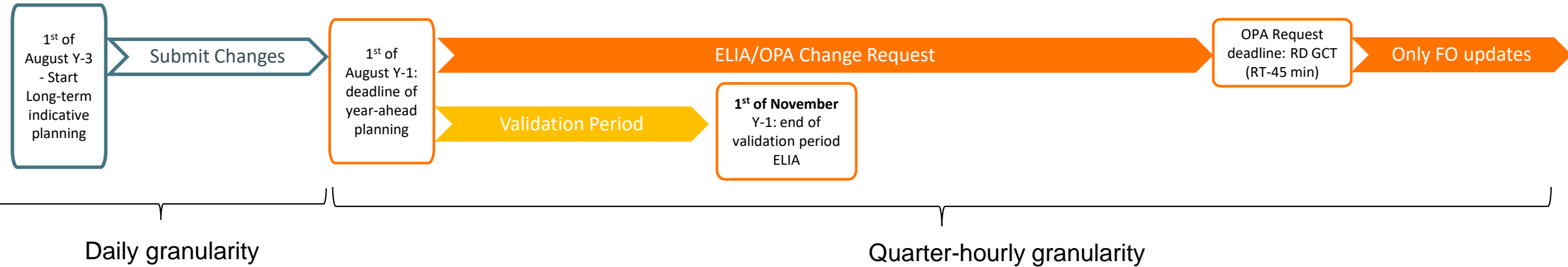
- **Simplified and uniform process** to provide availability plans to Elia
 - Removing several “gates” to provide information and introducing **continuous updates of data***
 - Full alignment with SOGL statuses for all timeframes
- Introduction of **Y-3 process** in accordance with article 93 of the SOGL
- Alignment of provision of data with **requirements related to transparency**



Multi-year ahead planning

Mandatory and validated by Elia	Mandatory and not validated by Elia	Not mandatory
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TF >= 25MW



Key points

- Mandatory submission of long term indicative availability plan* until Y+3 with daily granularity.
 - Indicative information, not validated by Elia.

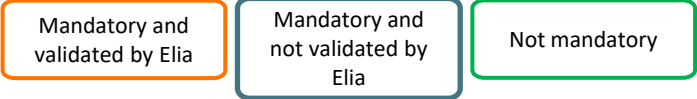
Needs for system operations

- Important input for optimization of operational planning in specific cases with a multi-year context as well as for adequacy studies

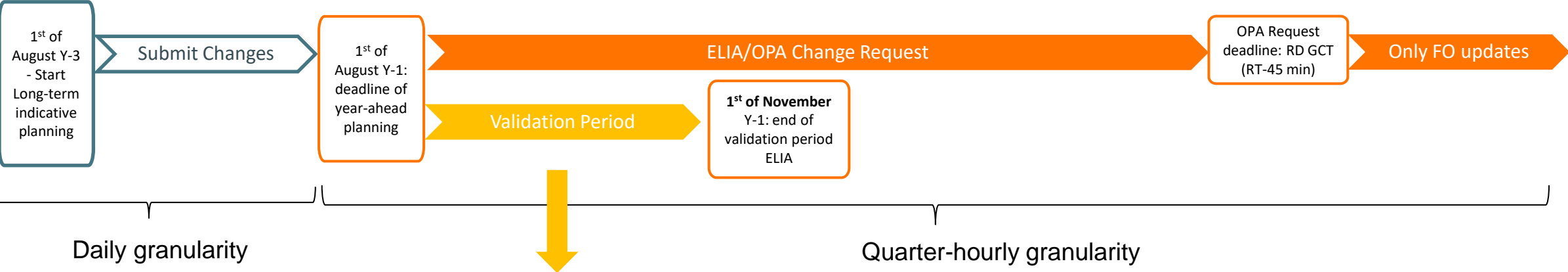


* Transparency obligation concerns TF ≥ 100 MW, however Elia proposes to extend this to TF ≥ 25MW to cover the needs related to multi-year operational planning

Year-ahead planning



TF >= 25MW



Key points

- Mandatory submission of availability plan on 1st August of Y-1 with quarter-hourly granularity for each DP
 - Binding availability plan, subject to validation by Elia
- Validation period for Elia until 1st of November Y-1
 - For amendments received during validation period, Elia will endeavor to take these into account. If not possible, these will be treated afterwards as update of the final availability plan

Needs for system operations

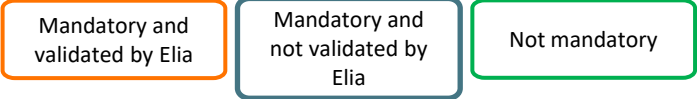
- Input to create the year-ahead outage planning as well as for seasonal adequacy studies



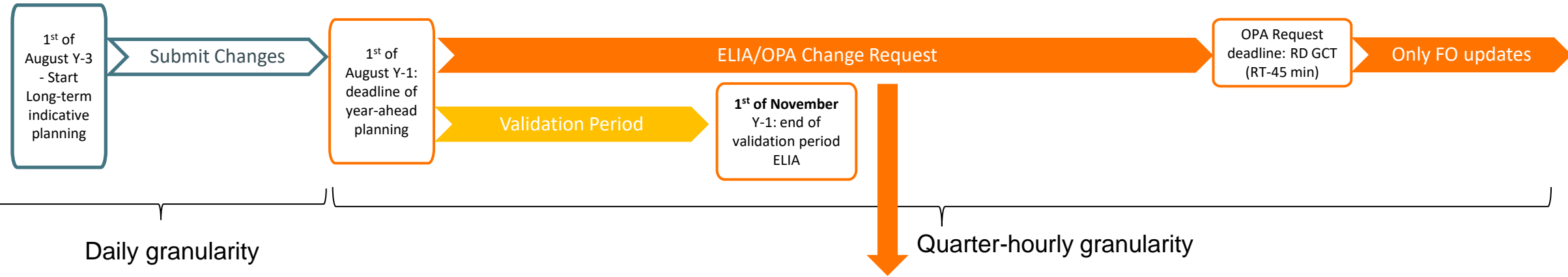
- During the validation period, Elia analyses the **compatibility** of availability plans provided by the OPAs at the relevant deadline with outage planning for Elia's assets
 - In accordance with the principles stated in the Rules for Coordination and Congestion Management
- Elia provides a final validation of the availability plan at the end of validation period
 - Indicative answer can be provided before the end of validation period
- In case an incompatibility is identified by Elia, Elia can request a **change of availability plan**



Updates to last validated planning



TF >= 25MW



Key points

- **Simplified and uniform process** to provide updates of availability plans to Elia
 - Removing several "gates" (Revision/Stand-By/Ready-to-run processes) to provide information and introducing continuous updates of data
 - Full alignment with SOGL statuses for all timeframes

Needs for system operations

- Receiving updates as soon as available at OPA side (not waiting for "gates")



OPA change request process

- The OPA can provide a change request of its availability plan after 1st August Y-1
- Depending on the timing of provision of the change request, Elia provides an answer to the OPA according to the following timings*:

OPA change request	Latest validation time by Elia
Within validation period	The most distant deadline between: <ul style="list-style-type: none">• End of validation period• Day of submission + two weeks
After validation period until Thursday 18:00 W-1	The closest deadline between: <ul style="list-style-type: none">• Day of submission + two weeks• Friday 16:00 W-1
After Thursday 18:00 W-1 and before D-1 10 AM	The closest deadline between: <ul style="list-style-type: none">• Moment of submission + 24h• D-1 10 AM
After D-1 10 AM	RT – 30 min

- Change requests have to be communicated to Elia as soon as they are known by the OPA
- This also allows increasing the probability of an accepted change request as it gives more time to Elia to find acceptable solutions in case of incompatibilities

Elia change request process

- Elia can request the following changes to the availability status provided by the OPA:

ELIA can request		
Indicated by the OPA	Availability Status	Meaning
Unavailable (U)	Available (A)	the Delivery Point is requested to be capable to inject (or take off) power
Testing (T)*	Available (A)	

- Elia will only request changes to availability plan in the period between:
 - **The start of the validation period**
 - **The deadline to request a must-run or a may-no-run to the scheduling agent**
 - Currently this deadline is D-5



* Modalities for the provision of a “Testing” status are to be defined (see next slides)

Modalities for change requests

- Changes of availability plans requested by the OPA/Elia are **subject to the approval by the other party (Elia/OPA)**
- A change request can be:
 - Accepted
 - Refused with justifications
 - Accepted on the condition that associated costs are compensated
- When a change request is accepted on the condition that associated costs are compensated, the **accepting party provides a financial offer** to the requesting party
 - Via a simplified process in the outage planning tool
- The **associated costs are provided via the offer** sent to the requester party and should be
 - Reasonable
 - Demonstrable
 - Directly related to the request



Rules for multiple amendments leading to associated costs :

- 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



Example

1. On 1st August Y-3, the OPA knows that a maintenance of about 10 days will be necessary in year Y around Q2 → **OPA provides a first unavailability event** for year Y that is acknowledged by Elia

2. On 1st August Y-1, the **OPA confirms this maintenance** and has more detailed information on the exact timings of the outage to provide → OPA updates its previous unavailability event

→ On 1st November Y-1, Elia confirms that this availability plan does not create grid security issue and no change is requested

3. On 15th November Y-1, the OPA provides an update of the availability planning

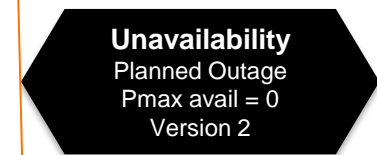
→ On 1st December Y-1, Elia accepts the update

15 May 00:00 YYYY



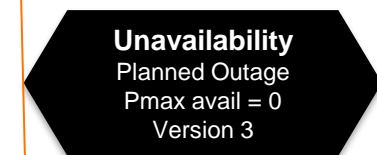
4 May 08:00 YYYY

14 May YYYY 18:00



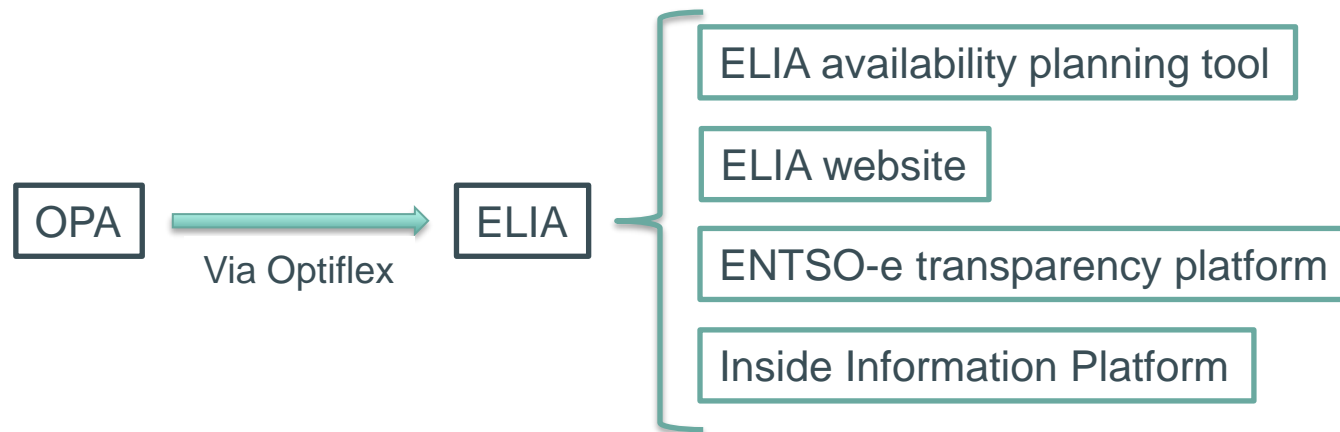
4 June 08:00 YYYY

14 June YYYY 18:00



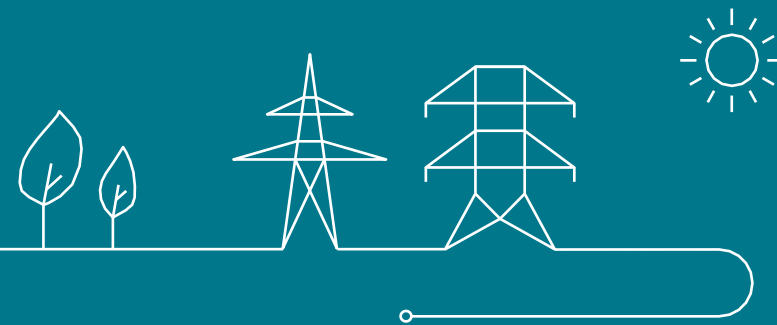
Transparency – Publication of outages

- Planned and forced outages of technical facilities are **published according to transparency obligations**
 - On Elia website
 - On ENTSO-e transparency platform*
 - On Inside Information Platform (IIP) if market party chooses Elia IIP as Inside Information Platform
- These publications are currently based on information provided by market parties via a separate data flow (Transprod)
- Elia proposes to **ensure data consistency by creating a unique data flow** for availability planning and transparency obligations
 - In practice, the **availability plan provided by the OPA will be the source for both processes**



* If Elia is the data provider to ENTSO-e for the relevant facilities

Testing and Forced Outage status



Testing (T) status – Definition and modalities

- **Testing** : The capability of the relevant Delivery Point to which a Technical Unit is associated, for injecting or offtaking active power is being tested
- Testing status is
 - **Not to be used for tests requested by Elia** in framework of e.g. Black-start service
 - Only used for “planned tests” as a Test Plan should be provided in advance
 - Similar to an “Available” status except that no ancillary services/redispaching services can be provided
 - No mFRR/aFRR/RD energy bids are expected
- The relevancy of “Testing” status for a demand facility is still to be assessed

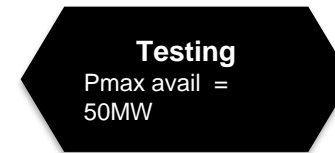


Test Plan and execution of the test

- When planning a test, the **OPA has to provide in advance*** a **Test Plan** to Elia

- A **Test Plan** consists in

- A **Testing status** with a **Pmax available**** during the test period
- The **reason** of the planned test



Availability plan	00:00	00:15	00:30	00:45	01:00	01:15
Availability status	T	T	T	T	T	T
Pmax available	50	50	50	50	50	50

- The provision of the Testing status and related Pmax available **is to be validated by Elia**
- As from day-ahead 3 PM before the test, the **SA provides a schedule for the Test**
 - Schedule related to a “Testing” status has to be validated by Elia
- A Test can **be canceled in real-time by Elia** if strictly needed for operational security reason
 - Cancellation of a test in real-time should be quite exceptional
 - A good coordination of the Test in advance still reduces the risk of real-time cancellation



*Typically within one month before the start of the test

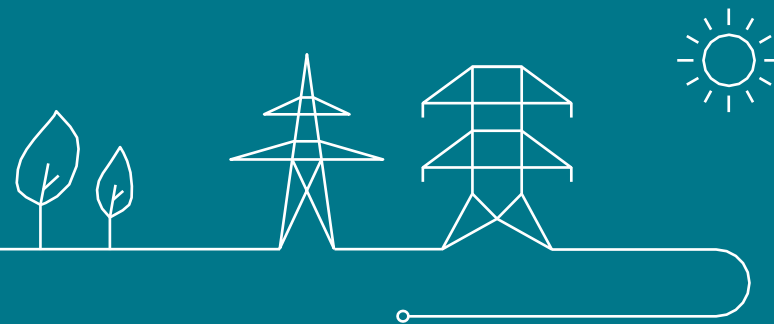
** Pmax that will be injected/taken off during the test

Forced Outage (FO) status

- **Forced Outage** means the unplanned removal from service of a relevant asset for any urgent reason that is not under the operational control of the operator of the concerned relevant asset
- Rules **to declare a FO** (no changes compared to current OPA contract):
 - A submitted FO status is automatically validated if submitted for:
 - The ongoing quarter-hour
 - Any of the 96 quarter-hours before the ongoing quarter-hour;
 - A successive serie of quarter-hours, starting with the ongoing quarter-hour
 - A partial Forced Outage is to be indicated via a FO status with a maximum available power larger than 0 MW



New availability planning process for production & storage facilities with a power larger than 1 MW and lower than 25MW



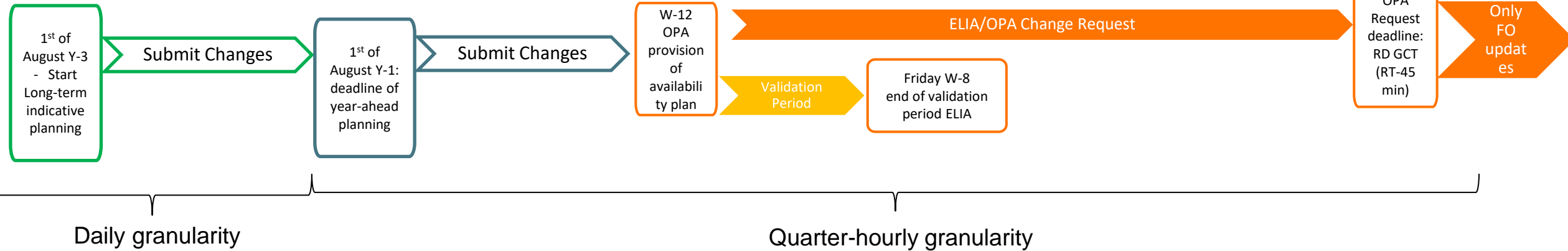
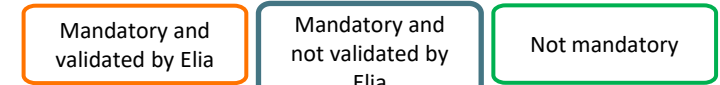
Specific design for smaller technical facilities

- The major part of the elements previously defined are applicable for all types of facilities:
 - Type of information to be provided
 - Granularity of information
 - Concepts of validation period and change request process
- However, considering that:
 - A fully accurate availability plan is probably more complex to provide long-time in advance for smaller production and storage facilities
 - The operational process at Elia side is different at lower voltage level
- Some **differences in terms of design are proposed** compared to larger technical facilities concerning:
 - The **timings and process** for the provision of information
 - The **validation timings** from Elia (due to operational limitation with possibilities of evolution)



Multi-year-ahead planning

1 MW ≤ TF ≤ 25MW



Key points

- Not mandatory, but system will be open for OPA to voluntary submit long-term indicative availability plan until Y+3

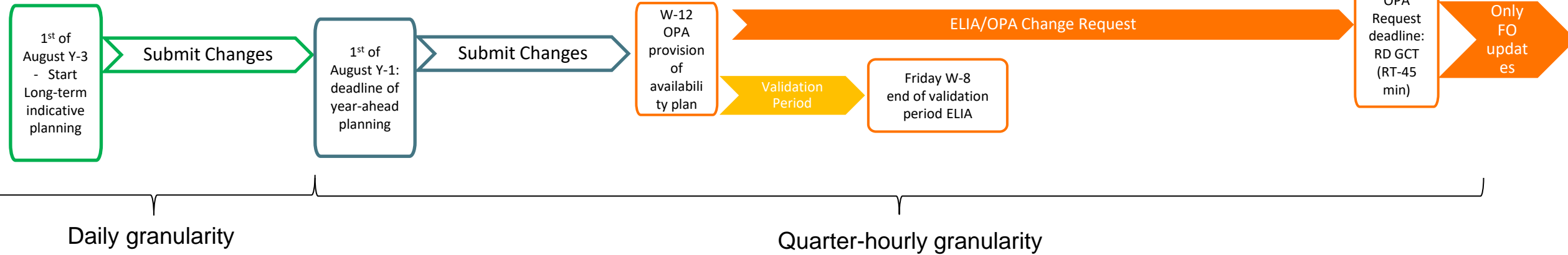
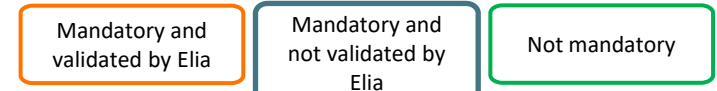
Needs for system operations

- Multi-year input for small facilities is not required for optimization of outage planning by Elia



Year-ahead planning

1 MW ≤ TF ≤ 25MW



Key points

- Mandatory submission for Y+1 for each Delivery Point
 - Indicative availability plan, no validation by Elia

Needs for system operations

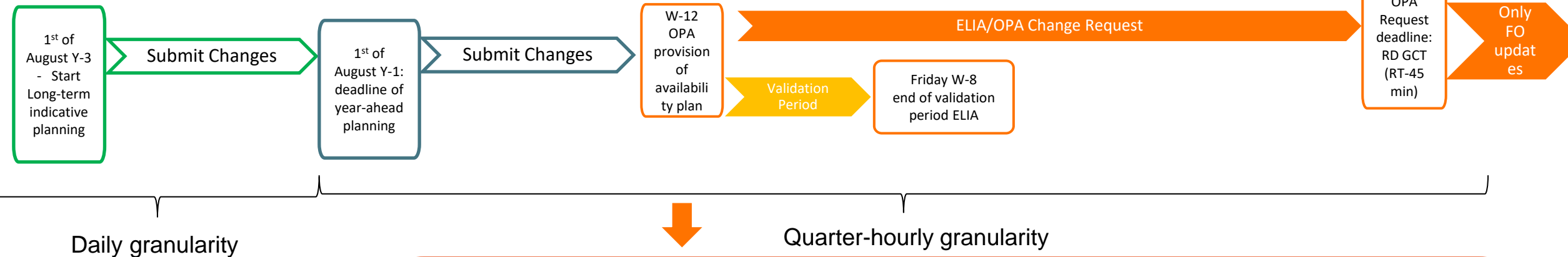
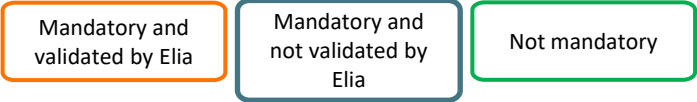
- Input may be used, for a preliminary check, during the year-ahead outage planning of grid elements
(mostly focused on specific cases or regions with limited outage possibilities)



Updates to year-ahead planning



1 MW <= TF <= 25MW



Key points

- Mandatory submission of availability plan in W-12 for week W with quarter-hourly granularity for each DP
 - Binding availability plan, subject to validation by Elia
- If no change to year-ahead availability plan is submitted, information for week W, as submitted in Y-1, will be used
 - Communication from Elia to OPA for a confirmation of an already planned maintenance can be envisaged if helpful
- Validation period for Elia until Friday W-8 (18h00)
 - For amendments received during validation period, Elia will endeavor to take these into account. If not possible, these will be treated afterwards as update of the final availability plan

Needs for system operations

- Input will be used by Elia in the operational planning analyses
- Elia will discuss adaptations with OPA in case of detected incompatibilities

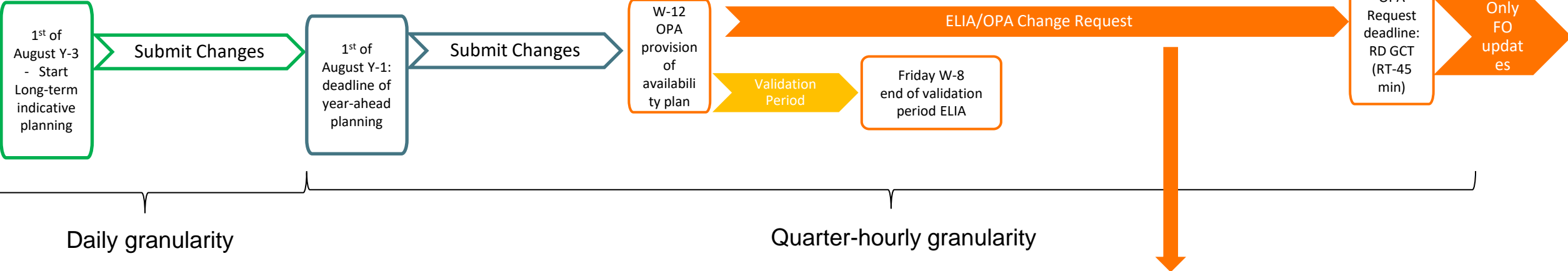
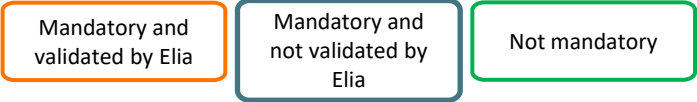
- During the validation period, Elia analyses the **compatibility** of availability plans provided by the OPAs at the relevant deadline with outage planning for Elia's assets
 - In accordance with the principles stated in the Rules for Coordination and Congestion Management
- Elia provides a final validation of the availability plan at the end of validation period
 - Indicative answer can be provided before the end of validation period
- In case an incompatibility is identified by Elia, Elia can request a **change of availability plan**



Updates to last validated planning



1 MW <= TF <= 25MW



Daily granularity

Quarter-hourly granularity

Key points

- Until RD Gate Closure Time, each OPA can request an update of the final availability plan to Elia
- In case an update is requested by Elia or OPA, the other party either:
 - Accepts the update
 - Refuses the update
 - Accepts the update, but the costs associated to the change are born by the requesting party

Needs for system operations

- Input will be used by Elia for the operational planning analyses
- Elia may request a change in availability plan in case incompatibilities arise

OPA change request process

- The OPA can still provide a change request of its availability plan for week W after W-12
- Depending on the timing of provision of the change request, Elia provides an answer to the OPA according to the following timings:

OPA change request	Latest validation time by Elia
Within validation period	The most distant deadline between: <ul style="list-style-type: none"> • End of validation period • Day of submission + two weeks
After validation period until Thursday 18:00 W-1	The closest deadline between: <ul style="list-style-type: none"> • Day of submission + two weeks • Friday 16:00 W-1
After Thursday 18:00 W-1 and before D-1 10 AM	The closest deadline between: <ul style="list-style-type: none"> • Moment of submission + 24h • D-1 10 AM
After D-1 10 AM	RT – 30 min



These possibilities of change request are conditioned to the successful implementation of the planned evolution of operational processes at Elia regional control center side

Change request have to be communicated to Elia as soon as they are known by the OPA

Elia change request process

- Elia can request the following changes to the availability status provided by the OPA:

ELIA can request		
Indicated by the OPA	Availability Status	Meaning
Unavailable (U)	Available (A)	the Delivery Point is requested to be capable to inject (or take off) power
Testing (T)*	Available (A)	

- Elia will only request changes to availability plan in the period between:
 - **The start of the validation period**
 - **The deadline to request a must-run or a may-no-run to the scheduling agent**
 - Currently this deadline is D-5



Modalities for change requests

- Changes of availability plans requested by the OPA/Elia are **subject to the approval by the other party (Elia/OPA)**
- A change request can be:
 - Accepted
 - Refused with justifications
 - Accepted on the condition that associated costs are compensated
- When a change request is accepted on the condition that associated costs are compensated, the **accepting party provides a financial offer** to the requesting party
 - Via a simplified process in the outage planning tool
- The **associated costs are provided via the offer** sent to the requester party and should be
 - Reasonable
 - Demonstrable
 - Directly related to the request



Rules for multiple amendments leading to associated costs :

- 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



Example

1. On 1st August Y-1, the OPA knows that a maintenance of about 10 days will be necessary in year Y around Q2 → **OPA provides a first unavailability event** for year Y that is acknowledged by Elia

15 May 00:00 YYYY



Unavailability
Planned Outage
Pmax avail = 0
Version 1

2. In February Y (W-12 before start of the unavailability event), **OPA confirms this maintenance** and has more detailed information on the exact timings of the outage to provide → OPA updates its previous unavailability event

17 May 08:00 YYYY

27 May YYYY 18:00



Unavailability
Planned Outage
Pmax avail = 0
Version 2

→ In March Y (W-8), Elia confirms that this availability plan does not create grid security issue and no change is requested

3. On 15th April Y, OPA provides an update of the availability planning

4 June 08:00 YYYY

14 June YYYY 18:00

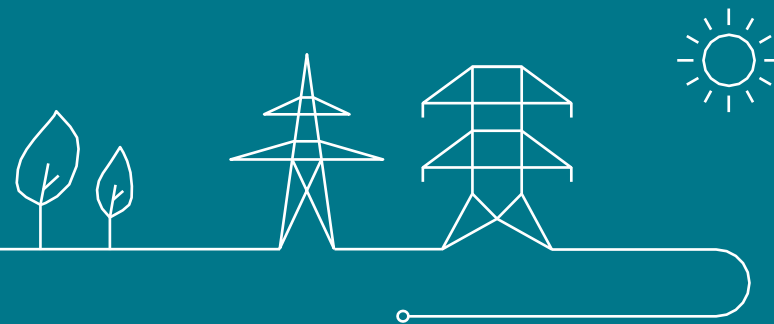


Unavailability
Planned Outage
Pmax avail = 0
Version 3

→ On 29th of April, Elia accepts the update



New availability planning process for demand sites



Specific design for demand sites

Demand sites will also have to provide availability planning information but according to a **simplified process**

- **Data needed:**
 - If relevant, full planned unavailability* of the demand site
 - Planned reduction of Pmax available in offtake
- **Use of data:**
 - Availability information is used as an **input for Elia to create and update year-ahead planning**
 - It allows Elia to **optimally ensure the coordination** of Elia works on demand sites connection point or grid elements with impact on/by demand sites
 - Based on this data, Elia tries to **plan maintenance of grid elements at moments where the direct/indirect impact on grid users will be reduced**
- **At which level?**
 - Elia is mainly interested to have information **on aggregated level at demand site level** (e.g. access point)**
 - Granularity to provide information for each demand facility within the demand site could be made flexible

Specific discussions with grid users of demand sites will be planned to finalize the design



* The precise meaning of “unavailable” for a demand site is still to be defined e.g. if offtake due to auxiliaries should be considered

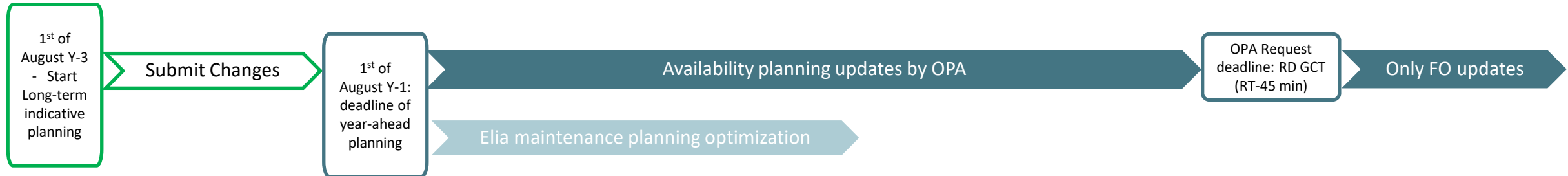
**Considering that availability information from production/storage facilities is already provided separately as defined previously

Availability planning process for demand sites

Mandatory and validated by Elia

Mandatory and not validated by Elia

Not mandatory

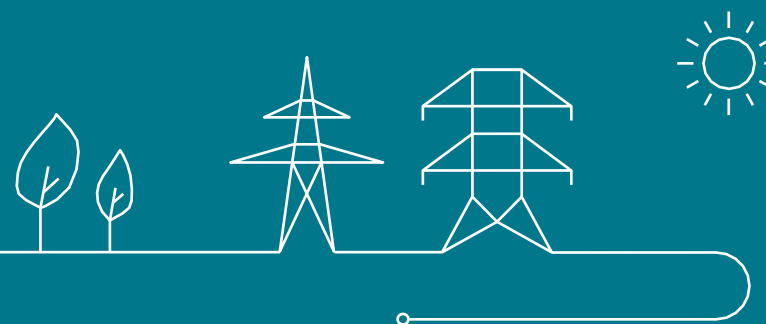


Modalities:

- Availability planning information is to be provided first **on 1st August Y-1**
- Updates are to be provided when available (and if relevant)
- **No validation** of the data by Elia takes place
- Based on data received as from 1st August Y-1, Elia follows **current process to coordinate outages with impact on demand facilities**



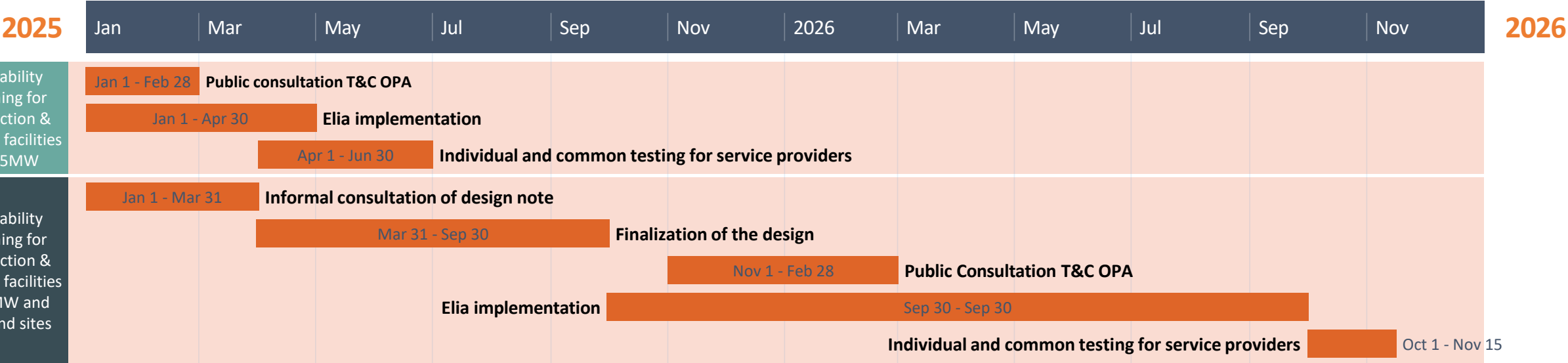
Next steps



Next Steps and planning



- Elia proposes to split the evolution of the availability planning process in two steps:
 1. The evolution related to the availability planning for production & storage facilities larger than 25 MW
 2. The evolution related to the new availability planning for production & storage facilities between 1 and 25MW and demand sites



Follow-up and contact persons

Comments and questions on presented information regarding availability planning can be sent to your KAM energy:

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Thank you

