Operational Readiness Testing for iCAROS & local mFRR go-live

Workshop Service Providers - Elia

March 2023

GOALS OF THESE OPERATIONAL READINESS TESTING
For iCAROS phase 1 and local mFRR go-live

The testing will assess:

1) the **ability** of market parties **to understand and acknowledge** any Elia requests.

2) the **Business** readiness of the global system (Service Providers and Elia) to go-live, and

3) the alignment of the data exchange with **the reality** (performance, correct view on the market bid proposal, …)

via External Communication Layer (B2B) in DEMO environment.

GOALS OF THIS PRESENTATION

1. Presentation of proposal for the **Operational Readiness Testing Protocol**

2. Collect feedback and Service Providers' needs for testing

WHAT KIND OF TESTS ARE FORESEEN?
All OPA, SA & BSP's normal process

	Tests	Type	What	Who
iCAROS	iCAROS_1	Reproduction of **real situation**	**Update** of an Availability Plan	OPA
	iCAROS_2		**Initialization** of Schedules & RD Energy Bids	SA OPA
	iCAROS_3		**Updates** of Schedules & RD Energy Bids	SA OPA
	iCAROS_4	**Simulation** of scenario's	**Activations of RD, Return to Schedules Requests**	SA
MARI	MARI_1	Reproduction of **real situation**	**Initialization** & **updates** of mFRR Energy Bids	BSP
	MARI_2	**Simulation** of scenario's	**Activations of mFRR**	BSP
iCAROS/MARI	iCAROS/MARI_1	Reproduction of **real situation**	**Initialization** of Schedules & RD/mFRR Energy Bids	BSP SA OPA
	iCAROS/MARI_2		**Updates** of Schedules & RD/mFRR Energy Bids	BSP SA OPA
	iCAROS/MARI_3	**Simulation** of scenario's	Combination of **activations** of **mFRR, RD** & **Return-to-Schedules Requests**	BSP SA

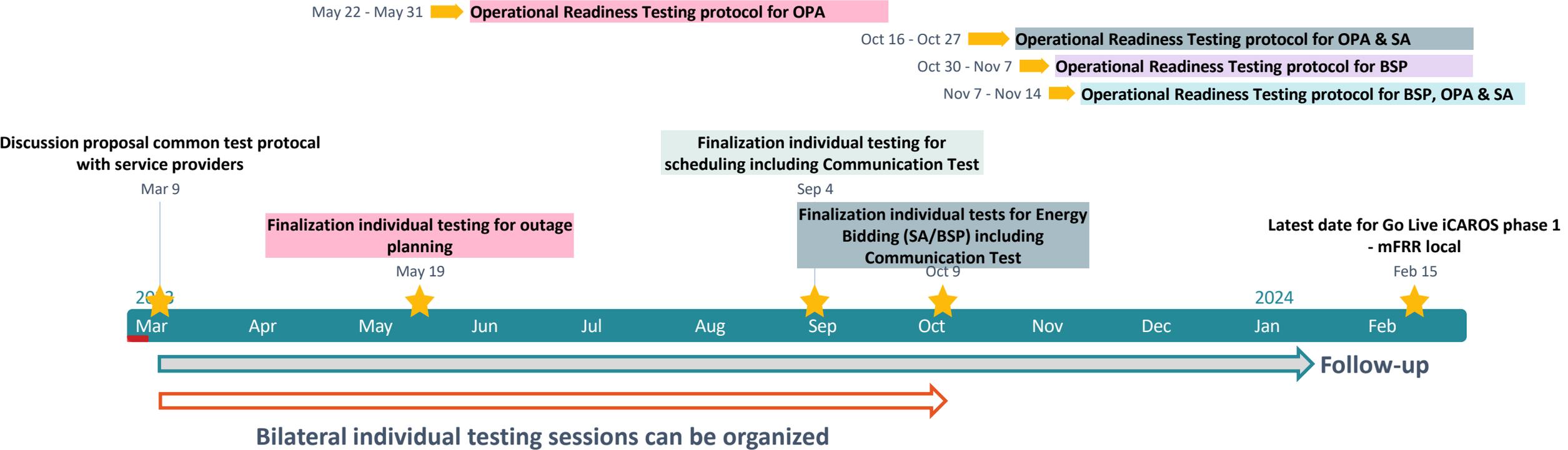# PREREQUISITE FOR PROVIDERS BEFORE THE TESTS
OPA, SA & BSP

❑ OPA

– Finalization individual tests for Availability Plans

❑ SA

– Finalization individual tests for Schedules and RD Energy Bidding

– Successful communication test of a RD activation

❑ BSP

– Finalization individual tests for mFRR Energy Bidding

– Successful communication test of a mFRR activation

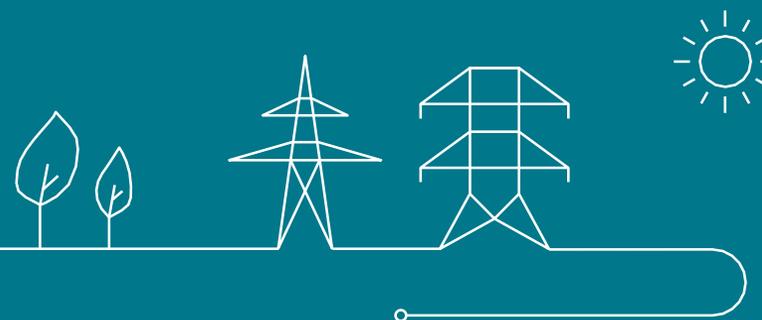> IT readiness is a prerequisite (External Communication Layer)

GENERAL ORGANIZATION
Proposed planning

May 22 - May 31 ➡ **Operational Readiness Testing protocol for OPA**

Oct 16 - Oct 27 ➡ **Operational Readiness Testing protocol for OPA & SA**

Oct 30 - Nov 7 ➡ **Operational Readiness Testing protocol for BSP**

Nov 7 - Nov 14 ➡ **Operational Readiness Testing protocol for BSP, OPA & SA**

Finalization individual testing for scheduling including Communication Test

Discussion proposal common test protocol with service providers

Mar 9

Finalization individual testing for outage planning

May 19

Sep 4

Finalization individual tests for Energy Bidding (SA/BSP) including Communication Test

Oct 9

Latest date for Go Live iCAROS phase 1 - mFRR local

Feb 15

2023											2024	
Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		Jan	Feb

➡ **Follow-up**

➡ **Bilateral individual testing sessions can be organized**

iCAROS
Testing details

ICAROS_1 - UPDATE OF AVAILABILITY PLANS
Reproduction of real situation

Goal	How	Reference values	Acceptance criteria's:
Verify the consistency of availability plan	OPA sends update of Availability Plan for day D in DEMO	Availability plans for day D in PROD (Topaz)	< 10% error of #'s status

D-1 3pm

Day D

GCT Submission of Availability plans for day D in PROD (Topaz)

FRIENDLY NAME	Outage Status
CCGT B GT1	AV
Wind Park A	PU

GCT Submission of Availability plans for day D in DEMO (Optiflex)

19/05/2023		00:00	00:15
CCGT B GT1	Status	A	A
	$P_{max,avail}$	85	85
Wind Park A	Status	U	U
	$P_{max,avail}$	0	0

ICAROS_2 - INITIALIZATION OF SCHEDULES & RD ENERGY BIDS
Reproduction of real situation

Goal	How	Reference values	Acceptance criteria's:
Verify the consistency of Schedules	SA sends Schedules for day D for full portfolio	Schedules for day D in PROD (Topaz)	same value within a margin of 10% of $P_{max,tech}$
Verify the consistency of RD Energy bids	SA sends RD Energy bids for day D for full portfolio	Implicit volume calculated by Elia	At least 80% of volume is submitted*
Verify the consistency of Availability Plan	OPA sends update of Availability Plan for day D	Availability plans for day D in PROD (Topaz)	< 10% error of #'s status Coherence with Schedules

D-1 3pm

Day D

GCT Submission of Schedules & update of outage status for day D in PROD (Topaz)

GCT Submission of Schedules and update of availability plans for day D in DEMO (Optiflex)

FRIENDLY NAME	Outage Status	0h - 1h		
		0 - 15	15 - 30	30 - 4
		Power	Power	Powe
CCGT B GT1	AV	85,0	85,0	85
Wind Park A	PU	0,0	0,0	0

07/11/2023	Version	00:00	00:15
CCGT B GT1	1	-85,0	-85,0
Wind Park A	1	0,0	0,0

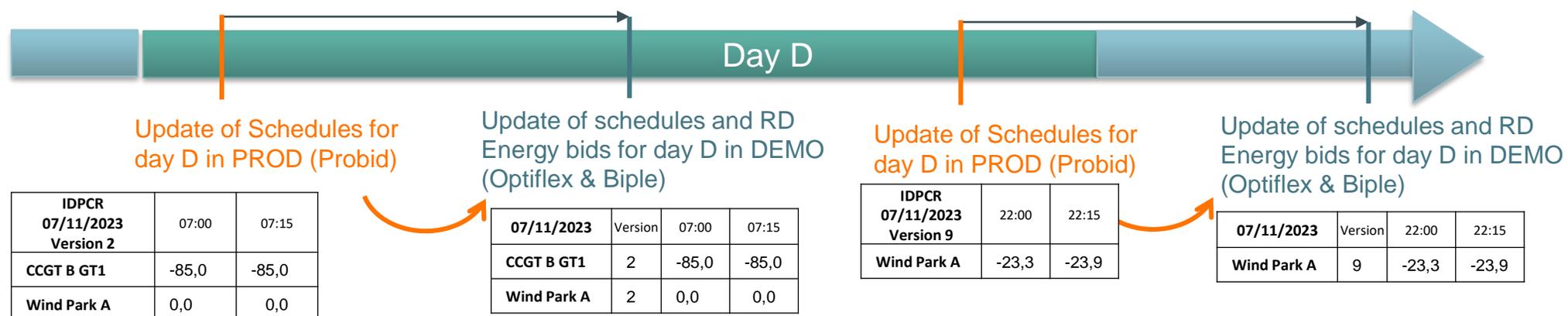| 07/11/2023		00:00	00:15
CCGT B GT1	Status	A	A
	$P_{max,avail}$	85	85
Wind Park A	Status	U	U
	$P_{max,avail}$	0	0

Operational Readiness Testing - go-live 2024 | 9

*Per Technical Facility in the coordinable direction

ICAROS_3 - UPDATES OF SCHEDULES & RD ENERGY BIDS
Reproduction of real situation

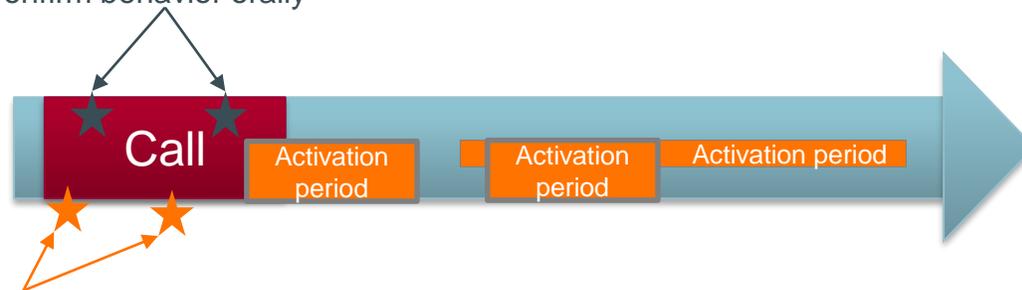| Goal	How	Reference values	Acceptance criteria's:
Verify the consistency of <u>Schedules updates</u>	For each update in PROD, SA sends corresponding update in DEMO	Schedules for day D in PROD (Probid)	Same value within a margin of 10% of $P_{max,tech}$
Verify the consistency of RD <u>Energy bids update</u>	SA sends RD Energy bids update for day D for full portfolio	Implicit volume calculated by Elia	- At least 80% of volume is submitted* - Timing in line with contracts

Update of Schedules for day D in PROD (Probid)

Day D

Update of schedules and RD Energy bids for day D in DEMO (Optiflex & Biple)

Update of Schedules for day D in PROD (Probid)

Update of schedules and RD Energy bids for day D in DEMO (Optiflex & Biple)

IDPCR 07/11/2023 Version 2	07:00	07:15
CCGT B GT1	-85,0	-85,0
Wind Park A	0,0	0,0

07/11/2023	Version	07:00	07:15
CCGT B GT1	2	-85,0	-85,0
Wind Park A	2	0,0	0,0

IDPCR 07/11/2023 Version 9	22:00	22:15
Wind Park A	-23,3	-23,9

07/11/2023	Version	22:00	22:15
Wind Park A	9	-23,3	-23,9

It could be that a full day is not feasible for certain service providers so at least one period in ID as realistic updates will be required as the strict minimum by Elia.

ICAROS_4 - ACTIVATIONS
Simulation of scenario's

Goal	How	Activations	Acceptance criteria's:
Test multiple (virtual) activations	Initialization: SA sends Schedules & RD Energy bids Test: Bilateral call during which Elia sends activations	Scheduled activation Direct activation Scheduled activation of RD Energy bid with extension of volume and duration A return to schedule request	- Technical and business acknowledgement - Confirmation during the call of the behavior requested

SA :
1) Sends ACK
2) Confirm behavior orally

Call

Activation period

Activation period

Activation period

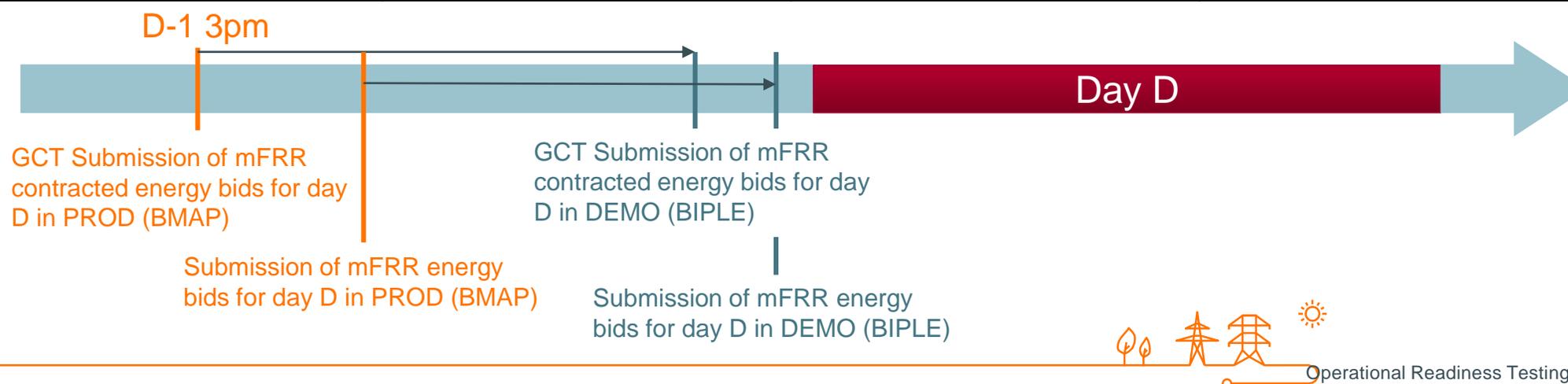**Elia** sends virtual activations

MARI

Testing details
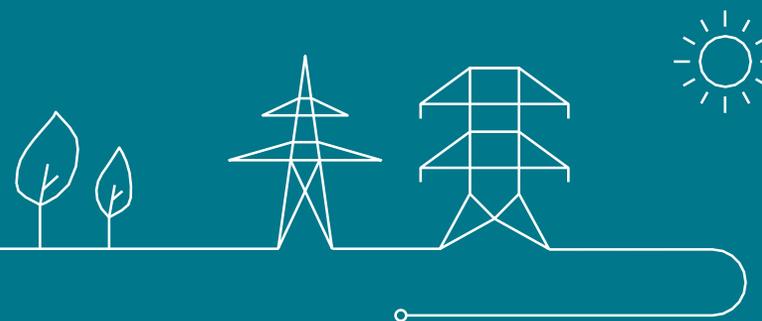
MARI_1 - INITIALIZATION + UPDATE OF MFRR ENERGY BIDS
Reproduction of real situation

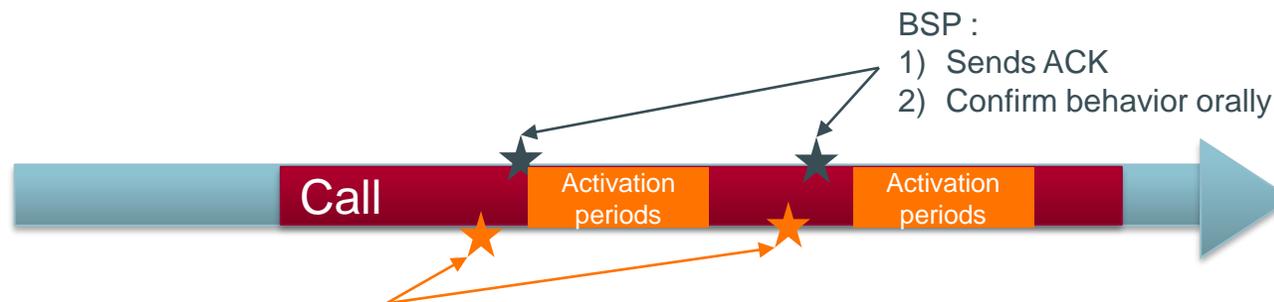| Goal	How	Reference values	Acceptance criteria's:
Verify the consistency of <u>mFRR Energy bids</u>	BSP sends mFRR Energy bids for day D for full portfolio*	Implicit volume calculated by Elia	- At least 80% of volume is submitted* - Contracted volume 100% in line with obligations
Verify the consistency of <u>mFRR Energy bids update</u>	BSP sends mFRR Energy bids for day D for full portfolio*	Implicit volume calculated by Elia	- At least 80% of volume is submitted* - Contracted volume 100% in line with obligations

D-1 3pm

Day D

GCT Submission of mFRR contracted energy bids for day D in PROD (BMAP)

GCT Submission of mFRR contracted energy bids for day D in DEMO (BIPLE)

Submission of mFRR energy bids for day D in PROD (BMAP)

Submission of mFRR energy bids for day D in DEMO (BIPLE)

*Except agreement with KAM

MARI_2 - ACTIVATIONS
Simulation of scenario's

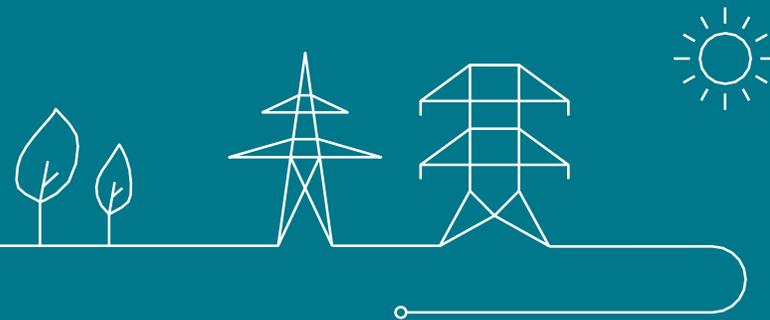| Goal	How	Activations	Acceptance criteria's:
Verify the correct reaction of a BSP to an mFRR energy activation	Initialization: BSP sends mFRR Energy bids Test: Bilateral call during which Elia sends activations	Scheduled activation Direct activation DPSU and DPPG if relevant Scheduled activation on several quarter hours (context congestion) Scheduled and direct activation on the same technical facilities and quarter-hour 2 scheduled activations in a row + Update of bid in intraday simulating a Forced Outage	- Technical and business acknowledgement received within correct timings - Confirmation during the call of the behavior requested to the activated DP: start and end time of activation, direction

BSP :
1) Sends ACK
2) Confirm behavior orally

Call   Activation periods   Activation periods

Elia sends a (virtual) mFRR activation
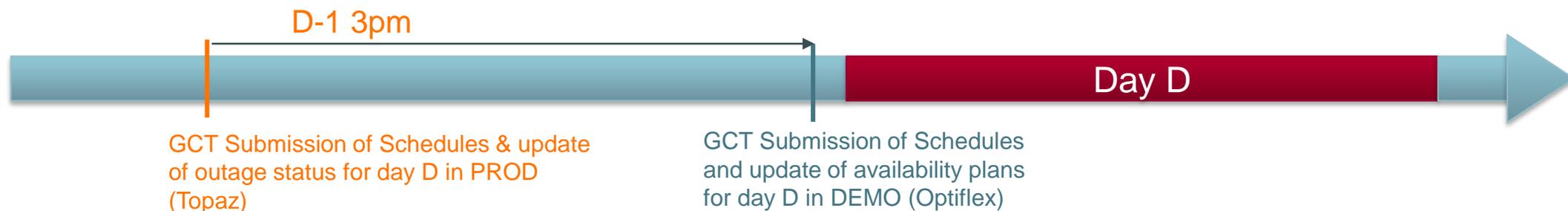
ICAROS / MARI

Testing details

ICAROS/MARI_1 - INITIALIZATION OF SCHEDULES & RD/MFRR ENERGY BIDS
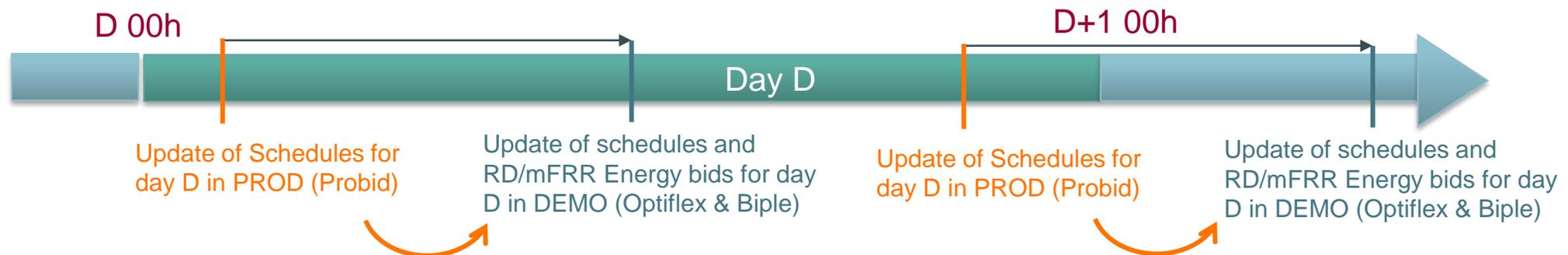## *Reproduction of real situation*

Goal	How	Reference values	Acceptance criteria's:
Verify the consistency of <u>Schedules</u>	SA sends Schedules for day D for full portfolio	Schedules for day D in PROD (Topaz)	same value within a margin of 10% of $P_{max,tech}$
Verify the consistency of RD <u>Energy bids</u>	SA sends RD Energy bids for day D for full portfolio	Implicit volume calculated by Elia	At least 80% of volume is submitted*
Verify the consistency of <u>mFRR Energy bids</u>	BSP sends mFRR Energy bids for day D for full portfolio*	Implicit volume calculated by Elia	- At least 80% of volume is submitted* - Contracted volume 100% in line with obligations
Verify the consistency of <u>availability plan</u>	OPA sends update of Availability Plan for day D	Availability plans for day D in PROD (Topaz)	- < 10% error of #'s status - Coherence with Schedules

D-1 3pm

Day D

GCT Submission of Schedules & update of outage status for day D in PROD (Topaz)

GCT Submission of Schedules and update of availability plans for day D in DEMO (Optiflex)

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*Per Technical Facility in the coordinable direction

ICAROS/MARI_2 - UPDATES OF SCHEDULES & RD/MFRR ENERGY BIDS
Reproduction of real situation

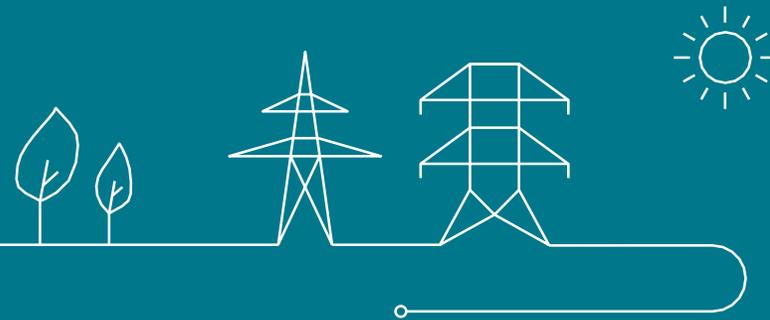| Goal	How	Reference values	Acceptance criteria's:
Verify the consistence of <u>Schedules updates</u>	For each update in PROD, SA sends corresponding update in DEMO	Schedules for day D in PROD (Probid)	same value within a margin of 10% of $P_{max,tech}$
Verify the consistence of RD <u>Energy bids update</u>	SA sends RD Energy bids for day D for full portfolio	Implicit volume calculated by Elia	- At least 80% of volume is submitted* - Timing in line with contracts
Verify the consistence of <u>mFRR Energy bids update</u>	BSP sends mFRR Energy bids for day D for full portfolio*	Implicit volume calculated by Elia	- At least 80% of volume is submitted* - Contracted volume 100% in line with obligations

D 00h

D+1 00h

Day D

Update of Schedules for day D in PROD (Probid)

Update of schedules and RD/mFRR Energy bids for day D in DEMO (Optiflex & Biple)

Update of Schedules for day D in PROD (Probid)

Update of schedules and RD/mFRR Energy bids for day D in DEMO (Optiflex & Biple)

It could be that a full day is not feasible for certain service providers so at least one period in ID as realistic updates will be required as the strict minimum by Elia.

ICAROS/MARI_3 - SIMULATION OF SCENARIO'S
Activations

Goal	How	Activations	Acceptance criteria's:
Test multiple (virtual) activations	Initialization: SA & BSP send Schedules & RD/mFRR Energy bids Test: Bilateral call during which Elia sends activations	Combination of a SA RD and SA/DA mFRR on the same TF. Combination of DA RD and SA/DA mFRR on the same TF Combination of a DA/SA mFRR activation and a Return to schedule request	- Technical and business acknowledgement - Confirmation during the call of the behavior requested

SA :
1) Sends ACK
2) Confirm behavior orally

BSP :
1) Sends ACK
2) Confirm behavior orally

Call

Activation periods

Elia sends a (virtual) RD activation

Elia sends a (virtual) mFRR activation
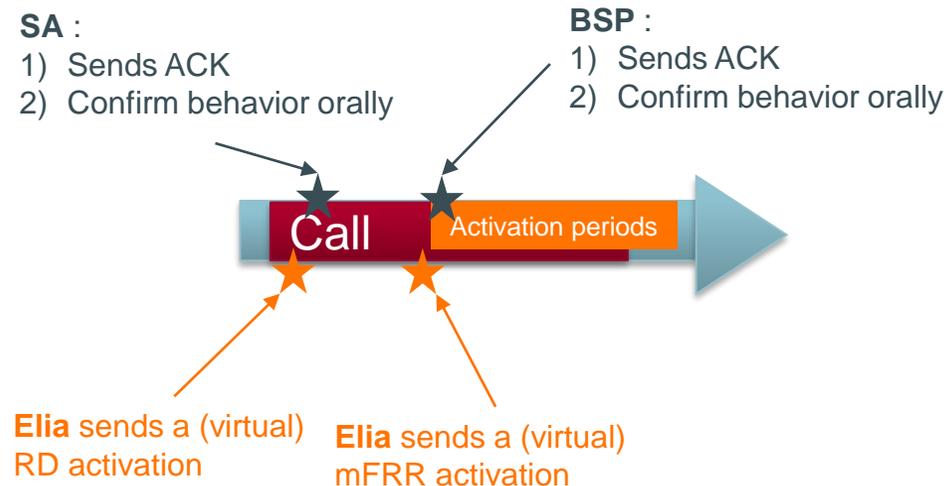
Testing organization

ORGANIZATION OF THE TESTING
Reproduction of real situation

- 2 common sessions on different days (Day I) and Day II)) are planned: OPA/SA/BSP indicate upfront in which of the two sessions they participate

- After the session, Elia analyzes the data received during the test.

- Communication of the results during a bilateral debriefing (e-mail or call)

- If needed, a backup day (Day III) is foreseen to redo (part of) the test.

Day I	Day II	Debrief	Day III backup

Elia Analysis

± 2 weeks

ORGANIZATION OF THE TESTING
Simulation of scenario's - activations

- Bilateral sessions between SA/BSP & Elia via Teams are planned in 3 different days (Days I, II & III). SA/BSP participates in one session.

- Results of the test will be communicated during the call

- If needed, a backup day (Day backup) is foreseen.

| Day I | Day II | Day III | Day backup |

± 2 weeks

FOLLOW-UP & CONTACT PERSON

Please provide your feedback on the **planning** & the **content** of this proposal of Operational Readiness Testing by the **16th of March** (best effort)*.

Reminder: Elia is also available for bilateral implementation meetings

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Arno.Motte@elia.be |

In order to include your comments in the next WG BAL

Thank you.