

Task Force iCAROS

Integrated Coordination of Assets for Redispatching and Operational Security

Meeting 6 – March 22, 2018

Elia

Web page: http://www.elia.be/en/users-group/Working-Group_Balancing/Task-Force-CIPU-Redesign

Agenda

Consultation feedback & design status

Federal Grid Code proposal – iCAROS related articles

Planning for Transition towards SO GL compliance in 2019

Varia:

- **KORRR submission to NRA**
- **ENTSO-E consultation on the “All TSOs proposals for the relevance of assets for outage coordination”**
- **Next steps**

Context

New design discussed with stakeholders during iCAROS task force:

- 7 June 2017 : introduction into CIPU and System Operations Guideline (SO GL)
- 20 June 2017: First proposition of ELIA on implementation of SO GL requirements
- 11 September 2017: Full-day workshop on ELIA's proposal for a new contractual, regulatory and operational framework
- 10 October 2017: Feedback on the 11/9 workshop & clarifications
- 21 November 2017: Overview of changed design proposals and approach for public consultation

Public consultation of design notes (incl. link with new Federal Grid Code): 11 December 2017 – 15 January 2018

Workshop Federal Grid Code: 6 February 2018

Finalization sections on iCAROS in Federal Grid Code => start public consultation on 15 March 2018

Consultation report of iCAROS design notes => publish and discuss with stakeholders during iCAROS task force of 22/3

**Current
step**

Finalize design

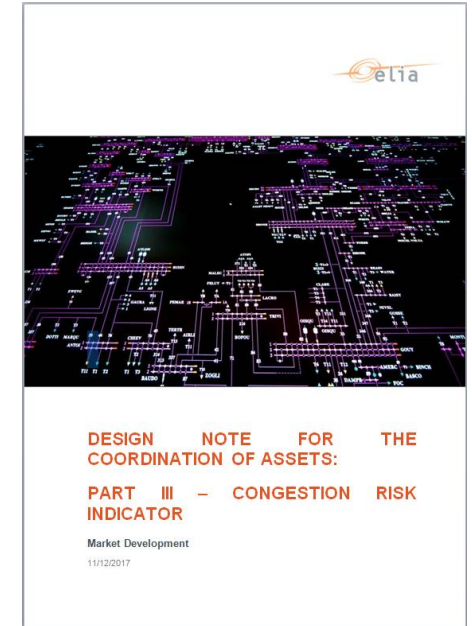
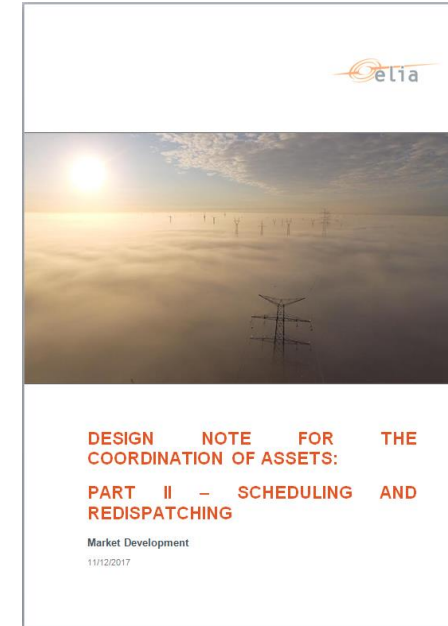
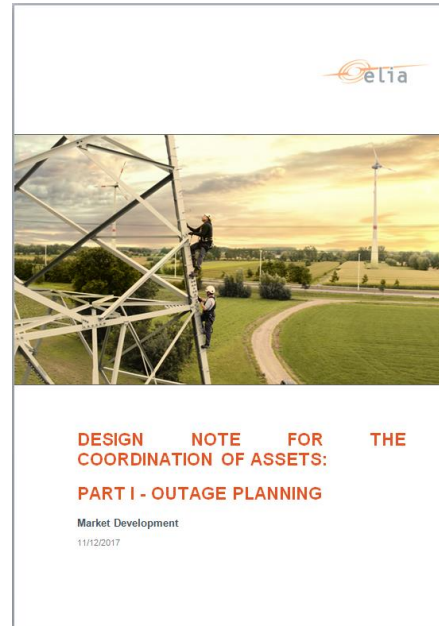
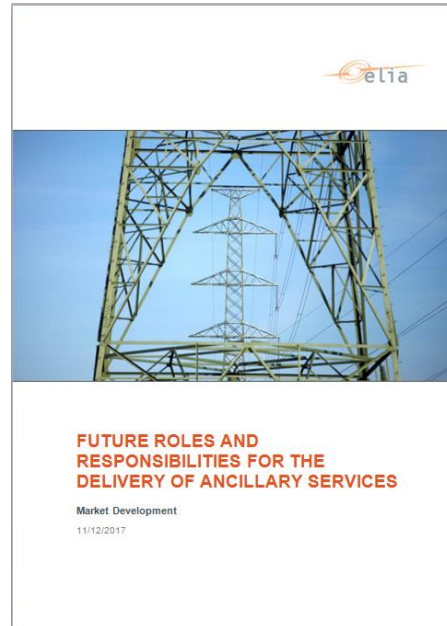
Prepare trajectory for transition phase

Prepare trajectory for full iCAROS implementation

Consultation feedback

Public Consultation of iCAROS design notes

Set of design notes:



Consultation period: 11/12/2017 – 15/01/2018

6 responses: Edora – Febeg – Ode ('EFO')
 Direct Energie (in addition to support of 'EFO')
 Febeliec

Restore
 Anode – TeamWise
 1 anonymous & confidential contribution

General remarks

- **Concerns** on the large scope and complexity of the subject, both for evolution of design proposals and for implementation.
- Much **appreciation** for the approach of ELIA on the design notes, stakeholder involvement, and expressed intention for pragmatism for the implementation of the new framework.

Conclusion:

- No fundamental issues identified that require a review of the proposed design for asset coordination and redispatching, but finetuning needed
- Stabilize design as input for implementation trajectory
- Keep in mind that reviews are possible in the future based on experiences with new design

Specific: Level playing field production – demand

Edora – Febeg – Ode regret the lack of level playing field between production and (coordinable) demand and propose changes throughout all procedures in the coordination of assets:

PGM	Demand facilities	Consultation feedback	ELIA response
Outage Planning			
- obligation: yearly separate process	- Obligation (more than SO GL): integrated in yearly load management survey	Differences in details (e.g., testing status also after available status)	⇒ Agreement to adapt design to reduce differences between PGM and demand
DA/ID schedules			
- Obligation: MW or ON/OFF schedules - Firmness (return-to-schedule) - MW schedule = Baseline	- Full exemption	PGM design should also apply to DSR bidding delivery points	⇒ Demand without DSR: maintain exemption ⇒ Demand with DSR for balancing : maintain exemption ⇒ Demand with DSR for redispatching : add scheduling obligation on DSR delivery point
MR/MNR			
- Possible requests from ELIA	- Full exemption	PGM design should also apply to DSR bidding delivery points	⇒ Possible in theory but no use case for ELIA (activation of DSR in DA/ID is sufficient)
Bidding for redispatching			
- Mandatory for PGM B/C/D	- Voluntary	Either DSR BAL => DSR RD or demand design should also apply PGM B	⇒ PGM: Bidding obligation for PGM B remains (technical flexibility at cost-based price) ⇒ Demand : default voluntary bidding for RD remains

Specific: CDS

Clarifications requested by Febeliec

➤ Obligations for CDS versus CDS-connected assets

iCAROS obligations are applicable on asset level:

- PGM & storage type B/C/D connected to TSO-connected CDS
- No direct obligations on demand facilities in TSO-connected CDS, but information on demand used in ELIA-CDS collaboration agreement and information exchange on states and flows between ELIA and CDS grids

➤ Role of the CDS operator versus CDS grid user

iCAROS results in obligations on the grid user, also if connected to a TSO-connected CDS

‘Service’ participation agreements on outage planning, scheduling/redispaching between ELIA and the CDS user

CDS operator: facilitating role for contact and information exchange

PGM in TSO-connected CDS

Same requirements for outage planning, scheduling and redispaching as for TSO-connected PGM

⇒ Direct contract CDS GU – ELIA

Demand facility in TSO-connected CDS

Outage planning:

- Between system operators, not between ELIA and CDS-connected demand facilities

Scheduling/redispaching:

- Same as for TSO-connected demand facilities

Feedback regarding “Future roles and responsibilities for the delivery of ancillary services”

- **Concerns on appointment of different roles and risk of misuse by market players to maintain power:** appointment of Outage Planning Agent and Scheduling Agent before flexibility is offered for balancing and risk of blocking a BSP
 - ⇒ Proposed design has been developed to open coordination of assets and congestion management towards new players
 - ⇒ Grid user plays a key role in the allocation of the different roles in compliance with laws & regulations on competition: blocking BSP is forbidden by law
- **Concerns on increasing complexity due to different roles which can be appointed to different parties**
 - ⇒ Different roles are imposed by EU guidelines: roles may still be appointed to a single party
 - ⇒ Trade-off between simplicity of the framework and a framework aiming at low barriers for market entry: grid user choice in appointment of different roles to one or more parties
 - ⇒ Requested by stakeholders and intent expressed by ELIA that ELIA will serve as facilitator in implementation
- **Concerns on impact on the BRP** in terms of use of flexibility for (self- or reactive-) balancing, in terms of correction of BRP perimeter, and in terms of coherence between schedules and BRP nominations
 - ⇒ Clarification needed of some misunderstandings (via T&C BRP, WG BAL, ARP day, ...)
 - ⇒ In some cases it concerns the trade-off between efficient operations and guarding confidentiality between different parties: ELIA can facilitate only to a certain extent within the scope that is legally allowed

Feedback regarding “Design note for the coordination of assets: Part I – Outage Planning”

1. **Questions on negotiation process:** “What is the procedure if no reasonable remuneration can be decided after negotiation and which party has to take the final decision?” (same for MR/MNR)

⇒ ELIA answer: both ELIA and the Outage Planning Agent should be able to address a competent authority for an advice or a position on the reasonableness of the requested amendment and remuneration. The authority to appoint as competent still needs to be clarified: if none, then court case as last resort

2. **Change requests on reimbursement in case an outage planning amendment annuls a previous outage planning amendment**

⇒ ELIA answer: **no change compared to design note**

Disincentive for too many amendments:

If amendment requested by **X** annuls an amendment previously requested (and remunerated) by **Y**: reimbursement of previous remuneration

If amendment requested by **X** annuls an amendment previously requested (and remunerated) by **X**: no reimbursement of previous remuneration

3. **Change requests on testing status:**

⇒ ELIA agrees to be less stringent with respect to tests (no ELIA approval needed unless if ELIA has a role in the test itself, test plan to be delivered within last month and before last week, ...)

⇒ ELIA must still be able to request a modification in the test plan (e.g., delay test with a couple of hours due to expected critical situation in terms of adequacy or balancing)

Feedback regarding “Design note for the coordination of assets: Part II – Scheduling and Redispatching”

1. ELIA’s proposal of no longer blocking schedules in Intraday due to congestion risk in combination with cost-based pricing
positive feedback of Edora – Febeg – Ode, Direct Energie – **critical point in the iCAROS design**
2. ELIA’s proposal of choice between ON/OFF schedules and MW schedules for PGM and storage type B
positive feedback of Febeliec on this possibility
3. Change request on reimbursement in case of an annulment of a Must-Run or May-Not-Run request
 - *In case in real-time the PGM produces more than the P_{min} requested in a Must-Run*
 - ⇒ ELIA answer: **clarify design note proposal**
 - The Grid User/Scheduling Agent should take the reimbursement to ELIA into consideration for market transactions (for the quarter-hours concerned).
 - *In case before DA, ELIA would annul a must-run: costs already made by the producer therefore the payment should not be reimbursed*
 - ⇒ ELIA answer: **possibility to review in coordination with stakeholders**
 - ELIA suggests making this part of the negotiation. As the costs for the MR/MNR have to be demonstrated it can also be discussed at the time of the MR/MNR request which cost components would remain in case of an annulment

Feedback regarding “Design note for the coordination of assets: Part II – Scheduling and Redispatching” (1)

1. Change requests on mandatory bidding of PGM/storage flexibility for redispatching (even when not the case for balancing)

⇒ ELIA answer: no change to design proposal

⇒ different philosophy between redispatching (local) versus balancing (national) and therefore level of market liquidity

2. Change requests on penalties

⇒ ELIA answer: no change to design proposal

Given the risks of congestion and limitations in remedial actions, a dissuasive penalty for **large** underdelivery is needed.

3. ELIA’s proposal of cost-based pricing for redispatching

Positive feedback by Febeliec

Although preference for free pricing, positive feedback by Edora – Febeg – Ode and Direct Energie in combination with ‘freedom of dispatch’ (see previous slide)

4. Change requests on possible annulment of redispatching activation

⇒ ELIA answer: Concern noted (block schedules via activation), need to discuss the rules for possible annulment with the stakeholders

Feedback regarding “Design note for the coordination of assets: Part II – Scheduling and Redispatching” (2)

4. Concerns with explicit bidding and requests to return to implicit bidding

⇒ ELIA answer: no change to design proposal

To clarify:

- the two proposed bidding methods (block bids and scheduling limits) are both examples of explicit bidding;
- bids are regarded as firm in both implicit and explicit bidding methods

5. Concerns with obligation to “bid all available flexibility”

⇒ Partly a misunderstanding of the format of a bid, partly a concern on exact formulation of this obligation

⇒ ELIA answer: ELIA agrees in principle and has noted it as an attention point for implementation (e.g., reformulation in Federal Grid Code proposal)

6. Request to apply Transfer of Energy on Redispatching

⇒ ELIA answer: not applicable by law

Feedback regarding “Design note for the coordination of assets: Part III – Congestion Risk Indicator”

1. Questions on link with balancing design (e.g., exemption for penalty in case of unavailability due to congestion)

⇒ ELIA answer: details will be clarified in balancing design implementation

2. Change request to remunerate opportunity costs in case of setting balancing bids at unavailable due to congestion

⇒ ELIA answer: no change to design proposal

It is out-of-discussion that rules for compensation of non-activated balancing energy need to be discussed on regional level in order to ensure a level playing field for market participants between countries.

Design status – Outage Planning

STABLE	• Rules appointment Outage Planning Agent • Obligations for assets connected to the TSO grid and to TSO-connected CDS: ◦ Mandatory for PGM B/C/D, storage B/C/D, TSO-connected demand facilities ◦ Role of CDS operator: coordination between ELIA on outages and flows of grid elements (OP-Agent for own grid elements), data exchange between ELIA-CDS (of OP/S-agent register and/or of relevant information) • Definitions of Availability status and Active power capability limitations • Calendar for data exchanges (year-ahead process versus light approach)
OPENPOINTS	• Clarity on definition of cross-border relevant assets (CSA methodology under consultation, see further): only impact on concrete requirements for TSO-connected demand facilities • Competent authority for blocking negotiations on amendments

Design status – DA/ID scheduling

STABLE	• Rules appointment Scheduling Agent • Obligations for assets connected to the TSO grid and to TSO-connected CDS: ◦ Mandatory for PGM C/D & storage C/D ≥ 25 MW (MW schedules) ◦ Mandatory for PGM B/D & storage B/D < 25 MW (choice MW schedules and ON/OFF schedules) • Timeline for schedule delivery and updates • MW schedules and return-to-schedule requests • Must-Run requests for PGM & storage: timeline, amendments and remuneration principles • (Partial) May-Not-Run requests PGM & storage: timeline, amendments and remuneration principles
OPEN POINTS	• Competent authority for blocking negotiations on amendments • Control of schedule quality/Return-to-schedule in case of non-coordinable assets, ON/OFF schedules, and assets without real-time metering

Design status – Redispatching

STABLE	• Rules appointment Scheduling Agent • Obligations for assets connected to the TSO grid and to TSO-connected CDS: ○ Mandatory for PGM B/C/D & storage B/C/D $\geq 25\text{MW}$ ○ Voluntary for demand • Timeline for bid delivery and updates • Cost-based pricing • Principle of serial activation of compensation bid
OPENPOINTS	• Coordinability: relevance of real-time metering installations • Bidding details for block bids and scheduling limits (design/implementation) • Activation control and penalty: threshold for ‘large’ underdelivery and value of the penalty • Rules for annulment of congestion activation • Compensation bidding: flexibility to be used by ELIA

Design status – CRI

STABLE	• CRI definition and levels • CRI: not used to block schedule updates in Intraday • CRI publication at the end of day D-1 • CRI used as: • Filter on balancing activations • Filter on reserve transfers
OPEN POINTS	

Design status – Overall

OPEN POINTS

Overall open questions

- Design for DSO-connected assets
- Specificities of emergency generators and storage devices that do run parallel with the grid for more than 5 minutes per month (i.e., generators and storage devices with both emergency purpose for the grid user as ancillary services for ELIA)
- Some specificities of wind units: impact of regulation for protection of neighbors and fauna,
- Case-by-case analysis of process driven generators

New Federal Grid Code

New Federal Grid Code: overview of obligations

Art. 256

§2. De installaties die dit hoofdstuk beoogt, zijn bestaande of nieuwe installaties, in de zin van de toepasselijke wetgeving, die vallen onder een van de volgende categorieën:

1. Elke **elektriciteitsproductie-eenheid of productiepark** zoals opgenomen in artikel 38 §2 van dit besluit van het type **B, C of D** conform de classificatie van datzelfde artikel en aangesloten op een transmissiesysteem of dat zich binnen een industriële vestiging bevindt of binnen een gesloten industrieel net of gesloten distributienet dat op zijn beurt is aangesloten op het transmissiesysteem;
2. Elke **asynchrone opslag** van het type **B, C of D** conform de classificatie van artikel 38 §5 van dit besluit, aangesloten op het transmissiesysteem of dat zich binnen een industriële site bevindt of een industrieel gesloten net dat op zijn beurt aangesloten is op het transmissiesysteem;
3. elke **verbruikersinstallatie** die aangesloten is op het **transmissiesysteem**, evenals
4. elke groep van **verbruikersinstallaties** van een **gesloten industrieel net of een gesloten distributienet** aangesloten op het **transmissiesysteem**.

Role of CDS
operator in Title IX

Art. 262§1: mandatory DA/ID scheduling

Art. 264§1: mandatory bidding of flexibility for redispatching

Art. 257: mandatory outage planning

Art. 262§2:

- exemption DA/ID scheduling when no DSR
- If DSR: scheduling is possible but not mandatory by FGC

New Federal Grid Code: bidding of available flexibility

Art. 264. §1. De netgebruiker of de derde die hij aanduidt als programma-agent voor elke elektrische installatie die het voorwerp uitmaakt van een verplichte programmering zoals bedoeld in artikel 262§1 van dit besluit **houdt het actief vermogen dat op die installatie opwaarts en neerwaarts beschikbaar is ter beschikking van de transmissienetbeheerder opdat die met name de corrigerende acties van redispatching kan uitvoeren.** De inschrijving voor dat vermogen wordt vergezeld van een prijsopgave die voldoet aan de opgelegde criteria, in de in artikel 275 van dit besluit bepaalde modaliteiten en voorwaarden die van toepassing zijn op de programmeringsverantwoordelijken en verloopt **volgens de regels vastgelegd in dezelfde modaliteiten en voorwaarden.**

⇒ Formulering aangepast: “stelt ter beschikking” vervangen door “houdt ter beschikking” ~ zelfde terminologie als huidig FTR art. 159

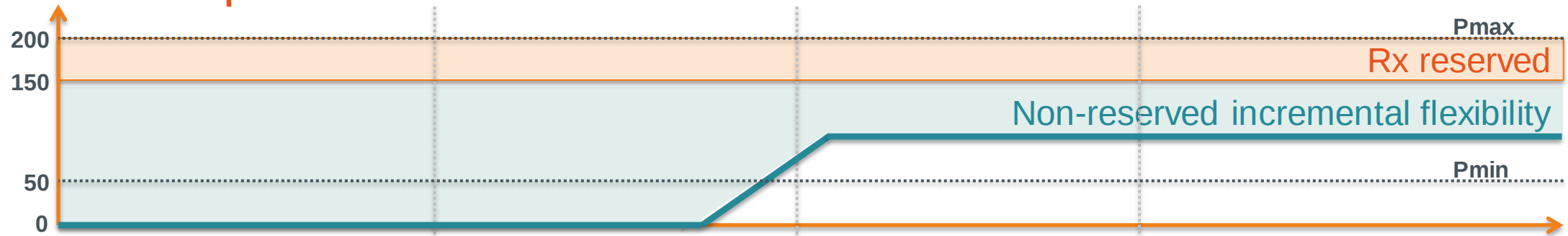
⇒ Principe: focus op *het recht van gebruik van flexibiliteit door TSO* en niet op *het inbieden van flexibiliteit door de Scheduling Agent*

⇒ Concrete modaliteiten vast te leggen in T&C:

⇒ basisinbieding van één of beperkt aantal scenario's mogelijk mogelijk met ad hoc aanpak mogelijk in geval van kritieke situaties die alternatieve configuratie zouden vereisen die niet basis is ingeboden

⇒ Specifieke modaliteiten en formulering in T&C nog af te stemmen in finalisatie van de design en implementatiefase

Example start up/incremental bids



Bid property	Unit	QH1 start up bid	QH1 incremental bid	QH2 start up bid	QH2 incremental bid	QH3 incremental bid	QH4 incremental bid
Delay	15 Min	0	0	0	0	0	0
Minimum activation time	15 Min	1	1	1	1	1	1
Maximum activation time	15 Min						
Bid size	MW	50MW	100MW	50MW	100MW	50MW	50MW
Divisibility	Y ; N	N	Y	N	Y	Y	Y
Condition (Interaction or Exclusivity)			To be activated with or after start-up bid		To be activated with or after start-up bid		
Fix Price (€)*	€	1000€	N/A	N/A (as start-up foreseen)	N/A	N/A	N/A
Activation Price (€/MWh)	€/MWh	70€/MWh	70€/MWh	70€/MWh	70€/MWh	70€/MWh	70€/MWh
Locational	EAN	EAN code	EAN code	EAN code	EAN code	EAN code	EAN code
Flex direction	I ; D	I	I	I	I	I	I

* Rules for payment to be specified

Planning for Transition towards SO GL compliance in 2019

Overview of relevant SO GL articles

Article 6 List of terms and conditions or methodologies which need regulatory approval - related to iCAROS

Art 6 §2 EU-wide approval (for applicability in all Member States of the Union)

- the KORRR (see further): this is a European-level methodology & all NRA approval

Art 6 §3 Regional approval (for applicability in Member States of a concerned region within the Union)

Art 6 §4 Member state approval (for national applicability)

- the applicability and scope of obligations for operational information exchange:
 - need to formalize whether the TSO provides exemptions for data delivery or not (“unless otherwise provided”)
 - Belgian proposal: via Federal Grid Code (e.g. exemption for TSO-connected demand facilities to provide Day-ahead and Intraday schedules)

Art6 §5: “Where an individual relevant system operator or TSO is required or permitted under this Regulation to specify or agree on requirements that are not subject to paragraph 4, Member States may require prior approval by the competent regulatory authority of these requirements”

⇒ Approval by NRA of T&C scheduling agent & outage planning agent should be fixed by National Grid Code

⇒ Elia has proposed this in her proposal of the new Federal Grid Code

SO GL obligations for outage planning and scheduling & compliance status

SO GL Article 192 Entry into force

[...] Articles 41 to 53 shall apply 18 months after the entry into force of this Regulation. Where other articles foresee the provision or use of data as described in Articles 41 to 53, in the period between entry into force of this Regulation and Articles 41 to 53 becoming applicable, the latest available equivalent data shall be used, in a data format as determined by the entity responsible for the delivery of data, unless otherwise agreed. [...]

Articles on operational information exchange enter into force 18 months after SO GL (therefore 14/03/2019)

SO GL Articles 46, 49, 52

TSO-connected PGM type C/D ≥ 25 MW: mandatory outage planning & DA/ID scheduling

SO GL compliant via CIPU



TSO-connected PGM type B/D < 25 MW: mandatory outage planning & DA/ID scheduling

If CIPU: SO GL compliant



If no CIPU: not SO GL compliant



(C)DSO-connected PGM type B/C/D: mandatory outage planning & DA/ID scheduling, but TSO may provide exemptions

If CIPU: SO GL compliant



If no CIPU: not SO GL compliant

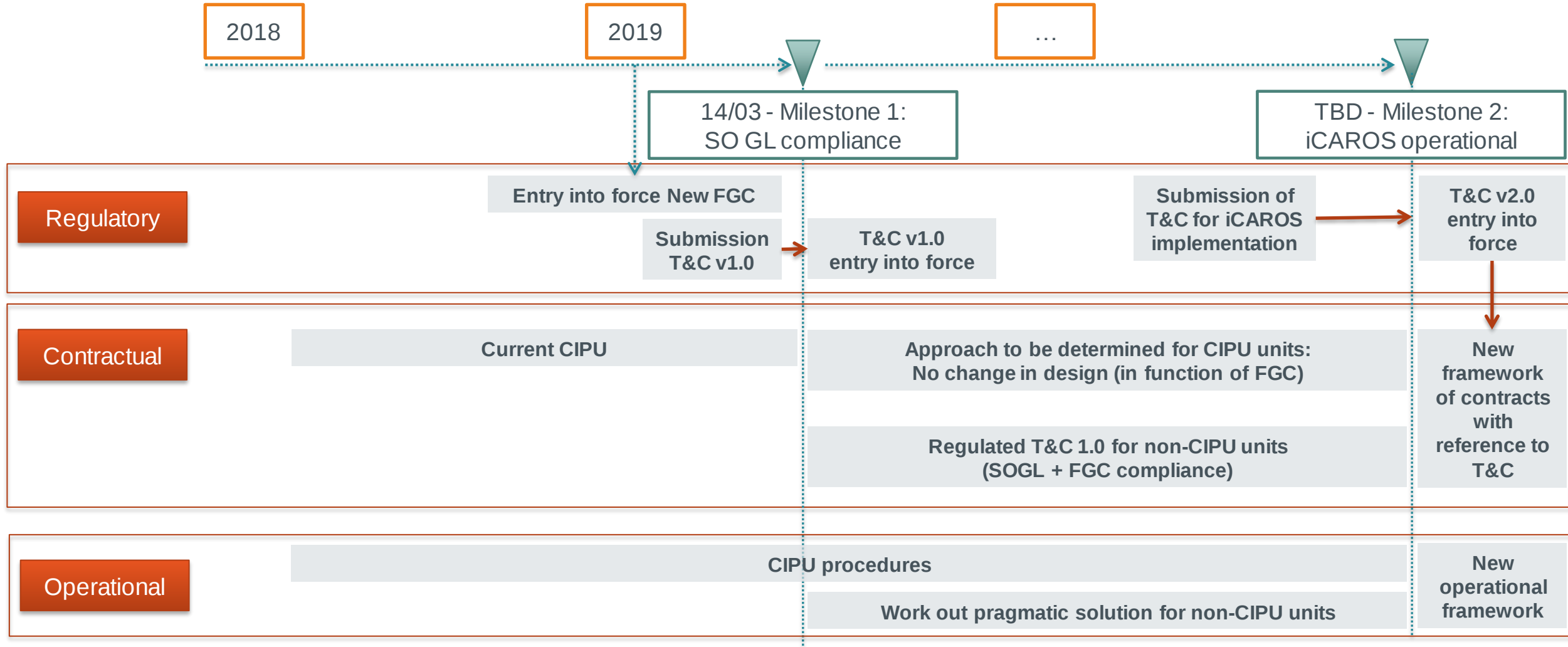


TSO-connected demand facilities: DA/ID scheduling, but TSO may provide exemptions

Exemption proposed in draft Federal Grid Code



Proposal: planning for SO GL compliance & full iCAROS implementation (Presume Federal Grid Code entry into force before 14/3/2019)



Varia

KORRR = Key Organizational Requirements, Roles and Responsibilities

European Guideline for System Operation: article 40(6)

- implementation with respect to operational information exchange (structural, schedules, and real-time information)
- between TSO-TSO, TSO-(C)DSO, TSO-(C)DSO-Significant Grid User
- ELIA approved and verified coherency with iCAROS design
- Belgian stakeholders (e.g., Belgian DSO and IFIEC/FEBELIEC) responded to the ENTSO-e public consultation
- TSO-DSO discussion on European level regarding responsibilities and rights of TSO and DSO

Timeline

31/10 – 1/12/2017: public consultation on KORRR proposal

14/03/2018: KORRR submission to NRA (i.e., 6 months after entry into force of SO GL) (KORRR, consultation report & supporting document) (submitted documents: see ENTSO-e website https://electricity.network-codes.eu/network_codes/sys-ops/methodologies/)

14/09/2018: deadline for NRA approval (i.e., 6 months after submission as described in article 6(7) of SOGL)

14/03/2019: implementation deadline together with the entry into force of the articles on operational information exchange in SO GL (art. 192 of SO GL, art. 18 of KORRR)

Cross-border relevant assets

Ongoing: ENTSO-E consultation on the “All TSOs proposals for the methodologies for coordinating operational security analysis and assessing the relevance of assets for outage coordination”

Open until April 6th, 2018

- Information via ELIA website:

<http://www.elia.be/en/about-elia/publications/Public-Consultation/ENTSO-E-consultation-on-the-All-TSOs-proposals-for-the-methodologies-for-coordinating>

- Information via ENTSO-e website:

<https://www.entsoe.eu/news-events/announcements/announcements-archive/Pages/News/All-TSOs-proposals-for-the-methodologies-for-coordinating-operational-security-analysis-and-assessing-the-relevance-of-asse.aspx>

Next steps

- Publish consultation report
- Finetune design
- 1st implementation step via new Federal Grid Code: ongoing public consultation (15/03 – 16/04/2018)
- No consultation of T&C OP/S-agent during the summer but rather Q3 or Q4 2018 in preparation of entry into force of new Federal Grid Code and implementation date of 14/03/2019 of relevant SOGL articles.
- Start of implementation trajectory with stakeholders :
 - Kick-off meeting will be organized May/June 2018
 - Public : Business & Business Analyst/IT

Many thanks for your attention!

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