

# Title CDS for federal grid code

## Main highlights

WG Belgian Grid

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# General vision – CDS topic

ONGOING: WS 18/12

Impact on FTR

Input – Vision availability

2 axes of work :

From NCs - Connection-related aspects:

- CDSO = grid user connected to Elia grid
  - To follow Title III's requirements at connection point (between the 2 grids – Art 41§3, c)
  - Specific technical requirements for demand (based on DCC requirements)
- CDSO = 'relevant system operator' as a kind of DSO
  - Respect of requirements fixed by FGC for every PGM in the control area (Elia as TSO)
  - When requirement is 'site specific': to be taken in connection contract between CDSO & its grid users (relative freedom within respect to NCs)
  - CDSO's requirements (as RSO) have to be compatible with the requirements the CDSO has to respect <> Elia (as grid user connected to Elia grid)

**PRINCIPLE** : technical requirements fixed in FGC as "RSO rules", except otherwise mentioned

⇒ Only applicable as grid user connected to Elia grid

⇒ Mention [@RSO]: rule to be taken also into regional grid codes at least for local transmission (as RSO at regional level) ; other RSOs (CDSOs and DSOs) have to develop their own specifications

**Belgian rules for operating a CDS at federal level** : no technical connection-related requirements

- Market issues, general rules & responsibilities of federal CDSO
- Position Paper CDS approved in Users' Group 22/9

ONGOING: WS 23/11

# Reminder : Rules for CDSO in the NCs as RSO

- General principle = “When text refers to DSO in general, it has to be read as to refer to CDSO”
- Some specific references to CDSO
- When reference to SGU, applicable to every industrial connected to Elia-grid, even if also having status of CDSO

Subsidiarity principle : to allow Member State to specify relevant rules applicable to CDSO as SGU or as specific type of DSO (what and how obligations have to apply to CDSO?)

- Provisions GL SO or NCs = general framework
- Possibility to be more detailed and deepened if needed (rules between CDSO & TSO)
- Not compulsory to implement detailed, additional rules at MS level (if not needed)

**Market NCs (CACM, FCA)**: no references to CDSO, nor DSO

**NC RfG**: frequent explicit references to CDSO (= classified as DSO)

- ✓ To agree on conditions for disconnection of PGM embedded in networks of industrial sites + exceptions (art. 6)
- ✓ In coordination with the relevant TSO, to specify general requirements for types B, C, D PGM (art. 14-16); to specify requirements for types B, C, D synchronous PGM (art. 17-19); to specify requirements for types B, C, D PPM (art. 20-22)
- ✓ Cost-benefit analysis: assist and contribute to CBA or assessment of potential derogation (provide data requested)(art. 39)
- ✓ Compliance monitoring: to assess compliance of PGM throughout its lifetime, notably establishing public list of information to be provided (art. 41); compliance testing & simulation (art. 42-73)
- ✓ Derogations : to assess request for derogation by a PG facility or for classes of PGM (art. 62-63)

# Reminder : Rules for CDSO in the NCs as RSO

## **NC DCC**: frequent explicit references to CDSO

- ✓ To agree on conditions for disconnection of PGM embedded in industrial sites (art. 5)
- ✓ List of requirements for transmission connected-CDS (art. 12-21)
- ✓ List of requirements for connection of CDS providing demand response services to TSO (art. 27-30)
- ✓ To confirm respect of operational notification procedure (art. 31-33)
- ✓ Compliance monitoring: to ensure respect of requirements (obligation of notification...)(art. 34-35)
- ✓ Compliance testing & simulation: to demonstrate respect of requirements (obligation to carry tests & simulations, record, exchange information...)(art. 36-41; 42-46)
- ✓ Cost-benefit analysis: assist and contribute to CBA or assessment of potential derogation (provide data requested)(art. 49)
- ✓ Derogations : CDSO may request derogation for a demand facility providing demand response to the NRA (art. 52)

## **NC HVDC**: few explicit references to CDSO

- ✓ 'Cost-benefit analysis' (art. 66): assist and contribute to CBA for applicability to existing HVDC systems or PPM (provide data requested)
- ✓ Derogations : request derogation by an HVDC system owner or DC-connected PPM owner situated in a CDS (art. 79) & request derogation by a CDSO (art. 80)

### **Conclusion - CNCs:**

#### **Some topics interesting for CDSO (already identified)**

- **Connection & compliance processes (DRUDs, FONs) for the relevant system operator**
- **Robustness (Islanding); Voltage Control & Reactive Power Management; Short-circuit current contribution**

# Reminder : Rules for CDSO in the NCs as RSO

**E&R NC:** few explicit references to CDSO, but reading to be done by for both SGU/DSO

- ✓ Scope (art.1.7 &1.8): SGU including “all Existing and New Transmission-CDS”; CDS when qualified as Defence Service Provider (art9.8) and/or Restoration Service Provider (art 21.11); CDS providing Demand Side Response
- ✓ Identification by TSO of SGU/DSO which have to implement measures for both defence and restoration plans (art 9.7 and 21.8)

## Conclusion - E&R NC:

- Notion of ‘impacted’ / ‘relevant’ / ‘identified’ SGU or DSO => CDSOs indirectly included
- Defence & Restoration Plans : « as is » situation in Belgium seems sufficient

**Guideline SO:** CDS classified as ‘SGU’ (but general definition as DSO); few explicit references to CDSO

- ✓ Remedial actions (art. 23)
- ✓ Performing short-circuit calculations: done by TSO (art. 31)
- ✓ Coordination of special protection schemes with CDSO (art. 37)
- ✓ Obligations and rules set on GSU (when notion used in general) (art. 53-59, 73-74)
- ✓ Outage coordination (art. 83-90): communication of infrastructure projects or assets or PGM... having impacts on CDSO, to coordinate the outage planning with CDSO
- ✓ Year-ahead availability plan proposals: cooperation with CDSO (art. 94-100)
- ✓ Execution of availability plans, including forced outage (art. 101-103)

## Conclusion – Guideline SO:

- Part II (Operational security): « as is » situation in Belgium seems sufficient; no need to develop new/extra set of rules
- Part III (Operational planning): explicit references to CDS and SGU

# New Title VI Bis “CDSO”

## Inputs:

- **Position paper CDS** : list of rules to be added in FTR
  - Rules regarding the connection and access of CDS grid to Elia grid
    - Contractual relations between CDSO and Elia
    - Responsibilities of CDSO and Elia
  - Rules regarding internal functioning of CDS grid
    - Operational and technical functioning of CDS grid
    - Connection and access of grid users within a CDS
  - Rules regarding supply of ancillaries services/ demand respons by grid users within a CDS to Elia
  - Rules regarding functioning of the electricity market in general
- **Vlaamse TR PVN**, amended to be aligned with federal vision
- **Access contract** (especially appendix 14)
- Proposals new articles for FGC, as discussed in **WG BG in 2012**
- Ongoing discussions with Febeliec and Workshops (RSO part)

# Title CDS: main elements to be pointed

- Federal grid code is applicable to '**CDSO de traction ferroviaire**' and to all its grid elements: all this grid is subject to federal competence
- **CDSO is not only a RSO but also a grid user :**
  - Connection & access of the CDS respect all requirements stated in Titles III & IV; notions of access/connection point (and not 'koppelpunt')
  - Proposal to **refer explicitly to Title III "requirements for grid users"**, in a similar way that current art 369, as a way to let remind that CDS are a kind of grid user and no specificities are detected so far (// Art III.7.1.6 TRPVN)
- **Data exchanges between Elia and CDSO: 2 levels**
  - Part Belgian rules, especially for realisation of energy allocation & planning data
  - Part NCs : structural data (requested by NC DCC and NC SOGL), scheduled data by SOGL (similar to access program), infos from NC E&R
  - Actions to taken in case of incidents, urgent situations (noodsituaties) or operation problems : impact NC E&R => to have a very broad reference
- **To add definitions** related to CDS : only the ones not in E-Law, nor in NCs : « CDS-access point », « closed distribution system » (in a generic sense and not only federal notion)
- **Rules regarding supply of AS/ DR** by grid users within a CDS to Elia : not much specifications => details are in Title IV and in contracts. Some principles only: delivery points in CDS allowed to participate, exceptional relations with Elia, some obligations for the CDSO

# Title CDS: main elements to be pointed

## Proposed structure:

- Chapitre 1. Règles générales et relations entre le gestionnaire du réseau de transport et les gestionnaires des réseaux fermés industriels
- Chapitre 2. Echanges de données entre le gestionnaire du réseau et les gestionnaires des réseaux fermés industriels
- Chapitre 3. Règles relatives au raccordement des utilisateurs de réseau fermé industriel
- Chapitre 4. Règles relatives à l'accès des utilisateurs de réseau fermé industriel et à l'équilibre des responsables d'équilibre actifs dans les réseaux fermés industriels
- Chapitre 5. Mesures et comptages



Impact NCs (data exchanges)



Impact NCs (connection requirements RSO)