

Implementation Network Codes: Status

WG Belgian Grid
26 Sept 2016

Agenda

a) Implementation NC: status and feedback of the process

b) Non-NC driven changes to the Federal Grid Code: consolidation list of stakeholder's ideas

c) Topic "Information Exchange": general presentation

d) Topic "Protection & Control": general presentation

Network Codes adoption progress

 = most recent evolutions

Network Code / Guideline	Status	Expected entry into force
Market codes:		
Capacity Allocation and Congestion Management (CACM)	Entered into force	14/8/2015
Forward Capacity Allocation (FCA)	Approved in Comitology (30/10/2015)	October 2016
Electricity balancing (EB)	Comitology ongoing (since 23/6/2016)	Q1/Q2-2017
Connection codes:		
Requirements for generators (RfG)	Entered into force	17/05/2016
Demand Connection Code (DCC)	Entered into force	7/09/2016
HVDC (HVDC)	(almost) Entered into force	28/09/2016
Operational codes:		
Operational Security (OS)	Approved in Comitology (4/5/2015)	December 2016
Operational Planning & Scheduling (OPS)		
Load Frequency Control & Reserve (LFCR)		
Emergency & Restoration (E&R)	Comitology ongoing (since 4/5/2015)	February 2017

Merged
in one
guideline

Status Task Force “Implementation NCs”

Last TF-meeting (14/9) two topics were discussed:

- **Short-Circuit Power**

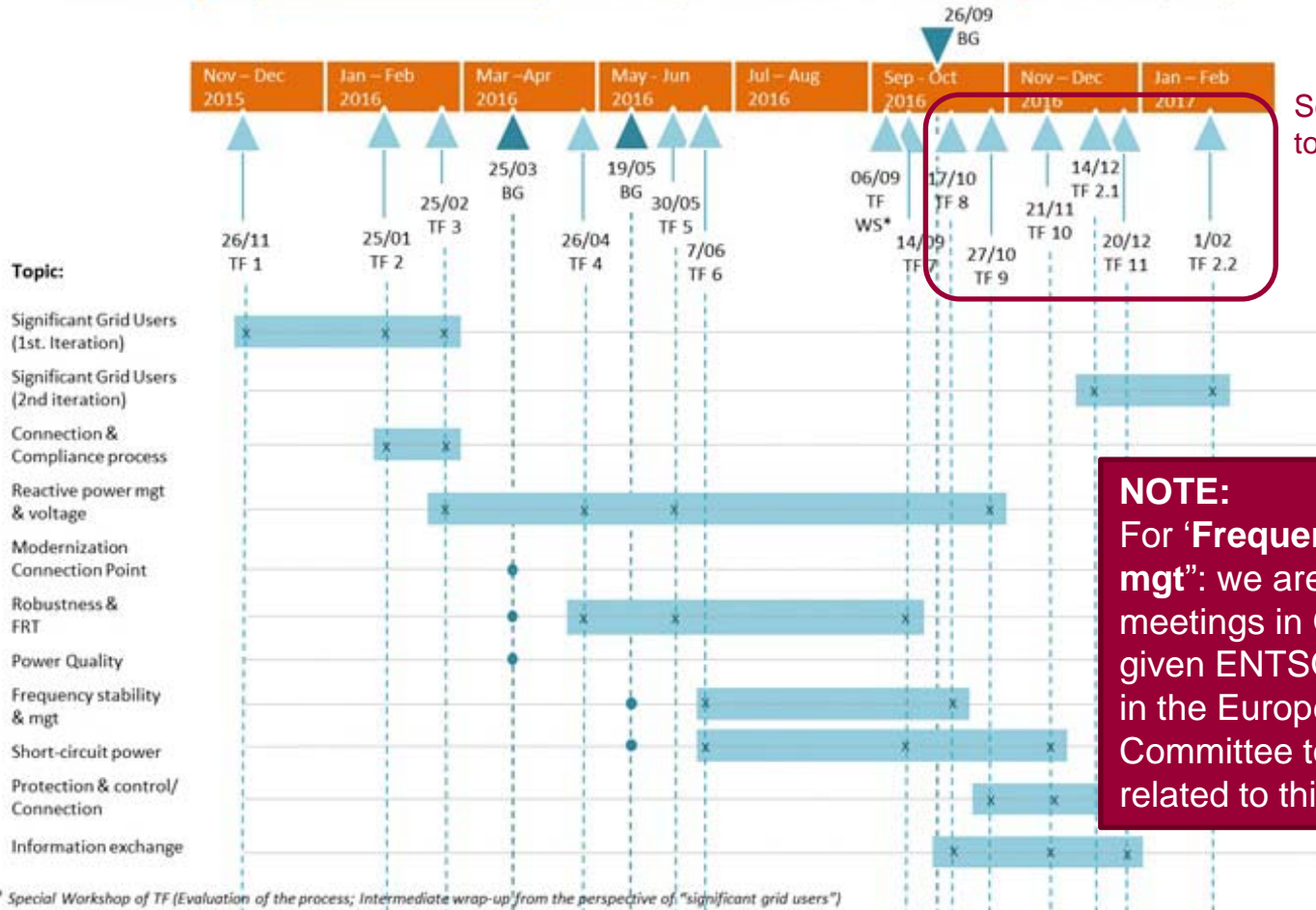
- Elia provided answers to open questions from previous meetings
- Link with operational guideline explained
- ➔ Topic is closed, a few identified remaining questions will be dealt with bilaterally

- **Robustness & Fault Ride Through**

- Elia provided answers to open questions from previous meetings
- BGA gave a presentation providing their feedback and questions
- Different opinions remain on several issues at technical level, but also at principles level (e.g. how stringent should requirements be set as standard level)
- In order to move forward, Elia is asked to provide more (technical) information on several aspects (protection delays, scenarios used, underlying principles, etc.)
- ➔ Topic remains open, Elia will provide answers (to the extent possible) on the identified questions. Depending on this output Elia and stakeholders will decide together whether an extra meeting is deemed necessary.

Calendar Task Force “Implementation NCs”

Planning of content discussion in TF Implementation NCs/Belgian Grid (BG)



Several meetings and topics planned for

NOTE:
For ‘Frequency stability & mgt’: we are evaluating whether meetings in October are useful, given ENTSO-E’s announcement in the European Stakeholder Committee to launch an initiative related to this issue.

Latest info available online:

<http://www.elia.be/en/users-group/Working-Group-Belgian-Grid/Task-Force-Implementation-nc/Agenda>

(Non-NC driven) ideas for updating the Federal Grid Code

In the Special Workshop at Genval (6/9) it was discussed and asked by FOD to identify within the Users' Group **common** priorities.

Proposed approach:

- Identify the topics which should be **prioritized for debate/discussion/treatment** (knowing that within a topic opinions can differ at the moment)
- Choosing priorities **should not imply discarding all other ideas**, they should be remembered and – whenever the opportunity is created (e.g. due to a close link with the NC) - be taken on board for changing the grid code when appropriate.
- ➔ Elia consolidated the ideas in **a single list with about 35 topics** which (1) clusters where considered possible but (2) while maintaining a view on the individual stakeholder lists.
- ➔ Stakeholders are asked to **select 15 priority topics** (by **20 October 2016**)
- ➔ By next WG Belgian Grid Elia will provide the results, indicating the common topics.
- ➔ Depending on these results, appropriate next steps can be determined..

(Non-NC driven) ideas for updating the Federal Grid Code

ID	Short name	Description	SH ideas
General aspects			
1	Definitions	<p>Definitions used by the FGC should be as much as possible aligned with the overall legal, contractual and regulatory framework.</p> <p>Where needed new definitions should be considered, e.g. demand response, local production unit, local transmission network, flexibility, ...</p> <p>Where possible a definition valid for the three regions should be created.</p>	<p>FBG 1 FBL 3 DSO 1 Elia 1</p>
2	Technology neutrality	<p>FGC should be made technology-neutral, in particular for ancillary services.</p>	<p>FBL 7 Elia 2</p>
3	Closed Distribution System	<p>The FGC (and regional grid codes) should be updated to reflect the new reality with respect to CDS and to be future proof.</p> <p><u>Elia</u>: amongst others, the contractual relationship with the transmission system operator and the relation (or aspects thereof) with other market roles such as the BRP, the information exchanges to be covered by a CDS operator, testing requirements and keeping a register of conformity with respect to its grid users,...</p>	<p>FBG 8 FBL 6 Elia 5</p>
4	Storage	<p>A framework for storage facilities should be defined, taken into account:</p> <ul style="list-style-type: none"> - connection requirements for such facilities - characteristics of generation and demand unit 	<p>FBG 2 FBL 8 Elia 6</p>
5	Future proof: HVDC, Offshore, ...	<ul style="list-style-type: none"> - In general, the Federal Grid Code may not act as a barrier for the upcoming evolutions with respect to offshore grids and offshore grid users. Not only aspects related to the connection to the main grid, but also market-related aspects should be taken into account (e.g. storm risk, ramping rates...). - The Federal Grid Code should be made future-proof with respect to the introduction of HVDC technology in the Belgian framework. The Federal Grid Code should not act as a barrier with respect to, for instance, the provision of services by HVDC installations or their integration in the market framework across all timeframes. 	<p>Elia 7 / 8</p>

(Non-NC driven) ideas for updating the Federal Grid Code

ID	Short name	Description	SH ideas
Connection			
6	Priority Dispatch for certain production types	This is by Febeliec considered to be an important market distortion that hinders the correct Energy Only Market functioning. Febeliec insists on eliminating this priority dispatch as soon as possible.	FBL 14
7	Connection requirement framework	In general it could be considered to provide a more solid legal and/or regulatory basis for the connection requirements applicable for grid users connected to the Elia grid.	Elia 15
8	Connection requirements	Next to the necessary implementations following the NC, also requirements linked to aspects not (entirely) arranged by the NC must be kept up-to-date and must be clarified where needed. Also and to the extent not already adequately covered by the NC, obligations on informing the transmission system operator on the evolution of installed generation capacity (also for small volumes, e.g. 1 MW) should be considered. Articles 61 to 78 concerning additional prescriptions for the connection of production units to be modified to be in line with NC RfG	DSO 6 Elia 16
9	Coherent evolution of old connections	In order to facilitate an optimal long term techno-economic grid development in the interest of all grid users, Elia proposes to introduce in the FGC a framework which aims to promote, whenever necessary, a harmonized evolution of some old existing connections in coherence with the needs of the grid. Such framework should take into account the characteristics of the concerned connections, respect the applicable tariff framework, be applied in dialogue with between the network operator and the grid user and deliver an appropriate solution for the grid user.	Elia 17
10	Shared connection	The FGC could consider the introduction of the concept of “shared connection”, i.e. a connection to the Elia grid used by multiple (but not unlimited) legal parties, each of them having an individual connection contract or collaboration agreement with Elia and possibly located on different geographical sites. Also the ‘capacity transfer’ which is at the basis of a shared connection should be covered.	Elia 18

(Non-NC driven) ideas for updating the Federal Grid Code

ID	Short name	Description	SH ideas
Connection (continuation)			
11	Aspects linked to metering	<p><u>FEBEG</u>: Allow commercial parties, other than Elia, to become active in the business of metering services (installing and operating).</p> <p><u>Febeliec</u>: sub-metering proposal (suggested by Elia) should be included in the FGC. Participation in the electricity market requires a smart meter. These smart meters should be placed (and analogue meters replaced).</p> <p><u>DSOs</u>: explicitly determine in the FGC who is the manager of the measuring device</p> <p><u>Elia</u>: FGC should be made future-proof providing a solid framework allowing recent evolutions (e.g. dealing with the metering installations at CIPU units and submetering which are not covered by the connection contract but rather by ancillary services contracts).</p>	<p>FBG 14</p> <p>FBL 13</p> <p>DSO 9</p> <p>Elia 12</p>
12	Capacity reservation	The FGC may not block any evolution as regard to congestion management, e.g. discussions as regards 'red zones' or compensation for 'flexible access'	User's Group approval
13	Connection request	Ensure that every grid user or a designated third party could make a connection request.	Elia 24
14	Terrains not owned by TSO	Reformulation of TSO obligations if connection installations are located on terrains not owned by the TSO (priority)	Elia 24
15	Art. 71 (U,Q diagram)	Article 71 (U,Q diagram) is not possible without on load tap changer on trafo	FBG 17

(Non-NC driven) ideas for updating the Federal Grid Code

ID	Short name	Description	SH ideas
Market roles			
16	Market roles & responsibilities	Market roles need to be made up-to-date and future proof. Updates may not block other legal/contractual/regulatory framework.	FBG 6 FBL 5 Elia 4
17	Supplier	<u>DSO</u> : align meaning "supplier" in FGC and TRDE + specify the role of DSO as network user	FBL 5 DSO 3 Elia 4
18	BRP	<u>Febeliec</u> : the role of the BRP should remain central. Change wording ARP to BRP	FBL 5 Elia 24
19	Flexible access	Incorporation of flexible access. <u>Febeliec</u> : Constraints on access should not be compensated for. Demand side in general is not interested in this kind of sub-optimal solution.	FBG 3 FBL 15 DSO 4
20	CIPU	<u>FELEG</u> : it should be ensured that the federal grid code doesn't block any evolution as regard congestion management, e.g. discussions as regards 'red zones' or compensation for 'flexible access' <u>Febeliec</u> : the FGC should be technology-neutral in the limitation of certain products and market segments to CIPU units <u>Elia</u> : The current CIPU-concept covering aspects of congestion management, balancing and revision planning should be assessed with respect to its contractual architecture and where appropriate also the underlying principles.	FBG 7 FBL 7 Elia 21
21	Access Holder related	Related to the Access contract: avoid yearly renewal, reconsider the 24/24h availability obligation, clarify the link between the ACH register and the ACH-contract	Elia 24

(Non-NC driven) ideas for updating the Federal Grid Code

ID	Short name	Description	SH ideas
Market: balancing and congestion management			
22	Ancillary services (product design)	<p><u>FEBEG</u>: FGC foresees that CREG has to make a report on the procured ancillary services, which is not possible with the short-term sourcing in place. both CIPU and non-CIPU can deliver services, creation of level playing field</p> <p><u>Febeliec</u>: general level playing field between all sources of flexibility and between all timeframes. Neutrality should be reflected.</p> <p><u>Elia</u>: For aspects linked to the provision of ancillary services a more technology-neutral approach than today's generation-oriented approach should be adopted. For instance, with respect to ancillary services a more service-oriented approach rather than technology-oriented approach could be envisaged (e.g. R1-load). Also, exceptions targeting specific technologies should be reconsidered and where possible be removed. The framework for ancillary services provided by Federal Grid Code should be reconsidered, taking into the upcoming EU Network Code on Electricity Balancing. This may require re-defining such services, reconsidering the merit order, considering the participation of all technologies, etc. Also for concepts like reactive balancing by Balance Responsible Parties the Federal Grid Code should not act as a barrier. Also, with respect to reserve dimensioning, the FGC should keep pace with ongoing evolutions.</p>	<p>FBG 10 / 11 FBL 2 / 7 Elia 2 / 3 / 20 / 22</p>
23	Ancillary services (balancing market design)	<p><u>FEBEG</u>: FGC determines the order of activation of ancillary services which causes problems for building bid ladder for all R3 products (contracted and non-contracted)</p> <p><u>Elia</u>: The framework for ancillary services provided by the Federal Grid Code should be reconsidered, taking into the upcoming European Network Code on Electricity Balancing. This may require re-defining such services, reconsidering the merit order, considering the participation of all technologies, etc. Also for concepts like reactive balancing by Balance Responsible Parties the Federal Grid Code should not act as barrier.</p> <p><u>Febeliec</u>: With an increasing share of end consumers participating in balancing products (which is as such a good thing, as it leads to more competition and lower system costs), the balancing rules should be adapted in order to reflect the impact of this new context on the merit order for balancing product activation.</p>	<p>FBG 11 FBL 16 Elia 20</p>

(Non-NC driven) ideas for updating the Federal Grid Code

ID	Short name	Description	SH ideas
Market: balancing and congestion management (continuation)			
24	Data exchange	Information exchange articles should be updated and reevaluated <u>FEBEG</u> : the FGC may not prevent evolutions towards 'near real-time balancing publication' <u>Febeliec</u> : Pragmatic approach required for the direct market participation for end consumers: obligations to participate in the technical and administrative treatment of trades and operations.	FBG 9 FBL 12
Market: forward, day-ahead, intraday			
25	Balancing obligation	Balancing obligation and more particularly obligation to submit in day-ahead a balanced program	FBG 12
26	ID Production programs	Consider improving the quality of intraday production programs by ensuring a better follow-up by/information from BRPs after having submitted the day ahead programs.	Elia 10
Losses			
27	Grid Losses	Consider other sourcing mechanism for procuring grid losses	FBG 5 FBL 9 Elia 13

(Non-NC driven) ideas for updating the Federal Grid Code

ID	Short name	Description	SH ideas
Emergency plans			
28	Emergency plans	The Federal Grid Code should be brought further up-to-date with respect to emergency plans and also address implementation aspects linked to the European Network Code on Emergency & Restoration. This could, for instance, include reconsidering and/or further clarifying definitions, priority loads in load shedding plans, shedding plans in case of so-called incompressibility, principle of operational rules for shedding.....	Elia 19
System operator			
29	TSO-DSO	<p>The FGC should be brought up-to-date with respect to the framework governing the relationship between the TSO and the DSOs: <u>Elia</u>: e.g. taking into account the already existing collaboration agreement. Additionally, it should be assessed whether some detailed aspects need to be revised, e.g. with respect to defining the techno-economic optimum, connection and reinforcement requirements and delays and the relationship between different grid operators. <u>DSO</u>: e.g. ancillary services such as congestion management and voltage management. Regulated network related services would preferably be detached from the commercial market services.</p> <p>It should be checked which of the current obligations for the network users should be withheld in a specific chapter applicable to DSOs and reference should be made to the SOK/CDC agreement.</p> <p>The articles 369 to 387 should be completely reviewed in both content and structure. Replace Section II with an article which refers to the legal clause prescribing that there must be a SOK/CDC which at least covers the listed aspects (cf. article VI.2.1.10 in the Flemish GC), as an alternative to a large number of the existing articles of Title VI.</p>	DSO 2 / 8 Elia 11

(Non-NC driven) ideas for updating the Federal Grid Code

ID	Short name	Description	SH ideas
Other aspects & Cleaning			
30	Attune federal & regional GC	Attune federal and regional grid codes to each other where opportune. The word “supplier” (“leverancier”) has a different meaning in the FGC and in the regional (flemish) TRDE	DSO 3 / 5
31	Availability planning data	Setting the period for availability of planning data to be provided by the grid user from 7 to 10 years for better alignment with the required development plans of the transmission system operator	Elia 24
32	Confidentiality	Bring articles related to confidentiality up to date.	Elia 24
33	Wellbeing	Check Federal Grid Code conformity with the “Wellbeing on workplace Law” (NL: Welzijnswet) (priority)	Elia 24
34	All-in contracts	Implement that all-in contracts are ipso jure replaced by approved contracts (Art. 138 (or 141)).	Elia 24
35	Safety	Where necessary, and taking due account of the Act on wellbeing on the workplace, the Federal Grid Code should be clarified to ensure that a clear framework is available for determining the applicable safety rules for employees of the transmission system operator (and its subcontractors) when accessing the transmission installations located on the grid users’ premises.	Elia 9
36	Cleaning	<ul style="list-style-type: none"> - At various places in the current FGC minor textual corrections would prove useful. - The FGC should be ‘cleaned’ for all outdated concepts which are no longer needed in the current (and future) context, e.g. power subscriptions in the context of transmission tariffs. - Remove all aspects arranged by (FCA/CACM) network codes, but ensure that no vacuum is created for any aspect that requires a complementary national framework. - Release the 5 year information limit for existing connections mentioned in Art. 138 (priority) - Check conformity of “behoud noodzakelijke transportcapaciteit (Art. 100) with the third EU package. 	Elia 24 / 25 / 26

Appendix: Results of the inquiry for non-NC driven changes to the “Federal Grid Code”

- Presentation Special Workshop Genval 06/09
- Preferred changes per stakeholder

Introduction

- NC implementation will require amending the Federal Grid Code
 - This opportunity could be used to also amend the Federal Grid Code on other (non-NC driven) aspects
- In May, Elia launched an inquiry for non-NC driven changes to Federal Grid Code
- At the end of the process, the results will be handed over to the FOD in all transparency with the Users' Group.

→ This inquiry is to be considered as a first step.

Contributions

- Several stakeholders have prepared their list of ideas and provided their input to Elia.
- Elia has “inventorized” the ideas of the stakeholders and Elia’s own list of ideas.
- Elia tried to represent the stakeholders’ ideas and to accurately translate whenever necessary. However, **for more precise information and for any context and disclaimers provided by stakeholders (and Elia) please refer to the original letters and notes.**
- Besides the list provided by Elia, three stakeholder associations have responded to the inquiry:
 - DSOs (Synergrid)
 - FEBEG
 - FEBELIEC

Contributions

Some observations

Overall, the received lists are:

- **For several items focusing on larger themes** and leaving some margin for further debate and how to realize.
- Sometimes very specific aspects are mentioned.
- There are clear **similarities** between the themes mentioned on different lists (which however does not imply an immediate consensus).
- Size of the lists vary, but are generally **not too lengthy, but overall a broad scope** is covered:
 - FEBEG: 17 items (distinction priority – others)
 - FEBELIEC: 16 items (no prioritization)
 - DSOs: 9 items (no prioritization)
 - Elia: 26 items (distinction priority – others)

Overview ideas

FEBEG	DSO	Febeliec	Elia	
1) Definitions	1) Definitions	1) Market Access	1) Definitions	18) Shared connection
2) Storage	2) Dinstinguish network users and DSO	2) Demand Side Flexibility and Demand Side Response	2) Technology neutrality for provision of ancillary services	19) Emergency plans
3) Access	3) Supplier	3) Definitions and overall structure of the Federal Grid Code	3) Demand response	20) Ancillary services
4) Capacity reservation	4) Flexible access	4) European Network Codes	4) Market model	21) CIPU
5) Grid losses	5) Federal & regional grid code	5) Roles and responsibilities	5) Closed Distribution Systems (CDS)	22) Reserve dimensioning
6) Roles	6) Art. 61-78 (NC RfG related)	6) Closed Distribution Systems	6) Storage	23) MVAR sourcing
7) Congestion management	7) Art. 369 – 387 (SOK related)	7) Technology neutrality	7) HVDC	24) Varia
8) Closed distribution system	8) Separated framework for regulated services	8) Storage	8) Offshore	25) Outdated concepts
9) Information flows	9) Manager of the measuring device	9) Grid loss procurement	9) Safety	26) Errata
10) Demand response		10) Grid connection	10) ID production programs	
11) Ancillary services		11) Technical requirements and specifications	11) TSO - DSO	
12) Balancing obligation		12) Data exchange	12) Metering	
13) Black-out & restoration		13) Sub-metering	13) Losses procurement	
14) Metering services		14) Priority Dispatch for certain production types	14) Capacity reservation	
15) Elia operational services		15) Flexible access	15) Connection requirement framework	
16) Preferential customers restoration		16) Merit order based balancing	16) Connection requirements	
17) Article 71			17) Coherent evolution of old connections	

FEBEG ideas – Priority suggestions

ID	Short name	Description
FBG 1	Definitions	Flexibility,...
FBG 2	Storage	Need to define storage (generation or demand?)
FBG 3	Access	Need for clarifications and modifications to adapt to new circumstances
FBG 4	Capacity reservation	i.e. implementation of procedure agreed upon in the Elia Users Group
FBG 5	Grid losses	evolution away from compensation in kind to other mechanism, e.g. tendering
FBG 6	Roles	role of FSP, but also role of supplier (access contract, ToE, ...)
FBG 7	Congestion management	it should be ensured that the federal grid code doesn't block any evolution as regard congestion management, e.g. discussions as regards 'red zones' or compensation for 'flexible access'
FBG 8	Closed Distribution Systems	reevaluate and update (reorganization, removal of all inconsistencies, ...) articles with regard to Closed Distribution Systems
FBG 9	Information flows	reevaluate and update articles as regards information flows and ensure that Federal Grid Code doesn't prevent evolution towards 'near real-time balancing publication'
FBG 10	Demand response	-FGC focuses on CIPU units while also non-CIPU units can deliver services to Elia -All consistencies in this respect should be removed ensuring a level playing field
FBG 11	Ancillary services	-FGC foresees that CREG has to make a report on the procured ancillary services, which is not possible with the short-term sourcing in place -FGC determines the order of activation of ancillary services which causes problems for building bid ladder for all R3 products (contracted and non-contracted)

FEBEG ideas – Other (non-priority) suggestions

ID	Short name	Description
FBG 12	Balancing obligation	Balancing obligation and more particularly obligation to submit in day-ahead a balanced program
FBG 13	Black-out & restoration	Reevaluation rules for black-out and restoration, especially with regard to financial aspects
FBG 14	Metering services	Allow commercial parties – like for example in the Netherlands – to become active in the business of metering services (no exclusivity of Elia on installing and operating metering services)
FBG 15	Elia operational services	Clarifications on operational services (maintenance, spare parts, ...) offered by Elia for installations belonging to grid users
FBG 16	Preferential customers restoration	A list of preferential customers in the restoration process exists, but should this list not need a legal basis?
FBG 17	Article 71	Article 71 (U,Q diagram) is not possible without on load tap changer on trafo

DSO's ideas

ID	Short name	Description
DSO1	Definitions	As a result of the NCs , but these should also be actualised and preferably harmonised with the regional grid codes . The expression " local transmission network " is not defined in the FGC (FTR). The best solution is to add a definition that is valid for all three regions (PVN in Flanders, RTL in Wallonia and RTR in Brussels)
DSO2	Distinguish Network users and DSOs	In the current version, a network user is defined as a connected consumer or supplier (supplier is perhaps also not a correct word in this context), and under the consumer category is also included "distributeur", which is not further defined. Thereby, it is unclear whether DSOs also fall in this category. If yes, all obligations of network users/consumers would also apply on DSOs, which is not always pragmatic. It should be checked which of the current obligations for the network users should be withheld in a specific chapter applicable to DSOs . In that specific chapter reference should be made to the obligation of concluding a SOK/CDC (collaboration agreement) between TSO and DSO and listing all the elements (without details) which need to be described in the SOK/CDC.
DSO3	Supplier	The word "supplier" ("leverancier") has a different meaning in the FGC and in the regional (flemish) TRDE
DSO4	Flexible access	Incorporation of flexible access (as it is already the case in the flemish codes TRDE and TRPVN)
DSO5	Federal & regional GC	Attune federal and regional grid codes to each other where opportune
DSO6	Articles 61 to 78	Articles 61 to 78 concerning additional prescriptions for the connection of production units to be modified to be in line with NC RfG

DSO's ideas

ID	Short name	Description
DSO7	Articles 369 to 387	<p>"Title VI – Specific provisions between the operator of the transmission network and the operator of the distribution network or the local transmission network in the control area", the articles 369 to 387 should be completely reviewed in both content and structure.</p> <p>Replace Section II with an article which refers to the legal clause prescribing that there must be a SOK/CDC which at least covers the listed aspects (cf. article VI.2.1.10 in the Flemish GC), as an alternative to a large number of the existing articles of Title VI.</p>
DSO8	Separate framework for regulated services	<p>Separate framework to provide for regulated services to be supplied by the DSO to the TSO (e.g. ancillary services such as congestion management and voltage management).</p> <p>Regulated network related services would preferably be detached from the commercial market services</p>
DSO9	Manager of the measuring device	<p>In the FGC is no explicit determination of who is the manager of the measuring device.</p> <p>Therefore, it seems opportune to aspire to coherence with the regional GC's, where it is clearly defined that the operator of the distribution/local transport network is the only authorized agent to put at disposal the measuring device, install it, adapt it, maintain it, replace it, remove it and exploit it</p>

FEBELIEC ideas

ID	Short name	Description
FBL 1	Market Access	After 20 years of liberalization, the market still does not function optimally. For end consumers, direct market access remains one of the key challenges. Access rules and regulation are very often considered to have a considerable impact on this. Wherever the Federal Grid Code can address these concerns, these should be addressed to facilitate full participation of all grid users to the market.
FBL 2	Demand Side Flexibility and Demand Side Response	The value of a more responsive demand side, with impact on the elasticity of the demand curve by offering more flexibility to the system, has been shown in Belgium, in products such as ICH, SDR, participation in an increasing number of balancing products, but a general level playing field should be created between all sources of flexibility (flexible generation, demand side flexibility, storage) and within all timeframes (so not limited to the balancing market, but also to the intraday, day ahead and forward markets as well as the near real-time markets). The Federal Grid Code should be adapted to reflect neutrality towards sources of flexibility.
FBL 3	Definitions and overall structure of the Federal Grid Code	These should undergo an update and reality check and be aligned within Belgium and with the European level. E.g. definition of demand response, which is different in all documents and not always reflects the full potential of demand response. A harmonization to for example the ACER or CEER definition would be an improvement.
FBL 4	European Network Codes	The Federal Grid Code should be adapted to reflect the requirements and obligations from these codes. The question remains how this should be done, by references to these Network Codes or by incorporating (parts of) these Network Codes in the Federal Grid Code. Important is to take into account the readability of the Federal Grid Code as a comprehensive document, not only an inventory of references to other documents.

FEBELIEC ideas

ID	Short name	Description
FBL 5	Roles and responsibilities	The roles as currently defined within the Federal Grid Code will need to undergo a reality check and need to be made future-proof , with new roles added (e.g. Flexibility Service Provider, with sub-categories Balancing Service Provider, ESCO, Aggregator). Nevertheless, Febeliec wants to stress the central role of the BRP within the electricity system and does not want to put this role or its content into question, other than reinforcing the responsibilities of the BRP. Also, the notion of ARP should be aligned with the European terminology, namely BRP.
FBL 6	Closed Distribution Systems	The transposition and implementation of European Legislation has created the notion of CDS as compared to Grid Users with an internal industrial grid. This new reality needs to be reflected and embedded within the Federal (and regional) grid code(s) , while at the same time leaving sufficient flexibility to make this concept future-proof.
FBL 7	Technology neutrality	The Federal Grid Code should be made technology neutral (also linked to the above point on sources of flexibility and the limitation of certain products and market segments to e.g. CIPU units)
FBL 8	Storage	The specific situation of storage, which has characteristics of both a generation and demand unit, should be addressed and implemented in the Federal Grid Code (and other documents).
FBL 9	Grid loss procurement	The compensation of grid losses in kind instead of via a grid tariff should be opened for an in-depth debate , taking into account the impact but also the best practices on the regional level as well as in other countries.
FBL 10	Grid connection	Remove the ambiguity that could still exist (e.g. from definitions), and align this with the European Network Codes . This also relates to connection and compliance processes.
FBL 11	Technical requirements and specifications	Alignment of technical requirements and specifications related to those coming from Euronorm, European Network Codes, Synergrid Prescriptions, ... This goes beyond the scope of the Federal Grid Code but should be addressed at some point.

FEBELIEC ideas

ID	Short name	Description
FBL 12	Data exchange	Direct market participation for end consumers, including CDS operators, rightly requires them to also participate in the technical and administrative treatment of trades and operations. Febeliec insists on the need of a balance between these additional obligations and the real market needs, and calls for a pragmatic approach by grid operators, regulators and legislators. This will facilitate market access for end consumers, improve liquidity in the market and therefore benefit the society as a whole.
FBL 13	Sub-metering	The solutions proposed by Elia for sub-metering and its pragmatic approach of this issue should allow most, if not all, end consumers on the transmission grid to find an acceptable solution for their metering issues. Febeliec would appreciate it if these solutions could be consolidated in the Federal Grid Code. In general, and in particular for distribution grids, Febeliec is convinced that participation in the electricity market unavoidably requires a smart meter. We therefore insist on the need to allow all end consumers to request their grid operator to install them a smart meter, the need to require prosumers to install a smart meter and the necessity to gradually replace existing analogue meters by smart meters.
FBL 14	Priority Dispatch for certain production types	This is by Febeliec considered to be an important market distortion that hinders the correct Energy Only Market functioning. Febeliec insists on eliminating this priority dispatch as soon as possible.
FBL 15	Flexible access	To be considered a facility offered to grid users to connect to the grid where this on normal criteria would not be possible. Constraints on access should not be compensated for. Demand side in general is not interested in this kind of sub-optimal solution.
FBL 16	Merit order based balancing	With an increasing share of end consumers participating in balancing products (which is as such a good thing, as it leads to more competition and lower system costs), the balancing rules should be adapted in order to reflect the impact of this new context on the merit order for balancing product activation.

Elia's ideas

ID	Short name	Description	Priority?
Elia 1	Definitions	Overall, the definitions use by the Federal Grid Code should be as much as possible aligned with the overall legal, contractual and regulatory framework and where needed new definitions should be considered, e.g. demand response, local production unit, ...	Yes
Elia 2	Technology neutrality for provision of ancillary services	For aspects linked to the provision of ancillary services a more technology-neutral approach than today's generation-oriented approach should be adopted. For instance, with respect to ancillary services a more service-oriented approach rather than technology-oriented approach could be envisaged (e.g. R1-load). Also, exceptions targeting specific technologies should be reconsidered and where possible be removed.	Yes
Elia 3	Demand response	Notwithstanding the need to become more technology-neutral on some aspects as described above, the concept of demand response may need to be introduced, for instance, with respect to the provision of ancillary services.	Yes
Elia 4	Market model	<p>The Federal Grid Code should not act as a barrier for several ongoing and upcoming evolutions linked to the roles and responsibilities in the provision of ancillary services (e.g. the FSP/BSP-concept) and the balance responsibility. Also other interactions between different market roles should be carefully assessed and possibly updated (e.g. the interaction between BRPs responsible for offtake and injection and BRPs linked to activations of flexibility).</p> <p>However, careful alignment with other documents in the legal/contractual/regulatory framework is needed in order not to become blocking.</p>	Yes

Elia's ideas

ID	Short name	Description	Priority?
Elia 5	Closed Distribution Systems (CDS)	The concept of CDS should be introduced into the Federal Grid Code in order to determine and/or clarify, amongst others, the contractual relationship with the transmission system operator and the relation (or aspects thereof) with other market roles such as the BRP, the information exchanges to be covered by a CDS operator, testing requirements and keeping a register of conformity with respect to its grid users,...	Yes
Elia 6	Storage	With respect to storage facilities it should be considered to define (a framework for) the connection requirements for such installations and thereby anticipate a potential technological evolution.	
Elia 7	HVDC	The Federal Grid Code should be made future-proof with respect to the introduction of HVDC technology in the Belgian framework. The Federal Grid Code should not act as a barrier with respect to, for instance, the provision of services by HVDC installations or their integration in the market framework across all timeframes.	Yes
Elia 8	Offshore	In general, the Federal Grid Code may not act as a barrier for the upcoming evolutions with respect to offshore grids and offshore grid users. Not only aspects related to the connection to the main grid, but also market-related aspects should be taken into account (e.g. storm risk, ramping rates...).	
Elia 9	Safety	Where necessary, and taking due account of the Act on wellbeing on the workplace, the Federal Grid Code should be clarified to ensure that a clear framework is available for determining the applicable safety rules for employees of the transmission system operator (and its subcontractors) when accessing the transmission installations located on the grid users' premises.	Yes

Elia's ideas

ID	Short name	Description	Priority?
Elia 10	ID production programs	Consider improving the quality of intraday production programs by ensuring a better follow-up by/information from BRPs after having submitted the day ahead programs.	Yes
Elia 11	TSO – DSO	The Federal Grid Code should be brought up-to-date with respect to the framework governing the relationship between the transmission system operator and the distribution system operators, e.g. taking into account the already existing collaboration agreement. Additionally, it should be assessed whether some detailed aspects need to be revised, e.g. with respect to defining the techno-economic optimum, connection and reinforcement requirements and delays and the relationship between different grid operators.	
Elia 12	Metering	With respect to metering, the Federal Grid Code should be made future-proof providing a solid framework allowing also recent evolutions (e.g. dealing with the metering installations at CIPU units and submetering which are not covered by the connection contract but rather by ancillary services contracts).	Yes
Elia 13	Losses procurement	The Federal Grid Code should allow considering other sourcing mechanisms for procuring grid losses than the one currently in place.	
Elia 14	Capacity reservation	<p>The Elia Users' Group has approved in December 2012 a position on the need for reviewing the mechanism for capacity reservation at the Elia grid for new production units. This position is based on the experience gained with current legislation, from generators and transmission operator, and the industrial realities met by projects developers.</p> <p>For this purpose Art. 94-113 should be partially redrafted: update capacity reservation for new production units.</p>	Yes

Elia's ideas

ID	Short name	Description	Priority?
Elia 15	Connection requirement framework	In general it could be considered to provide a more solid legal and/or regulatory basis for the connection requirements applicable for grid users connected to the Elia grid.	
Elia 16	Connection requirements	Next to the necessary implementations following the European Network Code, also requirements linked to aspects not (entirely) arranged by the European Network Codes must be kept up-to-date and must be clarified where needed. Also and to the extent not already adequately covered by the European Network Codes, obligations on informing the transmission system operator on the evolution of installed generation capacity (also for small volumes, e.g. 1 MW) should be considered.	Yes
Elia 17	Coherent evolution of old connections	In order to facilitate an optimal long term techno-economic grid development in the interest of all grid users, Elia proposes to introduce in the Federal Grid Code a framework which aims to promote, whenever necessary, a harmonized evolution of some old existing connections in coherence with the needs of the grid. Such framework should take into account the characteristics of the concerned connections, respect the applicable tariff framework, be applied in dialogue with between the network operator and the grid user and deliver an appropriate solution for the grid user.	Yes
Elia 18	Shared connection	The Federal Grid Code could consider the introduction of the concept of "shared connection", i.e. a connection to the Elia grid used by multiple (but not unlimited) legal parties, each of them having an individual connection contract or collaboration agreement with Elia and possibly located on different geographical sites. Also the 'capacity transfer' which is at the basis of a shared connection should be covered.	Yes

Elia's ideas

ID	Short name	Description	Priority?
Elia 19	Emergency plans	The Federal Grid Code should be brought further up-to-date with respect to emergency plan and also address implementation aspects linked to the European Network Code on Emergency & Restoration. This could, for instance, include reconsidering and/or further clarifying definitions, priority loads in load shedding plans, shedding plans in case of so-called incompressibility, principle of operational rules for shedding.....	Yes
Elia 20	Ancillary services	The framework for ancillary services provided by the Federal Grid Code should be reconsidered, taking into the upcoming European Network Code on Electricity Balancing. This may require re-defining such services, reconsidering the merit order, considering the participation of all technologies, etc. Also for concepts like reactive balancing by Balance Responsible Parties the Federal Grid Code should not act as a barrier.	Yes
Elia 21	CIPU	The current CIPU-concept covering aspects of congestion management, balancing and revision planning should be assessed with respect to its contractual architecture and where appropriate also the underlying principles.	
Elia 22	Reserve dimensioning	The Federal Grid Code should be made future-proof with respect to ongoing evolutions (e.g. shorter-term sourcing) in reserve dimensioning (and procurement) and may not act as a barrier, for instance with respect to the approval framework and the link between the volume needed and the volume actually procured (e.g. in a context of cross-border reserve sharing).	Yes
Elia 23	MVAR sourcing	The sourcing framework for MVAR should be clarified. In this respect it should be considered how neutrality between different types of grid users could be envisaged and also, though closely linked to the European Network Codes, which requirements are put at the point of connection with the grid.	Yes

Elia's ideas

ID	Short name	Description	Priority?
Elia 24	Varia	<p>Several more punctual aspects could be thought of as well of which some aspects have higher priority than others:</p> <ul style="list-style-type: none"> • Change wording ARP to BRP. • Setting the period for availability of planning data to be provided by the grid user from 7 to 10 years for better alignment with the required development plans of the transmission system operator • Related to the Access contract: avoid yearly renewal, reconsider the 24/24h availability obligation, clarify the link between the ACH register and the ACH-contract • Ensure that every grid user or a designated third party could make a connection request. • Remove all aspects arranged by FCA/CACM network codes, but ensure that no vacuum is created for any aspect that requires a complementary national framework. • Reformulation of TSO obligations if connection installations are located on terrains not owned by the TSO (<i>priority</i>) • Release the 5 year information limit for existing connections mentioned in Art. 138 (<i>priority</i>) • Bring articles related to confidentiality up to date. • Check Federal Grid Code conformity with the “Wellbeing on workplace Law” (NL: Welzijnswet) (<i>priority</i>) • Implement that all-in contracts are ipso jure replaced by approved contracts (Art. 138 (or 141)). • Check conformity of “behoud noodzakelijke transportcapaciteit (Art. 100) with the third EU package. 	Various

Elia's ideas

ID	Short name	Description	Priority?
Elia 25	Outdated concepts	The Federal Grid Code should be 'cleaned' for all outdated concepts which are no longer needed in the current (and future) context, e.g. power subscriptions in the context of transmission tariffs.	
Elia 26	Errata	At various places in the current Federal Grid Code minor textual corrections would prove useful.	