



Connection Network Code Feedback from Industry

Ljubljana
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Introduction

The RfG process consists of the following phases:

1. Drafting and consultation process
2. Definition of non-exhaustive requirements at national level
3. Implementation at national level – adoption by the industry

This presentation summarises feedback and recommendations for the different phases of the process.

1. Comments on the drafting and consultation process

- The draft NC was prepared by ENTSO-E on targets defined by ACER/EC
- The fact that relevant stakeholders or standardization entities have not been involved in the drafting process is challenging:

Product design is based on product standards (EN, ISO, IEC, etc.). Misalignment of the NC requirements from the product standard leads to complications.

Recommendation: Recognise the essential role of stakeholders, as stated in the preface of the RfG and ensure the involvement of IEC/ISO/CENELEC from an early stage in the drafting and consultation process – to ensure a smooth implementation

2. Comments on “non-exhaustive” requirements at national level

- “Non-exhaustive” requirements are to be defined at national level:
 - Generating type classification (threshold)
 - 68 non-exhaustive requirements (including non-mandatory requirements)

- **28 Member States have their own process** (technical committee, meetings and schedule)
 - Industry experts are expected to properly/constructively contribute to diverse processes simultaneously in 28 MSs
 - 2 examples of the complexity of each process:
 - Germany: 5 standards created/updated + 3 testing procedures. Each document exceed hundreds of pages, each documents went through several rounds of comments
 - Belgium: monthly meeting for up to 2 years discussing each part

2. Comments on the definition of “non-exhaustive” requirements process

For many countries it was difficult to follow-up on how the process started, developed and the associated technical discussion/technical committees working on the requirements.

Some of the main challenges:

- **Missing links:** to national documentation or implementation website
- **Focal points:** difficult to contact somebody involved in the process
- **Roadmap/ Planning:** often unknown specific timeline (meeting, public consultation etc.)
- **Many different languages:** In some countries the national language has been used without any translation into English (only some used English as a working language or provided translations)
- **Timing:** Activities overlapping / requests for comments during common vacation periods

2. Comments on the definition of “non-exhaustive” requirements process

Supporting tools:

- **IGD:** good starting point, but not sufficiently based on the complexity of the discussion on some technical points. ENTSO-E view rather than shared view with stakeholder (EG like)
- **Q&A:** should be a good focal point, not so much reflecting the intensity of discussion in the technical committee
- **Workshops:** a good initiative, but while stakeholder participation was extensive, SOs participation seemed limited to the more active MS. Involvement of the majority of the MSs SOs should be encouraged (webex, invitation, shared view from the majority of the countries and related experience)
- **Expert Groups :** very good initiative that allows for open discussion and contribution by all participants. EG structure could have been used during the drafting phase. Improvement in dissemination of results is needed.

2. Definition of “non-exhaustive requirements” – Industry expectations

- **Harmonisation of requirements** based on common discussions, especially on synchronous areas. National needs are understood, but too many differences can have unnecessary impact on product design where product optimisation should be considered a strategic asset.
- **Harmonisation and Common Compliance Process:** unnecessary and costly repetitions of compliance tests for each country should be avoided. Common procedures should be developed, shared and accepted within Member States to increase efficiency.

3. Implementation Process – Availability of the released documentation

- New requirements are entering into force
- Easy, free and clear access to National / System Operator Specific Rules for Connection to the Grid is needed including compliance process
- This information includes:
 - Grid Code (or equivalent rule for connecting to the grid) website
 - Date of entry into force (eventual reference to the legislation)
 - Reference contact person

The monitoring file maintained by ENTSO-E is a good guidance and starting point, but more support from relevant parties as part of the transparency requirements is expected

3. Implementation Process – Quality of the released documentation

In order to allow manufacturers to fulfil all compliance obligations and to respect national rules, it is necessary to guarantee:

- **English Versions of national rules:** Manufacturers require access to an English version of all documents. Therefore, an obligation that national rules need to be translated at least into English should be considered.
- **Accessibility:** All relevant rules should be easily accessible and free for download on the ENTSO-E website or national website (link provided within ENTSO-E domain)
- **Coherent Structure:** The structure of the national rules should ideally follow the structure of the NC RfG. If that is not the case, a clear reference to the relevant articles in the RfG should be made.

3. Implementation Process – Compliance process & documentation

In order to allow manufacturers to fulfil all compliance obligations and to respect national rules, it is necessary to guarantee:

- **Compliance Testing:** Access to clear descriptions on compliance tests, with reference to the applicable rules and criteria, is needed. It is expected that harmonised procedures are recognised among different Member States to avoid useless repetition of tests.
- **Certification:** the rules should clearly state whether and under which conditions a certification process is foreseen – at plant and/or at unit level and based on which requirements. In case of a unit certificate, a harmonised procedure should be defined, which is acceptable and sharable among Member States to limit unnecessary costs. The certification shall account for the configurability (specifically generating units which are not mass market) and family scheme shall be considered where reasonable.

3. Implementation process – Survey

The screenshot shows the 'entsoe CONNECTION CODES' website. The main heading is 'Connection Network Codes'. On the left, there are three sections: 'Announcements' (dated Jun 11, 2018), 'Monitoring' (highlighted with a red box and a red arrow pointing to the text 'Monitoring file'), and 'Technical Groups'. The 'Monitoring' section contains a button labeled 'Download monitoring file'. On the right, there is a paragraph about the monitoring process, a section for choosing a country to track progress, and a table of 'Member States Information' (highlighted with a blue box and a blue arrow). The table lists countries with icons for monitoring and information.

Monitoring file

Monitoring

Member States Information

Country	Monitoring	Information
Austria		
Belgium		
Bosnia and Herzegovina		
Bulgaria		
Croatia		
Cyprus		
Czech Republic		
Denmark		

3. Implementation process – Survey

- Member States provide the website where the information can be found
- Some provide implementation dates and proposal (official?) documents
- Where insufficient information was found, EUTurbines sent an email requesting detailed information – using the available email addresses

Dear Madame or Sir,

EUTurbines is the only association of European gas and steam turbine manufacturers. We have been an active stakeholder during the implementation phase of the Grid Connection (GC) and System Operator (SO) European Stakeholder Committee (ESC) and commented the different CNC drafts. We are contacting you with a request for information.

Our members - Ansaldo Energia, Doosan Skoda Power, GE Power, MAN Energy Solutions, Mitsubishi Hitachi Power Systems, Siemens and Solar Turbines, - that are active in most EU countries, identified difficulties in participating and supporting national implementation activities for the new regulation.

We experienced difficulties communicating information specific to our technology to properly integrate it in the future national regulation and Grid Code during the transition period. It is challenging to identify information defining the rules for connecting our generating unit. For Turbine technology those rules mainly consist of the RfG code as integrated at Member State level and associated Grid Code requirements for MV and HV systems. This information is essential to properly design our generating unit.

To resume, we are looking for the following information:

- Grid Code for MV system and associated webpage (published when?)
- Grid Code for HV system and associated webpage (published when?)
- Any additional documentation referring to the implementation process and associated webpage
- Date from when the requirements indicated in the Grid Code will be applicable (many regulators are postponing the enter into force of the requirements, since not yet published and once published the industry need a minimum time to get used to the requirements)
- If applicable, compliance procedure (not requested, Declaration of Conformity, Testing procedure -> published? Available for comments? certification scheme applicable)

We would like to ask you to provide us with the contact details of a person, a relevant focal point, that is able to reply to our eventual clarification questions in order to allow for compliance of our technology to the national rules.

If you are still in the process of public consultation of any comments associated with requirements to connect to the Grid, we would be happy to take the opportunity to contribute.

Please find attached our general position paper to frequency requirements for your information and understanding of Turbine technology in connection with Network codes. We are of course available to provide technical clarification if needed.

Thanks a lot for your kind support.

Best Regards
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3. Implementation process – Survey

- Email to request information sent on 19th July 2019
- Sent to 21 Countries,
 - ONLY 5 have replied
 - ONLY 2 with information
 - NO INFO request on the specific technical clarification submitted

3. Implementation process – Survey

- During July-August, the ENTSO-E Monitoring file has been updated!!
- For many countries, the links to the regulation or to the applicable reference standard defining the requirements are now provided!
- The majority of the links lead to documents or websites in the local language (difficult to be read)
- Many of the links lead to the definition of non-exhaustive non mandatory requirements, but not to the new code
- It seems the links do not have reference to compliance process

3. Implementation process – Survey

Country	Request for information (Monitoring file was not still updated)	Any reply or available data	Info and links on Monitoring File (21.August.2019)	Link to detailed documentation in monitoring file	EM
Albania	NO CONTACT		Link to a page in local language	NO	NO
Austria	19.July.2019		Link provided not working. Link shall be copied and re-posted to make it work	YES (not in english)	NO
Belgium	INFO AVAILABLE		YES	Partly (info not approved, links not provided)	YES
Bosnia and Herzegovina	19.July.2019		NO	NO	NO
Bulgaria	19.July.2019		NO	NO	NO
Croatia	19.July.2019	25.July.2019 Answered	NO	NO	NO
Cyprus	NO CONTACT		NO	NO	NO
Czech Republic	19.July.2019		Links to generic information. Download info in the english webpage not working	NO (tried only from the english webpage: download does not work)	YES, but not working
Denmark	19.July.2019	15.August.2019	NO	NO	NO
Estonia	NO CONTACT		NO	NO	NO
Finland	19.July.2019		YES	YES - ONLY in Finnish (to be cross-checked that all links are present)	NO
France	INFO AVAILABLE		YES	YES (seems to be the final version)	NO
Germany	INFO AVAILABLE		YES	YES - Link to VDE	Partly
Greece	19.July.2019		YES	Partly: ONLY in native language (english webpage provides an error), only threshold defined. Parameters not defined	NO
Hungary	19.July.2019	27.August.2019	YES	YES - link to user document with link to relevant documentation. Same data are project specific (to be provided by local SO)	YES
Iceland	NO CONTACT				
Ireland	INFO AVAILABLE		YES	Partly - CRU description with reference document. No Detailed Grid Code available	YES
Italy	INFO AVAILABLE		YES	Partly - ONLY in Italian. Documents from the Energy Regulatory Authority. Recommended to add link to CEI and TERNA Grid Code	NO
Latvia	19.July.2019		NO	NO	NO
Lithuania	19.July.2019		YES	YES - ONLY in Local language	NO
Luxembourg	19.July.2019 (Cross)		YES	YES - Many reference to the German text	NO
Macedonia	19.July.2019		NO	NO	NO
Montenegro	NO CONTACT				
Netherlands	19.July.2019		YES	YES - ONLY in local language (TBO all data are in)	NO
Norway	19.July.2019		YES	YES - ONLY in Local language. The document associated is quite long and difficult to be read/translated (note on frequency larger than RFG page 71)	NO
Poland	19.July.2019		YES	YES - ONLY in local language	NO
Portugal	19.July.2019		NO	NO	NO
Romania	19.July.2019	25.July.2019	YES	YES - ONLY in local language, link to three different pdf	NO
Serbia	19.July.2019		NO	NO	NO
Slovakia	19.July.2019		YES	YES - ONLY Local language and document referring to non-exhaustive, non-mandatory requirements	NO
Slavonia	19.July.2019		YES	YES - ONLY Local language and document referring to non-exhaustive, non-mandatory requirements	NO
Spain	INFO AVAILABLE		NO	Wrong link to Finnish pdf document indicated (probably by mistake)	NO
Switzerland	INFO AVAILABLE		NO	NO	NO
United Kingdom	INFO AVAILABLE		YES	No direct link to Grid Code. To get there one has to browse the Grid Code page and get to the final doc (Grid Code last revision dated 1st of August 2019)	YES

3. Recommendations

- The process has to be improved to ensure lean and easy access to the information: harmonisation and sharing of information involving stakeholders is a necessity
- The process should be as cost effective as possible, including the compliance process (lean compliance)
- All information and associated links should be grouped on a single platform (ENTSO-E website?) and information needs to be kept updated
- Contact address or reference person need to react to questions

3. Recommendations

- Ensure that MSs and respective **technical committees** involve (at least) GC ESC stakeholders in the definition process
- Set-up **regular feedback meetings at European level**, where participation should be mandatory for national representatives of technical committees to provide update on their activities
- Set-up a **discussion platform** that allows information sharing between stakeholders (and SOs). If this is considered too broad, define specific groups and areas (e.g. based on geography and items).

4. Contact



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