

# Connection Network Code Amendments - The Necessity of procedural improvements

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# 1 INTRODUCTION

## 1.1 CONTEXT

Grid Connection requirements and associated high level process are described in EU 631/2016 which has been introduced in the member states in the three years following May 2016.

The introduction of the new regulation has been a long ongoing lesson for the different stakeholder involved in the process.

EUTurbine collected several items of feedback on “what could be improved” throughout the process and identified 5 main areas of concern:

1. Alignment of NCs and Standards
2. Exhaustive requirements: prevent national decisions infringing the NCs
3. Non-exhaustive requirement: harmonise and justify
4. Transparent implementation at national level
5. Efficient implementation at national level (e.g. compliance).

Concrete recommendations for improvements have been brought forward on different occasions.

These recommendations for improvement had been further developed through presentation and multiple workshop that included a wide participation of stakeholder.

The objective of raising these issues is to optimise the implementation of the RfG and improve it where necessary. Effective harmonisation & alignment of existing requirements calls for transparent and strong monitoring procedures. The aim is therefore to review the current processes on different levels, explicitly clarifying roles and responsibilities of different actors, to identify procedural gaps and improve or propose clear process. A focus on improving the transparency of the implementation process on all levels, calls for proposals on optimizing information sharing procedures, platforms, and monitoring.

The present document is a sum up of the result of such effort.

## 1.2 HISTORY

In Autumn 2020 EUTurbines has been asked to present a concrete proposition.

EUTurbine prepared a list of topics to be improved in the form of a list of potential amendments to the RfG.

The amendment proposal was developed on bases of the joint presentation of EUTurbines & EUGINE “Connection Network Code Feedback from Industry” (11/09/2019) and builds on the

related EUTurbines presentation (12/12/2019) and other interventions at the GC ESC highlighting recommendations for improving the procedures. The amendment proposal developed was shared in a joint presentation of EUTurbines & VGB at the GC ESC (09/03/2021).

It was decided that interested members were invited to prepare reactions that were discussed during in dedicated workshops, which results should be presented in the GC ESC.

### 1.3 WORKSHOPS

A call for a workshop and comments on drafted proposals had been distributed in April-May 2021.

ESC Members have been actively participating to three dedicated workshops

- 18/05/2021 Workshop Part I
- 18/06/2021 Workshop Part II
- 20/07/2021 Workshop Part III

#### Participants to the different Workshops to share their expertise at the discussions

Alcazar Barrientos, Freddy Eduardo	EUGINE
Buquet, Maxime	EUTurbines
Chambers, Keith	CaterPillar
Dekinderen, Eric	VGB
Feger, Fabian	VGB
Forschauer, Manuel	ENTSO-E*
Geraerds, Ton Guenzi,	<sup>1</sup> VGB
Luca (Chair) Lewis,	EUTurbines
Thomas	SolarPower Europe
Leza, Paula Pernaut	CENER (EASE member)
Luxa, Andreas	Siemens
Kay, Mike	GEODE
Kurz, Magdalena	EUTurbines
Malbrancke, Marc	CEDEC
Marquardt, Gunnar	EASE member
Neuwirt, Vitalij	EUGINE
Obando, Andres-	Hitachi ABB Power Grids
Felipe Salazar, Juan	Hitachi ABB Power Grids
Felipe Sprooten,	ENTSO-E
Jonathan	ENTSO-E
Ioannis.theologitis	EASE
Teekahk, Anneli	ACER
Trovato, Vincenzo	

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<sup>1</sup> ENTSO-E has actively supported the series of workshops that have been organized and overall welcomes the initiatives that motivate discussions on the important CNC topics. On the specific proposals of this report, before possibly a formal ENTSO-E position on the proposal could be developed, an internal assessment would needed to be done."



## 2 PROPOSALS FOR IMPROVEMENT

In the following chapters the proposals on the five different areas are provided with their own justification.

As a first approach we were looking on how to embed such proposals in modifications of the present Regulation and specifically EC 613/2016. The amendment proposals were then used as initial base for discussion.

### 2.1 Alignment of Network Codes to Technical Standards and Harmonization of requirements

The electrical system shall maintain a high level of reliability and availability.

Electrical components and equipment part of the electrical system have their design based on technical standard. Technical standards are in fact considered status of the art.

Misalignments between technical standards and EU Regulation and its national implementations lead to increase cost, complexity and potentially less reliable equipment and components.

Technical committees are a common place where all involved stakeholders can discuss and share requirements. That would permit a sharing of technical information and a possible harmonization of interpretation and requirements.

NC RfG already includes reference to the use of standardization, however it is perceived that additional emphasis seems required.

### 2.2 Exhaustive requirements: prevent national decisions to infringe NCs

The requirements in the NC RfG are defined as exhaustive and non-exhaustive. Exhaustive requirements are expected to be integrated as they are in the national regulation, since they had been agreed upon in comitology after a long process of comments.

Manufacturers consider exhaustive requirements as minimum level of harmonization on which the design of the generating units and in general of the components shall be based.

Manufacturers must take their equipment through costly and detailed compliance process. In case of noncompliance the consequence is that the generating unit cannot connected to the grid.

It is therefore expected that Member States and system operators incorporate these requirements directly into the regulation and local grid connection codes.

The RfG shall therefore properly define which entity has the ability and responsibility to check that the requirements are properly implemented and the associated courses of action in cases where the requirements are not properly implemented. Such entity shall ensure that an appropriate derogation process is applied when necessary.

Reports shows that deviation from RfG requirements are already present in national regulations.

### **2.3 Non-exhaustive requirements: harmonise and justify**

Manufacturers currently are required to deal simultaneously:

- 68 non-exhaustive requirements defined at national level (not considering additional specific local requirement)
- 27 Member States own processes (technical committee, meetings and schedule) and documentation that requires reviewing
- More than 28 compliance process

Different interpretations of the requirements still persist.

It is expected that the requirements will develop in the future as well the verification process continues to evolve.

It is important to accelerate the harmonization of the requirements and of the compliance process by setting up systematic procedure to share information involving all stakeholders. We are still facing different interpretations on requirements which can drive the development of different logics for what is considered the same requirements and the associated compliance process costs which are in no way negligible.

### **2.4 Transparent implementation at national level**

It is important to have access to the connection requirements and to compliance process requirement in the most effective way.

Today the active library set-up by ENTSOE on request of the Grid Connection European Stakeholder Committee is a good instrument set-up on voluntary basis, but it is necessary to have a formal single point of focus where the information, requirements and compliance process, can be found and kept updated by accountable party on a regularly basis.

The single focus point shall include contacts reference that can be used for clarification.

### **2.5 Efficient implementation at national level**

As the requirements of the European regulation are understood to be crucial for the security of the overall electrical system, its efficient implementation at national level shall be considered a priority as well.

To make the process more efficient it is necessary that the information is made readily available in an easy way to the stakeholder involved in the process.

The compliance process shall also be reasonably simple so that verification shall not be repeated unnecessarily and the use of compliance certificate or verified compliance model is possible.

To such extent it is requested that some reasonable steps shall be taken.

English language translation: English translation of reference document is requested. This is not new and it is already present in other regulation.

Free access to requirements: the detailed official documents covering requirements shall be made available for free, since the documents are considered binding and, as such, public.

The requirements shall be structured as defined in the RfG (same coherent structure) to avoid misunderstanding and confusion.

Compliance process shall be made available, in particular links to where the documents can be accessed (if applicable). Compliance verification shall be detailed, including rules and the criteria for successful testing.

There is also the need to avoid or limit test repetition when not necessary based on the principle that same requirements will be verified in a similar way in the different countries.



# 3 PROPOSAL FOR IMPROVEMENT AND DISCUSSION

Once the five major areas of concern had been identified, as a first approach it was considered how to translate proposals in modifications of the present EU Regulations with a focus on EU 2016/613 Requirement for Generators. The amendment proposals were then used as initial base for discussion, considering alternative possibilities along the discussions.

All amendments had been extensively discussed during the workshops and result of such discussion is attached.

## 3.1 Network Code Monitoring, Roles and Responsibility

**(Prevent national decision to infringe NCs)  
(RfG EU 613/2016 Art 59(1) and Art 59(4))**

As a first step it is necessary to define roles and responsibility.

At the time when the EU 2016/613 regulation had been published ENTSOE was tasked to carry out monitoring activities according to art 8(8) of the Regulation EC 714/2009.

However, this role has been changed to ACER following the publication of the Regulation of internal market for electricity EU 2019/943 art 32.

### 3.1.1 Workshop Discussion

It was proposed to update the original article and use the opportunity to evaluate the involvement of European Stakeholder Committee due to its very active involvement along the years. This provides a formal role to European Stakeholder Committee in supporting ACER in its activities.

During the discussion there was different opinion on the opportunity on adding the reference since the European Stakeholder Committee is already partly carrying out such activities.

It was decided to propose a text amendment as follow:

### 3.1.2 Proposal to adapt existing article 59 (1):

~~ENTSO for Electricity shall monitor the implementation of this Regulation in accordance with Article 8(8) of Regulation (EC) No 714/2009.~~ ACER shall monitor the implementation of this Regulation in accordance with Article 32 of Regulation (EC) No 2019/943. ACER performing its task of monitoring shall involve the European Stakeholder Committee.

As a side activity it was proposed an **editorial modification also to art 59(4) as follow:**

Where ENTSO for Electricity or the Agency establish areas subject to this Regulation where, based on market developments or experience gathered in the application of this Regulation, further harmonisation of the requirements under this Regulation is advisable to promote market integration, they shall propose ~~draft amendments to this Regulation pursuant to Article 7(1) of~~

~~Regulation (EC) No 714/2009~~. draft amendments to this code can be proposed according to article 60(1) of EU 2019/943.

### **3.2 Feedback on implementation by Stakeholder**

**(Prevent national decision to infringe NCs)  
(RfG EU 613/2016 New Art 59(5))**

This article has been proposed to formalize the possibility to provide feedback on the implementation of the regulation by stakeholders.

This possibility is not formally stated both in the regulation EU 2019/943 nor in the EU 613/2016.

For avoidance of doubt it is recommended to have the point formalized.

#### **3.2.1 Workshop Discussion**

There were opposite opinions on modifying the existing regulation based on the same justification that the practice is already permitted.

However, it has been noted that it would be good to have the point formalized.

It has been noted that in case of infringement due to national decision penalties are defined in art 66 of the 2019/943.

During the last workshop the text proposal had been maintained as follow:

#### **3.2.2 Proposal for new article 59 (5)**

“Stakeholders may provide feedback on the implementation of this regulation and identification of any divergences to it, supporting ACER in conducting its activities as described in article 32 (1) of EU 2019/943. ACER shall keep the stakeholders informed on the follow up actions.”

### **3.3 Single Focus Point of Information**

**(Transparent implementation at national level – Harmonize and justify non-exhaustive requirement)  
(RfG EU 613/2016 Art 59(3))**

Manufacturers, plant owners and stakeholders in general need to have easy access to the requirements their products, equipment, component etc. shall meet as well as the associated compliance process. To develop products that can be installed all over Europe, this information is a must have for manufacturers and it is not realistic that the manufacturers struggle to find such information with extensive effort, particularly considering that requirements and compliance processes are frequently changing.

It is in the interest of all stakeholders involved in the process to have a single focus point where the information (requirement and compliance process) can be found and kept updated by the owner of the information (e.g. TSOs and DSOs).

Today, as an outcome of Grid Connection European Stakeholder Committee, the ENTSOE Active Library has been created. As an addition there is the list of the European Member States where national information is provided. However, the quality of the information provided change from country to country and the information are kept updated on a voluntary basis and not in similar structured way.

### **3.3.1 Workshop Discussion**

There were opposing opinions on the opportunity to keep the proposal.

Those against the proposal were promoting a solution without having to add or modify the regulation and noted that to some extent a single focus point had been already developed.

The ones in favour noted that the information like that provided in the active library shall be reliable and up to date and that the single focus point is particularly important.

It has been noted that to maintain such a single point of focus requires resources. However, it is expected that a quality process can be set-up and it could a good way to harmonize the way information is provided (e.g. based on NC structure).

It has been noted that the text proposal provided many bullet points in term of minimum information to be provided. However, these are already the typical information expected in the active library and the list can help harmonizing the way the information is provided.

To have the information updated, it has been proposed to have the owner of the information updating the corresponding data within two months of the date from when the modification enters into effect. As an alternative it has been proposed to set-up a calendarization for updating the information (e.g. every 2 months or every 3 months) to make it easier for the involved parties to schedule the correspondent activities. This point has been discussed and it can be further considered as a possible improvement of the present proposal.

Finally, no alternative had been proposed to support the present need for transparent information.

During the last workshop it has been decided to keep the proposal for amendment.

### **3.3.2 Proposal to adapt existing article 59 (3):**

~~Relevant TSOs shall submit to ENTSO for Electricity the information required to perform the tasks referred to in paragraphs 1 and 2.~~ Relevant TSOs and DSOs shall submit and keep updated to ACER through the national regulatory authority, the information requested by ACER to perform the tasks referred to in paragraphs 1 and 2.”

ACER in cooperation with ENTSO for electricity shall set-up a public online tool where national relevant information is collected and accessible to all relevant parties and interested individuals.

The information to be gathered are the following:

- Link to legal text
- Definition of exhaustive and non-exhaustive parameters

- TSOs' requirements and compliance tests and process to be performed (this can consist of a link to the TSO website)
- DSOs requirements and compliance tests and process to be performed (this can consist of a link to the EU DSO website)
- National website
- Contact mail and contact phone where requests can be posted.
- Any information relevant that can be useful for any person that has an interest in the code.

The online tool can be used by TSOs and DSOs for eventual additional communication specific to their system. The information shall be organized to permit easy access and provide a complete usable information to relevant party including plant owners and manufacturers. Stakeholders shall be involved in developing the online focal point.

TSOs and DSOs shall ensure the information provided is up to date.

TSOs and DSOs shall routinely update the information either when there are salient changes to the information are made, or alternatively at fixed times throughout the year, such as quarterly.

### **3.4 Focus on production and compliance costs for the industry**

#### **(Harmonize and justify non-exhaustive requirement) (RfG EU 613/2016 NEW Art 59(6))**

It has been considered necessary a minimum level of exchange of information among relevant stakeholders at least within the same synchronous area and region.

Such kind of information exchange should foster reliable and effective operation with a focus on improvement including harmonization of requirement and cost-effective solutions.

The idea is that when information is shared with aim of improving the system, it is expected a higher commonality among attendees.

The text proposal has been inspired from Network Code on electricity Emergency and Restoration EU 2017/2196.

#### **3.4.1 Workshop Discussion**

The text contains a reference to regional coordination centres. However, it is still to be confirmed if a better definition of the reference focus points is corrected.

During the discussion a concern on the opportunity to introduce a new article had been raised.

No alternative proposal had been received from stakeholders nor in term of alternative text or alternative procedure.

The text had been improved during the workshop activities.

It has been decided to keep the amendment proposal in its latest text revision.

### **3.4.2 Proposal for new article 59 (6)**

“Based on the experience gathered in the implementation and application of this regulation, ACER and ENTSO for Electricity, may propose amendments to the present requirements with a focus on reliable and effective operation and with the aim of preventing or limiting incidents on the system. Such amendments will consider the efficient, harmonized and cost containing implementation of the regulations, also taking into account the needs of all stakeholders involved in the value chain.

To this end, Experience gathered in the implementation and application of this regulation shall be shared within the regional coordination centres as part of their task as defined in EU 2019/943 and with the mandatory participation of the stakeholders involved at least once a year.

The feedback from the regional coordination centres shall be shared among TSOs and DSOs, particularly to those belonging to the same synchronous area.”

The aim is to achieve a common understanding, to harmonise, where possible, the requirements, to define organisational measures and to effectively optimise the compliance process and the connection to the grid, with a focus on reliable and effective operation and to prevent or limit incidents on the system. The target is also to ensure cost-effective solutions.

Based on the outcome of the communication and information sharing, relevant party (e.g. TSO and DSOs) in cooperation with stakeholders may issue recommendations to promote good practices.”

### **3.5 Use of existing and consolidated standards.**

#### **(Alignment of NCs and technical Standards)**

#### **(RfG EU 613/2016 Prologue (27) and Art 7.3 (f))**

Manufacturers use quality processes associated with internationally recognized standards including product standards (like IEC 60034 for generators), which are considered state of the art. The use of standards is always considered as a best practice when it comes to reliable system.

Regulation is not considered the appropriate reference text for the industry since it is not necessarily sufficiently detailed to lead directly to the definition of a product. The definition and revision of the requirements through technical standards is therefore the most efficient process to align the industry products in the most cost efficient and reliable way.

Experience of Technical committees is also of advantage for the definition of the requirements, since technical committees are inclusive place of discussion where all stakeholder are expected to cooperate to find the mutually best outcome.

The regulation EU 613/2016 already includes reference to technical standards in the development of new requirements; however it seems the indication provided is weak.

#### **3.5.1 Workshop Discussion**

It has been recognized that technical standards are an important component in the overall regulatory framework.

It has been recognized that today in the text of the regulation there is missing leverage in improving cooperation with the technical standardization when it comes to developing requirements.

To improve such cooperation, it has been proposed a modification to art 7.3(f), so that at least the TSOs or ENTSOE shall inform the appropriate European technical committees on modifications to requirements in due time. This would be in addition to the recital (27) which already references the use of standard.

Basically, the discussion was expressing two different expectations, from one side the fact that the development of requirements shall not be limited by technical committees' activities, from the other side the expectation that using technical committees to develop requirements is considered a most effective way due a larger audience contributing to the requirement itself.

It has been decided to promote the amendment proposal.

### **3.5.2 Proposal to adapt existing Prologue (27) as follow:**

The regulatory authorities, Member States and system operators should ensure that, in the process of developing and approving the requirements for network connection, they are harmonised to the extent possible, in order to ensure full market integration. Established technical standards should be taken into particular consideration in the development of connection requirements. Development of requirements include European standardisation organisations directly, therefore permitting the evolution of product standards and, as a consequence, their adoption by industry.

### **3.5.3 Proposal to adapt existing Art 7.3(f) as follow:**

(f) take into consideration agreed European standards and technical specifications. TSOs or ENTSOE shall inform national and European technical committees respectively on applicable new requirements in due time.

## **3.6 Introduction of new or amended requirements and associated applicability**

**(Transparent implementation at national level - Efficient implementation at national level (e.g. compliance)**

**(RfG EU 631/2016 Art 4(x))**

The application of new requirements or amendments to the existing requirements in the published regulation shall be made via a formal approval process. Information about any proposals for new requirements, or for amendments to the existing regulation, as well as the associated approval process, shall be publicly available

Art 4 of the EU 631/2016 Requirement for Generators covers only the introduction of the requirements of the regulation when it was published in 2016. There is no indication as to how the introduction of new requirements should be managed to avoid inadvertent or inappropriate effects on existing or new generation developments. It is essential that the introduction of requirements shall be properly regulated and their introduction shall consider impacts on manufacturers.

In addition art 4 in its present format is not consistent with other part of the code, in facts it requires new requirement to be applicable 2 years after the publication of the RfG, but permits system operator to present the draft requirements 2 years after the publication of the same regulation potentially causing problem in term of applicability to manufacturer.

### **3.6.1 Workshop Discussion**

There is a common agreement that art 4 shall be revisited.

During the discussion it has been noted that an amended version of the code would correspond to a new code and therefore somehow the present structure of art 4 can be still considered.

In addition to the proposed text introducing associated process for new requirements, it has been suggested to check definition of existing unit, in the new or amended revision of the regulation for consistency.

It has been recommended a legal recheck of the content of the chapter considering a proper flow of activities in the approval of the requirements and their implementation.

It has been noted that the proposed text presents several bullet points that could be eliminated.

It has been agreed to present the amendment to ACER for evaluation.

### **3.6.2 Proposal for new article 4(x)**

It is expected that art 4 will need to be updated sometime in the future, and that the new revision will include the following:

“Once the new requirements or the amendment is approved, its applicability will be defined based on a timeframe that will permit the manufacturers to understand and adopt it in their new product. This time shall be coordinated among stakeholders and shall consider:

- Applicability to ongoing projects (costs for retrofitting)
- Applicability to projects for which the major components had been bought (costs for retrofitting)
- Time to certify the generating unit or plant (if certification process applies)
- Time for a certification body to get its own approval for certifying the new requirement.
- Roll-out of the requirement

The new requirements shall be introduced considering a minimum time of 1 year between the date of their publication and the entering into force and will affect only installations for which major components are not ordered yet at the moment of official publication of the approved new requirements.”

## **3.7 Site Test compliance**

**(Efficient implementation at national level (e.g. compliance)  
(RfG EU 613/2016 Art 41.7)**

It can happen that system operators require a Declaration of conformity based on testing before permitting the connection of the generating unit to the grid. It shall be permitted to carry out compliance testing when connected to the grid in coordination with the RSO, eventually based on a preliminary declaration of conformity.

This situation can cause problems where the generating unit is too large to permit prior laboratory testing, meaning that site testing is the only viable solution.

### **3.7.1 Workshop Discussion**

It has been noted that Art 42.2 already permits such a solution, but it allows the system operator to decide if this is a possibility or not. However if a solution is to be found, it is not only the responsibility of the manufacturer or plant owner to solve the issue. The compliance procedure must not prevent compliant generating unit to be connected to the grid.

As an alternative to the proposed text an amendment to art 42.2 can be evaluated.

It has been recommended to share this point to the team working on compliance IGD (to be done).

### **3.7.2 Proposal for new article 41.7**

“In the frame of compliance testing, when the system operator requires proof of compliance of specific requirements, it shall establish a procedures permitting generating units to be connected to the grid with the purpose of conducting such tests and verifications, including certification test process when requested.”

## **3.8 Tests and Tests reports carried in a different facility as proof of compliance**

### **(Efficient implementation at national level (e.g. compliance) (RfG EU 613/2016 Art 42.2)**

While recognising the right to ask for specific verifications at site, in order to avoid costly test repetition, it shall be permitted in principle the use of test reports (typically provided by a recognized measuring institute) of tests carried out in facilities different from the one where the generating unit is going to be installed (eventually in different countries).

### **3.8.1 Workshop Discussion**

It has been noted that Expert Group Interaction Studies and Simulation Models (EG ISSM) developed a similar approach when it comes to testing procedure (“similar” approach).

It has been noted that a similar procedure is adopted for example in Belgium (see [Synergrid C10\\_26\\_conformity\\_document](#) check list).

### **3.8.2 Proposal for new article 42.2.d**

“(d) allow the use of alternative or same set of tests carried out in a different facility provided that those tests are efficient and suffice to demonstrate that a power-generating module complies with the requirements of this Regulation.”



### **3.9 Use of Equipment Certificate**

**(Efficient implementation at national level (e.g. compliance)  
(RfG EU 613/2016 NEW Art 42.5)**

It has been proposed the introduction of a specific article that permits the use of Equipment Certificate as a proof of compliance.

In art 42 in fact there is no reference to the use of Equipment Certificate.

#### **Workshop Discussion**

The proposal raised some doubts, since the Equipment Certificate is already foreseen except in Art 42 they are not mentioned.

It is recommended a legal crosscheck to verify the indication is requested.

The text amendment proposal is provided as reference.

#### **Proposal for new article 42.2**

“Instead of carrying out the relevant tests, power-generating facility owners may rely upon equipment certificates to demonstrate compliance with the relevant requirements. In such a case, copies of the equipment certificates shall be provided to the relevant system operator.”

### **3.10 Common provisions on compliance simulation**

**(Efficient implementation at national level (e.g. compliance)  
(RfG EU 613/2016 NEW Art 43.6)**

In light of potential use of validated models and simulation to prove compliance for small units, it is proposed an amendment that enlarge such opportunity also for Type A and Type B.

#### **3.10.1 Workshop Discussion**

It has been recommended the use of “validated model” instead of “compliance simulation” in the text proposal, which seems more appropriate.

#### **3.10.2 Proposal for new article 43.6**

“The relevant system operator shall allow the use of validated model to carry out simulations as described in article 43.2 also for Type A and Type B generating module. The provision described in art 15.6(c) are in this case applicable also to Type A, and Type B when compliance simulation is used.”

### **3.11 Use of English as a second language for relevant documents**

**(Efficient implementation at national level (e.g. compliance)  
(RfG EU 613/2016 NEW Art 3.3 or Art 7.10)**

In dealing with a huge number of documents in different languages can be problematic. It is in the interest of all stakeholder that the design of grid components is in fully line with the requirements and an English version of the relevant document is requested.

### **3.11.1 Workshop Discussion**

It has been noted that in the Network Code on Electricity Emergency and Restoration EU 2017/2196 there are several references to reports being prepared in English (e.g. NC ER art 14.4).

Another example of document with multiple language that has been used as reference is the Machinery Directive.

It has been noted that there could be some resistance in accepting a strict request for an English translation, due to legal reason.

It has been proposed that wording similar to that used for the machinery directive, where the text in the original language remains as reference and the translation bears corresponding wording.

### **3.11.2 Proposal for new article 3.3 or art 7.10**

“The documents defining the requirements and the verification of the compliance as defined by each Member State and system operators shall also be available in English. Unless English is the official language of the Member State, the version translated into English shall bear the words "Translation of the original document".”

## **3.12 Definition of families of generating unit and of generating plant**

### **(Efficient implementation at national level)**

#### **(RfG EU 613/2016 NEW Art 2)**

It has been requested that stakeholders promote any additional points relevant to the five areas of interest described in chapter 2.

It has been noted that the concept of families is already useful to simplify the compliance process and it is already adopted in several countries.

It is therefore recommended to formally introduce it in the RfG.

### **3.12.1 Workshop Discussion**

Different possible definitions have been discussed during the workshop.

It has been evaluated to extend the definition of families from the single generating module to plant concept.

As a result, an initial definition has been proposed.

It was planned to share this definition with the team working on the IGD compliance. In addition it has been noted that it is planned in the future an Expert Group which works are focused on the use of families in the compliance process. It is therefore expected the concept will be widely

discussed in such teams. It is however reported here below the definition proposed during the workshop.

**3.12.2 Proposal for new article 2 / definition to be further developed in EG Compliance and EG Harmonization of product family grouping and acceptance of equipment certificate at European level**

"Families are normally defined as set of generating units or set of generating plants with same technology and similar behaviour and design but allowing for instance different rated power and/or allowing for instance different rated voltage."

## ANNEX 1

No	COMMISSION REGULATION (EU) 2016/631 – Article	Draft Amendments and Proposals	Workshop Discussion
1	<p><b>Article 59 (1) and Article 59 (4)</b> Network Code Monitoring, Roles and Responsibility</p>	<p><b>Proposal to adapt existing article 59 (1):</b>  <del>Delete “ENTSO for Electricity shall monitor the implementation of this Regulation in accordance with Article 8(8) of Regulation (EC) No 714/2009.”</del> <b>replace by</b> “ACER shall monitor the implementation of this Regulation in accordance with Article 32 of Regulation (EC) No 2019/943. ACER performing its task of monitoring shall involve the European Stakeholder Committee”.</p> <p>Proposal to replace existing article 59 (4): “Draft amendments to this code can be proposed according to article 60(1) of EU 2019/943.”</p> <p>As a side activity it was proposed an editorial modification also to art 59(4) as follow:</p> <p>Where ENTSO for Electricity or the Agency establish areas subject to this Regulation where, based on market developments or experience gathered in the application of this Regulation, further harmonisation of the requirements under this Regulation is advisable to promote market integration, they shall propose draft amendments to this Regulation pursuant to Article 7(1) of Regulation (EC) No 714/2009. draft amendments to this code can be proposed according to article 60(1) of EU 2019/943.</p>	<p>It was proposed to update the original article and use the opportunity to evaluate the involvement of European Stakeholder Committee due to its very active involvement along the years. This provides a formal role to European Stakeholder Committee in supporting ACER in its activities.</p> <p>During the discussion there was different opinion on the opportunity on adding the reference since the European Stakeholder Committee is already partly carrying out such activities.</p> <p>It was decided to propose a text amendment as follow:</p>
2	<p><b>Article 59 (5) NEW</b> Feedback on implementation by Stakeholders</p>	<p><b>Proposal for new article 59 (5)</b>  “Stakeholders may provide feedback on the implementation of this regulation and identification of any divergences to it, supporting ACER in conducting its activities as described in article 32 (1) of EU 2019/943. ACER shall keep the stakeholders informed on the follow up actions.”</p>	<p>There were opposite opinions on modifying the existing regulation based on the same justification that the practice is already permitted.</p> <p>However, it has been noted that it would be good to have the point formalized. It has been noted that in case of infringement due to national decision penalties are defined in art 66 of the 2019/943.</p> <p>During the last workshop the text proposal had been maintained as proposed in the previous line.</p>

3	<p><b>Article 59 (3)</b> Single Focus Point of Information</p>	<p><b>Proposal to adapt existing article 59 (3):</b> Delete “Relevant TSOs shall submit to ENTSO for Electricity the information required to perform the tasks referred to in paragraphs 1 and 2.” replace by “Relevant TSOs and DSOs shall submit and keep updated to ACER through the national regulatory authority, the information requested by ACER to perform the tasks referred to in paragraphs 1 and 2.”</p> <p>Addition to article 59 (3): “The ACER in cooperation with ENTSO for electricity shall set-up a public online tool where national relevant information is collected and accessible to all relevant parties and interested individuals. The information to be gathered are the following: - Link to legal text - Definition of exhaustive and non-exhaustive parameters - TSOs requirements and compliance tests and process to be performed (this can consist of a link to the TSO website) - DSOs requirements and compliance tests and process to be performed (this can consist of a link to the DSO website) - National website - Contact mail and contact phone where requests can be posted. - Any information relevant that can be useful for any person that has an interest in the code. The online tool can be used by TSOs and DSOs for eventual additional communication specific to their system. The information shall be organized to permit easy access and provide a complete usable information to relevant party including plant owners and manufacturers. Stakeholders shall be involved in developing the online focal point.  TSOs and DSOs shall ensure the information provided is, up to date.  TSOs and DSOs shall provide the requested information within three months, or in case of specific requests within a given realistic deadline, after receiving the request, that can be calendarized.”</p>	<p>There were opposed opinion on the opportunity to keep the proposal. The ones against the proposal were promoting a solution without having to add or modify the regulation and noted that someday single focus point had been already developed.</p> <p>The ones in favour noted that the information like the ones provided in the active library shall be reliable and up to date and that the single focus point is for sure very important.</p> <p>It has been noted that to maintain such a single point of focus requires resources. However, it is expected that a quality process can be set-up and it could a good way to harmonize the way information are provided (e.g. based on NC structure).</p> <p>It has been noted that the text proposal provided many bullet points in term of minimum information to be provided. However, these are already the typical information expected in the active library and the list can help harmonizing the way the information is provided.</p> <p>To have the information updated, it has been proposed to have the owner of the information updating the correspondent data within two months from when the modification enters into effect. As an alternative it has been proposed to set-up a calendarization for updating the information (e.g. every 2 months or every 3 months) to make it easier for the involved parties to schedule the correspondent activities. This point has been discussed and it can be further considered as a possible improvement of the present proposal. Finally, no alternative had been proposed to support the present need for transparent information.</p> <p>During the last workshop it has been decided to keep the proposal for amendment.</p>
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4	<p><b>Article 59. (6) NEW</b> Focus on production and compliance costs for the industry</p>	<p><b>Proposal for new article 59 (6)</b> “Based on the experience gathered in the implementation and application of this regulation, ACER and ENTSO for Electricity, may propose amendments to the present <b>requirements with focus on reliable and effective operation and to prevent or limit incidents on the system considering an efficient, harmonized and cost containing implementation of the regulation, also taking into account the needs of all stakeholders in the value chain involved.</b></p> <p><del>To this end,</del> Experience gathered in the implementation and application of this regulation shall be shared within the regional coordination centres as part of their task as defined in EU 2019/943 and with the mandatory participation of involved stakeholders at least once a year. The feedback from the regional coordination centres shall be shared among TSOs and DSOs at least to the ones belonging to the same synchronous area.”</p> <p>The aim is to achieve a common understanding, to harmonise, <del>where possible, the</del> requirements, to define organisational measures and to effectively optimise the compliance process and the connection to the grid, with a focus on reliable and effective operation and to prevent or limit incidents on the system. The target is also to have a cost effective solutions.</p> <p>Based on the outcome of the communication and information sharing, stakeholders may issue recommendations to promote good practices.”</p>	<p>The text contains a reference to regional coordination centres. However, it is still to be confirmed if a better definition of the reference focus points is corrected.</p> <p>During the discussion a concern on the opportunity to introduce a new article had been raised.</p> <p>No alternative proposal had been received from stakeholders nor in term of alternative text or alternative procedure.</p> <p>The text had been improved during the workshop activities. It has been decided to keep the amendment proposal in its latest text revision.</p>
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5	<p><b>Prologue (27) and Art 7.3 (f)</b> Use of existing and consolidated standards.</p>	<p><b>Proposal for adding to Prologue (27)</b> The regulatory authorities, Member States and system operators should ensure that, in the process of developing and approving the requirements for network connection, they are harmonised to the extent possible, in order to ensure full market integration. Established technical standards should be taken into particular consideration in the development of connection requirements. <b>Development of requirements shall be carried involving European standardisation organisations therefore permitting the evolution of product standards and, as a consequence, the adoption of the same by industry.</b></p> <p>Modify art 7.3.(f) as follow:</p> <p>(f) take into consideration agreed European standards and technical specifications. TSOs or ENTSOE shall inform national and European technical committees respectively on applicable new requirements in due time.</p>	<p>It has been recognized that technical standards are an important brick of the wall.</p> <p>It has been recognized that today in the text of the regulation there is a missing leverage in improving cooperation with the technical standardization when it comes to developing requirements.</p> <p>To improve such cooperation, it has been proposed a modification to art 7.3(f), so that at least TSOs or ENTSOE shall inform European technical committees on modification to requirements in due time and an additional to the prologue (27) which was already referencing the use of standard.</p> <p>Basically, the discussion was expressing two different expectations, from one side the fact that the development of requirements shall not be limited by technical committees activities, from the other side the expectation that using technical committees to develop requirements is considered a most effective way due a larger audience contributing to the requirement itself. It has been decided to promote the amendment proposal.</p>
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6	<p><b>Proposal for new article 4 (x)</b> Introduction of new or amended requirements and associated applicability</p>	<p><b>Proposal for new article:</b></p> <p>The introduction of new requirements or amendments to the present regulation shall be regulated by an approval process. Information about new requirements or amendments to the existing regulation and associated approval process shall be publicly available free of charge.</p> <p><b>Proposal for consideration:</b> “Once the new requirements or the amendment is approved, its applicability will be defined based on a timeframe that will permit the manufacturers to understand and adopt it in their new product. This time shall be coordinated among stakeholders and shall consider:</p> <ul style="list-style-type: none"> <li>- Applicability to ongoing projects (costs for retrofitting)</li> <li>- Applicability to projects for which the major components had been bought (costs for retrofitting)</li> <li>- Time to certify the generating unit or plant (if certification process applies)</li> <li>- Time for a certification body to get its own approval for certifying the new requirement.</li> <li>- Roll-out of the requirement</li> </ul> <p>The new requirements shall be introduced considering a minimum time of 1 year (or ??) between the date of their publication and the entering into force and will affect only installations for which major components are not ordered yet at the moment of official publication of the approved new requirements.”</p> <p>Article 4 would permit to adapt the wording on applicability to existing plants. As an alternative modification to article 7 and reference to article 4 for existing plants (which shall then be a bit adapted).</p>	<p>There is a common agreement that art 4 shall be revisited.</p> <p>During the discussion it has been noted that an amended version of the code would correspond to a new code and therefore somehow the present structure of art 4 can be still considered.</p> <p>In addition to the proposed text introducing associated process for new requirements, it has been suggested to check definition of existing unit, in the new or amended revision of the regulation for consistency. It has been recommended a legal recheck of the content of the chapter considering a proper flow of activities in the approval of the requirements and their implementation.</p> <p>It has been noted that the proposed text presents several bullet points that could be eliminated.</p> <p>It has been agreed to present the amendment to ACER for evaluation.</p>
7	<p><b>Article 41 (Addition)</b> Site Test compliance</p>	<p><b>Proposal for an addition to article 41.7</b></p> <p>“In the frame of compliance testing, when the system operator requires proof of compliance of specific requirements, it shall establish a procedures permitting generating units to be connected to the grid with the purpose of conducting such tests and verifications, including certification test process when requested.”.</p>	<p>It has been noted that Art 42.2 is already permitting such a solution, but it provides the system operator to decide if this is a possibility or not. The idea is that a solution shall be found, it shall not be the only responsibility of the manufacturer or plant owner to solve the issue. The compliance procedure shall not prevent compliant generating unit to be connected to the grid. As an alternative to the proposed text an amendment to art 42.2 can be evaluated.</p> <p>It has been recommended to share this point to the team working on compliance IGD (to be done).</p>



8	<p><b>Article 42 (Addition)</b> Tests and Tests reports carried in a different facility as proof of compliance.</p>	<p><b>Proposal for an addition to this article 42.2.</b></p> <p>“(d) allow the use of alternative or same set of tests carried out in a different facility provided that those tests are efficient and suffice to demonstrate that a power-generating module complies with the requirements of this Regulation.”</p>	<p>It has been noted that Expert Group Interaction Studies and Simulation Models (EG ISSM) developed a similar approach when it comes to testing procedure (“similar” approach).</p> <p>It has been noted that a similar procedure is adopted for example in Belgium (see Synergrid C10_26_conformity_document check list).</p>
9	<p><b>Article 42 5. (NEW)</b> Use of Equipment Certificate</p>	<p><b>Proposal for a new additional point 5 to Article 42:</b></p> <p>“Instead of carrying out the relevant test, power-generating facility owners may rely upon equipment certificates issued by an authorised certifier to demonstrate compliance with the relevant requirement. In such a case, copies of the equipment certificates shall be provided to the relevant system operator.”</p>	<p>The proposal raised some doubts, since the Equipment Certificate is already foreseen except in Art 42 they are not mentioned.</p> <p>It is recommended a legal crosscheck to verify the indication is requested. The text amendment proposal is provided as reference.</p>
10	<p><b>Article 43 (NEW)</b> Common provisions on compliance simulation</p>	<p><b>Proposal for new Article 43 (6)</b> “43.6 The relevant system operator shall allow the use of compliance simulation as described in article 43.2 also for Type A and Type B generating module. The provision described in art 15.6(c) are in this case applicable also to Type A, and Type B when validated model is used.”</p>	<p>It has been recommended the use of Validated model instead of compliance simulation which seems more appropriate.</p>
11	<p><b>Article 3.3 (NEW) or art 7.10</b> Use of English as a second language for relevant documents</p>	<p>art 3.3 (NEW) or art 7.10 (NEW) the documents defining the requirements and the verification of the compliance as defined by each Member State and system operators shall be available also in english. Unless the english is the official language of the Member State, the english version in case of a translation of the original document shall bear the words "Translation of the original document".</p>	<p>It has been noted that in Network Code on Electricity Emergency and Restoration EU 2017/2196 there are several references to report to be prepared in English (e.g. NC ER art 14.4).</p> <p>Another example of document with multiple language that has been used as reference is Machinery Directive.</p> <p>It has been noted that there could some resistance in accepting a strict request for an English translation, due to legal reason.</p> <p>It has been proposed a wording similar to the one used for the machinery directive, where the text in the original language remains as reference and the translation bear a corresponding wording.</p>

12	<b>Art 2 (NEW)</b> Definition of families of generating unit and of generating plant	"Families are normally defined as set of generating units or set of generating plants with same technology and similar behaviour and design but allowing for instance different rated power and/or allowing for instance different rated voltage."	<p>Different possible definition has been discussed during the workshop. The definition of families had been extended from the single generating to plant concept.</p> <p>As a result, an initial definition has been proposed.</p> <p>It was planned to share this definition with the team working on the IGD compliance. In addition it has been noted that it is planned in the future an Expert Group which works are focused on the use of families in the compliance process. It is therefore expected the concept will be widely discussed in such teams. It is however reported here below the definition proposed during the workshop.</p>
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<sup>i</sup> ENTSO-E has actively supported the series of workshops that have been organized and overall welcomes the initiatives that motivate discussions on the important CNC topics. On the specific proposals of this report, before possibly a formal ENTSO-E position on the proposal could be developed, an internal assessment would needed to be done."