

Proposals for amendments to the Requirements for Generators

Fields marked with * are mandatory.

Introduction

Important developments in the policies of decarbonisation of the European Union (EU) energy and transport sectors have taken place since the inception of the development of the first European Grid Connection Network Codes (GC NCs) in 2012.

In the framework of the Grid Connection European Stakeholder Committee (GC ESC), the European Commission proposed for ACER to initiate the process towards the amendment of the existing GC NCs in September 2022. The amendment process, as presented to the GC ESC is outlined in the Figure below:



Following the scoping phase, ACER published the Policy Paper on the revision of the network code on requirements for grid connection of generators and the network code on demand connection in September 2022. The Policy Paper aims to transparently indicate to stakeholders the key policy areas in which amendments are to be expected. Moreover, the Paper draws on the alternative policy options and provides recommendations and proposed actions for the amendment process.

[Access the ACER Policy Paper on the revision of the NC RfG and NC DC](#)

This consultation aims at gathering, from all interested stakeholders, concrete proposals for amendments to the Commission Regulation (EU) 2016/631 of 14 April 2016 establishing a **Network Code on Requirements for Grid Connection of Generators** ('NC RfG').

For amendment proposals concerning Network Code on Demand Connection, please go to the form: [NC DC](#).

Responses to this consultation should be submitted by 28 November 2022 23:59 CET.

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* Name of the stakeholder:

SolarPower Europe

* Contact person:

[REDACTED]

* Contact person's email address:

[REDACTED]

* Country of the stakeholder's headquarters or main country of operation:

Belgium

* Type of the stakeholder:

- ☒ Generator (including association)
- ☐ Consumer (including association)
- ☐ Transmission system operator (including association)
- ☐ Distribution system operator (including association)
- ☐ Manufacturers (including association)
- ☐ Academia/research institution
- ☐ Regulatory authority
- ☐ Other (please, elaborate)

Please, elaborate on your answer above, if necessary:

[REDACTED]

* Do you consent to the publication of the stakeholder's name?

- ☒ Yes
- ☐ No

* Do you consent to the publication of provided answers?

- ☒ Yes
- ☐ No (please, note that your answer, without your name and organization, may be shared with the EU institutions and national authorities, drafting team members, and other persons or entities involved in the European Grid Connection Network Codes amendment process)

Instructions

Stakeholders are invited to submit their amendment proposals to the RfG articles that they consider should be revised in a two-step process:

1. by inserting the proposed amendments in the provided Word file
2. by motivating/reasoning the proposed amendments through this online consultation form.

Both steps are mandatory for all amendment proposals.

(Where no amendment is proposed, the article text in the word file can be left unaltered and the cells in the consultation form can be left blank.)

The mandatory steps for submitting amendment proposals are detailed below. At the end of this section, you can find an example showing how to submit your proposals.

Step 1

Please include all your amendment proposals in the **Word file provided below using the Track Changes mode**. Once you edit the file and rename it with your stakeholder's name ("NC_RfG_stakeholder_name"), please upload it in the last section of this form (FILE UPLOAD)

[Download the Word file \(NC RfG\)](#)

Step 2

In addition, please use this form to motivate/reason your proposals, following the instructions:

General requirements for type B power-generating modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|---------------|--------------------|-----------|------------------------------|
| Article 14(1) | 1 | 2 | 3 |
| Article 14(2) | | | |
| Article 14(3) | | | |
| Article 14(4) | | | |
| Article 14(5) | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new provisions in this section | Reasoning | Relation to other provisions |
|---|---|-----------|------------------------------|
| 4 | New provisions | | |

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5 Select file to upload

1. Propose an amended wording of the relevant provision, as you provided in the Word file.
2. Provide the motivation/reasoning behind your proposal.
3. Indicate (if any) which other provisions of the NC RfG are impacted and may need to be amended following your proposal.
4. Provide (if any) your proposals for adding new provisions to the relevant section of the Regulation, as you provided in the Word file.
5. Upload figures or tables if necessary; text inputs should be provided directly in the consultation form.

Example

Stakeholder XYZ would like to propose an amendment to Article 27 of NC RfG. In their view, the meaning of the word "respectively" in this article is not clear. Following a two-step process, the stakeholder downloads the Word file from the **Instruction** section, turns on the Track Changes mode and edits the text (first step).



Article 27

System restoration requirements applicable to AC-connected offshore power park modules

The system restoration requirements laid down respectively in Article 14(4) and Article 15(5) shall apply to AC-connected offshore power park modules types B and C, respectively.

Article 28

General system management requirements applicable to AC-connected offshore power park modules

The general system management requirements laid down in Article 14(5), Article 15(6) and Article 16(4) shall apply to AC-connected offshore power park modules.

After saving the edited file on their device under the name "*NC_RfG_Stakeholder_XYZ*", the stakeholder uploads it in the **FILE UPLOAD** section.

Pages

| | | | | | | |
|--------------|-------------|---------|-------------|-----------|----------------|--------------------|
| Introduction | Instruction | Whereas | Definitions | TITLE I | TITLE II CH. 1 | TITLE II |
| TITLE III | TITLE IV | TITLE V | TITLE VI | TITLE VII | Other | FILE UPLOAD |

FILE UPLOAD

Please upload the Word file (downloaded from the *Instruction* section) containing all your amendments

The maximum file size is 1 MB

NC_RfG_Stakeholder_XYZ.docx

Select file to upload

Previous

Submit

The stakeholder proceeds to motivate/reason their proposal. As they would like to propose an amendment to Article 27 of NC RfG, they enter **TITLE II CHAPTER 4** Section and insert the proposed amended wording and the reasoning (second step). As the proposed amendment of Article 27 does not affect other provisions, they leave the last column blank.

Pages

[Introduction](#)[Instruction](#)[Whereas](#)[Definitions](#)[TITLE I](#)[TITLE II CH. 1](#)[TITLE II CH. 2](#)[TITLE II CH. 3](#)[TITLE II CH. 4](#)[TITLE III](#)[TITLE IV](#)[TITLE V](#)[TITLE VI](#)[TITLE VII](#)[Other](#)[FILE UPLOAD](#)

TITLE II CHAPTER 4 - Requirements for offshore power park modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|------------|---|--|------------------------------|
| Article 23 | // | // | // |
| Article 24 | // | // | // |
| Article 25 | // | // | // |
| Article 26 | // | // | // |
| Article 27 | The system restoration requirements laid down in Article 14(4) and Article 15(5) shall apply to AC-connected offshore power park modules types B and C, respectively. | The current wording of Article 27 refers to the provisions of Articles 14(4) and 15(5). However, it is unclear from the legal text how the respective application should be understood. Indicating that the requirements of Article 14(4) shall apply to offshore PPMs type B and requirements of Article 15(5) shall apply to offshore PPMs type C follows the internal logic of the NC RfG and corresponds with the capabilities of the units in question. | - // |
| Article 28 | // | // | // |

As the survey is long,

1. you have the possibility to edit your answer after submission. When clicking on "submit", you will be given a contribution ID, which you can then use to access your contribution here. This allows you to proceed in steps.
2. we kindly suggest that you download the entire survey as .pdf (link on the right), prepare your answers and then upload them at once in the EU Survey Tool, to avoid a session timeout on submission.

The maximum length of each cell is 5000 characters. This is the maximum technical limit set by the EUsurvey tool, which cannot be increased.

Whereas Section

Please write your amendment proposal and the reasoning in the table below.

Numbers in the first column correspond with the recitals of the NC RfG Whereas section

| | Amendment proposal | Reasoning | Relation to other provisions |
|------|--------------------|-----------|------------------------------|
| (1) | | | |
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| (31) | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new recitals | Reasoning | Relation to other provisions |
|--------------|---------------------------|-----------|------------------------------|
| New recitals | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|---------------|--------------------|-----------|------------------------------|
| Article 2(1) | | | |
| Article 2(2) | | | |
| Article 2(3) | | | |
| Article 2(4) | | | |
| Article 2(5) | | | |
| Article 2(6) | | | |
| Article 2(7) | | | |
| Article 2(8) | | | |
| Article 2(9) | | | |
| Article 2(10) | | | |
| Article 2(11) | | | |
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| Article 2(13) | | | |
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| Article 2(15) | | | |
| Article 2(16) | | | |
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| Article 2(27) | | | |
| Article 2(28) | | | |
| Article 2(29) | | | |
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| Article 2(56) | | | |
| Article 2(57) | | | |
| Article 2(58) | | | |
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| Article 2(61) | | | |
| Article 2(62) | | | |
| Article 2(63) | | | |
| Article 2(64) | | | |
| Article 2(65) | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new definitions | Reasoning | Relation to other provisions |
|-----------------|------------------------------|-----------|------------------------------|
| New definitions | | | |

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TITLE I - General provisions

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|-----------|--|--|------------------------------|
| Article 1 | | | |
| Article 3 | | | |
| Article 4 | | | |
| | <p>Determination of significance</p> <p>1. The power-generating modules shall comply with the requirements on the basis of the voltage level of their connection point and their maximum capacity according to the categories set out in paragraph 2.</p> <p>2. Power-generating modules within the following categories shall be considered as significant:</p> <p>(a) maximum capacity of 0,8 kW or more (type A);</p> <p>(b) and maximum capacity at the threshold according to Table 1 (type B);</p> <p>(c) connection point below 110 kV and maximum capacity at or above a threshold specified by each relevant TSO in accordance with paragraph 3 (type C). This threshold shall not be above the limits for type C power-generating modules contained in Table 1; or</p> <p>(d) connection point at 110 kV or above and a maximum capacity above type B in table 1 (type D). A</p> | <p>The Voltage criterion existing in</p> | |

Article 5

power-generating module is also of type D if its connection point is below 110 kV and its maximum capacity is at or above a threshold specified in accordance with paragraph 3 (type D). This threshold shall not be above the limit for type D power-generating modules contained in Table 1.

Table 1

Thresholds and limits for thresholds for type B, C and D power-generating modules

| Synchronous areas | Capacity threshold from which a power-generating module is of type B | Limit for maximum capacity threshold from which a power-generating module is of type C | Limit for maximum capacity threshold from which a power-generating module is of type D |
|------------------------------|--|--|--|
| Continental Europe | 0,5 MW | 50 MW | 75 MW |
| Great Britain | 1 MW | 50 MW | 75 MW |
| Nordic | 1,5 MW | 10 MW | 30 MW |
| Ireland and Northern Ireland | 0,1 MW | 5 MW | 10 MW |
| Baltic | 0,5 MW | 10 MW | 15 MW |

(new) If a Member State deems it

the actual RfG should be removed for type A and B PGMs, below 15 MW capacity, as we expect requirements for Type A and B PGMs related to system security to be increased as proposed in the ACER policy paper under point 63, second sentence.

The voltage criterion imposes – in relation to its significance - disproportionate requirements to relatively small PGMs with a capacity below 15 MW in terms of capabilities as well as notification and compliance processes, in case they utilize existing infrastructure connected to the HV System. Especially when those PGMs are installed in HV-connected demand-facilities, applying the same requirements as those PGMs of a capacity of >50MW would mean that the potential of such installations would be jeopardized due to additional economic burdens without obvious technical reasons.

If there are any concerns with that, a member state should go through a stakeholder process , if he deems it necessary to apply the voltage level criterion in order to determine the significance.

necessary to introduce the criterion “connection point at a voltage level at 110kV or above” for PGMs larger than 15 MW, to make it a type D PGM, it has the option to do so.

This however must not lead to a distortion of a level playing field between PGM of different size or an incentive to inefficient splitting of installations into smaller units.

3. Proposals for maximum capacity thresholds for types C and D power-generating modules shall be subject to approval by the relevant regulatory authority or, where applicable, the Member State. In forming proposals the relevant TSO shall coordinate with adjacent TSOs and DSOs and shall conduct a public consultation in accordance with Article 10. A proposal by the relevant TSO to change the thresholds shall not be made sooner than three years after the previous proposal.

4. Power-generating facility owners shall assist this process and provide data as requested by the relevant TSO.

5. If, as a result of modification of the thresholds, a power-generating

However, this provision should not distort the level playing field between higher and lower capacity PGMs, or result into an incentive to inefficiently split larger installations into smaller units. We assume that for the determination of significance, the overall capacity is the sum of the PGMs.

The threshold between type A and B should be fixed in order to harmonize products and processes for mass market of small PGMs over Europe.

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| | <p>module qualifies under a different type, the procedure laid down in Article 4(3) concerning existing power-generating modules shall apply before compliance with the requirements for the new type is required.</p> | | |
| | <p>Application to power-generating modules, pump-storage power-generating modules, combined heat and power facilities, industrial sites and mixed customer sites in general</p> <p>1. Offshore power-generating modules connected to the interconnected system shall meet the requirements for onshore power-generating modules, unless the requirements are modified for this purpose by the relevant system operator or unless the connection of power park modules is via a high voltage direct current connection or via a network whose frequency is not synchronously coupled to that of the main interconnected system (such as via a back-to-back convertor scheme).</p> <p>2. Pump-storage power-generating modules shall fulfil all the relevant requirements in both generating and pumping operation</p> | | |

Article 6

mode. Synchronous compensation operation of pump-storage power-generating modules shall not be limited in time by the technical design of power-generating modules. Pump-storage variable speed power-generating modules shall fulfil the requirements applicable to synchronous power-generating modules as well as those set out in point (b) of Article 20(2), if they qualify as type B, C or D.

3. With respect to power-generating modules embedded in the networks of industrial sites, power-generating facility owners, system operators of industrial sites and relevant system operators whose network is connected to the network of an industrial site shall have the right to agree on conditions for disconnection of such power-generating modules together with critical loads, which secure production processes, from the relevant system operator's network. The exercise of this right shall be coordinated with the relevant TSO.

4. Except for requirements under paragraphs 2 and 4 of Article 13 or where otherwise stated in the national framework, requirements

The existing network RfG does not consider mixed customer sites. Mixing production, demand and especially storage is a key enabler for the green transition as it reduces the impact on the electricity grid significantly.

When mixing production, demand and especially storage in the same installation, these units should not be evaluated separately, as this would prevent internal optimisations.

The suggested changes, where mixed customer sites are evaluated in the connection point to the grid as a combined facility will enable internal optimization.

6a) In mixed customer sites, it makes sense to limit the infeed capacity and focus on self-consumption. The most important impact parameters of a PGM to the network are related to the maximum infeed capacity to the grid, rather than installed capacity.
6b) If possible, no adjustment shall be required at the connection point

of this Regulation relating to the capability to maintain constant active power output or to modulate active power output shall not apply to power-generating modules of facilities for combined heat and power production embedded in the networks of industrial sites, where all of the following criteria are met:

- (a) the primary purpose of those facilities is to produce heat for production processes of the industrial site concerned;
- (b) heat and power-generating is inextricably interlinked, that is to say any change of heat generation results inadvertently in a change of active power-generating and vice versa;
- (c) the power-generating modules are of type A, B, C or, in the case of the Nordic synchronous area, type D in accordance with points (a) to (c) of Article 5(2).

5. Combined heat and power-generating facilities shall be assessed on the basis of their electrical maximum capacity.

6. For mixed customer sites (MCS) the following applies:

- (a) the type classification according to table 1 does not refer to the installed capacity, but the

of the existing load facility. Especially in medium voltage connected existing demand facilities, a control reference point at the PCC often leads to significant additional cost for measuring equipment / reconstruction of the switchgear etc. Such cost may jeopardize investments into such PGMs. A reference point within the MCS - at least for relatively small plants in relation to the connection point's capacity - is technically feasible.

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| | <p>maximum feed-in capacity as agreed with the relevant system operator.</p> <p>(b) if the MCS was taken into operation before the application date of this regulation, the requirements of the PGM may apply at their connection to the MCS.</p> | | |
| | <p>Regulatory aspects</p> <p>1. Requirements of general application to be established by relevant system operators or TSOs under this Regulation shall be subject to approval by the entity designated by the Member State and be published. The designated entity shall be the regulatory authority unless otherwise provided by the Member State.</p> <p>(new 1) If a TSO or relevant system operator deems it necessary to apply more stringent requirements to PGMs that are foreseen for a type of a higher power threshold, there has to be a comprehensible rationale as well as a national stakeholder process.</p> <p>(new 2) If a relevant system operator deems it necessary to apply more stringent requirements to PGMs than defined during the</p> | | |

implementation in the member state, there has to be a comprehensible rationale as well as a national stakeholder process.
(new 3) When Relevant system operators or TSOs are establishing requirements under this regulation, they shall disclose how they incorporated the principles set out in article 7(3).

2. For site specific or regional requirements to be established by relevant system operators or TSOs under this Regulation, Member States may require approval by a designated entity.

3. When applying this Regulation, Member States, competent entities and system operators shall:

- (a) apply the principles of proportionality and non-discrimination;
- (b) ensure transparency;
- (c) apply the principle of optimisation between the highest overall efficiency and lowest total costs for all parties involved;
- (d) respect the responsibility assigned to the relevant TSO in order to ensure system security, including as required by national legislation;
- (e) consult with relevant DSOs

New 1: Proposed changes shall achieve a harmonisation between types B, C, D

New 2: Harmonize the requirements of different DSOs within a member state to avoid

Article 7

and take account of potential impacts on their system;

(f) take into consideration agreed European standards and technical specifications.

(g) seek the highest degree of harmonization with other system operators in the same synchronous area for requirements set out for type A, B, C and D

4. The relevant system operator or TSO shall submit a proposal for requirements of general application, or the methodology used to calculate or establish them, for approval by the competent entity within two years of entry into force of this Regulation.

5. Where this Regulation requires the relevant system operator, relevant TSO, power-generating facility owner and/or the distribution system operator to seek agreement, they shall endeavour to do so within six months after a first proposal has been submitted by one party to the other parties. If no agreement has been found within this time frame, each party may request the relevant regulatory authority to issue a decision within six months.

6. Competent entities shall take

unnecessary efforts for installers, planners, vendors.

New 3: Proposed changes shall achieve a harmonisation between types B, C, D

2. Proposed changes shall achieve a harmonisation between grid operators in one member state. Even slightly different requirements for different system operators within a Member State (e.g. several 100 in Germany) lead to unproportionate efforts for manufacturers and installers

3g) Where possible, System Operators and Member States should harmonize their requirements, e.g. by applying European Standardization where possible in order to support European-wide, efficient installation and application of Renewable Energy

decisions on proposals for requirements or methodologies within six months following the receipt of such proposals.

7. If the relevant system operator or TSO deems an amendment to requirements or methodologies as provided for and approved under paragraph 1 and 2 to be necessary, the requirements provided for in paragraphs 3 to 8 shall apply to the proposed amendment. System operators and TSOs proposing an amendment shall take into account the legitimate expectations, if any, of power-generating facility owners, equipment manufacturers and other stakeholders based on the initially specified or agreed requirements or methodologies.

8. Any party having a complaint against a relevant system operator or TSO in relation to that relevant system operator's or TSO's obligations under this Regulation may refer the complaint to the regulatory authority which, acting as dispute settlement authority, shall issue a decision within two months after receipt of the complaint. That period may be extended by two months where additional information is sought by

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| | <p>the regulatory authority. That extended period may be further extended with the agreement of the complainant. The regulatory authority's decision shall have binding effect unless and until overruled on appeal.</p> <p>9. Where the requirements under this Regulation are to be established by a relevant system operator that is not a TSO, Member States may provide that instead the TSO be responsible for establishing the relevant requirements.</p> | | |
| Article 8 | | | |
| Article 9 | | | |
| Article 10 | | | |
| Article 11 | | | |
| Article 12 | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new articles in this section | Reasoning | Relation to other provisions |
|--------------|---|-----------|------------------------------|
| New articles | | | |

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TITLE II CHAPTER 1 - General Requirements

General requirements for type A power-generating modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|---------------|---|---|------------------------------|
| Article 13(1) | | | |
| Article 13(2) | | | |
| Article 13(3) | | | |
| Article 13(4) | | | |
| Article 13(5) | | | |
| Article 13(6) | <p>The power-generating module shall be equipped with a logic interface (input port) in order to cease active power output within five seconds following an instruction being received at the input port. The Member States and respective energy regulators shall specify requirements for equipment to make PGMs operable remotely. The specified requirements have to be based on present technical standards. Increased efforts must be made by the relevant system operator to ensure the long-term applicability of the specified standard.</p> | <p>Due to the huge number of small customers effected by Type A requirements, the accompanying costs must be as low as possible. Therefore, the use of common standards is emphasized to ensure competition and lower the costs. In this regard the chosen standard must be at least applicable in the near to midterm future.</p> <p>Or, in different wording:</p> <p>For PGMs of type A, a standardization of the interface is crucial. There is a high need for harmonization for secure, harmonized remote access solutions for mass applications. System-operator specific configuration of remote control access leads to significant effort for planners , installers and manufacturers.</p> | |

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|---------------|--|--|--|
| Article 13(7) | | | |
|---------------|--|--|--|

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new provisions in this section | Reasoning | Relation to other provisions |
|----------------|---|--|------------------------------|
| New provisions | The activation of additional power reduction requirements, aside from countering unforeseen short-term events to ensure grid stability, must be based on an agreement with the party concerned. | The use of the implemented remote control to provide more flexibility must be an optional case. This is ensured by a mandatory agreement of the customers. Regarding the additional costs for implementing an APC (especially relevant for single-family-houses), this would also ensure that an APC is only used when really necessary. | |

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General requirements for type B power-generating modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|---------------|--------------------|-----------|------------------------------|
| Article 14(1) | | | |
| Article 14(2) | | | |
| Article 14(3) | | | |
| Article 14(4) | | | |
| Article 14(5) | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new provisions in this section | Reasoning | Relation to other provisions |
|----------------|--|---|------------------------------|
| New provisions | <p>Advanced capabilities such as congestion management or capabilities related to non-frequency ancillary services according to DIRECTIVE (EU) 2019/944 are non-mandatory requirements for Type B PGMs. Such capabilities should be harmonised to the highest extent between member states and then be applied in the framework of ancillary services market frameworks.</p> | <p>Advanced capabilities introduce additional costs to power-generating modules. These costs should only be taken if the capability is actually needed. Otherwise a lot of sunk costs will be introduced.</p> <p>Procurement of such capabilities rather than applying them to all generators helps to find the economically most favourable solution.</p> <p>The suggested changes state that specified advanced capabilities should be non-mandatory. This will reduce the grid connection costs significantly.</p> | |

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General requirements for type C power-generating modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|---------------|--------------------|-----------|------------------------------|
| Article 15(1) | | | |
| Article 15(2) | | | |
| Article 15(3) | | | |
| Article 15(4) | | | |
| Article 15(5) | | | |
| Article 15(6) | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new provisions in this section | Reasoning | Relation to other provisions |
|----------------|---|-----------|------------------------------|
| New provisions | | | |

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General requirements for type D power-generating modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|---------------|--------------------|-----------|------------------------------|
| Article 16(1) | | | |
| Article 16(2) | | | |
| Article 16(3) | | | |
| Article 16(4) | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new provisions in this section | Reasoning | Relation to other provisions |
|----------------|---|-----------|------------------------------|
| New provisions | | | |

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TITLE II CHAPTER 2 - Requirements for synchronous power-generating modules

Requirements for type B synchronous power-generating modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|---------------|--------------------|-----------|------------------------------|
| Article 17(1) | | | |
| Article 17(2) | | | |
| Article 17(3) | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new provisions in this section | Reasoning | Relation to other provisions |
|----------------|---|-----------|------------------------------|
| New provisions | | | |

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Requirements for type C synchronous power-generating modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|---------------|--------------------|-----------|------------------------------|
| Article 18(1) | | | |
| Article 18(2) | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new provisions in this section | Reasoning | Relation to other provisions |
|----------------|---|-----------|------------------------------|
| New provisions | | | |

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Requirements for type D synchronous power-generating modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|---------------|--------------------|-----------|------------------------------|
| Article 19(1) | | | |
| Article 19(2) | | | |
| Article 19(3) | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new provisions in this section | Reasoning | Relation to other provisions |
|----------------|---|-----------|------------------------------|
| New provisions | | | |

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TITLE II CHAPTER 3 - Requirements for power park modules

Requirements for type B power park modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|---------------|--------------------|-----------|------------------------------|
| Article 20(1) | | | |
| Article 20(2) | | | |
| Article 20(3) | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new provisions in this section | Reasoning | Relation to other provisions |
|----------------|---|-----------|------------------------------|
| New provisions | | | |

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Requirements for type C power park modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|---------------|--------------------|-----------|------------------------------|
| Article 21(1) | | | |
| Article 21(2) | | | |
| Article 21(3) | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new provisions in this section | Reasoning | Relation to other provisions |
|----------------|---|-----------|------------------------------|
| New provisions | | | |

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Requirements for type D power park modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|------------|--------------------|-----------|------------------------------|
| Article 22 | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new provisions in this section | Reasoning | Relation to other provisions |
|----------------|---|-----------|------------------------------|
| New provisions | | | |

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TITLE II CHAPTER 4 - Requirements for offshore power park modules

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|------------|--------------------|-----------|------------------------------|
| Article 23 | | | |
| Article 24 | | | |
| Article 25 | | | |
| Article 26 | | | |
| Article 27 | | | |
| Article 28 | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new articles in this section | Reasoning | Relation to other provisions |
|--------------|---|-----------|------------------------------|
| New articles | | | |

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TITLE III - Operational notification procedure for connection

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|------------|--|-----------|------------------------------|
| Article 29 | | | |
| | <p>Operational notification of type A power-generating modules</p> <p>1. The operational notification procedure for connection of each new type A power-generating module shall consist of submitting an installation document. The power-generating facility owner shall ensure that the required information is filled in on an installation document obtained from the relevant system operator and is submitted to the system operator. Separate installation documents shall be provided for each power-generating module within the power-generating facility. The relevant system operator shall ensure that the required information can be submitted by third parties on behalf of the power-generating facility owner.</p> <p>2. The member states shall specify the content of the installation document to be used on national level by the relevant system operators, which shall have at least the following information:</p> <p>(a) the location at which the connection is made;</p> | | |

Article 30

- (b) the date of the connection;
- (c) the maximum capacity of the installation in kW;
- (d) the type of primary energy source;
- (e) the classification of the power-generating module as an emerging technology according to Title VI of this Regulation;
- (f) reference to equipment certificates issued by an authorised certifier used for equipment that is in the site installation;
- (g) as regards equipment used, for which an equipment certificate has not been received, information shall be provided as directed by the relevant system operator; and
- (h) the contact details of the power-generating facility owner and the installer and their signatures.

3. The power-generating facility owner shall ensure that the relevant system operator or the competent authority of the Member State is notified about the permanent decommissioning of a power-generating module in accordance with national legislation.

The relevant system operator shall

Documents and data required shall be harmonised over all DSOs in at least one member state.

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| | ensure that such notification can be made by third parties, including aggregators. | | |
| Article 31 | | | |
| | <p>Article 32</p> <p>Procedure for type B and C power-generating modules</p> <p>1. For the purpose of operational notification for connection of each new type B and C power-generating module, a power-generating module document ('PGMD') shall be provided by the power-generating facility owner to the relevant system operator and shall include a statement of compliance.</p> <p>For each power-generating module within the power-generating facility, separate independent PGMDs shall be provided.</p> <p>2. The format of the PGMD to be used on national level by the relevant system operators and the information to be given therein shall be specified by the member states. The procedure and the effort for obtaining the PGMD shall be in a sensible proportion to the PGM's size and significance. The relevant system operator shall have the right to request that the power-generating facility owner</p> | | |

Article 32

include the following in the PGMD:

- (a) evidence of an agreement on the protection and control settings relevant to the connection point between the relevant system operator and the power-generating facility owner;
- (b) itemised statement of compliance;
- (c) detailed technical data of the power-generating module with relevance to the grid connection as specified by the relevant system operator;
- (d) equipment certificates issued by an authorised certifier in respect of power-generating modules, where these are relied upon as part of the evidence of compliance;
- (e) for Type C power-generating modules, simulation models pursuant to point (c) of Article 15(6);
- (f) compliance test reports demonstrating steady-state and dynamic performance as required by Chapters 2, 3 and 4 of Title IV, including use of actual measured values during testing, to the level of detail required by the relevant system operator; and
- (g) studies demonstrating steady-state and dynamic

Efforts to show compliance shall be kept in a reasonable relation to the plant's cost. Therefore, documents and the related process shall be harmonised between the RSOs of a member state and take the PGMs significance and value into account. The smaller the PGM ("Mass market products"), the less project-specific technical requirements and notification effort can be afforded.

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| | <p>performance as required by Chapters 5, 6 or 7 of Title IV, to the level of detail required by the relevant system operator.</p> <p>3. The relevant system operator, on acceptance of a complete and adequate PGMD, shall issue a final operational notification to the power-generating facility owner.</p> <p>4. The power-generating facility owner shall notify the relevant system operator or the competent authority of the Member State about the permanent decommissioning of a power-generating module in accordance with national legislation.</p> <p>5. Where applicable, the relevant system operator shall ensure that the commissioning and decommissioning of Type B and Type C power-generating modules can be notified electronically.</p> <p>6. Member States may provide that the PGMD shall be issued by an authorised certifier.</p> | | |
| Article 33 | | | |
| Article 34 | | | |
| Article 35 | | | |
| Article 36 | | | |
| Article 37 | | | |
| Article 38 | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new articles in this section | Reasoning | Relation to other provisions |
|--------------|---|-----------|------------------------------|
| New articles | | | |

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TITLE IV - Compliance

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|------------|---|-----------|------------------------------|
| Article 40 | | | |
| | <p>Tasks of the relevant system operator</p> <p>1. The relevant system operator shall assess the compliance of a power-generating module with the requirements applicable under this Regulation, throughout the lifetime of the power-generating facility. The power-generating facility owner shall be informed of the outcome of this assessment. For type A power-generating modules, the relevant system operator shall rely upon equipment certificates issued by an authorised certifier for this assessment. Type A power-generating modules which have been successfully certified in one Member State shall not require any additional assessment in another Member State.</p> <p>2. The relevant system operator shall have the right to request that the power-generating facility owner carry out compliance tests and simulations according to a repeat plan or general scheme or after any failure, modification or</p> | | |

replacement of any equipment that may have an impact on the power-generating module's compliance with the requirements of this Regulation.

The power-generating facility owner shall be informed of the outcome of those compliance tests and simulations.

3. The relevant system operator shall make publicly available a list of information and documents to be provided as well as the requirements to be fulfilled by the power-generating facility owner within the framework of the compliance process. The list shall cover at least the following information, documents and requirements:

- (a) all the documentation and certificates to be provided by the power-generating facility owner;
- (b) details of the technical data on the power-generating module of relevance to the grid connection;
- (c) requirements for models for steady-state and dynamic system studies;
- (d) timeline for the provision of system data required to perform the studies;
- (e) studies by the power-generating facility owner to

Where compliance with this Regulation has been proven for Type A modules once, this shall be sufficient proof within the entire internal market. Type A modules shall not be subject to repeated individual certification in every Member State.

Harmonize the requirements of different DSOs within a member state to avoid unnecessary efforts for installers, planners, vendors.

demonstrate the expected steady-state and dynamic performance in accordance with the requirements set out in Chapters 5 and 6 of Title IV;

(f) conditions and procedures, including the scope, for registering equipment certificates; and

(g) conditions and procedures for the use of relevant equipment certificates issued by an authorised certifier by the power-generating facility owner.

(i - new) If a relevant network operator deems it necessary to extend the list defined during the implementation in the member state, there has to be a comprehensible rationale and a national stakeholder process shall be done.

4. The relevant system operator shall make public the allocation of responsibilities between the power-generating facility owner and the system operator for compliance testing, simulation and monitoring.

5. The relevant system operator may totally or partially delegate the performance of its compliance monitoring to third parties. In such cases, the relevant system operator shall continue ensuring

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| | <p>compliance with Article 12, including entering into confidentiality commitments with the assignee.</p> <p>6. If compliance tests or simulations cannot be carried out as agreed between the relevant system operator and the power-generating facility owner due to reasons attributable to the relevant system operator, then the relevant system operator shall not unreasonably withhold the operational notification referred to in Title III.</p> | | |
| Article 42 | | | |
| Article 43 | | | |
| Article 44 | | | |
| Article 45 | | | |
| Article 46 | | | |
| Article 47 | | | |
| Article 48 | | | |
| Article 49 | | | |
| Article 50 | | | |
| Article 51 | | | |
| Article 52 | | | |
| Article 53 | | | |
| Article 54 | | | |
| Article 55 | | | |
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| Article 58 | | | |
| Article 59 | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new articles in this section | Reasoning | Relation to other provisions |
|--------------|---|-----------|------------------------------|
| New articles | | | |

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TITLE V - Derogations

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|------------|--------------------|-----------|------------------------------|
| Article 60 | | | |
| Article 61 | | | |
| Article 62 | | | |
| Article 63 | | | |
| Article 64 | | | |
| Article 65 | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new articles in this section | Reasoning | Relation to other provisions |
|--------------|---|-----------|------------------------------|
| New articles | | | |

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TITLE VI - Transitional arrangements for emerging technologies

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|------------|--------------------|-----------|------------------------------|
| Article 66 | | | |
| Article 67 | | | |
| Article 68 | | | |
| Article 69 | | | |
| Article 70 | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new articles in this section | Reasoning | Relation to other provisions |
|--------------|---|-----------|------------------------------|
| New articles | | | |

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TITLE VII - Final provisions

Please write your amendment proposal and the reasoning in the table below.

| | Amendment proposal | Reasoning | Relation to other provisions |
|------------|--|-----------|------------------------------|
| Article 71 | <p>Amendment of contracts and general terms and conditions</p> <p>1. Regulatory authorities shall ensure that all relevant clauses in contracts and general terms and conditions relating to the grid connection of new power-generating modules are brought into compliance with the requirements of this Regulation.</p> <p>2. All relevant clauses in contracts and relevant clauses of general terms and conditions relating to the grid connection of existing power-generating modules subject to all or some of the requirements of this Regulation in accordance with Article 4(1) shall be amended in order to comply with the requirements of this Regulation. The relevant clauses shall be amended within three years following the decision of the regulatory authority or Member State as referred to in Article 4(1).</p> <p>3. Regulatory authorities shall ensure that national agreements between system operators and owners of new or existing power-generating facilities subject to this Regulation and relating to grid</p> | | |

| | | | |
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| | <p>connection requirements for power-generating facilities, in particular in national network codes, reflect the requirements set out in this Regulation.</p> <p>4. The relevant system operators shall not establish requirements for grid connection to their grid which go beyond what is laid down in this Regulation. Where additional requirements are necessary for the secure operation of the system, the NRA may after consultation with all relevant stakeholders lay down a limited set of options for additional requirements for grid connection from which system operators may choose.</p> | <p>Today, in some Member States such as Germany, each of the 900 DSOs can establish individual additional grid connection requirements for their grid. This leads to a substantial fragmentation of the internal market for energy technologies and products which can be offered on a national level. Instead, only where necessary a limited set of national – or even better European – options to go beyond the RfG should be offered.</p> | |
| Article 72 | | | |

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new articles in this section | Reasoning | Relation to other provisions |
|--------------|---|-----------|------------------------------|
| New articles | | | |

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Other additional provisions

Please write your amendment proposal and the reasoning in the table below.

| | Proposal for new provisions | Reasoning | Relation to other provisions |
|----------------------|-----------------------------|-----------|------------------------------|
| Other new provisions | | | |

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Please upload the Word file (downloaded from the **Instruction** section) containing all your amendment proposals in the Track Changes mode.

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