Proposals for amendments to the Demand

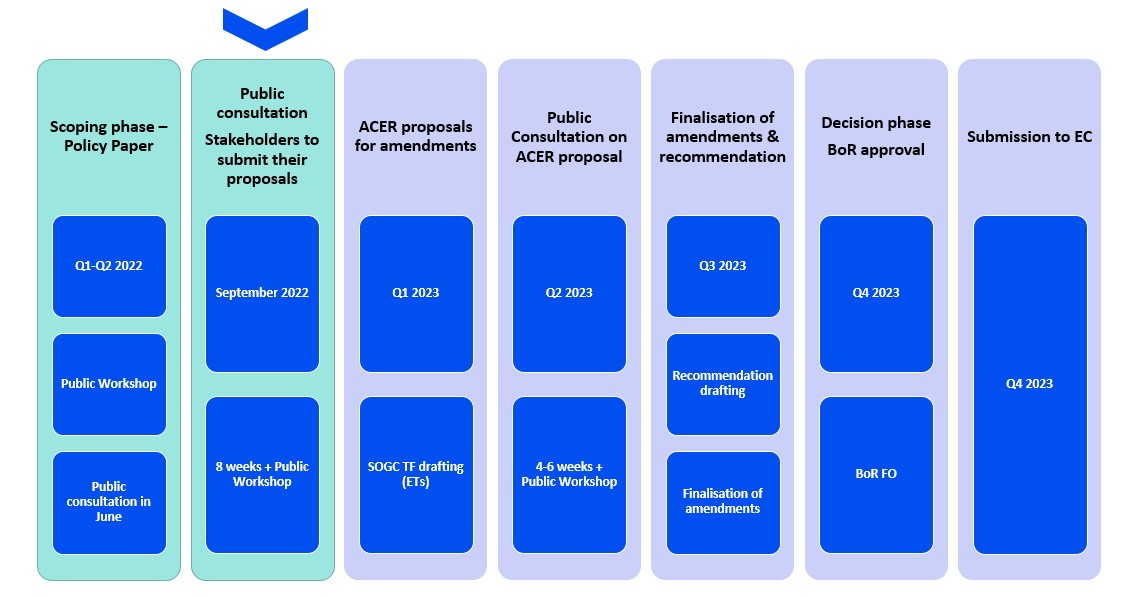
Connection Code

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) 2016/1388 of 17 August 2016 establishing a Network Code on Demand Connection ('NC DC').

For amendment proposals concerning Network Code on Requirements for Generators ('NC RfG'), please go to the form: NC RfG.

Responses to this consultation should be submitted by 21 November 2022 23:59 CET.

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protection

\* Name of the stakeholder:

\* Co

\* Co

|  |
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|  |
| ntact person: |
|  |
| ntact person's email address: |
|  |

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

Austria Belgium Bulgaria Croatia Cyprus Czechia Denmark Estonia Finland France



Germany Greece Hungary Iceland Ireland



Italy



Latvia



Liechtenstein



Lithuania



Luxembourg



Malta



Netherlands



Norway Poland Portugal Romania



Slovak Republic



Slovenia



Spain



Sweden



Outside the EEA (please, specify)



Please, specify the country:

\* 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



Other (please, elaborate)



Please, elaborate on your answer above, if necessary:

Association

\* 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 NC DC 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\_DC\_stakeholder\_name"), please upload it in the last section of this form (FILE UPLOAD)

Download the Word file (NC DC)

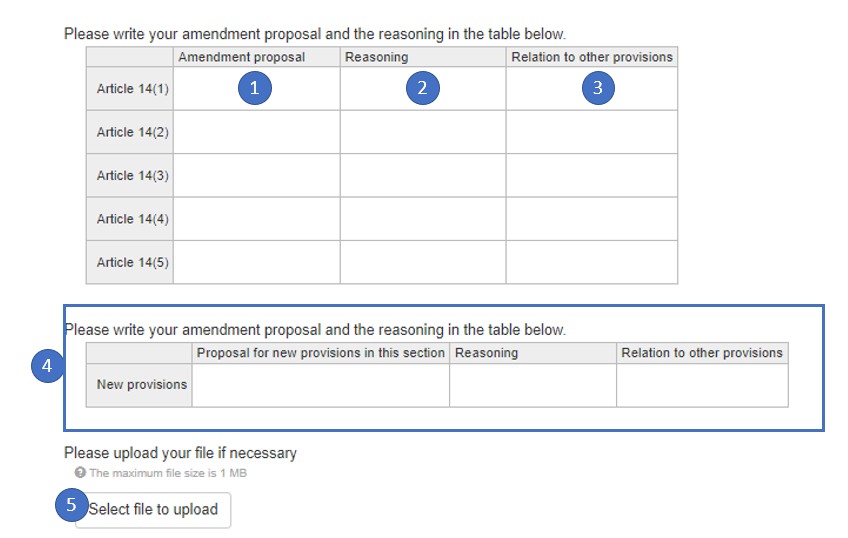
Demand Connection Code (Word file)

Please download the file and insert your proposed amendment in TC.

NC\_DC.docx

Step 2

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



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 DC 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

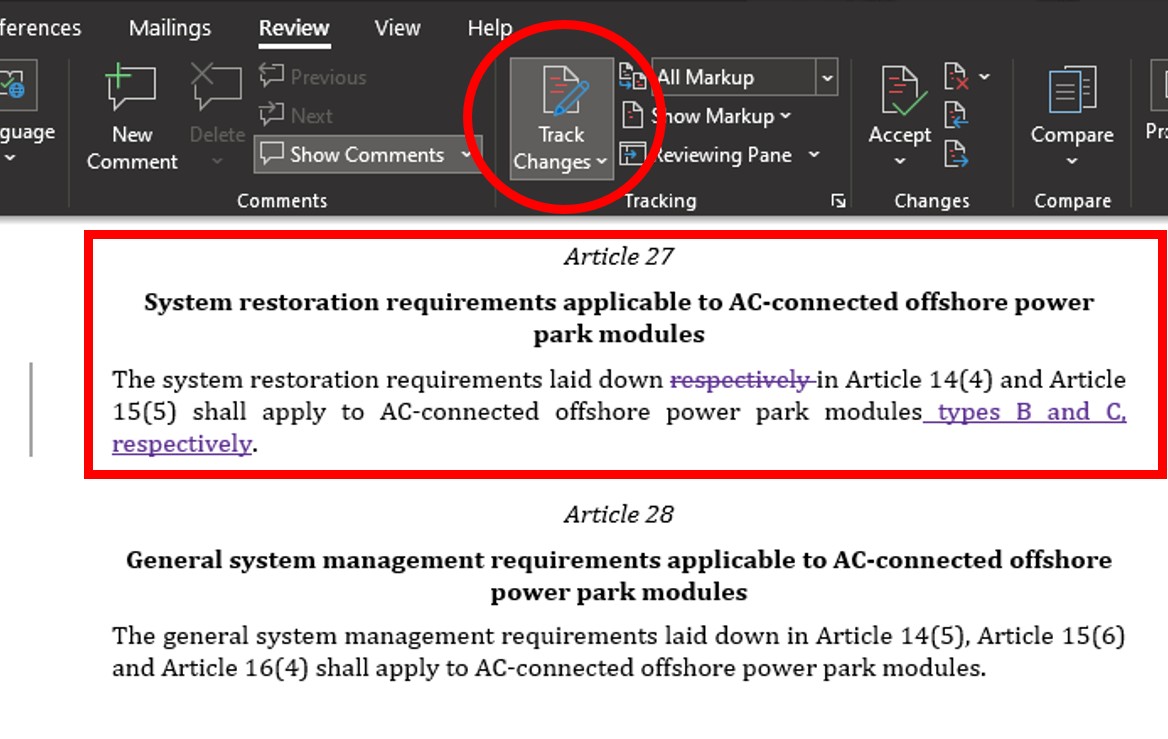
you provided in the Word file.

5. Upload figures or tables if necessary; text inputs should be provided directly in the consultation form.

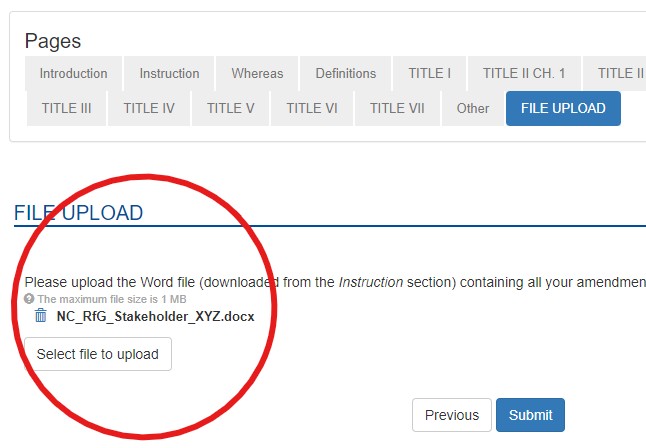
Example

This section shows an example of an input to the survey on the NC RfG. The input process is the same for the NC DC survey.

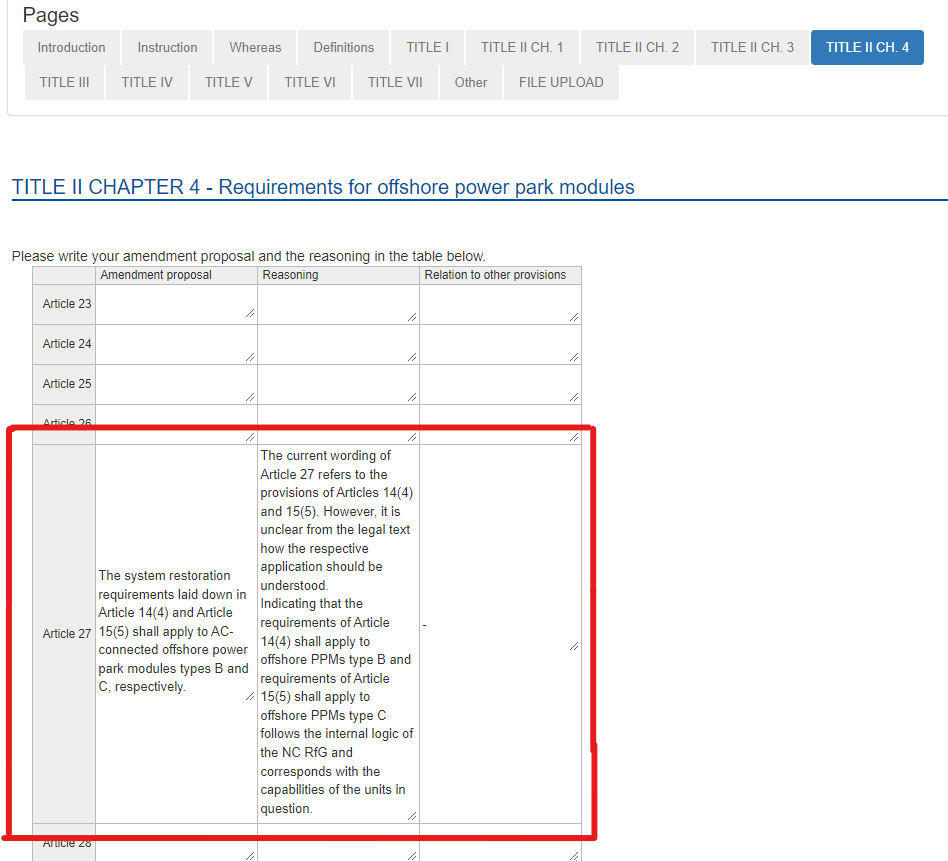
Stakeholder XYZ would like to propose an amendment to Article 27 of NC RfG. In their view, the meaning of the word "respectively" in this article is not clear. Following a two-step process, the stakeholder downloads the Word file from the Instruction section, turns on the Track Changes mode and edits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



After saving the edited file on their device under the name "NC\_RfG\_Stakeholder\_XYZ", the stakeholder uploads it in the FILE UPLOAD section.



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.



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

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

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| Amendment proposal Reasoning Relation to other provisions | |
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New recitals

Proposal for new recitals Reasoning Relation to other provisions

Definitions (Article 2)

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|  |  |
| --- | --- |
| 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) |  |
| Article 2(12) |  |
| Article 2(13) |  |
| Article 2(14) |  |
| Article 2(15) |  |
| Article 2(16) |  |
| Article 2(17) |  |
| Article 2(18) |  |
| Article 2(19) |  |
| Article 2(20) |  |
| Article 2(21) |  |
| Article 2(22) |  |

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New definitions

Proposal for new definitions Reasoning Relation to other provisions

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| Proposal for new definitions Reasoning Relation to other provisions | | | |
| New definitions | Use or refer to definition on 'energy storage', included on Directive (UE) 2019/944 (in the electricity system, deferring the final use of electricity to a time later than when it was generated, or the conversion of electrical energy into a form of energy that can be stored, the storage of that energy and the subsequent reconversion of that energy into electrical energy or its use as another energy carrier) | These definitions are incorporated to develop Article 5 and include storage facilities. | Article 5, 6 |
| New definitions | 'storage equipment' means equipment in an installation that makes it possible to store energy and defer its injection into the grid, regardless of whether it is connected to a consumer's internal grid and regardless of whether it has the technical and legal capacity to be reversible. It may be a synchronous or an electrical park, depending on whether it uses synchronous generators or inverters to connect to the grid respectively. It may be connected to the grid independently or in a hybrid installation. | These definitions are incorporated to develop Article 5 and include storage facilities. | Article 5, 6 |
| New definitions | 'Maximum storage equipment capacity' means the value of the maximum active power declared by the operator that can be permanently produced by the storage equipment while complying with the relevant technical requirements. | These definitions are incorporated to develop Article 5 and include storage facilities.  Alternatively, the “capacity” of a storage system could be associated with an energy value rather than a power value. A storage system can never permanently produce/withdraw a certain amount of power due to its limited capacity. An alternative could be to replace “Maximum storage equipment capacity” and “Maximum import capacity of storage equipment” with Useful Capacity Storage System: the amount of energy that a storage system is able to exchange with the grid at the point of delivery. The useful capacity of a storage system can vary over the lifetime of the system. And “Maximum discharge power”: Maximum active power that a storage system can deliver to the grid at the point of delivery; it can vary depending on the SOC and “Maximum charging power”: Maximum active power that a storage system can draw from the grid at the point of delivery; it can vary depending on the SOC. | Article 5, 6 |
| New definitions | 'Maximum import capacity of storage equipment' means the value of the maximum active power declared by the operator that can be permanently consumed by the storage equipment while simultaneously complying with the relevant technical requirements. | These definitions are incorporated to develop Article 5 and include storage facilities. | Article 5 |
| New definitions | 'Electric vehicle charging point or installation' means the infrastructure necessary to safely conduct electrical energy between the electricity supply grid and the electric vehicle. | These definitions are incorporated to develop Article 5 and include Electric vehicle charging points | Article 5 |
| New definitions | 'one-way electric vehicle charging point or installation' means the infrastructure necessary to safely conduct electrical energy from the electricity supply grid to the electric vehicle with demand-only behavior. | These definitions are incorporated to develop Article 5 and include Electric vehicle charging points | Article 5 |
| New definitions | Use or refer definition on ' fully integrated network components ', included on Directive (UE) 2019/944 (network components integrated into the transmission or distribution system, including storage facilities, which are used for the sole purpose of ensuring secure and reliable operation of the transmission or distribution system, and not for balancing or congestion management purposes) | These definitions are incorporated to elaborate on Article 3 in which the exemptions are integrated. | Article 3 |
| New definitions | 'bi-directional electric vehicle charging point or installation' means the infrastructure necessary to conduct electrical energy safely from the electricity supply grid to the electric vehicle and from the electric vehicle to the electricity supply grid with both generation and demand behavior. | These definitions are incorporated to develop Article 5 and include Electric vehicle charging points | Article 5 |

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TITLE I - General provisions

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| Amendment proposal Reasoning Relation to other provisions | | | |
| Article 1 |  |  |  |
| Article 3 | 2. (d) storages owned by system operators which are considered as fully integrated elements serving the purpose of providing security of supply at specific points in the system and where they are not participating in electricity markets.  ~~(b) storage devices, except pumped storage electricity generation modules in accordance with Article 5(2).~~ | It is proposed that distribution batteries considered as "fully integrated elements" be exempted from ERW (EU) 2016/631 and instead, in order to introduce storage in these network codes, it is proposed that paragraph d be deleted. |  |
| Article 4 |  |  |  |
| Article 5 | Article 5 (2) to be deleted. | Current provision establishes that “Any pumping module within a pump-storage station that only provides pumping mode shall be subject to the requirements of this Regulation and shall be treated as a demand facility”. Connection of pumping facilities should be precisely regulated in the Generation Connection NC. The mention of such assets in the present NC leads to unnecessary overlap and confusion. |  |
| Article 6 |  |  |  |
| Article 7 |  |  |  |
| Article 8 |  |  |  |
| Article 9 |  |  |  |
| Article 10 |  |  |  |
| Article 11 |  |  |  |
| Article 12 |  |  |  |

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| Proposal for new articles in this section Reasoning Relation to other provisions | | | |
| New provisions | **Application to electric vehicle charging points**  Unidirectional charging points shall be considered in general as demand facilities, but they shall comply with requirements for generators in terms of system support and stability oriented functions. Bi-directional charging points shall also be fully subject to requirements for generators regulated in Regulation (EU) 2016/631. | It is proposed to include the treatment to be considered for electrical recharging points. |  |
| New provisions | **Application to storage facilities**  This Regulation shall apply to storage facilities withdrawing from the electricity grid and these facilities shall also be subject to the requirements for generators regulated in Regulation (EU) 2016/631, considering their behaviour during the low frequency perturbation or emergency conditions to support the stability and balance of the system when injecting electricity into the grid. | It is proposed to include the treatment to be considered for storage units. For all storage systems with size includable in Type A and Type B PGMs, the technical specifications in detail shall be defined directly in EN 50549 family standards. |  |
| New provisions |  | Under the European Commission proposal for the Alternative Fuels Infrastructure Regulation, Member States will be required to deploy sufficient charging capacity through publicly accessible charging points based on: (i) total fleet of BEV and PHEV in a given country; and (ii) maximum distance along the TEN-T Core and Comprehensive corridors, and to meet such obligation it is then critical to ensure that the processes to grant grid connections for installation of charging points are speed up.  Currently it may take several months for a CPO to have a grid connection granted depending on the site where the charging points will  be installed… Such delay not only impacts CPOs activities and increase opportunity costs, but also potential EV drivers that continue to perceive the “lack of sufficient charging points” as one of the main constraints to transition to e-mobility.  *General context:*  Charging points may take from 9 months to 2 years to become fully operational. Under this context, on average the processes related to the grid connection with the DSO may require from 5 to 12 months;  The information gap between the available power in a given location (information owned by DSOs) and the potential power demand associated with the installation of charging points (required by CPOs) is a time-consuming barrier to fast-track the roll out of the publicly accessible charging network. In this sense, the grid connection process timeframe could be significantly reduced, should the information of power availability was known by CPOs in advance, which could ease, for instance, the installation of large charging hubs or ultra-fast chargers on locations with idle low voltage grid capacity; |  |
| New provisions | Recommendations to address EV charging infrastructure grid connection bottlenecks:   * Requirements * Power reduction (V1G) Curves in case of frequency drop (participation in the grid defence plans) – By default: Market base * Power injection (V2G) curves in case of frequency drop (participation in the grid defence plans) - By default: Market base * Power increase curves in case of frequency increase (participation in the grid defence plans) - By default: Market base * Power consumption limitation by the DSO in case of grid contingency (ON/OFF and setpoint) |  |  |
|  | The following requirements should be present for storage systems:   * Possibility of DSO to control Storage in case of grid emergency plans are activated * This possibility should be framed in the connection conditions (licensing) in agreement with the promoters, where limitations to injection can be anticipated. Otherwise, it should be ensured that any intervention with recourse to curtailment and redispatching (total or partial) complies with the rules established in the scope of the Internal Electricity Market Regulation, namely in what concerns to due compensations. * Furthermore, it should be clarified that this only applies to storage with direct connection to the public grid and when not framed in a context of individual/collective self-consumption or energy communities (which may use the public grid but with a self-consumption purpose). * Day ahead Programming |  |  |
|  | **DSR facilities**  All reference in the DCC should be removed as all markets have qualification requirements and validation procedures. The present requirements only limit market participation. |  |  |
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TITLE II - Connection of transmission-connected demand facilities, transmission-connected distribution facilities and distribution systems

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| Amendment proposal Reasoning Relation to other provisions | | | |
| Article 12 |  | | |
| Article 13 |  | | |
| Article 14 |  | | |
| Article 15 |  | | |
| Article 16 |  | | |
| Article 17 |  | | |
| Article 18 | Communication to DSO should be available through a dedicated hotline and with properly dimensioned human and technological resources, to quickly address technical requirements and clarifications CPOs may need on their grid connection processes, preventing the need for later follow up. | Recommendations to address EV charging infrastructure grid connection bottlenecks |  |
| Article 19 |  | | |
| Article 20 |  | | |
| Article 21 |  | | |
| Article 22 |  | | |
| Article 23 |  | | |
| Article 24 |  | | |
| Article 25 |  | | |
| Article 26 |  | | |

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

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TITLE III - Connection of demand units used by a demand facility or a closed distribution system to provide demand response services to system operators

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| Amendment proposal Reasoning Relation to other provisions | | | |
| Title III | Title III could be transferred within the new NC on DSR, alongside art 9 (with reference to point 1.d -provisions related to chapter 3.)  All reference in the DCC to Demand Response should be removed as all markets have qualification requirements and validation procedures. The present requirements only limit market participation. | Most of the DER is and will be connected to DSO grids. We can say that these are also potential flexibility sources and their number will also be increasing very fast. Furthermore,  technical local balancing on specified DSO grid area can be very important. It gives wider possibilities to use potential of local energy sources (or active customers - DSR) and also in relation to energy storage.  Mentioned above large development of DER will also cause significant share of electricity to flow from the DSO grid to TSO grid. More and more energy will be produced locally and there are more flexibility possibilities from DER, that are also used locally. This will change  situation in energy delivery and also attitude to some investment analysis.  DSO network starts to be smart and equipping network users with smart meters and systems, thus enable the development of new services and products. In parallel, it should support customers that want to actively participate in the energy market, through aggregation, demand management, peer-to-peer trading, etc. There is a need for many new regulations, tools and products in this new area. The new regulations should be interrelated to each other and resulting from each other, which is possible only in a new code, developed from the beginning, based on a new approach to the sector and new conditions. | Requirements for units providing demand side services (flexibility services) should be included in the future NC on Demand Side Flexibility  According to the current legal framework, demand response services provided to the system operator by demand units are enumerated in a catalogue of Article 27(1) of NC DC.  Technical requirements concerning the connection of units providing these services are laid down in Articles 28-30 of NC DC, should the unit fall under the scope of the NC DC  All requirements for demand response services provided to the system operator by demand units  should be included in the future NC on Demand Side Flexibility.  Since the connection to the grid is a different aspect from the provision of services to SOs, we suggest carrying over the technical requirements to provide demand response services from the DCC Regulation to the new NC on Demand Side Flexibility. As a result, the scope of the RfG and DCC Regulations would be limited to capabilities for grid connection while all requirements set in prequalification processes for the provision of SO services would be in the new NC on Demand Side Flexibility. |
| Article 27 |  | | |
| Article 28 |  | | |
| Article 29 | Delete points (f) and (g) | Points (f) and (g) should be part of an equipment technical standard document rather than a Network Code. |  |
| Article 30 | Delete points (c) | Point (c) should be part of an equipment technical standard document rather than a Network Code. |  |
| Article 31 |  | | |
| Article 32 |  | | |
| Article 33 |  | | |

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

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TITLE IV - Compliance

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| Amendment proposal Reasoning Relation to other provisions | |
| Article 34 |  |
| Article 35 |  |
| Article 36 |  |
| Article 37 |  |
| Article 38 |  |
| Article 39 |  |
| Article 40 |  |
| Article 41 |  |
| Article 42 |  |
| Article 43 |  |
| Article 44 |  |
| Article 45 |  |
| Article 46 |  |
| Article 47 |  |

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| New provisions |  | | |

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TITLE V - Applications and derogations

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| Amendment proposal Reasoning Relation to other provisions | |
| Article 48 |  |
| Article 49 |  |
| Article 50 |  |
| Article 51 |  |
| Article 52 |  |
| Article 53 |  |
| Article 54 |  |
| Article 55 |  |

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| New provisions |  | | |

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TITLE VI - Non-binding guidance and monitoring of implementation

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| Amendment proposal Reasoning Relation to other provisions | |
| Article 56 |  |
| Article 57 |  |

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| New provisions |  | | |

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TITLE VII - Final provisions

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| Amendment proposal Reasoning Relation to other provisions | |
| Article 58 |  |
| Article 59 |  |

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| New provisions |  | | |

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ANNEX I

34

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

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

Amendments to Annex I

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ANNEX II

36

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

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

Amendments to Annex II

37

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Other additional provisions

38

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

Proposal for new provisions Reasoning Relation to other provisions

Other new provisions

39

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FILE UPLOAD

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

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