



# Joint DSO response to ENTSO-E answer on article 15 paragraph 2 of NC DCC

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## Contacts

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## As a reminder:

### ENTSO-E response to CEDEC on Interpretation of article 15 in NC DCC

[....]

#### Conclusion

Following feedback from stakeholders on their interpretation of the requirements in the code it is clear that the existing text can be misconceived. The confusion is centered on, is it required to install capability that is sufficient to be compliant with the requirement at a single operational point at or below 25% of the maximum import capability, or for every operational point at or below 25%. To resolve this issue a revised wording of Article 15.2 could deliver certainty with regard to the originally intended purpose of the requirement **as discussed and agreed with stakeholders in the consultation and development of the code**, mostly notably the four DSO associations.

## Associations' Response

First of all it must be stated that the four DSO associations have never agreed to DCC article 15 paragraph 2 during consultation or development phase of the code in its current phrasing.

As regards reactive compensation, the four associations are convinced one-size-does-not-fit-all. As today there will also in future be different solutions for different distribution networks and their interconnection with transmission grids. No universal best solution exists. The most economically efficient solution depends on the topology in a given situation. All options will thus have to be considered, including solutions within transmission systems.

Until now the four associations are not aware of any TSO making use of the option given by the current version of NC DCC article 15 paragraph 2. If a TSO intends to use this option, it should always be accompanied by a thorough cost-benefit-analysis of the particular case to ensure the solution is beneficial from an overall economic point of view. In its current version, a CBA is only necessary if the member states require it.

Generally, the four associations call for a revision of DCC article 15 paragraph 2. The DCC should leave more space for a case by case approach. Transmission and distribution systems should be developed in a cooperative and coordinated manner. Distribution systems as well as transmission systems do not only vary in many parameters across Europe but also within a member state, which should be reflected in an amended version of DCC article 15 paragraph 2.

In European countries such as Germany, Sweden, Netherlands, Denmark, Switzerland and others, reactive power exchange at connections to the TSO's network is jointly agreed between TSO and DSO. Such bilateral negotiations ensure fair allocation of costs. The reactive power capability of distribution systems depend on many, diverse factors such as:

- Highest voltage level of the distribution system;
- Layout;
- load density;
- cabling ratio;

- existence, rated power and location of distributed energy generators;
- existence, rated power and location of var-sources in general;
- etc.

A joint cost-benefit analysis should be performed to justify the requirements of limited reactive power exchange and demonstrate additional benefits. DSO associations therefor propose a revised wording of article 15 paragraph 2 of NC DCC:

**Original Article 15 paragraph 2**

*'The relevant TSO may require that transmission-connected distribution systems have the capability at the connection point to not export reactive power (at reference 1 pu voltage) at an active power flow of less than 25 % of the maximum import capability. Where applicable, Member States may require the relevant TSO to justify its request through a joint analysis with the transmission-connected distribution system operator. If this requirement is not justified based on the joint analysis, the relevant TSO and the transmission-connected distribution system operator shall agree on necessary requirements according to the outcomes of a joint analysis.'* 18.8.2016 L 223/22 Official Journal of the European Union EN

**Revised wording Article 15 paragraph 2**

*'In situations where either technical or financial system benefits are demonstrated by the Relevant TSO and the Distribution System Operator through joint analysis, the relevant TSO may require that transmission-connected distribution systems have the capability at the connection point to not export reactive power (at reference 1 pu voltage) at an active power flow of less than 25 % of the maximum import capability. If this requirement is not justified based on the joint analysis, the relevant TSO and the transmission-connected distribution system operator shall agree on necessary requirements according to the outcomes of a joint analysis.'*