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# Report containing methodologies and projects following from the derogation granted by the ACM for loop flows and outage situations

*in accordance with Article 16(9) of Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (recast)*

TenneT TSO B.V.  
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**Introduction**

Article 16(8) of the Regulation (EU) 2019/943, prescribes that TSOs shall not limit the volume of interconnection capacity to be made available to market participants as a means of solving congestion inside their own bidding zone, or as a means of managing flows resulting from transactions internal to bidding zones. This requirement shall be considered to be complied with if a minimum level of 70% of available capacity for cross-zonal trade is reached, respecting operational security limits of internal and cross-zonal critical network elements taking into account contingencies (hereinafter referred to as “CNECs”). Transitory measures, such as action plans pursuant to Article 15 of the Regulation 2019/943 or derogations pursuant to Article 16(9) of the same regulation, allow a step-wise approach for reaching this minimum capacity ultimately by 31 December 2025. In addition to the establishment of an action plan for the Netherlands, TenneT applied for a derogation.

Following its decision on 19 December 2019, ACM granted a derogation pursuant to Article 16(9) to TenneT TSO B.V. (hereafter 'TenneT') for loop flows, outages and operational implementation for the duration of the year 2020<sup>1</sup>. As a condition for its approval, ACM requires that TenneT will latest 30 June 2020 report in accordance with article 16(9) of Regulation (EU) 2019/943 a methodology and projects to be developed and to be published which shall foresee in a long-term solution for the matters to which the derogation applies. By means of submitting this report to the ACM containing a description of a methodology and projects to be developed, TenneT is considered to be compliant with this requirement. The derogation granted by ACM is based on three different reasons to deviate from the 70% requirement: (i) loop flows above an acceptable level, (ii) outages and (iii) the operational implementation of processes and tools. Given the third reason is of temporary nature and has become obsolete since the operational implementation has been finalised, this report will only address for the two remaining reasons what methodologies and projects are developed and may be published as part of a long-term solution to the matter.

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<sup>1</sup> Reference ACM/19/035922

## Reasons for the derogation

The first reason for the derogation is an externality, being that loop flows on Dutch CNECs cannot be contained to an acceptable level, which contributes in creating an operational security risk if the 70% requirement would be directly applied. Loop flows created in neighbouring bidding zones are a consequence of their grid topology in combination with a sub-optimal generation and load distribution which cannot be expected to be contained by using the redispatching potential available in the Netherlands. As TSO to which the aforementioned derogation applies, cannot directly influence loop flows or the reduction thereof. Considering that several Member States implemented an action plan among which the German State, TenneT expects that identified structural congestions in neighboring bidding zones will not disappear on short term and considering the current bidding zone configuration will be maintained.

The second reason for the derogation is the possible lack of redispatching potential to allow TenneT to follow the 70% requirement without endangering operational security when the grid is in an outage situation. The network development plan in the Netherlands includes upgrades of existing corridors. These grid investments are required to keep the grid fit for purpose considering the future energy mix as a result of set climate goals and to increase capacity available for cross-zonal trade while avoiding an increase of congestions on CNECs in the future. For construction of these projects, situations of long duration outages are expected to occur with a certain frequency. In an outage situation, the grid capacity is reduced and internal flows on the remaining critical network elements increase compared to the grid situation where the outage is not present. Therefore it can occur that the available internal redispatching potential is insufficient to meet the 70% requirement.

## Projects and Methodologies

To address the two reasons for the derogation TenneT is working on the following projects and methodologies with the purpose of developing a long-term solution to the issues at hand. In accordance with the Regulation, TSOs should consider all available non-costly and costly remedial actions to further increase cross-zonal capacity for trade up to the minimum capacities, including redispatching potential within and between the Capacity Calculation Region (CCR), while respecting the operational security limits of TSOs of the CCRs. For this purpose, in accordance with Regulation (EU) 2015/1222 (hereafter: CACM Regulation) and Regulation (EU) 2017/1485 (Hereafter: SOGL Regulation), TSOs are required to deliver some methodologies, which are key to managing the flows in the electricity grid via coordinated capacity calculation and coordinated application of remedial actions. These key methodologies are:

- a) The Day-Ahead Capacity Calculation Methodology for the Core Capacity Calculation Region as referred to in Article 21 of the CACM Regulation ("**Core DA CCM**"). This methodology will improve the estimation of loop flows and optimize the effective use of capacities on internal and cross-zonal CNECs by implementing a harmonised approach across the Core region.
- b) The operational security coordination methodology as referred to in Article 76 of the SOGL Regulation ("**SOGL 76 methodology**"). This methodology will improve amongst others the coordination between TSOs based on the coordinated security analysis as well as outage coordination by the regional coordination centres (RCCs). However as an important prerequisite, the implementation of RCCs is still under development.

- c) The coordinated redispatching and countertrading methodology as referred to in Article 35 of the CACM Regulation ("**CACM 35 methodology**"). By improving coordination of remedial actions and redispatch measures, the effective use of the redispatch potential, which will benefit the mitigation of loopflows and make it easier to increase available capacities for cross-zonal exchange.
- d) The redispatching and countertrading cost sharing methodology as referred to in Article 74 of the CACM Regulation ("**CACM 74 methodology**"). The cost sharing methodology will ensure that financial settlement between TSOs after providing redispatch and countertrading for sake of managing flows will be streamlined and benefit cooperation across borders.

Acknowledging that all key methodologies from the CACM Regulation and SOGL regulation are not yet implemented, TenneT cannot yet rely on the above methodologies in order to implement the minimum capacity available for cross-zonal trade as set by the linear trajectory described in the Dutch action plan in accordance with Article 15(2) of Regulation 2019/943 on a structural basis. The implementation of these methodologies will provide a significant contribution to managing flows in the electricity grid and coordination of remedial actions and forthcoming mitigation of loop flows and enhance outage coordination. The methodologies will be subject to approval by relevant regulators and will be published. In addition to implementing coordinated redispatching and countertrading amongst TSOs, improved cooperation between TSOs and DSOs may also contribute to reducing the need for redispatch and can enable a more efficient use of available resources in case of loop flows and outages. TenneT is participating in joint TSO-DSO working groups for this purpose which also entails the development of new concepts and joint projects, such as the GOPACS platform to facilitate market-based redispatch.

However as explained these methodologies will together not encompass a long-term solution for the mitigation of loop flows and operational security issues in case of outages. Therefore in addition and as part of a long-term solution, TenneT has submitted with all TSOs a methodology - and as a few of the TSOs also configurations - for a next bidding zone review, based on which the outcome shall require Member-States to decide on adapting or maintaining the current bidding reconfiguration. As an optimal bidding zone configuration should not be subject to structural congestion and loop flows, this would for a large part mitigate the reasons for this derogation. The methodology, configuration and outcomes of the bidding zone review will be published.

## Conclusion

For the purpose of this derogation, TenneT is developing in cooperation with others TSOs several methodologies and is pro-actively participating in the upcoming bidding zone review. As the expected methodologies are not yet in place, this prevents TenneT to structurally rely on cross-border remedial actions. Especially in situations with (locally) limited domestic redispatch potential, cross-border remedial actions can provide efficient measures to maintain operational security. Existing bilateral redispatching contracts do not enable a structural use due to the manual procedures involved and the limited visibility on the future availability of redispatching potential. The need for a derogation in outage situations is expected to become less relevant in the future as the implementation of the methodologies listed in the previous paragraph is expected to provide more structural redispatching possibilities. For the year 2021 TenneT expects a derogation remains necessary.