# All TSOs' proposal for the methodology for assessing the relevance of assets for outage coordination developed in accordance with Article 84(1) of Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a Guideline on Electricity Transmission System Operation

## Response to public consultation comments received during the consultation held 26 February – 6 April 2018

Remarks:

(i)     identical comments from different stakeholders have been grouped where possible, to improve the readability;

(ii)     the final proposal for the methodology includes a new article numbered 4, the references to the articles and paragraphs in the "ENTSO-E response" column are based on the new numbering in the updated version of the methodology.

| Comment nb | Article | Stakeholder comment | Reviewer affiliation | ENTSO-E response |
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| 1. | 3 | Article 3.8<br>This should not be a carte blanche to ask for new data. Only data that is allowed for in the national implementation of SOGL Articles 40-53 can be legally requested.<br><br>"…and shall be entitled to ask these DSOs/ CDSOs for the corresponding technical parameters and data as prescribed in the national implementation of SOGL Articles 40 to 53..<br><br>Article 3.9<br>As 3.8 above.<br><br>Revised text as follows:<br>"When requested according to paragraphs 7 or 8, each transmission-connected DSO/CDSO shall provide the relevant data, as provided for in the national implementation of SOGL Articles 40 to 53, to enable the connecting TSO to incorporate the required part of their DSO/CDSO systems in its national grid models or in its individual grid models established pursuant to paragraph 11." | Energy Networks Association | Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 3 provided there. |

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| 2. | 3 | Art 3.1.b:  It is not clear what is meant by "other similar network models in terms of needed data". Data provided by stakeholders to TSOs should be used to build the Common Grid Model (CGM). The data, to our understanding, is not allowed to be used for any other purpose.<br>Change proposed: the use of data to cover only CGM.<br>Article 3.2: The article does not mention DSOs, but it seems that some of the DSOs assests / SGUs could be irrelevant for its TSO (for outage and security analysis), but could be included in the data required by another TSO for outage coordination.<br>We propose bilateral discussions with DSOs on this matter.<br>Article 3.3: Change proposed: "Each TSO shall have the right to use voltage influence factors for determination of its proposal of relevant assets in case it is necessary to correctly assess the proposal compared to the assessment by power flow."<br>Explanation: It is unclear to stakeholders under which circumstances and by which criteria a TSO decides to use voltage influence factors. As the use of voltage influence factors may lead proposals containing more assets and thus to higher costs for stakeholders, they should only be used if necessary.<br>Article 3.5: Change proposed: "TSOs may agree to use dynamic studies for assessing influence of the grid elements, power generating modules, and demand facilities located outside their control areas, in case it is necessary to correctly assess the proposal compared to the assessment by power flow and voltage influence. In such case, they shall define models, studies and criteria to be used for the assessment and inform their NRAs about their agreement. These models and studies shall be consistent with those developed in application of Articles 38 or 39 of SO GL."<br>Explanation: It is unclear to stakeholders under which circumstances and by which criteria a TSO decides to use dynamic studies. As the use of dynamic studies lead to higher costs for stakeholders for providing dynamic models of their assets etc., they should only be used if necessary. Furthermore, we would very welcome if TSOs could harmonize thresholds for assessing the influence of assets for dynamic studies as well.<br>Article 3.6: Change proposed: "Each TSO may decide to use dynamic studies to assess influence of the grid elements, power generating modules, and demand facilities located in transmission-connected DSOs/CDSOs grids in case it is necessary to correctly assess the proposal  compared to the assessment by power flow and voltage influence. In such a case, the TSO shall use models, studies and criteria, consistent with those developed in application of Articles 38 or 39 of SO GL, and in the case where one or more elements are identified as relevant, the concerned TSO shall inform its NRA of the elements identified with reasoning supporting this result." | innogy SE, Grid&Infrastructure, E.ON SE | 3.1.b: We agree. Computation of the influence of the elements for the determination of relevant assets shall be performed only on the elements, which are located outside TSO's control area. Therefore, for this task only CGM will be used. Following this remark, RAOCM has been updated in Article 3.1.b<br><br>3.2 & 3.3: Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 1 provided there.<br><br>3.5: The Annex I in RAOCM does not cover the case of dynamic studies used in particular cases to establish influence of a given network element. As mentioned in RAOCM, this kind of evaluation is a "case by case" one, and cannot be defined in a general manner, nor can thresholds be provided<br><br>3.6: We agree that more transparency should be provided in case TSOs choose to use dynamic studies to assess influence of the grid elements, power generating modules, and demand facilities. RAOCM has been updated and new Article 4, which describes use of dynamic studies, have been introduced.<br><br>3.7: Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 1 provided there. |

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| | | Explanation: It is unclear to stakeholders under which circumstances and by which criteria a TSO decides to use dynamic studies. As the use of dynamic studies lead to higher costs for stakeholders for providing dynamic models of their assets etc., they should only be used if necessary. Furthermore, we would very welcome if TSOs could harmonize thresholds for assessing the influence of assets for dynamic studies as well.<br>Article 3.7: Change proposed: "Each TSO shall inform the concerned transmission-connected DSOs/CDSOs about the decision to compute power flow and/or voltage influence factor of grid elements of their systems or of power generating modules and demand facilities connected to these DSO/CDSO systems, and shall be entitled to ask these DSOs/ CDSOs for technical parameters and data that can allow the inclusion of at least part of their grids in the TSO's grid models. If DSOs compute power flow and/or voltage influence factor of grid elements connected to the distribution system themselves, the TSO's computation shall be based on the DSO's results."<br>Explanation: Due to increased requirements for the integration of renewable energy sources DSOs start to compute power flow and/or voltage influence factor on their own. In order to avoid doubled calculations with possibly different results and with the aim to avoid unnecessary costs, the TSO shall be entitled to use the results of the DSO computation.<br>Article 3.8: Change proposed: "Each TSO shall agree with the concerned transmission-connected DSOs/CDSOs about the decision to use dynamic studies to assess influence of the grid elements, power generating modules, and demand facilities located in transmission-connected DSOs/CDSOs grids and shall be entitled to ask these DSOs/ CDSOs for the corresponding technical parameters and data"<br>Explanation: As far as dynamic studies are necessary both, the TSO and the DSO, are affected or at least face the same challenges in their network area. A joint decision is the best way to ensure a cooperation on equal footing. | | 3.8: Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 1 provided there |
| 3. | 3 | A3(6)<br>Dynamic models are not necessary for the determination of the influencing factors in Appendix 1.<br>What additional information is expected by using dynamic models in terms of network interference? | Axpo Power AG | Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 2 provided there. |

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| 4. | 3 | EDF wonders about the handling of uncertainties in the methodology.<br>Indeed, the way uncertainties are dealt with requires coherence and justification.<br>EDF considers that before the operational window, and as long as the potential of remedial actions (costly or not) could be sufficient to restore secure operation, N-1 contingencies should always be disregarded.<br>EDF also considers that the proposed methodology for "influence computation" should be less conservative and not systematically take into account N-2 situations (simulation of the loss of both the asset analyzed and the outage of all elements). | EDF | Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 4 provided there. |
| 5. | 3 | Article 3.1.b:  It is not clear what is meant by "other similar network models in terms of needed data". Data provided by stakeholders to TSOs should be used to build the Common Grid Model (CGM). The data, to our understanding, is not allowed to be used for any other purpose.<br>Change proposed: the use of data to cover only CGM.<br><br>Article 3.2: The article does not mention DSOs but it seems that some of the DSOs assests / SGUs connected to DSOs could be irrelevant for its TSO (for outage and security analysis), but could be included in the data required by another TSO for outage coordination.<br>We propose bilateral discussions with associations representing DSOs at European level to discuss this matter.<br><br>Article 3.3: It is unclear to stakeholders under which circumstances and by which criteria a TSO decides to use voltage influence factors. As the use of voltage influence factors may lead proposals and thus to higher costs for stakeholders, they should only be used if necessary.<br>Change proposed: "Each TSO shall have the right to use voltage influence factors for determination of its proposal of relevant assets in case it is necessary to correctly assess the proposal compared to the assessment by power flow."<br><br>Article 3.5: It is unclear to stakeholders under which circumstances and by which criteria a TSO decides to use dynamic studies. As the use of dynamic studies lead to higher costs for stakeholders for providing dynamic models of their assets etc., they should only be used if necessary. Furthermore, we would very welcome if TSOs could harmonize thresholds for assessing the influence of assets for dynamic studies as well.<br>Change proposed: "TSOs may agree to use dynamic studies for assessing influence of the | eurelectric | 3.1.b: Please see answer to comment 2.<br><br><br>3.2: Please see answer to comment 2.<br><br><br><br>3.3: Please see answer to comment 2.<br><br><br><br>3.5: Please see answer to comment 2. |

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| | | grid elements, power generating modules, and demand facilities located outside their control areas, in case it is necessary to correctly assess the proposal compared to the assessment by power flow and voltage influence. In such case, they shall define models, studies and criteria to be used for the assessment and inform their NRAs about their agreement. These models and studies shall be consistent with those developed in application of Articles 38 or 39 of SO GL." <br><br> Article 3.6: It is unclear to stakeholders under which circumstances and by which criteria a TSO decides to use dynamic studies. As the use of dynamic studies lead to higher costs for stakeholders for providing dynamic models of their assets etc., they should only be used if necessary. Furthermore, we would very welcome if TSOs could harmonise thresholds for assessing the influence of assets for dynamic studies as well. <br> Change proposed: "Each TSO may decide to use dynamic studies to assess influence of the grid elements, power generating modules, and demand facilities located in transmission-connected DSOs/CDSOs grids in case it is necessary to correctly assess the proposal compared to the assessment by power flow and voltage influence. In such a case, the TSO shall use models, studies and criteria, consistent with those developed in application of Articles 38 or 39 of SO GL, and in the case where one or more elements are identified as relevant, the concerned TSO shall inform its NRA of the elements identified with reasoning supporting this result." <br><br> Article 3.7: Due to increased requirements for the integration of renewable energy sources DSOs start to compute power flow and/or voltage influence factor on their own. In order to avoid double calculation with possibly different result the TSO shall be entitled to use the results of the DSO computation. <br> Change proposed: "Each TSO shall inform the concerned transmission-connected DSOs/CDSOs about the decision to compute power flow and/or voltage influence factor of grid elements of their systems or power generating modules and demand facilities connected to the DSO/CDSO system and shall be entitled to ask these DSOs/ CDSOs for technical parameters and data that can allow the inclusion of at least part of their grids in the TSO's grid models. If the DSOs compute power flow and/or voltage influence factor of grid elements connected to the distribution system themselves, the TSO computation shall base on the results." <br><br> Article 3.8: As far as dynamic studies are necessary both, the TSO and the DSO, are affected or at least face the same challenges in their network area. A joint decision is the | | 3.6: Please see answer to comment 2. <br><br><br><br><br><br> 3.7: Please see answer to comment 2. <br><br><br><br><br><br><br><br> 3.8: Please see answer to comment 2. <br><br><br><br><br><br> 3.9: Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 1 provided there. |

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| | | best way to ensure a cooperation on equal footing. SOGL prescribes all the data that can be exchanged – it should not be necessary to seek additional data.. Change proposed: "Each TSO shall agree with the concerned transmission-connected DSOs/CDSOs about the decision to use dynamic studies to assess influence of the grid elements, power generating modules, and demand facilities located in transmission-connected DSOs/CDSOs grids and shall be entitled to ask these DSOs/CDSOs for the corresponding technical parameters and data as prescribed in the national implementation of SOGL Articles 40 to 53." <br><br> Article 3.9: Only data that is allowed for in the national implementation of SOGL Articles 40-53 can be legally requested. Change proposed: "When requested according to paragraphs 7 and 8, each transmission-connected DSO/CDSO shall provide the relevant data, as provided for in the national implementation of SOGL Articles 40 to 53, to enable the connecting TSO to incorporate the required part of DSO/CDSO systems in its individual grid models established pursuant to paragraph 11." | | |

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| 6. | 3 | Art. 3 Number 3<br>"3. Each TSO shall have the right to use voltage influence factors for determination of its proposal of relevant assets in case it is necessary to correctly assess the proposal compared to the assessment by power flow. "<br><br>Explanation<br>It is unclear to stakeholders under which circumstances and by which criteria a TSO decides to use voltage influence factors. As the use of voltage influence factors may lead proposals and thus to higher costs for stakeholders, they should only be used if necessary.<br><br>Art. 3 Number 5<br>5. TSOs may agree to use dynamic studies for assessing influence of the grid elements, power generating modules, and demand facilities located outside their control areas, in case it is necessary to correctly assess the proposal  compared to the assessment by power flow and voltage influence. In such case, they shall define models, studies and criteria to be used for the assessment and inform their NRAs about their agreement. These models and studies shall be consistent with those developed in application of Articles 38 or 39 of SO GL.<br><br>Explanation<br>It is unclear to stakeholders under which circumstances and by which criteria a TSO decides to use dynamic studies. As the use of dynamic studies lead to higher costs for stakeholders for providing dynamic models of their assets etc., they should only be used if necessary. Furthermore, we would very welcome if TSOs could harmonize thresholds for assessing the influence of assets for dynamic studies as well.<br><br>Art. 3 Number 6<br>"Each TSO may decide to use dynamic studies to assess influence of the grid elements, power generating modules, and demand facilities located in transmission-connected DSOs/CDSOs grids in case it is necessary to correctly assess the proposal compared to the assessment by power flow and voltage influence. In such a case, the TSO shall use models, studies and criteria, consistent with those developed in application of Articles 38 or 39 of SO GL, and in the case where one or more elements are identified as relevant, the concerned TSO shall inform its NRA of the elements identified with reasoning supporting this result." | BDEW German Association of Energy and Water Industries | 3.3: Please see answer to comment 2.<br><br><br><br>3.5: Please see answer to comment 2.<br><br><br><br>3.6 Please see answer to comment 2. |

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| | | Explanation<br>It is unclear to stakeholders under which circumstances and by which criteria a TSO decides to use dynamic studies. As the use of dynamic studies lead to higher costs for stakeholders for providing dynamic models of their assets etc., they should only be used if necessary. Furthermore, we would very welcome if TSOs could harmonize thresholds for assessing the influence of assets for dynamic studies as well. | | |

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| 7. | 4 | Article 4.3<br>It is not clear what "one influence factor higher" means. 1%? Or something else? Also "correspondent" should probably be "corresponding".<br><br>Article 4(6)<br>Inappropriate word choice: Delete the word along and replace with throughout<br><br>"..of critical network element is sufficiently stable throughout the year". | Energy Networks Association | 4.3: Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 5 provided there.<br><br><br>4.6: We agree with the remark. RAOCM Article 5 (former Article 4) has been adapted accordingly. |
| 8. | 4 | Article 4.2: Change proposed: "Each TSO shall select threshold values for the synchronous area inside the range of relevant assets thresholds listed in Annex 1 that it shall use to determine its proposition of relevant assets in application of paragraph 1. The TSO shall publish on its web site those threshold values in time with the application of paragraph 1."<br>Explanation: The threshold values shall be harmonized at least in the synchronous area. This is required in Art. 84 of SOGL.<br>Article 4.5: Change proposed: "By 3 months after the approval of this methodology, and when necessary after that, all TSOs of an outage coordination region shall define the common list of relevant assets to be coordinated in this outage coordination region. This list shall include all elements being grid elements, power generating modules, and demand facilities proposed as relevant asset in accordance to paragraph 3 and 4 by at least one TSO belonging to this outage coordination region and which is located in a TSO's control area belonging to this outage coordination region."<br>Explanation: To define exceptions, the criteria should be clear. As the criteria is not defined for the exceptions in Art 4 Number 5 the passage should be deleted. | innogy SE, Grid&Infrastructure, E.ON SE | 4.2: The Article 84 of SO GL requires TSOs to develop Methodology at least per synchronous area and we have identified the need in this methodology to give a range of thresholds (rather limited) inside which each TSO can choose a particular unique threshold value. In chapter 3.5 of the supporting document for CSAM/RAOCM, we give explanation why we provide a range of possible thresholds for TSOs to choose and why it is not achievable to have a unique threshold value for all TSOs, given the diversity of the situations to address. TSOs shall select only one value for each threshold and ENTSOE shall publish it.<br><br>4.5: SO GL requires reassessment of relevant assessment list every year, but does not specify how this shall be done. In RAOCM we write that this should be done qualitatively every year and perform computations every five years. The computation and process of identification of relevant assets is very time consuming, which does not seem necessary to be run every year. In case of new existing element added in the list on a qualitative basis, the owner can always claim for a quantitative assessment (Art 5.10). For any new commissioned element qualitative approach is suggested, but similarly, if the owner of the asset does not agree with this approach, a computation for the relevance of this element (only) shall be performed. |

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| 9. | 4 | TSO shall describe the main assumptions made for the influence computation method. Indeed, some of them are essential since the influence factor computation is very sensitive to these assumptions. In particular, the Generation Shift Key used by the model could be very important. Indeed, when simulating the loss of a given production asset, the model seeks to compensate the same amount by means of other production units. An assumption is then needed (e.g. whether all the groups in the control area increase their production or only a given asset increases its production due to the Common Merit Order List). The first option (all the groups increase their production) should take into account the physical limit of each asset i.e. the maximal active power.  Thus, this assumption should appear in the method and be subject to justification by TSOs. The other input is the scenarios/contingencies to be taken into account.

Then, the construction of the scenarios/contingencies used should be detailed. During the workshop held by Entso-e on the 21st March, TSOs explained that there were two sets of scenarios: one set for the specific purpose of security coordination (i.e contingencies) and another set for the determination of relevant assets (influence factor computation). However, TSOs' proposal seems to consider the same set of scenarios both for security coordination and for relevant assets. Therefore, if two sets of scenarios are effectively used, it is important that article 21 describes each of them. Besides, as transparency is essential on such points, these scenarios should be transparent with regard to stakeholders and notably provide details on the "stressed" scenarios (and their related "stressed values") as well as on "best case" scenarios.

Hence EDF proposes to add the following paragraph:
"Each TSO shall inform the owner of a production / demand unit when the unit is identified as relevant by application of the methodology.  In that case the following information shall be given:
- The values of the different criteria ;
- The scenario(s) whose application leads to declare the asset relevant"

EDF wonders whether the selection of a threshold value by each TSO would lead to unequal treatment between the same situation in different countries. In any case, EDF considers it is essential that TSOs justify their choice.
Consequently EDF proposes to add the following paragraph:
"The threshold values selected by the TSO shall be approved by the concerned NRA"
In EDF's view, in case of assessment of the relevance of an asset on a qualitative basis, | EDF | Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 7 provided there.

Not the case for relevant assets assessment. Only scenarios required by Article 65 of SO GL will be used for the assessment.

If an asset is identified as relevant asset for outage coordination, the owner will be informed about this. SO GL regulates this and the whole process of outage coordination is described in SO GL.
Only scenarios required by Article 65 of SO GL will be used for the assessment.

RAOCM cannot legally provide additional approval powers to NRAs. Let's recall that all thresholds selected by TSOs will be public on the ENTSOE website.

Inclusion of SGUs in the TSO's proposal for relevance of assets is described in the Article 5.3.e. (4.3.d before the change) and is based on a quantitative evaluation, as only SGUs with influence factor higher than the threshold shall be selected. |

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| | | TSOs should be fully transparent about the information and the method used.<br>Hence EDF proposes to add the following paragraph:<br>"In case of assessment of the relevance of an asset on a qualitative basis, TSO shall inform and give to the owner of the asset all the information relevant to understand the choice of the TSO". | | Qualitative approach can be used only for updating the list every year between 2 full quantitative method application, although this yearly revision of the list is required by SO GL we do not expect frequent changes on existing elements, as there is in general few reasons for that and it's not valuable for any party included in the outage coordination process described in SO GL. Other qualitative case is for new commissioned element. Following your remark, we have added in Art 5.10 that the owner of an element can always refuse the application of the qualitative evaluation and request a quantitative approach. |

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| 10. | 4 | Article 4.2: The threshold values shall be harmonized at least in the synchronous area. This is required in Art. 84 of the SOGL.<br>Change proposed: "Each TSO shall select threshold values for the synchronous area inside the range of relevant assets thresholds listed in Annex 1 that it shall use to determine its proposition of relevant assets in application of paragraph 1. The TSO shall publish on its web site those threshold values in time with the application of paragraph 1."<br><br>Article 4.3: Change proposed: "Each TSO shall include in its proposition of relevant assets: a. all grid elements outside its control area which have at least one influence factor higher than the corresponding relevant asset threshold values selected pursuant to paragraph 2."<br><br>Article 4.5: To define exceptions, the criteria should be clear. As the criteria is not defined for the exceptions in Art 4 Number 5 the passage school be deleted.<br>Change proposed: "By 3 months after the approval of this methodology, and when necessary after that, all TSOs of an outage coordination region shall define the common list of relevant assets to be coordinated in this outage coordination region. This list shall include all elements being grid elements, power generating modules, and demand facilities proposed as relevant asset in accordance to paragraph 3 and 4 by at least one TSO belonging to this outage coordination region and which is located in a TSO's control area belonging to this outage coordination region."<br><br>Article 4.6: Change proposed: "All TSOs of an outage coordination region shall complement the list identified according to paragraph 5 with the critical network elements identified in accordance with Regulation (EU) No 2015/1222 for the relevant outage coordination region, and provided that their status of critical network element is sufficiently stable throughout the year." | eurelectric | 4.2: Please see answer to comment 8.<br><br><br><br>4.3: We agree with the remark. RAOCM has been changed accordingly.<br><br><br><br>4.5: Please see answer to comment 8.<br><br><br><br>4.6: We agree with the remark. RAOCM has been changed accordingly. |

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| 11. | 4 | Art. 4 Number 2<br>"Each TSO shall select threshold values for the synchronous area inside the range of relevant assets thresholds listed in Annex 1 that it shall use to determine its proposition of relevant assets in application of paragraph 1. The TSO shall publish on its web site those threshold values in time with the application of paragraph 1."<br><br>Explanation<br>The threshold values shall be harmonized at least in the synchronous area. This is required in Art. 84 of the SOGL.<br><br>Art. 4 Number 5<br>"By 3 months after the approval of this methodology, and when necessary after that, all TSOs of an outage coordination region shall define the common list of relevant assets to be coordinated in this outage coordination region. This list shall include all elements being grid elements, power generating modules, and demand facilities proposed as relevant asset in accordance to paragraph 3 and 4 by at least one TSO belonging to this outage coordination region and which is located in a TSO's control area belonging to this outage coordination region.<br><br>Explanation<br>To define exceptions, the criteria should be clear.  As the criteria is not defined for the exceptions in Art 4 Number 5 the passage in the last sentence should be deleted. | BDEW German Association of Energy and Water Industries | 4.2: Please see answer to comment 8.<br><br><br><br>4.5: Please see answer to comment 8. |

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| 12. | Annex | We ask ENTSO-E/TSOs to limit the influence computation method to n-1-scenarios. From our point of view, its current version considers a n-2-scenario (at least n-1-1) by realising two contingencies (one at TSO A (element i) and one at TSO B (element r)). This is out of the scope of SOGL and obviously contradicting article 3 (1) of RAOCM (""It is able to characterize the influence of the absence of one network element…""). Using such an approach leads to overestimation of the influence of element r, as its influence on a weaken grid is assessed, instead of its influence on an undisturbed grid. This leads to larger asset lists and thus higher costs to all parties involved.<br><br>AI.2: Change proposed: ""AI.2 Influence Computation Method<br>In order to compute influence of elements located outside TSOs control area on a given control area following definitions have to be introduced (Figure 1):<br>▪ Element t is an element located in TSOs control area and which is influenced by an element located outside TSOs control area;<br>▪ Element r is an element located outside TSOs control area whose influence is assessed;<br>DELETED[▪ Elements i are elements located either in TSOs control area or outside TSOs control area which are disconnected to represent planned (or forced) outages.]""<br><br>AI.2.1.1: Change proposed:""DELETED[i: Element located either in TSOs control area or outside TSOs control area (different from elements r and t) considered disconnected from the network when assessing the formula; I: Set of elements, located either in TSOs control area or outside TSOs control area, modelled in the grid model whose possible outage should be taken into account in the assessment.;][…]<br>$P^t_{(n-i)}$: Active power through the element t with the element r DELETED[and the element i ]disconnected from the network;[…]<br>The formulas must be applied, for each element r which belongs to the set R, assessing its influence on every element t of the TSO's control area for which the assessment is performed DELETED[, and considering possible outages (element i)] (Figure 1).""<br><br>AI.2.1.2: Change proposed:""$P^t_{(n-i)}$: Active power through the element t with the generating module or demand facility r DELETED[ and the element i disconnected] from the network;""<br><br>We would welcome further clarity on the criteria used to define the thresholds. | innogy SE, Grid&Infrastructure, E.ON SE | Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 32 provided there. |

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| 13. | Annex | Regarding Formular:<br>To assess the influence of a specific element r the Annex proposes to calculate the maximum percentage of the power flow on this element is flowing after the outage in any element of TSO A.<br>For TSO A this ratio is not as relevant as if any element in its control area is heavily loaded after the outage (e. g. > 80 % PATL).<br>Hence, instead of calculating the ratio we propose to assess the loading increase<br>$IF_r = MAX\_forall\_i,s,t\ ((P^t\_(s,n-i-r) - P^t\_(s,n-i))/PATL^(s,t))$<br>for all elements with a high loading after the outage<br>$Loading_t = MAX\_forall\_i,s,t\ (P^t\_(s,n-i-r)/PATL^(s,t)).$<br>The PATL of the element r is not relevant. The worst case power flow is selected with the scenarios. If the element is in any case loaded with max. 50 %, it is not reasonable to assume that it is loaded with 100 % in the same grid topology as the ratios are calculated.<br><br>Regarding Thresholds:<br>The evaluation of the thresholds should be transparent and comprehensible. TSO connected DSOs should participate in the threshold evaluation as they are directly affected. | Axpo Power AG | Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 33 provided there. |
| 14. | Annex | In EDF's view, TSOs should transparently justify the scenarios used. In particular transparency on used margins and assumptions on power generation are needed. A "stressed" scenario, with very low probability to happen, can nevertheless influence the calculation thus showing important factors. That is why EDF would prefer a quantile (95% for instance) to be implemented in order to filter the "stressed" scenarios if used. | EDF | Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 34 provided there. |

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| 15. | Annex | We ask ENTSO-E/TSOs to limit the influence computation method to n-1-scenarios. From our point of view, its current version considers a n-2-scenario (at least n-1-1) by realising two contingencies (one at TSO A (element i) and one at TSO B (element r)). This is out of the scope of SOGL and obviously contradicting article 3 (1) of RAOCM ("It is able to characterize the influence of the absence of one network element…").<br><br>AI.2: Change proposed: "AI.2 Influence Computation Method<br>In order to compute influence of elements located outside TSOs control area on a given control area following definitions have to be introduced (Figure 1):<br>▪ Element t is an element located in TSOs control area and which is influenced by an element located outside TSOs control area;<br>▪ Element r is an element located outside TSOs control area whose influence is assessed;"<br>(i.e. delete "▪ Elements i are elements located either in TSOs control area or outside TSOs control area which are disconnected to represent planned (or forced) outages.")<br><br>AI.2.1.1: Change proposed: Delete "i: Element located either in TSOs control area or outside TSOs control area (different from elements r and t) considered disconnected from the network when assessing the formula; I: Set of elements, located either in TSOs control area or outside TSOs control area, modelled in the grid model whose possible outage should be taken into account in the assessment.;"<br>[…]<br>"$P^t_{(n-i)}$: Active power through the element t with the element r disconnected from the network;" (i.e. delete "and the element i ")<br>[…]<br>"The formulas must be applied, for each element r which belongs to the set R, assessing its influence on every element t of the TSO's control area for which the assessment is performed (Figure 1)." (i.e. delete ", and considering possible outages (element i)")<br><br>AI.2.1.2: Change proposed:"$P^t_{(n-i)}$: Active power through the element t with the generating module or demand facility r from the network;" (i.e. delete "and the element i disconnected")<br><br>We would welcome further clarity on the criteria used to define the thresholds. | eurelectric | Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 32 provided there. |

| Comment nb | Article | Stakeholder comment | Reviewer affiliation | ENTSO-E response |
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| 16. | Annex | AI.2:<br>AI.2 Influence Computation Method<br>In order to compute influence of elements located outside TSOs control area on a given control area following definitions have to be introduced (Figure 1):<br>▪ Element t is an element located in TSOs control area and which is influenced by an element located outside TSOs control area;<br>▪ Element r is an element located outside TSOs control area whose influence is assessed;<br><br>AI.2.1.1:<br><br>$P^t_{(n-i)}$: Active power through the element t with the element r and the element i disconnected from the network;[…]<br>The formulas must be applied, for each element r which belongs to the set R, assessing its influence on every element t of the TSO's control area for which the assessment is performed,(Figure 1).<br><br>AI.2.1.2:<br>$P_{(n-1)}^t$: Active power through the element t with the generating module or demand facility r disconnected from the network;<br><br>Explanation<br>We ask ENTSO-E/TSOs to limit the influence computation method to n-1-scenarios. From our point of view, its current version considers a n-2-scenario (at least n-1-1) by realising two contingencies (one at TSO A (element i) and one at TSO B (element r)). This is out of the scope of SOGL (cf. article 72(3) of SOGL) and obviously contradicting article 3 (1) of RAOCM ("It is able to characterize the influence of the absence of one network element…"). | BDEW German Association of Energy and Water Industries | Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 32 provided there. |
| 17. | General feedback | We welcome the longer consultation period introduced by ENTSO-E. We would have welcomed more clarity and an open discussion on the n-2-principle ENTSO-E intends to use. We need an open and transparent discussion on European Level to agree on n-2 before it is introduced! | innogy SE, Grid&Infrastructure | Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 36 provided there. |

| Comment nb | Article | Stakeholder comment | Reviewer affiliation | ENTSO-E response |
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| 18. | General feedback | Over 90 percent of all renewable energy resources in Germany are connected to distribution systems. Distribution systems increasingly influence the operation of transmission systems. DSOs play an important role for the energy system.<br>The BDEW is therefore convinced that a close cooperation on equal footing between DSOs and TSOs as well as unanimous decision making is essential for secure network operation.<br>In addition, it is highly important that Generators are involved whenever consultations/agreements between TSO and DSO affect the data delivery obligations of generation units. | BDEW German Association of Energy and Water Industries | Same questions asked in the feedback concerning CSAM. Please refer to the answer to comment 38 provided there. |