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**Pvm / Datum / Date:** 14.02.2019

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**Nimi / Namn / Name:** Simo Nurmi

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## Yhteen kytketyistä vuorokausimarkkinoista seuraavien suunniteltujen siirtojen laskentamenetelmä

### Asianosainen

Fingrid Oyj

### Vireilletulo

8.3.2018

### Selostus asiasta

Fingrid Oyj (jäljempänä myös Fingrid) toimitti Energiavirastolle 27.2.2018 ehdotuksen yhteen kytketyistä markkinoista seuraavien siirtojen laskentamenetelmää koskevan ehdotuksen.

Kapasiteetin jakamista ja ylikuormitusten hallintaa koskevien suuntaviivojen vahvistamista koskevan komission asetuksen EU/2015/1222 (jäljempänä CACM -suuntaviiva) artiklan 9(12) mukaan sääntelyviranomaiset voivat tarvittaessa pyytää asianosaisia siirtoverkkoyhtiötä täydentämään niiden toimittamia ehdotuksia. Energiavirasto tutustui yhdessä muiden asianomaisten sääntelyviranomaisten siirtoverkonhaltijoiden ehdotukseen. Tutustuttuaan ehdotukseen sääntelyviranomaiset päätyivät pyytämään siirtoverkonhaltijoita täydentämään ehdotustaan. Tämän mukaisesti Energiavirasto pyysi 14.9.2018 lähettämällään kirjeellä Fingrid Oyj:tä täydentämään ehdotustaan asianomaisten sääntelyviranomaisten edellyttämällä tavalla. Fingrid toimitti muutetun ehdotuksensa Energiavirastolle 30.11.2018.

### Asiaan liittyvä lainsäädäntö

#### **Kapasiteetin jakamista ja ylikuormitusten hallintaa koskevien suuntaviivojen vahvistamista koskevan komission asetuksen EU/2015/1222 (jäljempänä CACM suuntaviiva)**

CACM -suuntaviivan 43 artiklan 1 kohdan mukaan siirtoverkonhaltijoiden, jotka aikovat laskea yhteen kytketyistä vuorokausimarkkinoista seuraavia suunniteltuja siirtoja, on viimeistään 16 kuukauden kuluttua tämän asetuksen voimaantulosta laadittava ehdotus tässä laskennassa käytettävästä yhteisestä menetelmästä. Ehdotuksesta on järjestettävä kuuleminen 12 artiklan mukaisesti.



CACM -suuntaviivan 43 artiklan 2 kohdan mukaan menetelmässä on kuvailtava laskelma ja lueteltava tiedot, jotka asianomaisten nimitettyjen sähkömarkkinaoperaattoreiden on toimitettava 8 artiklan 2 kohdan g) -alakohdan mukaisesti perustetulle suunniteltujen siirtojen laskijalle, ja vahvistettava tietojen toimittamisen määräaika. Tietojen toimittamisen määräaika on viimeistään klo 15:30 vuorokausimarkkinoiden markkina-aikaa.

CACM -suuntaviivan 43 artiklan 3 kohdan mukaan laskelman on perustuttava kunkin markkina-aikayksikön nettotilanteisiin.

CACM -suuntaviivan 43 artiklan 4 kohdan mukaan suunniteltuja siirtoja soveltavien siirtoverkonhaltijoiden on tarkastettava menetelmää uudelleen viimeistään kahden vuoden kuluttua siitä, kun kyseisen alueen sääntelyviranomaiset ovat hyväksyneet 1 kohdassa tarkoitetun ehdotuksen. Menetelmää on tämän jälkeen tarkastettava uudelleen joka toinen vuosi, jos toimivaltaiset sääntelyviranomaiset sitä pyytävät.

CACM -suuntaviivan 49 artiklan 1 kohdan mukaan kunkin suunniteltujen siirtojen laskijan on laskettava tarjousalueiden väliset suunnitellut siirrot kussakin markkina-aikayksikössä 43 artiklan mukaisesti määritellyllä menetelmällä.

CACM -suuntaviivan 49 artiklan 2 mukaan kunkin suunniteltujen siirtojen laskijan on ilmoitettava sovitusta suunnitelluista siirroista asianomaisille nimitetyille sähkömarkkinaoperaattoreille, sähkökauppojen vastapuolille, välittäjille ja siirtoverkonhaltijoille.

CACM -suuntaviivan artiklan 3 mukaan asetuksen tavoitteena on:

- a) edistää tehokasta kilpailua sähkön tuotannossa, kaupassa ja toimittamisessa;
- b) varmistaa siirtoinfrastruktuurin optimaalinen käyttö;
- c) varmistaa käyttövarmuus;
- d) optimoida alueiden välisen kapasiteetin laskenta ja jakaminen;
- e) varmistaa siirtoverkonhaltijoiden, nimitettyjen sähkömarkkinaoperaattoreiden, viraston, sääntelyviranomaisten ja markkinaosapuolten oikeudenmukainen ja syrjimätön kohtelu;
- f) varmistaa tietojen avoimuus ja luotettavuus ja parantaa niitä;
- g) edistää Euroopan sähkönsiirtoverkon ja sähköalan tehokasta toimintaa ja kehittämistä pitkällä aikavälillä;
- h) ottaa huomioon tarve taata oikeudenmukaiset ja säännönmukaisesti toimivat markkinat sekä oikeudenmukainen ja säännönmukainen hinnanmuodostus;
- i) luoda tasapuoliset toimintaedellytykset nimitetyille sähkömarkkinaoperaattoreille;
- j) tarjota syrjimätön pääsy alueiden väliseen kapasiteettiin.



CACM -suuntaviivan 9 artiklan 7 kohdan alakohdan d mukaan seuraavia ehtoja ja edellytyksiä tai menetelmiä koskeville ehdotuksille tarvitaan asianomaisen alueen kaikkien sääntelyviranomaisten hyväksyntä: 43 artiklan 1 kohdan ja 56 artiklan 1 kohdan mukaiset suunniteltujen siirtojen yhteiset laskentamenetelmät.

CACM -suuntaviivan 9 artiklan 9 kohdan mukaan ehtoja ja edellytyksiä tai menetelmiä koskevaan ehdotukseen on sisällyttävä ehdotettu täytäntöönpano-aikataulu ja kuvaus niiden odotetuista vaikutuksista tämän asetuksen tavoitteisiin.

CACM -suuntaviivan 9 artiklan 10 kohdan mukaan; jos ehtoja ja edellytyksiä tai menetelmiä koskevan ehdotuksen hyväksyminen edellyttää useamman kuin yhden sääntelyviranomaisten päätöstä, toimivaltaisten sääntelyviranomaisten on kuultava toisiaan, tehtävä tiivistä yhteistyötä ja koordinoitava toimiaan sopimukseen pääsemiseksi. Toimivaltaisten sääntelyviranomaisten on soveltuviissa tapauksissa otettava huomioon viraston lausunto. Sääntelyviranomaisten on tehtävä 6, 7 ja 8 kohdan mukaisesti ehdotettuja ehtoja ja edellytyksiä tai menetelmiä koskevat päätökset kuuden kuukauden kuluessa siitä, kun sääntelyviranomaisen tai, soveltuviissa tapauksissa, viimeinen asianosainen sääntelyviranomaisen on vastaanottanut ehdot ja edellytykset tai menetelmät.

CACM -suuntaviivan 9 artiklan 12 kohdan mukaan; jos yksi tai useampi sääntelyviranomaisen vaatii 6, 7 ja 8 kohdan mukaisesti toimitettujen ehtojen ja edellytysten tai menetelmien muuttamista ennen hyväksymistä, asianomaisten siirtoverkonhaltijoiden tai nimitettyjen sähkömarkkinaoperaattoreiden on annettava ehdotus muutetuista ehdoista ja edellytyksistä tai menetelmistä kahden kuukauden kuluessa sääntelyviranomaisten vaatimuksen esittämisestä. Toimivaltaisten sääntelyviranomaisten on päätettävä muutetuista ehdoista ja edellytyksistä tai menetelmistä kahden kuukauden kuluessa niiden esittämisestä.

CACM -suuntaviivan 12 artiklan 1 kohdan mukaan ehtoja ja edellytyksiä tai menetelmiä tai niiden muutoksia koskevien ehdotusten toimittamisesta tämän asetuksen mukaisesti vastaavien siirtoverkonhaltijoiden ja nimitettyjen sähkömarkkinaoperaattoreiden on kuultava sidosryhmiä, kunkin jäsenvaltion asianomaiset viranomaiset mukaan luettuina, ehtoja ja edellytyksiä tai menetelmiä koskevasta ehdotusluonnoksista, kun sitä nimenomaisesti vaaditaan tässä asetuksessa. Kuulemisen on kestettävä vähintään yhden kuukauden.

## Perustelut

### Energiaviraston toimivalta

CACM -suuntaviivan artiklan 9(7) mukaisesti 43 artiklan mukaisen koskevan ehdotuksen hyväksymiselle tarvitaan asianomaisen alueen kaikkien sääntelyviranomaisten hyväksyntä.

Energiavirastosta annetun lain (870/2013) 1 §:n 2 momentin 3 kohdan mukaan Energiavirasto hoitaa kansalliselle sääntelyviranomaiselle kuuluvat tehtävät, joista säädetään sähkön sisämarkkinoita koskevista yhteisistä säännöistä ja direktiivin 2003/54/EY kumoamisesta annetun Euroopan parlamentin ja neuvoston direktiivin 2009/72/EY, jäljempänä sähkömarkkinadirektiivi, nojalla annetuissa, suuntaviivoja koskevissa komission asetuksissa tai päätöksissä.



CACM suuntaviiva on sähkömarkkinadirektiivin nojalla annettu komission säädös, jonka mukaisten tehtävien hoitaminen on lainsäädännössä annettu edellä mainituin tavoin Energiaviraston tehtäväksi.

### Ehdotuksen arviointi

Energiavirasto on yhdessä asianomaisten sääntelyviranomaisten kanssa tutustunut siirtoverkonhaltijoiden ehdotukseen yhteen kytketyistä vuorokausimarkkinoista seuraavien suunniteltujen siirtojen laskentamenetelmäksi.

CACM -suuntaviivan artiklan 43(1) mukaan siirtoverkonhaltijoiden, jotka aikovat laskea yhteen kytketyistä vuorokausimarkkinoista seuraavia suunniteltuja siirtoja, on viimeistään 16 kuukauden kuluttua tämän asetuksen voimaantulosta laadittava ehdotus tässä laskennassa käytettävästä yhteisestä menetelmästä.

Vain osa siirtoverkonhaltijoista jättivät ehdotuksensa sovellettavasta yhteen kytketyistä vuorokausimarkkinoista seuraavien suunniteltujen siirtojen laskentamenetelmästä asianomaisille kansallisille sääntelyviranomaisilleen vahvistettavaksi 14.12.2016 mennessä, jonka jälkeen kansallisten sääntelyviranomaisten yhteistyövirasto ACER pyysi komissiolta tulkintakannanottoa säännöksen soveltamisalan laajuudesta. Komissio ilmoitti 1.6.2017 kannanottonaan, että kansalliset sääntelyviranomaiset voivat päättää, koskeeko ehdotuksen jättämisvelvollisuus kaikkia vai ainoastaan osaa siirtoverkonhaltijoita. Kansalliset sääntelyviranomaiset pyysivät yhteisellä 22.9.2017 päivätyllä kirjeellään kaikkia relevantteja siirtoverkonhaltijoita jättämään kyseisen ehdotuksen vahvistettavaksi 31.12.2017 mennessä.

Käsitellessään ehdotusta sääntelyviranomaisten kirjeen pohjalta CACM -suuntaviivan 9(6) artiklan mukaisena kaikkien siirtoverkonhaltijoiden ehdotuksena, siirtoverkonhaltijat katsoivat, ettei sääntelyviranomaisten asettama määräpäivä ollut tarkoituksenmukainen ja pyysivät lisääaikaa. Kansalliset sääntelyviranomaiset päättivät myöntää ehdotukselle lisääaikaa 28.2.2018 asti. Viimeinen sääntelyviranomaisen vastaanotti CACM -suuntaviivan 43 artiklan mukaisen siirtoverkonhaltijoiden ehdotuksen 14.3.2018. Energiavirasto pyysi Fingridiä muuttamaan ehdotusta 14.9.2018 lähettämällä muutospyyntöä. Fingrid toimitti muutetun ehdotuksen Energiavirastolle 30.11.2018. Viimeinen sääntelyviranomaisen vastaanotti muutetun ehdotuksen 14.12.2018.

Energiavirasto katsoo, että ehdotus täyttää sille lainsäädännössä asetetut muodolliset ja prosessuaaliset vaatimukset sekä toteuttaa sääntelyn tavoitteet. Muutettu ehdotus täyttää myös kansallisten sääntelyviranomaisten muutospyyntöissä esitetyt vaatimukset päätöksen liitteenä olevan kansallisten sääntelyviranomaisten yhteisen näkemyksen mukaisesti.

Edellä mainitun perusteella Energiavirasto vahvistaa Fingridin noudatettavaksi päätöksen liitteenä olevan menetelmän yhteen kytketyistä vuorokausimarkkinoista seuraavien suunniteltujen siirtojen laskennasta.

### Ratkaisu

Energiavirasto vahvistaa Fingrid Oyj:n 30.11.2018 toimittaman ehdotuksen yhteen kytketyistä vuorokausimarkkinoista seuraavien siirtojen laskentamenetelmästä.



Päätös on voimassa toistaiseksi.

Päätöstä on noudatettava muutoksenhausta huolimatta.

### **Sovelletut säännökset**

Kapasiteetin jakamista ja ylikuormitusten hallintaa koskevien suuntaviivojen vahvistamista koskevan komission asetuksen EU/2015/1222 artiklat 3, 9(7), 9(9), 9(10), 9(12), 12, 43, 49

Laki Energiavirastosta (870/2013) 1 §:n 2 momentin 3 kohta

Laki sähkö- ja maakaasumarkkinoiden valvonnasta (590/2013) 36 §

### **Muutoksenhaku**

Muutoksenhakua koskeva ohjeistus markkinaoikeuteen liitteenä.

Liitteet

Valitusosoitus

Approval of All Regulatory Authorities agreed at the Energy Regulators' Forum on the all TSOs' proposals for calculating scheduled exchanges resulting from the single day-ahead coupling in accordance with Articles 43(1) of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management.

All TSOs' proposal for a Methodology for Calculating Scheduled Exchanges resulting from single day-ahead coupling in accordance with Article 43 of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management.

Jakelu

Fingrid Oyj

## **Valitusosoitus**

### **Muutoksenhakuoikeus**

Energiaviraston päätökseen saa hakea muutosta valittamalla siten kuin hallintolainkäyttölaissa (586/1996) säädetään. Valituskelpoisella päätöksellä tarkoitetaan toimenpidettä, jolla asia on ratkaistu tai jätetty tutkimatta.

Valitusoikeus on sillä, johon päätös on kohdistettu tai jonka oikeuteen, velvollisuuteen tai etuun päätös välittömästi vaikuttaa.

### **Valitusviranomainen**

Valitusviranomainen Energiaviraston päätökseen on Markkinaoikeus.

### **Valitusaika**

Valitus on tehtävä 30 päivän kuluessa päätöksen tiedoksisaannista. Valitusaikaa laskettaessa tiedoksisaantipäivää ei oteta lukuun.

### **Valituskirjelmän sisältö**

Valitus tehdään kirjallisesti. Valituksen voi tehdä myös hallinto- ja erityistuomioistuinten asiointipalvelussa osoitteessa <https://asiointi2.oikeus.fi/hallintotuomioistuimet>. Valituskirjelmässä on ilmoitettava:

- valittajan nimi ja kotikunta
- postiosoite ja puhelinnumero, joihin asiaa koskevat ilmoitukset valittajalle voidaan toimittaa
- päätös, johon haetaan muutosta
- miltä kohdin päätökseen haetaan muutosta ja mitä muutoksia siihen vaaditaan tehtäväksi sekä
- perusteet, joilla muutosta vaaditaan.

Valittajan, laillisen edustajan tai asiamiehen on allekirjoitettava valituskirjelmä. Jos valittajan puhevaltaa käyttää hänen laillinen edustajansa tai asiamiehensä tai jos valituksen laatijana on muu henkilö, on valituskirjelmässä ilmoitettava myös tämän nimi ja kotikunta.

### **Valituskirjelmän liitteet**

Valituskirjelmään on liitettävä:

- muutoksenhaun kohteena oleva päätös alkuperäisenä tai jäljennöksenä
- todistus siitä, minä päivänä päätös on annettu tiedoksi tai muu selvitys valitusajan alkamisajankohdasta sekä
- asiakirjat, joihin valittaja vetoaa vaatimuksensa tueksi, jollei niitä ole jo aikaisemmin toimitettu Energiavirastolle tai markkinaoikeudelle.

Asiamiehen on liitettävä valituskirjelmään valtakirja, jollei päämies ole valtuuttanut häntä suullisesti valitusviranomaisessa. Asianajajan ja yleisen oikeusavustajan tulee esittää valtakirja ai-noastaan, jos valitusviranomaisen niin määrää.

Kun valituskirjelmä toimitetaan hallinto- ja erityistuomioistuinten asiointipalvelun kautta, liitteet voi toimittaa skannattuna asiointipalvelussa tai kirjeitse.

### **Valituskirjelmän toimittaminen valitusviranomaiselle**

Valituskirjelmä on toimitettava valitusajan kuluessa Markkinaoikeudelle, jonka osoite on:

Markkinaoikeus

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Faksi: 029 56 43300

Sähköposti: [markkinaoikeus@oikeus.fi](mailto:markkinaoikeus@oikeus.fi)



**Approval of All Regulatory Authorities agreed at the  
Energy Regulators' Forum**

**on**

**the all TSOs' proposals for  
calculating scheduled exchanges resulting from the  
single day-ahead coupling in accordance with Articles  
43(1) of Commission Regulation (EU) 2015/1222 of 24  
July 2015 establishing a Guideline on Capacity  
Allocation and Congestion Management**

**8 February 2019**

## I. Introduction and legal context

Article 43(1) of Regulation 2015/1222<sup>1</sup> requires that by 16 months after the entry into force of this Regulation, i.e. by 14 December 2016, TSOs, which intend to calculate scheduled exchanges (SCH EXC), resulting from single day-ahead coupling shall develop a proposal for a common methodology for this calculation ('DA SCH EXC proposal').

In line with Article 9(9) of the CACM Regulation, the proposal must include a proposed timescale for its implementation and a description of the expected impact on the objectives of the CACM Regulation.

Some Regulatory Authorities subsequently received a DA SCH EXC proposal on 14 December 2016.

Following the submission, ACER on behalf of All Regulatory Authorities sent a letter to the European Commission on 14 March 2017. In this letter All Regulatory Authorities asked for an interpretation on whether all TSOs, including those who did not submit any methodology on 14 December 2016, should develop and submit for approval to their Regulatory Authority common SCH EXC methodologies or not.

In its response of 1 June 2017, the European Commission stated that it is up to the Regulatory Authorities to decide whether it is more efficient to involve all TSOs in the development of the SCH EXC methodologies or not. Thus, All Regulatory Authorities have agreed that all TSOs should submit a common methodology for the day-ahead calculation of SCH EXC. In a letter dated 22 September 2017, All Regulatory Authorities requested all TSOs to submit a common methodology by 31 December 2017.

Following the receipt of the All Regulatory Authorities' letter, all TSOs elaborated on common SCH EXC methodologies for the day-ahead timeframe. Due to discussions between TSOs and NEMOs on the inclusion of the calculation of SCH EXC between NEMO trading hubs, TSOs indicated that the deadline set by All Regulatory Authorities will not be feasible. Therefore, All Regulatory Authorities agreed in December 2017 to prolong the deadline for submission of the SCH EXC methodologies until 28 February 2018. The last relevant Regulatory Authority received the SCH EXC methodology for the day-ahead timeframe on 14 March 2018.

According to Article 9(7)(d) of the CACM Regulation the DA SCH EXC proposal must be subject to the approval of All Regulatory Authorities of the concerned region which in this case includes All Regulatory Authorities, as confirmed by the European Commission.

All Regulatory Authorities agreed at the Energy Regulators' Forum on 7 September 2018 to request an amendment to the all TSOs' proposal for calculating SCH EXC resulting from the single day-ahead coupling. Based on this agreement, All Regulatory Authorities made their national decision on the request for amendment by 14 September 2018. The amended proposal for calculating SCH EXC resulting from the single day-ahead coupling was received by the last relevant Regulatory Authority on 14 December 2018.

This agreement of All Regulatory Authorities shall provide evidence that a decision on the amended DA SCH EXC proposal does not need to be adopted by ACER pursuant to Article 9(11) of the CACM regulation. This agreement is intended to constitute the basis on which All Regulatory Authorities will each subsequently adopt a decision to the DA SCH EXC proposal pursuant to Article 9(6)(h).

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<sup>1</sup> 'Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management' ('CACM Regulation').

The legal provisions relevant for the DA SCH EXC proposal can be found in Articles 3, 8, 9, 43 and 49 of the CACM Regulation.

**Article 3** of the CACM Regulation:

*This Regulation aims at:*

- (a) Promoting effective competition in the generation, trading and supply of electricity;*
- (b) Ensuring optimal use of the transmission infrastructure;*
- (c) Ensuring operational security;*
- (d) Optimising the calculation and allocation of cross-zonal capacity;*
- (e) Ensuring fair and non-discriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants;*
- (f) Ensuring and enhancing the transparency and reliability of information;*
- (g) Contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union;*
- (h) Respecting the need for a fair and orderly market and fair and orderly price formation;*
- (i) Creating a level playing field for NEMOs;*
- (j) Providing non-discriminatory access to cross-zonal capacity*

**Article 8** of the CACM Regulation:

- 1. (...)
- 2. (...)

*(g) where required, establish scheduled exchange calculators for calculating and publishing scheduled exchanges on borders between bidding zones in accordance with Articles 49 and 56;*

*[...]*

**Article 9** of the CACM Regulation:

- 1. *TSOs and NEMOs shall develop the terms and conditions or methodologies required by this Regulation and submit them for approval to the competent regulatory authorities within the respective deadlines set out in this Regulation. Where a proposal for terms and conditions or methodologies pursuant to this Regulation needs to be developed and agreed by more than one TSO or NEMO, the participating TSOs and NEMOs shall closely cooperate. TSOs, with the assistance of ENTSO for Electricity, and all NEMOs shall regularly inform the competent regulatory authorities and the Agency about the progress of developing these terms and conditions or methodologies.*
- 2. (...)
- 3. (...)
- 4. (...)
- 5. *Each regulatory authority shall approve the terms and conditions or methodologies used to calculate or set out the single day-ahead and intraday coupling developed by TSOs and NEMOs. They shall be responsible for approving the terms and conditions or methodologies referred to in paragraphs 6, 7 and 8.*
- 6. (...)
- 7. *The proposals for the following terms and conditions or methodologies shall be subject to approval by all regulatory authorities of the concerned region:*

(...)

*(d) the common methodologies for the calculation of scheduled exchanges in accordance with Articles 43(1) and 56(1);*

(...)

8. (...)

9. *The proposal for terms and conditions or methodologies shall include a proposed timescale for their implementation and a description of their expected impact on the objectives of this Regulation. Proposals on terms and conditions or methodologies subject to the approval by several or all regulatory authorities shall be submitted to the Agency at the same time that they are submitted to regulatory authorities. Upon request by the competent regulatory authorities, the Agency shall issue an opinion within three months on the proposals for terms and conditions or methodologies.*

10. *Where the approval of the terms and conditions or methodologies requires a decision by more than one regulatory authority, the competent regulatory authorities shall consult and closely cooperate and coordinate with each other in order reach an agreement. Where applicable, the competent regulatory authorities shall take into account the opinion of the Agency. Regulatory authorities shall take decisions concerning the submitted terms and conditions or methodologies in accordance with paragraphs 6, 7 and 8, within six months following the receipt of the terms and conditions or methodologies by the regulatory authority or, where applicable, by the last regulatory authority concerned.*

11. (...)

12. *In the event that one or several regulatory authorities request an amendment to approve the terms and conditions or methodologies submitted in accordance with paragraphs 6, 7 and 8, the relevant TSOs or NEMOs shall submit a proposal for amended terms and conditions or methodologies for approval within two months following the requirement from the regulatory authorities. The competent regulatory authorities shall decide on the amended terms and conditions or methodologies within two months following their submission. Where the competent regulatory authorities have not been able to reach an agreement on terms and conditions or methodologies pursuant to paragraphs (6) and (7) within the two-month deadline, or upon their joint request, the Agency shall adopt a decision concerning the amended terms and conditions or methodologies within six months, in accordance with Article 8(1) of Regulation (EC) No 719/2009. If the relevant TSOs or NEMOs fail to submit a proposal for amended terms and conditions or methodologies, the procedure provided for in paragraph 4 of this Article shall apply.*

13. (...)

14. (...)

**Article 43** of the CACM Regulation:

1. *By 16 months after the entry into force of this Regulation, TSOs which intend to calculate scheduled exchanges resulting from single day-ahead coupling shall develop a proposal for a common methodology for this calculation. The proposal shall be subject to consultation in accordance with Article 12.*
2. *The methodology shall describe the calculation and shall list the information which shall be provided by the relevant NEMOs to the scheduled exchange calculator established in accordance with Article 8(2)(g) and the time limits for delivering this information. The time limit for delivering information shall be no later than 15.30 market time day- ahead.*
3. *The calculation shall be based on net positions for each market time unit.*

4. *No later than two years after the approval by the regulatory authorities of the concerned region of the proposal referred to in paragraph 1, TSOs applying scheduled exchanges shall review the methodology. Thereafter, if requested by the competent regulatory authorities, the methodology shall be reviewed every two years.*

**Article 49** of the CACM Regulation:

1. *Each scheduled exchange calculator shall calculate scheduled exchanges between bidding zones for each market time unit in accordance with the methodology established in Article 43.*
2. *Each scheduled exchange calculator shall notify relevant NEMOs, central counter parties, shipping agents and TSOs of the agreed scheduled exchanges.*

## **II. All TSOs' proposals**

All TSOs' submitted a DA SCH EXC proposal for calculating SCH EXC resulting from single day-head coupling in accordance with Article 43(1) of the CACM Regulation.

This proposal is subject to the All Regulatory Authorities approval process, as outlined in Article 9 of the CACM Regulation.

The proposal contains, as required by Article 9(9) of the CACM Regulation, a description of the timeline for implementation as well as a description of the expected impact of objectives of the Regulation as listed in Article 3.

All TSOs also submitted supporting documents for further information regarding the proposal. These documents contain more in-depth description of the calculation methodologies and additional information but were not submitted for the approval of All Regulatory Authorities.

### **III. All Regulatory Authorities' position**

#### ***General remarks***

##### On the format

All Regulatory Authorities acknowledge that all TSOs have improved the editing of the DA SCH EXC proposal.

##### On deadlines

All Regulatory Authorities acknowledge that all TSOs have taken into account their request and clarified the deadlines within the DA SCH EXC proposal.

##### On the perimeter of the calculation

All Regulatory Authorities acknowledge that all TSOs have clarified the perimeter of the calculation according to their request.

##### On scheduling areas without NEMO trading hubs

All Regulatory Authorities acknowledge that all TSOs took into account that there are specific requirements for scheduling areas without NEMO trading hubs and that all TSOs reflected this in the DA SCH EXC proposal.

##### On additional information to be included in the explanatory document

All Regulatory Authorities acknowledge that all TSOs improved the explanatory documents by including additional information.

#### ***Content of the DA SCH EXC Proposal***

##### Article 1 – Subject matter of scope

All Regulatory Authorities acknowledge that all TSOs clarified that the output parameters described in Article 1(2) shall be provided for each market time unit.

##### Article 3 – List of information required from relevant NEMOs

All Regulatory Authorities acknowledge that all TSOs refer to the all TSOs' requirements for the price coupling algorithm and the continuous trading matching algorithm (e.g. also including the requirement to provide scheduled exchanges on DC interconnector level), developed in accordance with Article 37(1) of the CACM Regulation in order reflect the information received by NEMOs.

##### Article 4 – SCH EXC calculator

All Regulatory Authorities acknowledge that all TSOs clarified the deadline for submission of information referred to in Article 4(7).

#### Article 7 - Calculation of SCH EXC between bidding zones

All Regulatory Authorities acknowledge that all TSOs improved the formulas describing the optimization function and the used variables and indices. Furthermore, TSOs also improved the description of the determination of cost coefficients and the principles used in order to comply with the All Regulatory Authorities request.

#### Article 8 – Calculation of SCH EXC between scheduling areas

All Regulatory Authorities acknowledge that all TSOs improved the formulas describing the optimization function and the used variables and indices by taking into account the request for amendment. Furthermore, TSOs also improved the description of the determination of cost coefficients and the principles used in order to comply with the All Regulatory Authorities request.

#### Calculation of SCH EXC between NEMO trading hubs

All Regulatory Authorities acknowledge that all TSOs included an additional article covering the calculation of SCH EXC between NEMO trading hubs, defined as “electricity transfer scheduled between NEMO trading hubs operating within or between scheduling areas or bidding zones” in the ACER decision No 08/2018 on the NEMO’s proposal for the price coupling algorithm and the continuous trading matching algorithm.



## **IV. Conclusion**

All Regulatory Authorities welcome the submitted amended DA SCH EXC proposal and the significant improvements adopted by all TSOs. All Regulatory Authorities have assessed, consulted and closely cooperated and coordinated to reach an agreement about the proposal, which meets the requirements of Regulation 2015/1222 and as such can be approved by All Regulatory Authorities.

All Regulatory Authorities therefore will issue their national decisions, based on this agreement, by 14 February 2019.

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**All TSOs' proposal for a Methodology for Calculating  
Scheduled Exchanges resulting from single day-ahead  
coupling in accordance with Article 43 of the  
Commission Regulation (EU) 2015/1222 of 24 July 2015  
establishing a guideline on capacity allocation and  
congestion management**

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1/12/2018

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All Transmission System Operators taking into account the following:

### Whereas

1. This document is a common proposal developed by all Transmission System Operators (hereafter referred to as “TSOs”), which intend to calculate Scheduled Exchanges resulting from single day-ahead coupling (hereafter referred to as “SDAC”). The document provides a methodology for calculating Scheduled Exchanges resulting from the SDAC (“hereafter referred to as ”**DA SEC Methodology**”) in accordance with Article 43 of Commission Regulation (EU) 2015/1222 establishing a guideline on Capacity Allocation and Congestion Management (hereafter referred to as ”**CACM Regulation**”). This proposal is hereafter referred to as ”**DA SEC Proposal**”.
2. The DA SEC Proposal takes into account the general principles, goals and other methodologies reflected in CACM Regulation. The goal of CACM Regulation is the coordination and harmonisation of capacity calculation and allocation in the day-ahead and intraday cross-border markets.
3. The DA SEC Proposal, in line with Article 45 of CACM Regulation, accommodates situations where there are more than one Nominated Electricity Market Operator (hereafter referred to as “NEMO”) designated and/or offering day-ahead trading services in a particular geographic area. In addition, according to Article 4(1) of CACM Regulation, multiple NEMOs can be designated to perform SDAC in a Member State. For each NEMO, a NEMO trading hub shall be assigned. Where multiple NEMOs operate within a geographic area, some multi-NEMO arrangements require multiple NEMO trading hubs within that geographic area.
4. The DA SEC Proposal shall consider situations where the bidding zone is equal to the scheduling area, as well as where there are multiple scheduling areas within a bidding zone.
5. The DA SEC Proposal provides for the calculation of Scheduled Exchanges between bidding zones, scheduling areas and NEMO trading hubs.
6. The DA SEC Methodology shall be applied by the Scheduled Exchange Calculator who is responsible for the calculation of Scheduled Exchanges resulting from SDAC as per Article 49 of CACM Regulation. By all TSOs' decision, this role can be delegated to a service provider.
7. Net positions and clearing prices are fixed by the results from the SDAC. Furthermore, cross-zonal capacities and allocation constraints have already been taken into account by the price coupling algorithm. Cross-zonal capacities and allocation constraints shall therefore not be impacted by the calculated Scheduled Exchanges.
8. According to Article 9(9) of CACM Regulation, the proposed timescale for the implementation of the proposed DA SEC Methodology shall be included in the DA SEC Proposal.
9. The implementation of the DA SEC Methodology is aligned with the price coupling algorithm proposal in accordance with Article 37 of CACM Regulation (here after referred to as 'algorithm methodology'), arrangements developed in accordance with Article 45 of CACM Regulation for more than one NEMO

within a bidding zone and arrangements developed for clearing and settlement between central counter parties and shipping agents in accordance with Article 77 of CACM Regulation. Thus, the implementation should happen in co-operation with NEMOs applying common solutions to ensure consistency and alignment of exchange calculations.

10. The Scheduled Exchanges calculation will form an integral part of the price coupling algorithm pursuant to the ACER Decision No 08/2018 on the all NEMOs' proposal for the price coupling algorithm and the continuous trading matching algorithm.

11. According to Article 9(9) of CACM Regulation, the expected impact of the proposed DA SEC Methodology, on the objectives of CACM Regulation, shall be described.

- Article 3(a) of CACM Regulation aims at promoting effective competition in the generation, trading and supply of electricity.
  - The DA SEC Methodology, as it is derived from the results of SDAC, does not impact competition in generation, trading and supply of electricity.
- Article 3(b) of CACM Regulation aims at ensuring optimal use of the transmission infrastructure.
  - The Scheduled Exchanges resulting from the DA SEC Methodology are derived from the results of SDAC i.e. they are based upon:
    - Net positions of bidding zones, scheduling areas and NEMO trading hubs;
    - Scheduled Exchanges into and out of individual HVDC interconnectors (difference in Scheduled Exchanges in/out reflecting losses where applicable).
- Article 3(c) of CACM Regulation aims at ensuring operational security.
  - The information provided by all NEMOs to all TSOs resulting from the SDAC will duly respect all constraints defined by TSOs in order to maintain operational security.. Cross-zonal capacities and allocation constraints shall not be impacted by the calculation of Scheduled Exchanges and shall have no influence on operational security.
- Article 3(d) of CACM Regulation aims at optimising the calculation and allocation of cross-zonal capacity.
  - Scheduled Exchanges resulting from SDAC shall not modify, but only duly reflect the results of the SDAC session.
- Article 3(e) of CACM Regulation aims at ensuring fair and non-discriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants.
  - The DA SEC Methodology shall be fair, transparent and based on the results of SDAC.
- Article 3(f) of CACM Regulation aims at ensuring and enhancing the transparency and reliability of information.
  - The DA SEC Methodology comprises a step-wise, top-down approach (from bidding zone, to scheduling area and to NEMO trading hub) for the calculation of Scheduled Exchanges which ensures and enhances the transparency and reliability of the DA SEC Methodology.

- Article 3(g) of CACM Regulation aims at contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union.
    - The DA SEC Methodology shows clear cross-Network Code thinking in order to contribute to the efficient development of the common European day-ahead market. The DA SEC Methodology, through its construction facilitates the efficient long-term operation and development of the European transmission system.
  - Article 3(h) of CACM Regulation aims at respecting the need for a fair and orderly market and fair and orderly price formation.
    - The DA SEC Methodology does not interfere with or compromise the anonymity of the market participants as it has no influence on the results of SDAC.
  - Article 3(i) of CACM Regulation aims at creating a level playing field for NEMOs.
    - The DA SEC Methodology creates a level playing field for NEMOs as it has no influence on the results of SDAC. Additionally, the DA SEC Methodology supports multiple NEMOs within a bidding zone or scheduling area.
  - Article 3(j) of CACM Regulation aims at providing non-discriminatory access to cross-zonal capacity.
    - The DA SEC Methodology does not interfere with the provision nor allocation of cross-zonal capacity.
12. The requirements on information exchange between the NEMOs, TSOs and the SEC stem from the algorithm methodology.

SUBMIT THE FOLLOWING DA SEC METHODOLOGY TO ALL REGULATORY AUTHORITIES:

### **Article 1 - Subject matter and scope**

1. All TSOs lay down in this DA SEC Proposal the requirements to calculate Scheduled Exchanges resulting from SDAC, the information required from all NEMOs for the calculation, the calculation process, methodology and description of the required equations.
2. The outputs of the applied DA SEC Methodology shall be, for each market time unit:
  - a) Scheduled Exchanges between bidding zones
  - b) Scheduled Exchanges between scheduling areas
  - c) Scheduled Exchanges between NEMO trading hubs
3. The scope of the DA SEC Methodology does not extend to the assignment of roles and responsibilities of the specific parties. Also the governance framework for specific roles or responsibilities is out of scope of the DA SEC Proposal. These aspects shall be defined by the TSOs, where required, in accordance with Article 8(2)(g) of CACM Regulation.

## Article 2 - Definitions and interpretation

1. For the purposes of this DA SEC Proposal, terms used shall have the meaning of the definitions included in Article 2 of CACM Regulation, Commission Regulations (EU) 543/2013 and (EU) 1227/2011 as well as Article 3 of Commission Regulation (EU) 2017/1485, with the exception of the definition of 'scheduling area'. In addition, the following definitions shall apply:
  - a) 'NEMO trading hub' shall have the meaning as defined in the terms and conditions or methodologies pursuant to Article 37 and Article 45 of CACM Regulation;
  - b) 'Scheduling area' means a scheduling area according to Article 3(2)(91) of the Regulation (EU) 2017/1485 with at least one NEMO trading hub<sup>1</sup>;
  - c) 'Scheduled Exchanges between NEMO trading hubs' means 'electricity transfer scheduled between NEMO trading hubs operating within or between scheduling areas or bidding zones', as defined in the ACER Decision No 08/2018 on the all NEMOs' proposal for the price coupling algorithm and the continuous trading matching algorithm;
  - d) 'Net Financial Exposure' shall have the meaning set forth in Article 9(2) of this DA SEC Proposal.
2. The term 'Scheduled Exchange' is defined within Article 2 of CACM Regulation. For the purposes of the DA SEC Proposal, the term 'geographic area' means both scheduling area and bidding zone. The notion of 'NEMO trading hub' is required in order to ensure proper functioning of post market coupling processes under market settlement regimes where multiple NEMOs are active in a bidding zone or scheduling area in accordance with the requirements contained within Article 45 of CACM Regulation.
3. In this DA SEC Proposal, unless the context requires otherwise:
  - a) the terms used apply in the context of the SDAC;
  - b) the table of contents and headings are inserted for convenience only and do not affect the interpretation of this methodology; and
  - c) any reference to legislation, regulations, directive, order, instrument, code or any other enactment shall include any modification, extension or re-enactment of it then in force.

## Article 3 –Scheduled Exchanges Calculator

1. The Scheduled Exchanges calculation will form an integral part of the price coupling algorithm pursuant to the ACER Decision No 08/2018 on the all NEMOs' proposal for the price coupling algorithm and the continuous trading matching algorithm. The Scheduled Exchange Calculator shall therefore apply the requirements set forth in the methodology for the price coupling algorithm pursuant to Article 37(5) of the CACM Regulation.

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<sup>1</sup> For the requirements set forth in the methodology for the price coupling algorithm and for the continuous trading matching algorithm in accordance with Article 37(5) of Commission Regulation (EU) 2015/1222 the creation of virtual bidding zones may be needed (cfr. Requirement 2.1.k of Annex 1). It may be that these virtual bidding zones are accompanied by virtual scheduling areas and virtual NEMO trading hubs to ensure proper modelisation of the functionality. These virtual bidding zones fall under this proposal.

2. All NEMOs shall provide the following information pursuant to the algorithm methodology and Article 43(2) of CACM Regulation, resulting from the SDAC, to all TSOs, for each market time unit:
  - a) net position per bidding zone;
  - b) net position per scheduling area;
  - c) net position per NEMO trading hub;
  - d) a single clearing price for each bidding zone in EUR/MWh;
  - e) Scheduled Exchanges for each bidding zone border, between scheduling areas and between NEMO trading hubs; and
  - f) where relevant, Scheduled Exchanges into and out of individual relevant HVDC interconnectors (difference in Scheduled Exchanges in/out reflecting losses where applicable).
3. The information listed in Article 3(2)(e) and 3(2)(f) is required to ensure a coherent calculation of Scheduled Exchanges between different capacity calculation regions (hereafter referred to as “CCR”) and to ensure the implementation of arrangements pursuant Article 45 of CACM Regulation.
4. The TSOs shall develop governance functionalities, which are in line with the SDAC, for the Scheduled Exchange Calculator in coordination with all NEMOs.
5. The Scheduled Exchange Calculator shall notify the results of the DA Scheduled Exchanges Calculation by 13:00 under normal operation, and will endeavour to deliver these ahead of the intra day gate opening time so that the day-ahead post-coupling processes can be completed. If there are issues ascertaining the market coupling results, the Schedule Exchange Calculator shall notify the results no later than 15.30 market time day-ahead as per CACM Regulation Article 43(2).

#### **Article 4 - General Principles for Calculation of Scheduled Exchanges**

1. The Scheduled Exchange Calculator shall calculate Scheduled Exchanges between bidding zones, scheduling areas and NEMO trading hubs as defined in this methodology and according to the following principles:
  - i. Only the Scheduled Exchange Calculator shall calculate the DA Scheduled Exchanges.
  - ii. The calculation of DA Scheduled Exchanges shall be carried out by the Scheduled Exchange Calculator in such a way that the constraints described in Article 5 of this DA SEC Proposal are respected.
  - iii. The calculation of DA Scheduled Exchanges as described in Articles 6, 7 and 8 of this DA SEC Proposal shall be based upon the net position of bidding zones, scheduling areas and NEMO trading hubs.
  - iv. For cross border HVDC interconnectors within a CCR applying the flow-based approach and where the impact of an exchange over the HVDC interconnector is considered during flow-based capacity allocation, the Scheduled Exchanges over the respective bidding zone border may differ from the Flow Based net positions on the virtual hub used to model the HVDC interconnector to ensure optimal solution in accordance with this DA SEC Proposal. This allows, if configured as such, a calculation based only on net positions of the scheduling area and bidding zone, a set of



constraints and Scheduled Exchanges on relevant bidding zone borders (as for other AC interconnectors).

- v. Scheduled Exchanges between bidding zones, where one bidding zone has multiple scheduling areas, shall be consistent i.e. the Scheduled Exchanges shall be calculated by the Scheduled Exchange Calculator and the sum of the Scheduled Exchanges on the scheduling areas' borders corresponding to this bidding zone border shall equal the Scheduled Exchange on this bidding zone border.

### **Article 5 - Methodology for calculating Scheduled Exchanges between bidding zones, scheduling areas and NEMO trading hubs resulting from SDAC**

1. The DA SEC Methodology shall be based on a step-wise calculation of DA Scheduled Exchanges. The Scheduled Exchange Calculator shall respect the principles defined in Article 4 of this DA SEC Proposal.
2. The calculation shall be performed per market time unit:
  - i. The Scheduled Exchange Calculator shall calculate respective Scheduled Exchanges stepwise for the three different levels (bidding zones, scheduling areas and NEMO trading hubs);
  - ii. Each subsequent step shall take as a constraint the output from the previous step;
  - iii. The calculation of the DA Scheduled Exchanges between bidding zones shall follow the principles described in Article 6 of this DA SEC Proposal;
  - iv. The calculation of the Scheduled Exchanges between scheduling areas shall follow the principles described in Article 7 of this DA SEC Proposal;
  - v. The calculation of Scheduled Exchanges between NEMO trading hubs shall follow the principles described in Article 8 of this DA SEC Proposal; and
  - vi. Scheduled Exchanges shall always be calculated for a specific direction i.e. Scheduled Exchange from/to.

### **Article 6 - Calculation of Scheduled Exchanges between bidding zones**

1. The Scheduled Exchange Calculator shall calculate the Scheduled Exchanges between bidding zones based on bidding zone net positions provided by all NEMOs according to Article 3 of this DA SEC Proposal.
2. Bidding zone borders in the calculation in this Article consist of the set of bidding zone borders and, where relevant, individual HVDC interconnectors considered in the SDAC.
3. When considering the Coordinated Net Transmission Capacity (hereafter referred to as “CNTC”) approach, where a price difference exists between two bidding zones either the available capacity has been fully used or another allocation constraint (e.g. ramping constraint) was active. Hence, the Scheduled Exchange shall respect the active allocation constraint.

4. When the allocation of cross-border capacities is based on bidding zone net positions (e.g. flow-based approach), or in case of indeterminacies<sup>2</sup>, several routes could be possible. The optimisation of the Scheduled Exchanges shall therefore aim to minimise the costs associated with the Scheduled Exchanges between the involved bidding zones taking into account the principles in Article 4(1) of this DA SEC Proposal. For this minimisation, the Scheduled Exchanges between involved bidding zones shall be used as a set of variables to minimise the target function following:

$$\min \left( \sum_{i=1}^n lc_{i,h} * flow\_bzb_{i,h} + \sum_{i=1}^n qc_{i,h} * flow\_bzb_{i,h}^2 \right)$$

With:

- $lc_{i,h}$  = linear cost coefficient associated to bidding zone border i for market time unit h
  - $qc_{i,h}$  = quadratic cost coefficient associated to bidding zone border i for market time unit h
  - $flow\_bzb_{i,h}$  = Scheduled Exchange on bidding zone border i for market time unit h
  - n = total number of bidding zone borders and individual HVDC interconnectors considered in the optimization
5. The costs coefficients (both linear and quadratic) associated to each bidding zone border are provided as an input by TSOs. The cost coefficients are fixed for a given market topology (set of bidding zone borders) and do not change per market time unit. The cost coefficients are determined in such a way that following objectives are met:
- i. Uniqueness by introducing a quadratic cost coefficient
  - ii. Shortest path rule to avoid loops and to ensure a minimization of transits between bidding zones by setting of the linear cost coefficient
  - iii. Priorisation rule to prioritise certain path (set of bidding zone borders) for exchanges between two bidding zones to avoid path of the flow which will reduce economic efficiency
  - iv. For HVDC interconnectors, which apply losses in the SDAC, the linear cost coefficient shall be set to a high value to avoid undue scheduling through the interconnector
  - v. The size of bidding zones shall be taken into account. This is concretely translated as, for a given bidding zone, in case a bidding zone border has a significantly higher or lower thermal capacity than the other bidding zone borders, then the quadratic cost coefficient of this bidding zone border shall be set appropriately (i.e. bidding zone borders which have a limited installed capacity will set a higher quadratic cost coefficient)
6. The cost coefficients are determined in such a way that the optimisation avoids creating high differences between Scheduled Exchange values it calculates, especially on a given bidding zone's borders, while respecting the objectives set forth in Article 6(5). Hence, the ratio between the different cost coefficients on each bidding zone border is more important than the exact value of the cost coefficient.

<sup>2</sup> In case there is no congestion between two or more bidding zones applying a CNTC approach (i.e. no allocation constraint was active and the bidding zone prices are equal), then multiple routes are available.

7. CCRs which apply the FB approach or the CNTC approach shall set the same cost coefficients (linear and quadratic) for all borders within the CCR, unless this approach breaches the objectives set forth in Article 6(5).
8. When a new bidding zone border is added to the SDAC or when a CCR implements either CNTC or FB, the cost coefficients on all bidding zone borders of the CCR bidding zone borders to neighbouring CCR(s) shall be reviewed to ensure compliance with the requirements set forth in previous Articles. NRAs shall be informed of the changes.
9. TSOs and NEMOs shall review the cost coefficients used in the SDAC regularly, at least once every two years, in accordance with Article 43(4) of the CACM Regulation. NRAs shall be informed of any changes to the cost coefficient.
10. Furthermore, for regions where Flow Based Bilateral Intuitiveness applies, it needs to be ensured that Scheduled Exchanges are defined from low price to high price areas. Therefore, an intuitiveness scheduling restriction between bidding zones is applied. The intuitiveness scheduling restriction between bidding zone A and bidding zone B is described as follows:

$$(Price_B - Price_A) * Scheduled Exchanges_{A \rightarrow B} \geq 0$$

11. The calculated Scheduled Exchanges between bidding zones shall be consistent with the bidding zones' net positions provided by all NEMOs according to Article 3 of this DA SEC Proposal.
12. The Scheduled Exchange Calculator shall respect the allocation constraints in the SDAC.

### **Article 7 - Calculation of Scheduled Exchanges between scheduling areas**

1. After the calculation of the Scheduled Exchanges between bidding zones, the Scheduled Exchange Calculator can calculate the Scheduled Exchanges between scheduling areas, where appropriate. In case scheduling areas are equal to bidding zones, Scheduled Exchanges between two bidding zones are equal to the Scheduled Exchanges between two scheduling areas.
2. Calculation of Scheduled Exchanges between scheduling areas is only performed between scheduling areas where at least one NEMO operates.
3. If there is more than one scheduling area within a bidding zone then:
  - a) The Scheduled Exchange Calculator shall calculate the Scheduled Exchanges between the scheduling areas using the scheduling areas' net positions provided according to Article 3 of this DA SEC Proposal.
  - b) For the calculation of Scheduled Exchanges between scheduling areas the same optimisation approach shall be applied as for the Scheduled Exchanges between bidding zones following:

$$\min \left( \sum_{i=1}^n lc_{i,h} * flow\_sab_{i,h} + \sum_{i=1}^n qc_{i,h} * flow\_sab_{i,h}^2 \right)$$

With:

- $lc_{i,h}$  = linear cost coefficient associated to scheduling area border i for market time unit h
- $qc_{i,h}$  = quadratic cost coefficient associated to scheduling area border i for market time unit h
- $flow\_sab_{i,h}$  = Scheduled Exchange on scheduling area border i and market time unit h
- $n$  = number of scheduling area borders considered in the optimization

- c) If there are multiple scheduling areas on one (or both) side(s) of the bidding zone border, then the Scheduled Exchanges between the scheduling areas, over the bidding zone border, shall be attributed to each scheduling area border proportionally to the installed thermal capacity of the interconnectors on each scheduling area border, following:

$$flow\_sab_{i,h} = \frac{TC\_sab_i}{TC\_bzb_k} flow\_bzb_{k,h}$$

With:

- $flow\_sab_{i,h}$  = Scheduled Exchange on scheduling area border i and market time unit h
- $TC\_sab_i$  = Thermal capacity installed on scheduling area border i
- $TC\_bzb_k$  = Thermal capacity installed on bidding zone border k of which scheduling area border i is a part of
- $flow\_bzb_{k,h}$  = Scheduled Exchange on bidding zone border k and market time unit h

4. The linear and quadratic cost coefficient for the scheduling area borders within the same bidding zone border shall be equal.
5. The calculated Scheduled Exchanges between scheduling areas shall be consistent with the scheduling areas' net positions provided by NEMOs according to Article 3 of this DA SEC Proposal:

## Article 8 - Calculation of Scheduled Exchanges between NEMO trading hubs

1. The Scheduled Exchange Calculator shall calculate the Scheduled Exchanges between NEMO trading hubs based on NEMO trading hubs' net positions provided by all NEMOs according to Article 3 of this DA SEC Proposal.
2. The calculation of Scheduled Exchanges between NEMO trading hubs aims at minimizing the Net Financial Exposure (hereinafter referred to as "NFE") between the central counter parties associated to each NEMO (hereinafter referred to as "CCP"). The NFE between two pairs of CCPs is expressed with relation to the Scheduled Exchanges between the NEMO trading hubs of their corresponding NEMO as follows:

$$NFE_{A|B} = \sum_{h \in H} \sum_{l \in L_{A,B}} P_B^h * (1 - loss_{n_1,n_2}) * flow_{n_1,n_2}^h - P_A^h * (1 - loss_{n_2,n_1}) * flow_{n_2,n_1}^h$$

with:

- A, B being two different CCPs
- $L_{A,B} = \{l = (n_1, n_2) \in L^d \mid ccp(n_1) = A \text{ and } ccp(n_2) = B\}$  being the set of all lines linking NEMO trading hubs of NEMO corresponding to CCP A and NEMO trading hubs of NEMO corresponding to CCP B.  $L^d$  is the set of all directed lines connecting two NEMO Trading Hubs.
- $ccp(n_1), ccp(n_2)$  is a function giving the CCP corresponding to NEMO trading hub  $n_1$  and  $n_2$  respectively
- $P_A^h, P_B^h$  is the clearing price for bidding zone of CCP A and B respectively for market time unit h
- $flow_{n_1,n_2}^h$  is the Scheduled Exchange from NEMO trading hub  $n_1$  to NEMO trading hub  $n_2$  for market time unit h
- $loss_{n_1,n_2}$  is the loss associated to the network constraint underlying scheduled exchange, or 0 if no such constraint exists
- h is the market time unit and H is the set of all market time units

3. The NFE is firstly minimized using a sum of quadratic terms

$$\min \sum_{c \in CCP} \sum_{c' \in CCP \setminus \{c\}} (NFE_{c|c'})^2$$

with:

- CCP is the set of all the CCPs
- c is a CCP
- c' is other CCP different than CCP c

4. A second minimization problem is applied using linear and quadratic cost coefficients to avoid any indeterminacies and define a solution consistent with the Scheduled Exchanges between scheduling areas calculated pursuant to Article 8 of this DA SEC Proposal

$$\min \left( \sum_{i=1}^n lc_i * flow_{n_1, n_2}^h + \sum_{i=1}^n qc_i * (flow_{n_1, n_2}^h)^2 \right)$$

with:

- $lc_i$  = linear cost coefficient associated to of NEMO trading hub border  $i$
- $qc_i$  = quadratic cost coefficient associated to of NEMO trading hub border  $i$
- $flow_{n_1, n_2}^h$  is the Scheduled Exchange from NEMO trading hub  $n_1$  to NEMO trading hub  $n_2$  for market time unit  $h$
- $n$  = total number of NEMO trading hub borders considered in the optimization, meaning Scheduled Exchange from NEMO trading hub  $n_1$  to NEMO trading hub  $n_2$

### Article 9 - Implementation of the DA SEC Methodology

1. The TSOs shall implement the DA SEC Proposal when the day-ahead market coupling operator function developed in accordance with Article 7(3) of CACM Regulation, the price coupling algorithm in accordance with Article 37(5) of CACM Regulation and, where relevant, arrangements concerning more than one NEMO in accordance with Article 45 of CACM Regulation are implemented in each bidding zone and its borders.

### Article 10 - Language

1. The reference language for this DA SEC Proposal shall be English. For the avoidance of doubt, where TSOs need to translate this DA SEC Proposal into their national language(s), in the event of inconsistencies between the English version published by TSOs in accordance with Article 9(14) of the CACM Regulation and any version in another language, the relevant TSOs shall be obliged to dispel any inconsistencies by providing a revised translation of this DA SEC Proposal to their relevant national regulatory authorities.