February 6 Nordic CCM Stakeholder Forum (SHF)

web conference

(10.00-12.00)

ENERGINET SVENSKA KRAFTNÄT FINGRID Statnett

Agenda

1. Welcome and introduction
2. Short step back to ACER’s decision on the LT CCM
3. DA/ID CCM and public consultation
4. Questions and answers

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1. Welcome and introduction
where do we come from and where are we now

DA/ID CCM RfA (DUR, EI, EV)
Dec 20

DA/ID CCM (version 2) submitted by ENDK, FG, and Svk
Jun 20

DA/ID CCM (version 1) approved
Jul 16

DA/ID CCM (version 2) approved by DUR, EI, EV

2018 — 2018 | 2019 | 2020 — 2020

Jan 16
FCA CCM submission

May 15
FCA CCM ACER referal

Oct 30
FCA CCM ACER decision

DA/ID CCM (version 3) amendment process

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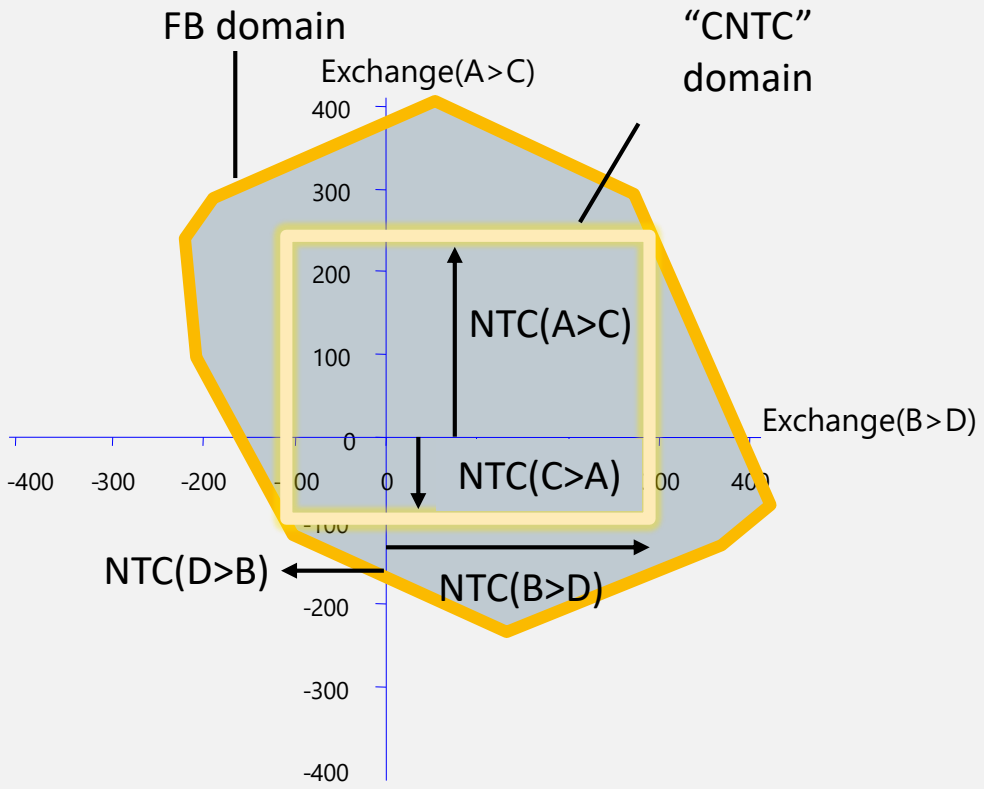
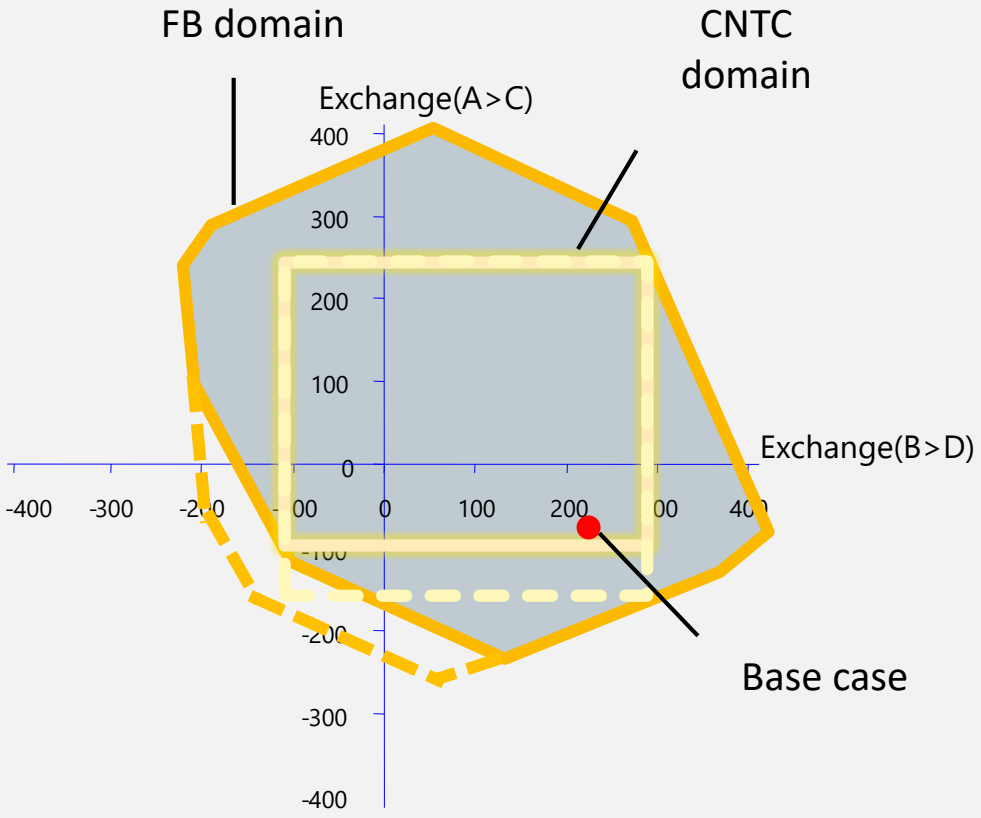
2. Short step back to ACER's decision on the LT CCM - Original Nordic TSO LT CCM proposal: CNTC

- In the FCA GL, the CNTC methodology is the default capacity calculation approach
- The Nordic TSOs proposed a CNTC LT capacity calculation methodology, where
  - A linearized security domain (i.e. FB domain is assessed) first, and
  - A CNTC domain is extracted from that
- As there are many CNTC domains that can be extracted from the FB domain, the CNTC extraction is based on an **optimization**



2. Short step back to ACER's decision on the LT CCM - Original Nordic TSO LT CCM proposal: CNTC

- CNTC characteristics
  - CNTC is a "limited / not-so-detailed" way to represent grid limitations
  - All CNTC capacities are simultaneously feasible
- Due to these characteristics, the fear is that the CNTC domain, that is extracted from a FB domain, is too restrictive (compared to today's values)
- Therefore, relaxation of the FB domain is considered for the CNTC extraction
  - This comes at a price: the CNTC domain "sticks" out of the FB domain and may cause an operational risk.



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2. Short step back to ACER's decision on the LT CCM

- On May 15, Nordic NRAs referred the LT CCM to ACER
  - ✓ NRAs have a different interpretation of "what constitutes a CNTC and what constitutes a FB methodology"
- ACER amended the LT CCM, and iterated with TSOs and NRAs in weekly conference calls
- ACER decided on October 30 (Decision 16/2019) to approve the Nordic LT CCM

- **ACER decided on a FB Nordic LT CCM**:

> (35) According to the CACM Regulation, the CNTC approach was never meant to be applied in a meshed transmission network, because it is extremely difficult efficiently to define simultaneously feasible NTC values for highly interdependent borders as is the case for the Nordic CCR. Therefore, the Nordic CCR should ideally apply a flow-based approach

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2. Short step back to ACER's decision on the LT CCM - some highlights

Original Nordic TSO LT CCM proposal

- CNTC
  A linearized security domain (i.e. FB domain is assessed) first, and a CNTC domain is extracted from that
- Optimization-based CNTC extraction
- Dynamic constraints as CNEs (as so-called PTCs: Power Transfer Corridors)
  This means that the dynamic analysis can be performed by the TSO
- Advanced hybrid coupling is part of the CCM
- Publication of data as in the Nordic DA/ID CCM

ACER decision on LT CCM

- FB
  FB with ATC extraction as intermediate solution until a FB LT allocation is supported by the service provider (the terminology CNTC is not used)
- Optimization-based ATC extraction (**unchanged**)
- Dynamic constraints as allocation constraints (in case of multiple network element - the dynamic analysis can be performed by the TSO to assess the Fmax) or CNE (in case of an individual network element - the dynamic analysis needs to be performed by the CCC to assess the Fmax)
- Advanced hybrid coupling is part of the CCM (**unchanged**)
- Publication of data has been extended and aligned to that of the ACER decision on the Core DA/ID CCM

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2. Short step back to ACER's decision on the LT CCM - some highlights

Amendment of the LT CCM / actions required within 18 months after implementation of the methodology

- Amend the CCM by including the **method for assessing the economic efficiency of including internal network elements** (combined with the relevant contingencies) in the long-term capacity calculation.
- Amend the CCM - in case the concerned Nordic TSOs cannot find and implement a more efficient solution than the applied **combined dynamic constraint -** by:
  (a) the technical and legal justification for the need to continue using the combined dynamic constraint indicating the underlying operational security limits and why they cannot be transformed efficiently into maximum flow on specific CNECs;
  (b) a detailed methodology to calculate the values of the combined dynamic constraints.
- Amend the CCM by **further harmonizing the generation shift key methodology**.
- Amend the CCM by including the description and definition of the functions used in the **ATC extraction**.

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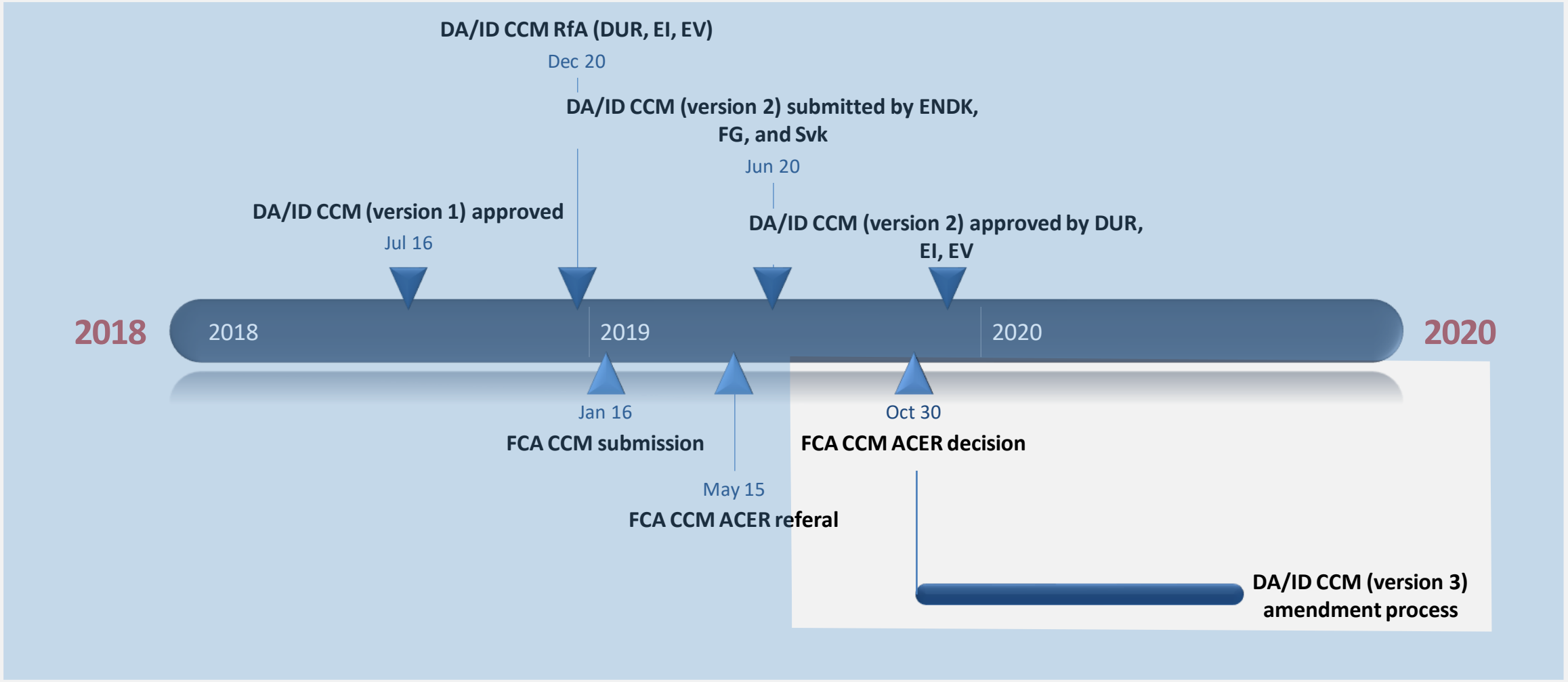
3. DA/ID CCM and public consultation - ACER's decision on the LT CCM > DA/ID CCM amendment



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3. DA/ID CCM and public consultation - ACER's decision on the LT CCM > DA/ID CCM amendment

ACER decision LT CCM

- FB
  FB with ATC extraction as intermediate solution until a FB LT allocation is supported by the service provider (the terminology CNTC is not used)
- Optimization-based ATC extraction
- Dynamic constraints as allocation constraints (in case of multiple network element - the dynamic analysis can be performed by the TSO to assess the Fmax) or CNE (in case of an individual network element - the dynamic analysis needs to be performed by the CCC to assess the Fmax)
- Advanced hybrid coupling is part of the CCM
- Publication of data has been extended and aligned to that of the ACER decision on the Core DA/ID CCM
- Amendment of the LT CCM / actions required within 18 months after implementation of the methodology

Amended DA/ID CCM

- FB
  FB with ATC extraction as intermediate solution until a **FB ID allocation** is supported (the terminology CNTC is not used)
- Optimization-based ATC extraction
- Dynamic constraints as allocation constraints (in case of multiple network element - the dynamic analysis can be performed by the TSO to assess the Fmax) or CNE (in case of an individual network element - the dynamic analysis needs to be performed by the CCC to assess the Fmax)
- Advanced hybrid coupling is part of the CCM
- Publication of data has been extended and aligned to that of the ACER decision on the Core DA/ID CCM
- Amendment of the DA/ID CCM / actions required within 18 months after implementation of the methodology

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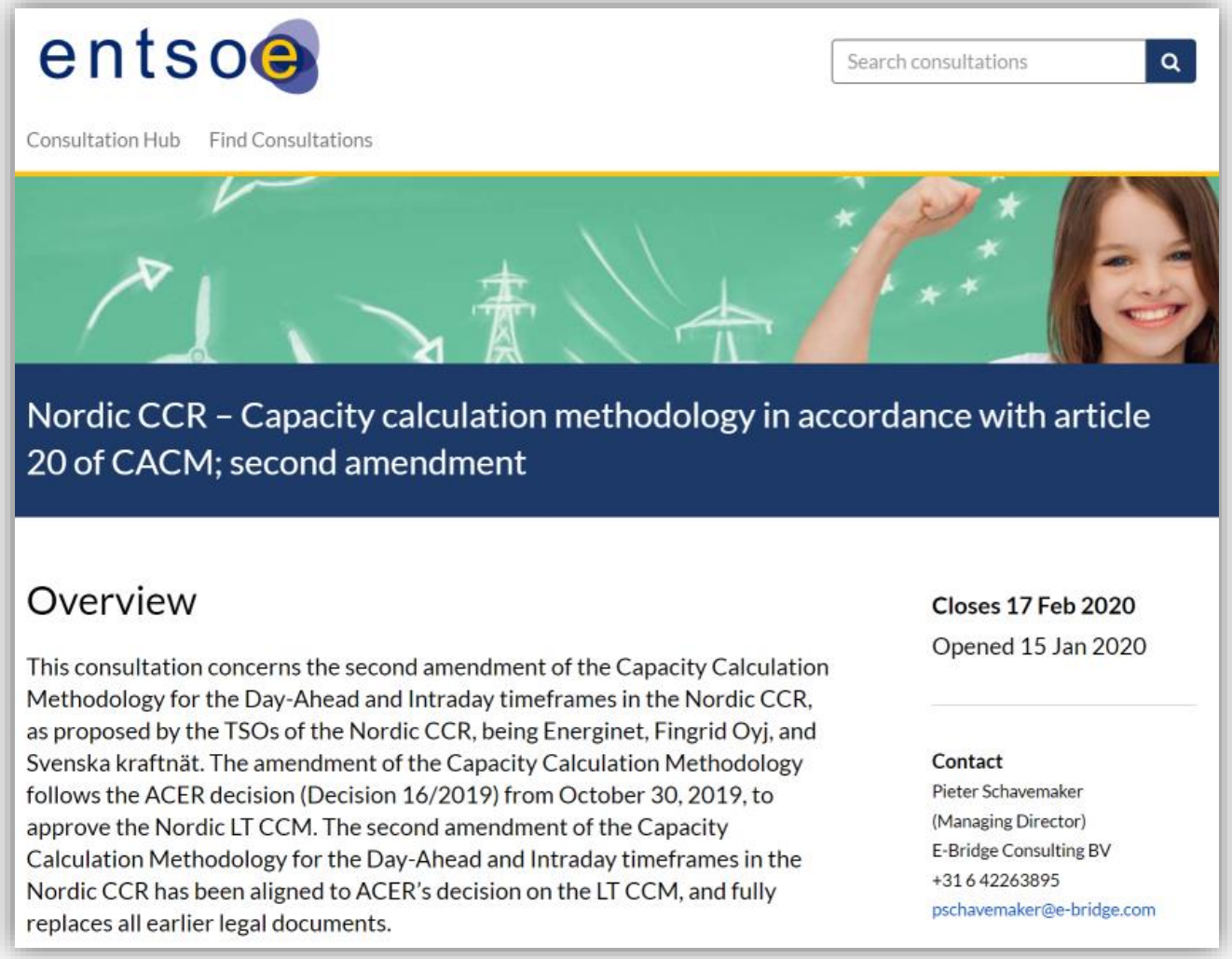
3. DA/ID CCM and public consultation

- New proposal for DA/ID CCM ("version 3") in public consultation Jan. 15th to Feb. 17th
- The link to the consultation on the ENTSO-E consultation platform: https://consultations.entsoe.eu/markets/cacm_article12_amended_da_id_ccm_nordic_ccr/
- Both the amended legal document and the supporting document are available for download from the consultation platform.



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