# Jan 29 SHG web conference

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# Agenda

1. Welcome and introduction: public consultation DA/ID CCM + Feb 6 SHF (13.00-13.15)

2. KPIs (13.15-14.00)

3. Non-intuitivity (14.00-14.15)

4. AOB (14.15-14.30)

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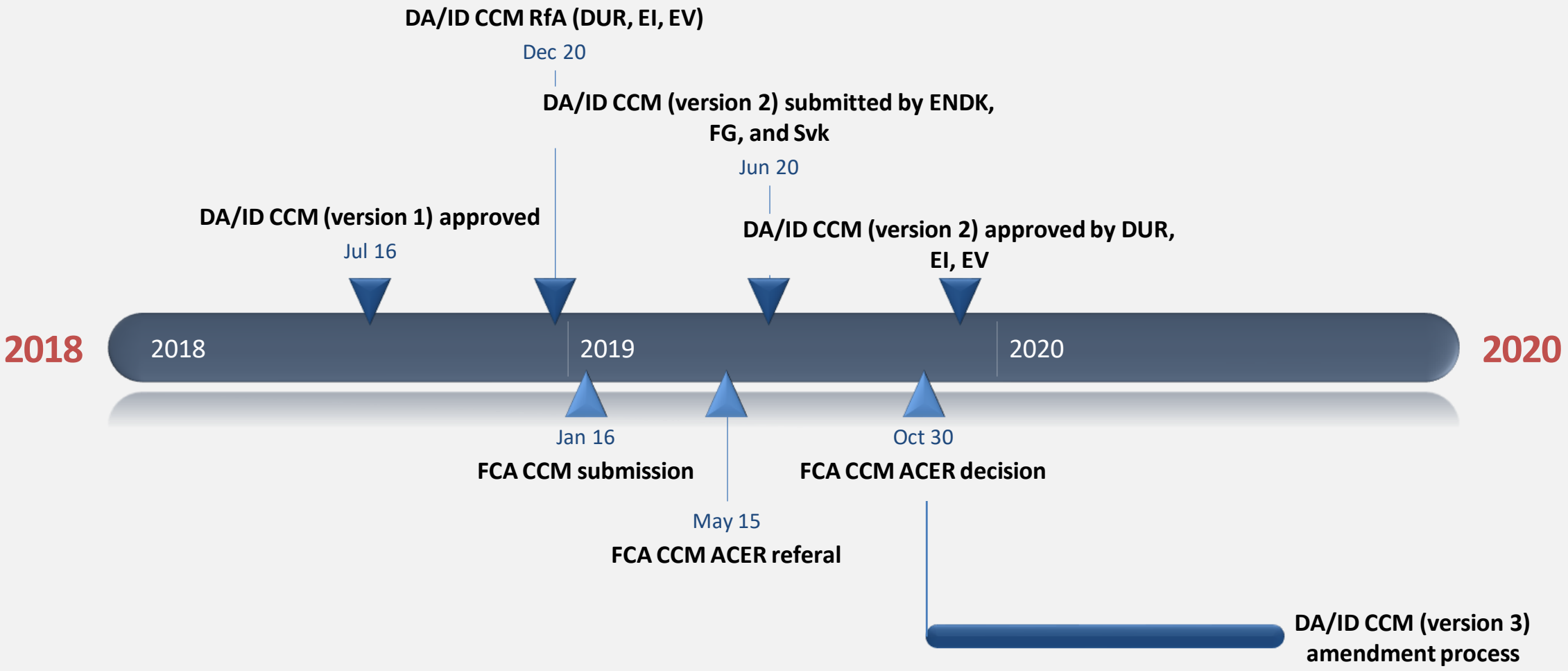
# 1. Welcome and introduction
# where do we come from and where are we now

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# 1. Welcome and introduction public consultation DA/ID CCM + Feb 6 SHF

- 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.
- Stakeholder forum on Feb. 6th organized as a telco, where stakeholders can ask clarifying questions to the proposed CCM
  - ✓TSOs will give a short intro
  - ✓Purpose of the telco is not to discuss content or oral delivery of response
  - ✓Registration is required: https://nordic_ccm_shf_february_2020.eventbrite.nl

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# 2. KPIs
# KPI Development

1. Feedback & response
2. Evaluation
   a) Go/No-go criteria
3. KPI's
   a) FB capacity calculation process – input
   b) FB capacity calculation process – output
   c) FB capacity allocation results
4. KPI suggested by Vattenfall

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# 2. KPIs
# Feedback & response

| Area | Details | Nordic CCM comment | Included in updated KPI document? |
|---|---|---|---|
| Duration/NOGO criteria | All KPIs met for 1 month, else restart 1month | The duration where all KPI's are to be met fully also affect the 'rigidness' of the KPI's. Some nuance needs to be adressed, as it might be too binary | Yes (Readiness evaluation)<br>New suggestion:<br>last 1 month: all "green"<br>last 2 months: no "red" |
| | All KPIs met for 12 months, else restart 12mts | | |
| | All KPIs met for 3 months, else restart 3mts | | |
| | TSOs proposal to meet the KPIs only in the last month of parallel runs contradicts with the approved CCR Nordic CCM | | |
| FB Intuitive | Simulate FB intuitive as well as FB plain during the \|\|-run | Possibly interesting to study, but not part of KPI's.<br>"Intuitiveness" is not a performance indicator as it is not part of CCM.<br>Prices and scheduled flows will be published | No<br>However it might be studied, but not as a part of go-live criterion |
| | Additional KPI: Explicability and intuitiveness of the results (prices and flows) | | |
| Data Quality | A tool has to be in place for checking quality of the FB capacity results. | Difficult to see that a tool can check quality. Quality is related to the "market logic" of data; there is a close link between change in social welfare, prices and flows, over loads etc. This logic can only be checked by a human.<br><br>What is quality (ie. good/poor)? Can the tool be EUPHEMIA, and quality=SEW?<br><br>Quality in terms of operational security can be determined in the domain validation tool by TSO operators | Partly (KPI04)<br>SEW is part of KPI's |
| | How to measure data quality? | A basic measure is whether the ACLF converges. Future quality measure is FRM (not possible during \|\|-run though. | Yes (KPI01)<br>Measured through how many times fallback/substitution CGM's are used. (When the loadflow is diverging, subsitution rules comes into effect) |
| | Need to clarify how fallback results evaluate in terms of KPI – there needs to be a limit on how many consecutive fallbacks are used | Agreed | Yes (KPI01) |

# 2. KPIs
# Feedback & response

| Area | Details | Nordic CCM comment | Included in updated Go-live criterias - Version "1"? |
|---|---|---|---|
| Monitoring | We ask for further development and clarification what regards how the KPIs are measured, and followed up | Agreed | Yes<br>Metrics introduced with clearly stated measurements |
| | Categorize potential issues on different levels of severity (and consequently impacts) | Agreed | Yes<br>Metrics introduced with 3 levels of severity |
| | How is oversight by the regulatory authorities ensured? | This is probably a question better directed to NRA's | No |
| Technical implementation | Formats, integration and data converters need to be in place | Agreed, but it is part of the technical implementation, not KPI's. It is certainly a pre-requisite for starting the parallell run, but not an indicator to measure performance on during \|\|-run. | No |
| Specific indicators | MCP, MCV, NEX, PRB etc. | Many of the indicators sounds reasonably to monitor, but not strictly as criteria for go-live. Several of the suggested indicators are for comparing FBP/FBI, which is not intended to be part of the go-live criterion.<br>The generic discussion of PI/RI measurements are better handled in MIT design | Partly<br>- KPI01 Fallback (Convergence)<br>- KPI04 SEW |
| | Take into account the total welfare for the whole Europe, FB vs. NTC in the Nordics | | |
| SH Acceptance | When you start the //run you need to give an extensive workshop to indicate what it is, and so on | Agreed | No |
| Specific indicators | Monitor structural impact – whether specific group of customers suffering systematically | Yes, this should be monitored/analyzed, but not part of go-live criteria. A systematic (and correct) loss of income cannot be a barrier for go-live | No |
| Monitoring | Transparency of the capacity calculation process;<br>- Cross-zonal capacities (FB parameters) calculated and published every day in line with the operational timelines (publication DL same for FB parameters as for NTCs)<br>- At least the same level of transparency as in Central Europe in all Nordic countries (e.g. locations of the CNEs published) | This is handled in the MIT implementation track. Difficult to see a KPI to measure this, maybe as entry criteria?<br>The same level of transparency as CE is probably not possible. | Partly, the publishing of data is covered by KPI03 |

# 2. KPIs
# Readiness Evaluation

Three levels of evaluation

Evaluated and reported on a month-by-month basis

| | |
|---|---|
| Acceptable | The performance is acceptable, no immediate measures need to be taken |
| Concern | The performance is concerning – there are issues that need to be addressed |
| Critical | The performance is not acceptable – there are issues that severely affect performance |

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# 2. KPIs
# Readiness Evaluation – Go/No-Go

1. No critical in the last 2 months
2. No concern in the last 1 month

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KPI01 | 🔴 | 🔴 | 🔴 | 🔴 | 🔴 | 🟢 | 🟡 | 🟡 | 🟢 | 🟢 | 🟢 | 🟢 |
| KPI02 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🟢 | 🔴 | 🟢 | 🟢 | 🟢 | 🟡 | 🟢 |
| KPI03 | 🟡 | 🟡 | 🟡 | 🟡 | 🟡 | 🔴 | 🟡 | 🔴 | 🟢 | 🟡 | 🟢 | 🟢 |
| KPI04 | 🔴 | 🔴 | 🔴 | 🔴 | 🔴 | 🔴 | 🔴 | 🟡 | 🔴 | 🟡 | 🟢 | 🟢 |

or, in other words

All KPI's must be met with acceptable level the last month, and there can be no critical statuses in the month before

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# 2. KPIs
# FB capacity calculation process - input

**Purpose:** Catch-all for issues concerning data provision and quality in TSO/RSC processes

The capacity calculation process requires valid input data, timings to be respected, and a successful calculation. If needed, a proper fallback mechanisms is triggered, not leading to any delay in the provision of capacity information by the RSC to the NEMOs / allocation mechanism and publication platform and stakeholder information tool. However, this needs to be monitored in order to not be in a fallback situation too often.

- Several different layers of fallbacks are included – IGM, CCC input data, CCC process, Capacities etc.

| KPI01: Metrics for fallbacks | | |
|---|---|---|
| Acceptable | Concern | Critical |
| Use of fallback in less than 7% of MTUs | Use of fallback in between 7% - 17% of MTUs | Use of fallback in more than 17% of MTUs |

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# 2. KPIs
# FB capacity calculation process - output

**Purpose:** Monitor that results are delivered in time

- There is no structural delay in:

| KPI02: Metrics for delivering Domain to SDAC | | |
|---|---|---|
| Acceptable | Concern | Critical |
| Capacities delivered in time for all days (i.e. 100%) | Capacities delivered in time, in between 96% - 100% of all days | Capacities delivered in time, for less than 96% of all days |

| KPI03: Metrics for delivering capacity information to MIT | | |
|---|---|---|
| Acceptable | Concern | Critical |
| Capacities delivered in time for more than 93% of all days | Capacities delivered in time in between 83% - 93% of all days | Capacities delivered in time, for less than 83% of all days |

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# 2. KPIs
# FB capacity allocation

**Purpose:** verify that the aggregated market welfare obtained under FB MC is higher than the aggregated market welfare obtained in the operational ATC MC, with the same level of operational security.

- Evaluation is in nature a bit binary – either welfare is increased or not.
- Difficult to evaluate "level of operational security", but if there is not any observed increase in SEW, there is cause for concern.

| KPI04: Metrics for socioeconomic welfare | | |
|---|---|---|
| Acceptable | Concern | Critical |
| The total SEW for Nordics is higher in FB than NTC at the same level of operational security | The total SEW for Nordics in FB is lower than in NTC at the same level of operational security | Not applicable |

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# 2. KPIs
# Proposed KPI from Vattenfall

(.msg)

Email Vattenfall

*for each interconnection between bidding zones:*

## KPI = 1 - (Flowbased flow – Physical flow) / Flowbased flow

Rationale: This KPI shows how the flow based methodology delivers compared to the physical transfer

*"The flow based flows are the optimal flows from a social welfare perspective. That's why the denominator is the flow based flow. So the KPI is reflecting how much of the optimal theoretical solution is captured in the real physical world with 1 as the perfect solution. Otherwise there would be no point adding this methodology if the physical reality differs far from the optimal solution."*

Example:

Optimal flow based solution for SE3->SE4 3500 MW, three cases of physical flows:

Case 1: Flow based flow 3500 MW, Physical flow 3500 MW -> 1-(3500-3500)/3500 = 1

Case 2: Flow based flow 3500 MW, Physical flow 2000 MW -> 1-(3500-2000)/3500 = 0.57

Case 3: Flow based flow 3500 MW, Physical flow -1000 MW -> 1-(3500-[-1000])/3500 = -0.29

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# 2. KPIs

# KPI = 1- ($P_{FB}$– $P_{physical}$) / $P_{FB}$

## What does the KPI measure?

a) Correctness of PTDF (~linearization errors)? **$P_{FB}$ = NP*PTDF**, would it not the make more sense to set **$P_{FB}$ = $NP_{physical}$ *PTDF** ?

b) To what extent scheduled FB flows are realized? Cannot be measured until we have Flowbased market coupling, ie. after go-live..

## What is "Flowbased Flow" $P_{FB}$?

- Assumption: $P_{FB}$ = Scheduled flow from DA MC, ie. NP*PTDF.
- Only flows originating from cross-border trade. Possibly perform ACLF on market results?

## What is "Physical Flow" $P_{physical}$?

- Assumption: Observed flow from real-time measurements and state estimation ($P_{physical}$ ~= $P_{observed}$).
- Flows originating from cross-border trade as well as internal trades and loop flows

## Is this FRM?

- No, FRM is reflecting the difference between forecasted flow in CGM ($P_{CGM}$) and observed flow ($P_{observed}$). Also includes N-1 considerations

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# 2. KPIs
# Nordic TSO's position on Vattenfall KPI

1. Scheduled flows and physical flows are not comparable
2. The physical flows stems from NTC, not FB during ||-run

In conclusion;

**Nordic TSO's will not implement this as a KPI for the ||-run**

Other KPI proposals are always welcome!

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