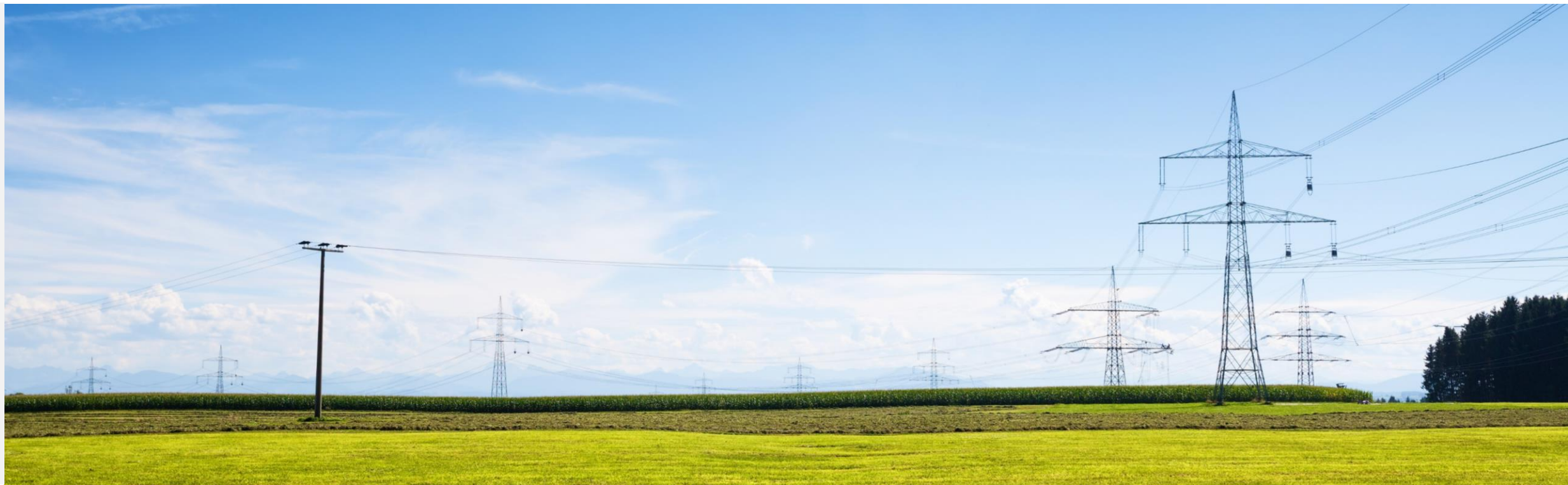


# ENTSO-E CNC Implementation updates and TG HP on grid forming

TOP.2

18th GC ESC meeting, 04 June 2020

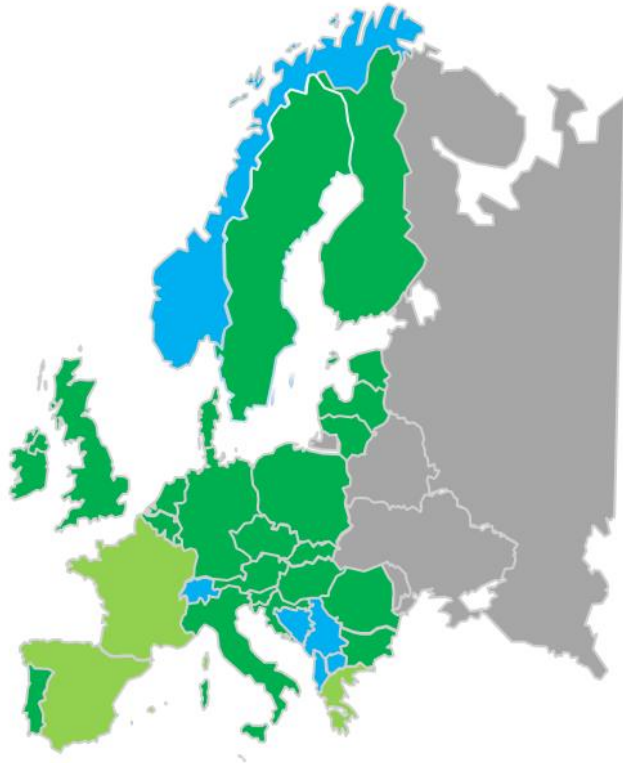


Ioannis Theologitis, ENTSO-E

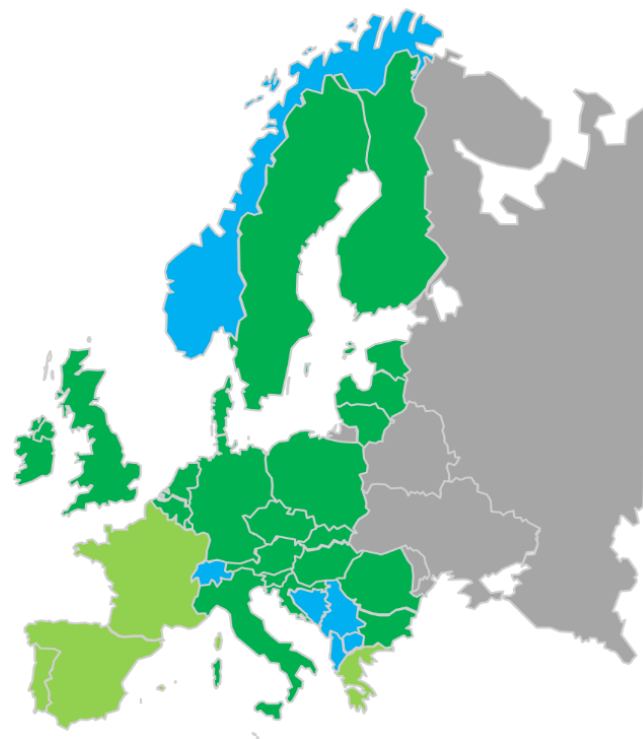
# CNC Implementation Monitoring

# CNC Implementation Monitoring – June 2020 status

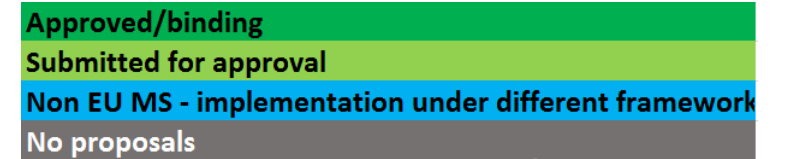
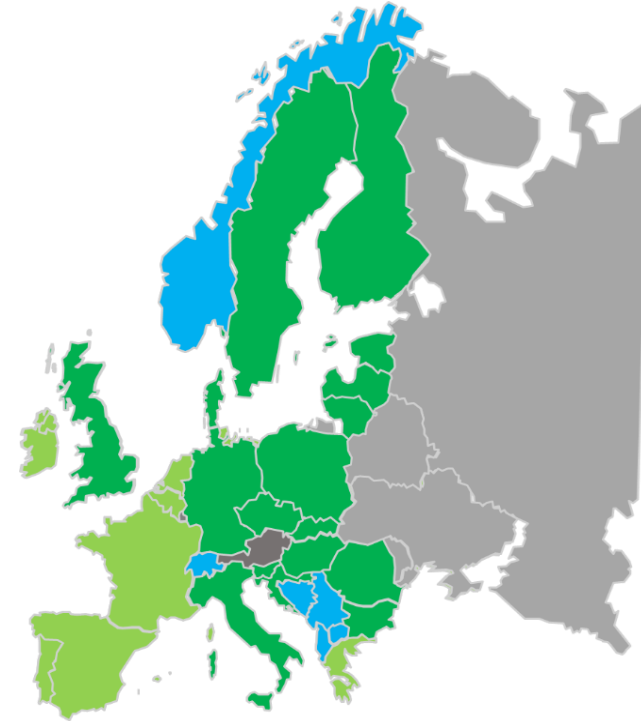
RfG NC



DC NC



HVDC NC



The CNC monitoring report of 2019 can be found [here](#)

# CNC Active Library

## CNC Active Library

**Implementation Guidance Documents**  
[Go to IGDs](#)

**Monitoring**  
[Download monitoring file](#)  
[Implementation Monitoring Report - 2019](#)

**NC News**  
[All Announcements](#)

ENTSO-E, for reasons of transparency, has been monitoring the implementation process in the European countries reporting all the necessary and publicly available information. This is an ongoing activity until Maybe 2018 for RfG NC and until September for DCC and HVDC NC. Available information, documents, websites, contacts can be found below.

In addition, a **monitoring file** (please check the Monitoring box on the left) can be downloaded which summarizes all the proposals for non-exhaustive requirements for all Connection Network Codes and their status for all the countries under the scope.

Choose a country in order to track the progress of **Connection Network Code implementation**.

Please, see below the [implementation maps](#)

**Countries**

Austria	<a href="#">NI Guides</a> <a href="#">Globe</a> <a href="#">Email</a> <a href="#">Briefcase</a>
Belgium	<a href="#">NI Guides</a> <a href="#">Globe</a> <a href="#">Email</a> <a href="#">Briefcase</a>
Bosnia and Herzegovina	<a href="#">Email</a> <a href="#">Briefcase</a>
Bulgaria	<a href="#">Email</a> <a href="#">Briefcase</a>
Croatia	<a href="#">Email</a> <a href="#">Briefcase</a>

- The new AL will provide easy access to:**
- Final approved documents (national documentation) when available – organized by CNC

**Belgium**  
[NI Guides](#) [Globe](#) [Email](#) [Briefcase](#)

DCC

DCC Document

[Download](#)

RFG

RFG Document

[Download](#)

HVDC

HVDC Document

[Download](#)

**Current Status!** ENTSO-E has surveyed and mapped the updates that are needed for each TSO e.g. updating national contacts, updating documents (from submitted to final etc). The implementation has slowed down as a result of the cyber incident and COVID-19

**Note!** The quality of information per country differs significantly due to the differences of the national implementation. For more details, one can consult national websites or the national contacts when those exist.

- National sites (update the current ones when required)
- Contact people (already incorporated in the old version)
- Any archived material shared during the national implementation process

# Overview of planning until end of 2020

# Overview of planning until end of 2020

- Continuation with the work of the Expert Groups
- Continuation of the work with the standardization bodies (e.g. CENELEC, IEC, IECRE)
- Development of the second edition of the monitoring report (by end of 2020)
  - + a revised monitoring excel file to be launched
- Submission of a first set of updated IGDs for consultation in November 2020
  - > Updates will mainly reflect discussions and outcomes at GC ESC level

# ENTSO-E 2020 Public Consultations

Column1	Topic	Article	Level 1 Article content/activity	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
2017/2195	SO GL	156.11	Cost-benefit analysis for suggesting the required minimum activation time for FCR in CE and Nordic synchronous a										
2017/1485	SO GL	75.1	Amendments to methodology for coordinating operational security analysis										
2017/1485	SO GL	76.1	Common provisions for regional operational security coordination										
2016/631	RfG	58	Non-binding guidance on implementation										
2016/1388	DCC	56	Non-binding guidance on implementation										
2016/1447	HVDC	75	Non-binding guidance on implementation										
714/2009	MAF	8.3.b	Mid Term Adequacy Forecast (MAF) report										
2019/943	CM	26.11.a	Methodology for calculating the maximum entry capacity for cross-border participation										
2019/943	CM	26.11.b	Methodology for sharing the revenues from CMs XB participation Income										
2019/943	CM	26.11.c	Common rules for the carrying out of availability checks referred to in point (b) of paragraph 10										
2019/943	CM	26.11.d	Common rules for determining when a non-availability payment is due;										
2019/943	CM	26.11.e	Draft terms of the operation of the registry as referred to in point (a) of paragraph 10										
2019/943	CM	26.11.f	Common rules for identifying capacity eligible to participate in the capacity mechanism										
2019/943	Adequacy	23	European resource adequacy assessment										
2019/941	Adequacy	9	Summer Outlook										
2019/941	Adequacy	9	Winter Outlook										
2019/943	Adequacy	23.5	European resource adequacy methodology (ERAA methodology)										
2019/943	Adequacy	23.6	Methodology for Value of Lost Load (VOLL), Cost of new entry (CONE), reliability standard										
2019/943	SOR	30.1f	Proposal defining the system operation region in accordance with Article 36										
2019/943	CI	19.4	Methodology for the Use of Congestion Income										
2019/943	other	30.1.j	Annual Work Programme 2021										

	Development of a proposal		Public Consultation		Submission of a proposal	w	Workshop /webinar
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# GC ESC Expert Groups

## Expert Group on Pump Storage Hydro

- Final meeting in June to discuss the legal opinion from ACER and ENTSO-E, consistency with other EGs and prepare the final report, submitted to GC ESC before the summer break (doodle open)
- Allow for 1-2 weeks for acknowledgement/approval and publish

## Expert Group on Storage

- Final meeting in June to approve the final report with the last changes (doodle open)
- Publish the report before the summer break

## Expert Group on Mixed Customer Sites

- Finalized and archived

## New Expert Groups to kick off

- Baseline for type A power-generating modules (EG BtfA)
- Criteria for significant modernisation (EG CSM)
- Interaction Studies and Simulation Models (EG ISSM) for PGM/HVDC – (doodle to be launched by 5<sup>th</sup> June for fixing the webinars until end of 2020)

- For all EGs a public space can remain available [here](#)
- Closed EGs will be archived and meetings' material will be shared with the EG members in due time



# Technical Group on High Penetration

# Publicly available references + next steps



Results from the work have been reported in several occasions over the last period – most notably:

- GC ESC meeting, 12 December 2019 (link [here](#))
- Publication of the final report, 29 January 2020 (link [here](#))
- Public workshop on High Penetration of Power Electronic Interfaced Power Sources and the Potential Contribution of Grid Forming Converters, 30 January 2020 (link [here](#))
- IEA webinar on Technical secure integration of large shares of converter based power sources, 25 March 2020 (link [here](#))

## Next steps

- ENTSO-E has discussed with a number of stakeholders regarding continuation of work -> no concrete proposal has been identified, appropriate for an ENTSO-E TG
- Given the current priorities on amendments and EG group, ENTSO-E suggests to postpone any further investigation and consider how to best utilize the current outcomes of the recent report
- Possible workshops can be organized that could very well lead to regrouping the TG HP with an updated scope during 2021