

Preface

NordREG annual report presents the work undertaken by the Nordic Energy Regulators (NordREG) during the year 2020. The report focuses on the core areas of the NordREG cooperation: electricity wholesale and retail markets, network regulation and demand flexibility.

The year 2020 was exceptional in many ways. In despite of the Covid-19 pandemic related challenges Europe was and still is facing, NordREG continued the fruitful and strong cooperation in the Nordic region. Close regional cooperation of national energy regulators and efficient and advanced energy markets for the benefits of consumers towards a decarbonised society are the key fundamentals that NordREG is promoting.

The EU's Clean Energy Package (CEP) brings new tasks and responsibilities to the national energy regulators as well. The goal of the CEP in the electricity sector is to go forward to a modern electricity market design that is more flexible and facilitates decarbonisation. Implementation of the CEP at national level is still on going. The Nordic energy regulators has provided comprehensive recommendations to the Nordic ministries on harmonised approaches in areas where harmonisation will bring benefits to the Nordic electricity markets.

The NordREG cooperation is playing an important role in promoting efficient electricity markets and developing the relevant regulation to benefit the Nordic area and especially the Nordic consumers. As in previous years, attention was drawn to the implementation of the European network codes and guidelines in the Nordic region.

Helsinki, December 2020

Simo Nurmi

Chair of NordREG 2020



Executive summary

NordREG has over the years become increasingly influenced by the development of the electricity market on the EU level. The establishment of a common harmonised European electicity market has been in focus and the Clean energy for all legislative package has had a big influence on the development.

In 2020 NordREG has during the year continued to focus on the work on the implementation of the European network codes and guidelines in the Nordic region. Other major tasks have involved harmonisation of the Nordic retail market, network regulation, tariff design and flexibility issues, which also has a prominent role in the Clean Energy package regulation.

NordREG has had an important part to play in the coordination of the regulatory oversight of the new Nordic Balancing Model to ensure a timely and efficient implementation in compliance with the legislation. The various dedicated NordREG working groups and task forces carried out important tasks to reach the strategic goals. Many of the tasks have required a close cooperation with stakeholders.

Retail market development

In 2020 NordREG´s Retail Market Working Group has investigated if it could be social-economic efficient on a Nordic level to interconnect the Nordic data hubs to enable interoperability, and if so, what's the most cost-efficient way to make the data hubs interoperable.

Wholesale and transmission

The Wholesale and transmission Working Group (W&T WG) has been focusing on the continued development and well function of the Nordic wholesale market. A major part of the work relates to the European network codes and guidelines. W&T WG also forms the link between the Nordic National Regulatory Authorities (NRAs) and the Nordic Transmission Net Operators (TSOs) regarding the Nordic Wholesale market. A large part of the work undertaken in 2020 has been in line with the NordREG vision to achieve efficient and advanced energy markets in terms of promoting efficient price signals, competition and an efficient and advanced energy system.

Network regulation

The aim of the work program for 2020 was to focus on the implementation of the CEP tariff design, network development plans and comparison of the Nordic countries' economic network regulation.

Demand Flexibility

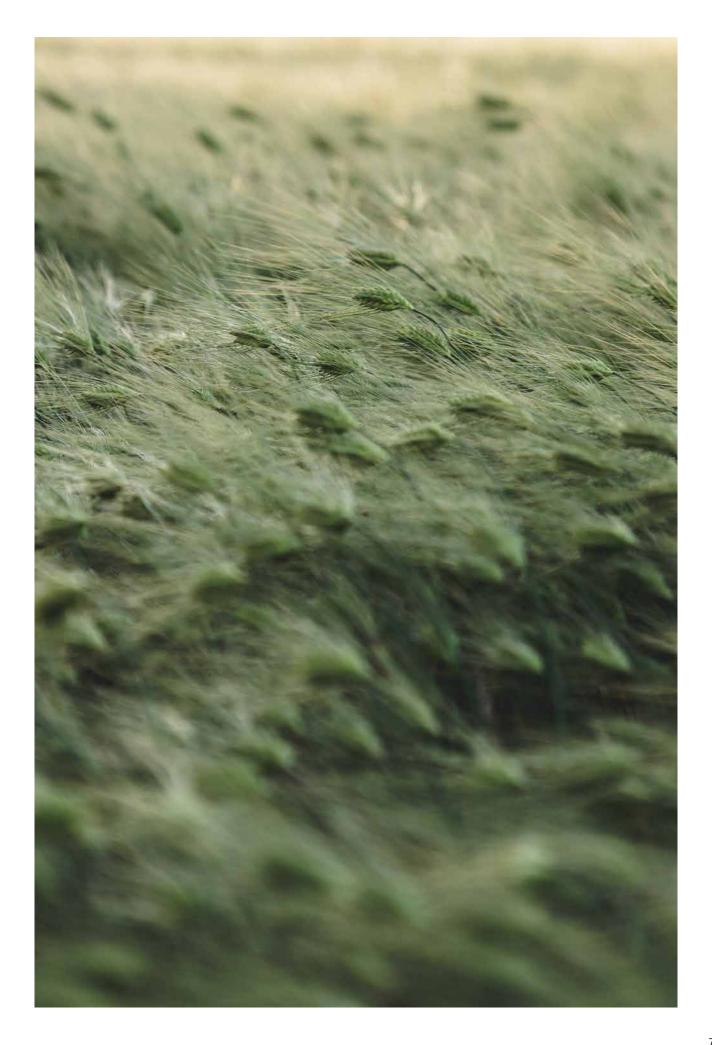
The Demand Flexibility WG has contributed to the coordination of implementation of the CEP, primarily through its proposal on the regulatory framework for independent aggregation and helped ensure a strong Nordic voice on issues concerning demand-flexibility.

Strategy Group

In 2020 NordREG has continued the work to strengthen the organisational and procedural framework in order to secure an efficient cooperation.

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1. Introduction

This report presents the work undertaken by the Nordic energy regulators (NordREG) during 2020 in the areas of wholesale electricity markets, retail markets, network regulation and demand side flexibility.

The aim of the report is to describe how NordREG has dealt with each task during the year. The annual report presents challenges and success stories from 2020 on a general level.

1.1 Mission and vision

NordREG's objective is to promote and develop efficient electricity markets in the Nordic area, consistent with

and in the forefront of the development in the EU. The work within NordREG focuses on practical, relevant solutions to common challenges, e.g. in relation to the European network codes and guidelines.

NordREG's mission

"In cooperation, we actively promote legal and institutional framework and conditions necessary for developing the Nordic and European electricity markets"

NordREG's vision

To reflect the Nordic direction better, NordREG revised its vision during 2018. The new vision is as follows:

"Actively promoting efficient and advanced energy markets, for the benefit of consumers towards a decarbonised society"

1.2 Long term strategy

The report explains what various NordREG Working Groups have done to achieve the goals set in the NordREG Long Term Strategy, which was prepared and adopted in 2019. The aim of the strategy is to provide clear guidance for the development during the years up to 2030. NordREG's mission is to actively promote legal and institutional framework and conditions necessary for developing the Nordic and European electricity market. NordREG's strategy consist of three strategic principles:

- 1. Correct price signals
- 2. Active consumers
- 3. Dynamic framework

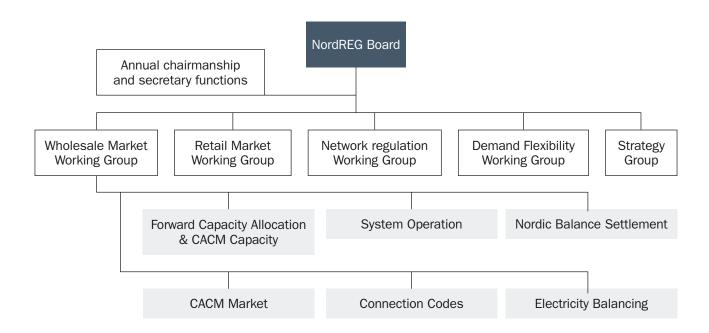
NordREG's Strategy is supported by a Road Map that outlines the activities needed in the short-, medium- and long run to accomplish the target items set in the Strategy. The Road map guides Working Groups and Task Forces to plan their work for the next 12 months. NordREG has five active working groups as seen in chart below.

1.3 Priorities for 2020

The implementation of the CEP will introduce new areas of regional cooperation, and NordREG sees benefits according to our vision in streamlining the way the new legal acts are implemented in the Nordic

countries. Also, when performing national tasks, NRAs increasingly encounters matters of regional concern and crossborder implications. Following the vision and the strategy, the seven priorities for 2020 are as follows:

- 1. Implementation of the CEP regulation and ensuring a common, harmonised understanding and application of the rules.
- 2. Continue effective implementation of European network codes and guidelines on Forward Capacity Allocation Guideline, Capacity Allocation and Congestions Management Guideline, System Operations Guideline, Electricity Balancing Guideline, Requirements for Grid Connection of Generators Network Code, Demand Connection Network Code and High Voltage Direct Current Network Code.
- Continue cooperation and coordination of the work regarding the common Nordic end-user market and market conditions for customers in the Nordic retail markets for electricity.
- Cooperate and coordinate the work regarding flexibility issues with a special focus on the implementation of the CEP.
- Maintain a close dialogue with Nordic Transmission System Operators (TSOs) on issues of importance for the internal market.
- 6. Deepen the Nordic cooperation in CEER and ACER.
- 7. Continue to enhance the strategic as well as the day-to-day cooperation in NordREG.





2. Retail Market

This chapter describes the work NordREG has done within the Retail Market Working Group (RMWG) and the current state of affairs nationally looking specifically at the development of data hubs. This area has been identified by the working group as a crucial base for a well-functioning electricity retail market.

2.1 Highlighted activities from 2020

RMWG has continued to follow the implementation of data hubs. In the annual publication "Implementation of data hubs in the Nordic countries - Status Report, June 2020", it was concluded that data hubs are up and running in Denmark and Norway and under development in Finland and Sweden, with a scheduled start around February 2022 in Finland and, depending on the legislation, 2022/2023 in Sweden (after the report was published the Swedish data-hub has been further delayed).

In the annual report published 2019, it was concluded that the Nordic data hubs will not be interoperable with each other. In 2020, RMWG has investigated if it could be social-economic efficient on a Nordic level to interconnect the Nordic data hubs to enable

interoperability. The study was done by a consultant that also answered the following questions:

- If interoperability creates a positive net-result, what's the most cost-effective way to make the data hubs interoperable?
- What rules and regulations need to be harmonised for interoperability to work?
- If interoperability creates negative net-result, what are the reasons for this?

The study was published by the end of 2020.

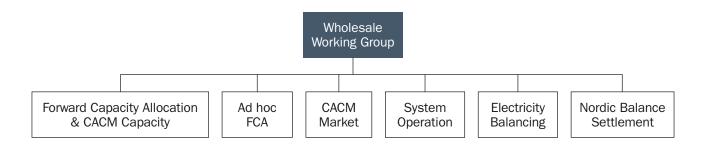
In November 2020, RMWG arranged a monitoring workshop where monitoring experts from the Nordic NRAs participated. Here, national cases were presented, and the overall conclusion was that NRAs faces similar challenges and therefore can benefit from sharing experience with each other. Comparison tools, protection of small businesses and how to monitor suppliers with many complaints were discussed.

During 2020, RMWG also shared experiences regarding the ongoing implementation of the Clean Energy Package, with a special focus on the NordREG recommendations¹ for how to implement article 10, 12, 14 and 18 in the new Electricity Directive.



	Activities from 2020	Description
1	Information exchange regarding the ongoing national work to implement national data hubs.	RMWG follows the implementation of Nordic data hubs and publish an annual status report. In 2020, RMWG has also investigated if interoperability between the Nordic data hubs can be social-economic beneficial for the Nordic market.
2	Coordination of current and future European activities.	At each meeting, RMWG discuss the need for common standpoints on upcoming European activities.
3	Follow-up on CEP implementation.	RMWG follows the implementation of the CEP, with a special focus on the NordREG-recommendations from 2019 regarding the Electricity Directive's article 10, 12, 14 and 18.
4	Monitoring work shop 2020.	RMWG arranged a workshop where experiences regarding monitoring were shared and discussed.
5	Status report on remaining asymmetries and gaps in terms/conditions in Nordic retail markets.	Following a request from the Nordic Electricity Forum, RMWG has started to map remaining asymmetries and gaps in terms/conditions in Nordic retail markets.





3. Wholesale and Transmission

This chapter describes the work done by NordREG within the Wholesale and Transmission WG (W&T WG) and the current state of affairs. In 2020, the W&T WG work has been focusing on the continued development and well function of the Nordic wholesale market. A major part of the work relates to the implementation of European network codes and guidelines. W&T WG also forms the link between the Nordic NRAs and the Nordic TSOs regarding the Nordic Wholesale market. A large part of the work undertaken in 2020 will support NordREGs vision to achieve efficient and advanced energy markets in terms of promoting efficient price signals, competition and an efficient and advanced energy system.

W&T WG coordinates six task forces. The structure of the task forces has been organised according to the different network codes and guidelines. W&T WG's tasks also include issues, which strictly speaking do not fall under the guidelines.

3.1 Highlighted activities from 2020

In 2020, the W&T WG has been analysing European and regional regulatory initiatives and approvals to

allow coherent regulatory framework for the benefit of the Nordic region. Furthermore, proposals have been made to influence the implementation of the network codes and guidelines. The W&T WG has also been acting as a coordination body regarding the activities in the specialised taskforces, each dealing with questions on the prioritised areas of NordREG`s work in the wholesale and transmission field.

In accordance with the network codes and guidelines, the Nordic region must make a number of regional decisions. The Nordic Energy Regulator Regional Forum (ERRF), established in 2017, formally approves decisions regarding the Nordic region, e.g. capacity calculation region Nordic. Listed below in 3.2 are descriptions of the various task forces and their expected regional decisions.

The W&T WG is responsible for keeping a close dialogue with stakeholders within the wholesale and transmission related field, including the Nordic TSOs. Amongst others, the W&T WG arranges meetings with the TSOs to facilitate exchange of information and views.

In 2020, the W&T WG has continued to work on EU topics, which require a coordinated Nordic position. In particular, the RCC proposal from the TSO has been thoroughly analysed. In addition, the W&T WG constantly considers possible further areas for development and integration of the Nordic electricity market in the years to come with the aim of achieving further socioeconomic benefits to the Nordic market area.

3.2 Reports from the Whole sale and Transmission taskforces

3.2.1 Capacity Task Force

The Capacity Task Force (Capacity TF) focuses its' work on issues related to implementation of the capacity calculation and redispatch/countertrading methodologies according to European regulations in the Nordic region. The Task Force is also involved in processes on a European level in instances where topics with potential implications for CCR Nordic are under consideration.

In 2020, the main task of this TF has been to coordinate on the assessment of the Nordic TSOs' proposal for a new capacity calculation methodology for the Day Ahead and Intraday timeframes.

3.2.2 Single Market Task Force

In 2020 the Single Market TF (SM TF) has been working to support and facilitate a coordinated implementation of the Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (CACM GL) in the Nordic area.

The SM TF has served as a forum to exchange views and reaching common Nordic positions on other issues than regional decisions related to the implementation of the CACM GL. Especially where the Nordic NRAs have common interests regarding the EU-wide methodologies and principles approved according to the CACM GL. Where beneficial, the TF has been coordinating national decisions according to the CACM GL.

In 2020 the TF has been working on following up the go-live of the Nordic Multi NEMO Arrangements (Nordic MNA). The go-live of the Nordic MNA was June 3rd 2020 and there are currently two operational NEMOs in the Nordic region, EPEX Spot and Nord Pool EMCO AS.

3.2.3 System Operation Task Force

Pursuant to the SO GL the Nordic TSOs have submitted in 2020 a number of proposals for approval by all NRAs of the Nordic Synchronous Area or Capacity Calculation Region. Some of these proposals were updated from previous proposals due to the developing of the electricity market.

The following regional decisions have been made by Nordic NRAs in 2020:

- Common provisions for each capacity calculation region for regional operational security coordination in accordance with Article 76;
- 2. The additional properties of the FCR in accordance with Article 154(2). Updated proposal.
- 3. For the CE and Nordic synchronous areas, the minimum activation period to be ensured by FCR providers in accordance with Article 156(10);
- 4. Ramping restrictions for active power output in accordance with Article 137(3) and (4). Updated proposal.

In addition, the Nordic TSOs have submitted some reports in accordance with the SO GL and previous decisions the Nordic NRAs have made.

The Nordic NRAs have approved a number of proposals developed by the TSO at national level, as specified in the ER NC.

Exchange of views on the interpretation of ER NC has taken place during the year although decisions are made separately by each national regulator.

3.2.4 Electricity Balancing Task Force

An enhanced balancing market integration and harmonisation, both at Nordic and EU level, is the prerequisite for a more advanced, efficient and liquid way of exchanging balancing energy.

In 2020, the Electricity Balancing Task Force (EB TF) has had an extensive dialogue and regulatory oversight of the Nordic TSOs' implementation of the Nordic Balancing Model (NBM). Further, the EB TF cooperated on analysing the TSOs' national proposals for a 15-minute Imbalance Settlement Period

implementation in the Nordic synchronous area. It has also acted as a platform for information and discussion of positions in other matters in relation to electricity balancing markets.

3.2.5 Nordic Balance Settlement

The Nordic Balancing Task Force (NBS TF) focus is to maintain the harmonised achievements of the common Nordic imbalance settlement. There are upcoming measures and implementations that will affect the imbalance settlement e.g. 15 minutes settlement, one balance settlement, aggregator etc. It is important that implementations which affect common settlement infrastructure can be harmonised where it is necessary or appropriate.

	Activities from 2020	Description
1	Nordic TSOs' proposal for Nordic aFRR capacity market.	Referral to ACER and subsequent input to ACER decision.
2	Nordic TSOs' requests to derogate from 15 minute imbalance settlement period.	Assessment whether to grant/granting of derogation until 22 May 2023.
3	Nordic TSOs' proposal for the settlement of intended and unintended energy exchanges in the Nordic synchronous area.	The proposal was approved.
4	Nordic TSOs' design document for a single price model for imbalances in the Nordic region.	Guidance to TSOs prior to their submission of terms and conditions for regulatory approval.
5	Coordination and stakeholder involvement.	Chairing of NRA/TSO Nordic Balancing model (NBM) Coordination Group and presentations at NBM reference group meetings.

	Activities from 2020	Description
1	The regulatory oversight of establishment of the Regional Coordination Centre (RCC).	Preparation for legal establishment and the regulatory oversight of the RCC.
2	Capacity calculation methodology (CCM) for DA and ID timeframes.	Nordic TSOs' proposal for the FB CCM methodology was approved subject to some additional amendments made by NRAs from CCR Nordic.
3	Follow-up of Nordic MNA.	Follow-up of the go-live of the Nordic Multi NEMO Arrangement (Nordic MNA). The go-live of the Nordic MNA was June 3rd 2020 and there are currently two operational NEMOs in the Nordic region, EPEX Spot SE and EMCO AS.
4	Nordic Balancing Model (NBM).	Through close dialogue and regulatory oversight with the Nordic TSOs cooperation of the implementation of the Nordic TSO's Nordic Balancing Model (NBM).
5	Approval of Nordic TSOs' proposals	The following proposals on TCMs were approved:
	on terms and conditions and methodologies (TCM) pursuant to the SO GL.	Common provisions for each capacity calculation region for regional operational security coordination (ROSC) in accordance with Article 76;
		The additional properties of the FCR in accordance with Article 154(2). Updated proposal.
		For the CE and Nordic synchronous areas, the minimum activation period to be ensured by FCR providers in accordance with Article 156(10);
		Ramping restrictions for active power output in accordance with Article 137(3) and (4). Updated proposal.
6	Nordic TSOs' proposal for Nordic aFRR capacity market.	Proposal was referred to ACER for decision and subsequent input was provided to ACER decision.
7	Coordination of derogations from 15 min ISP.	Nordic TSOs have requested for a derogation from implementation of 15 minute imbalance settlement period until 22 May 2023.
		Coordination of national assessments of the derogation requests from Nordic TSOs.
8	Nordic TSOs' proposal for the settle- ment of intended and unintended energy exchanges in the Nordic synchronuos area	The proposal was approved.
9	Nordic TSOs' design document for a single price model for imbalances in the Nordic region.	Guidance to TSOs ws provided prior to their submission of terms and conditions for regulatory approval.
10	Coordination and stakeholder outreach.	Chairing of NRA/TSO Nordic Balancing model (NBM) Coordination Group and presentations at NBM reference group meetings.
11	Seminar on monitoring of capacities.	Seminar for stakeholders and other interested parties on monitoring of interconnector capacities was held in December.



"Cost reflective grid tariffs & connection fees"

4. Network regulation

The path towards a decarbonised society presents new challenges to the regulation of distribution networks. During 2020 the Network Regulation WG (NR WG) has focused on network tariff regulation and regulatory tasks where the NRAs are having synergies carrying out national tasks together in NordREG.

In addition, the WG is observant on potential articles in the Clean Energy Package (CEP), which can give rise to needs for joint NordREG opinions regarding network regulation issues. The discussion of relevant articles in CEP will be coordinated with the program in CEER.

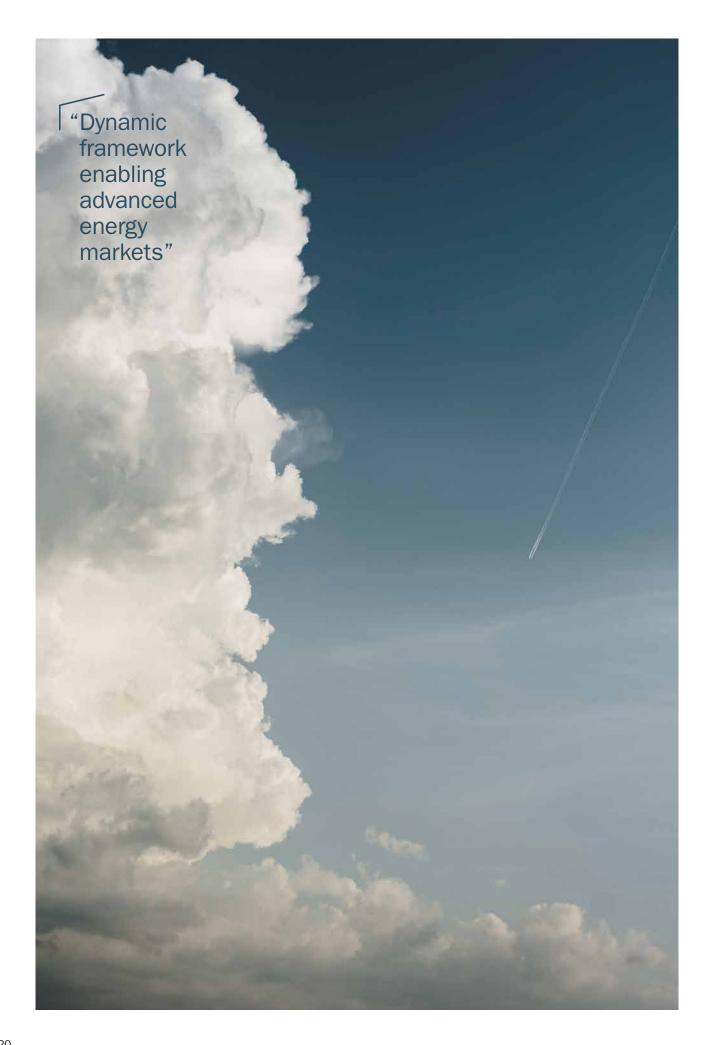
4.1 Highlighted activities from 2020

The aim of the work program 2020 was to focus on the implementation of the CEP, tariff design and a comparison of the Nordic countries' economic regulation.

 Report on price incentives and tariffs. The focus for the report was to describe the theoretical approach of designing cost-reflective tariffs in the current and future energy landscape. The report also described how customers may be affected by a change in the view of tariff design. The work with tariff design is in line with the strategic principle 'Correct price signals' and 'Dynamic framework' in the NordREG strategy, since the report argues why it is beneficial to have more cost reflective tariffs.

- In the work program for 2020, NR WG planned to work with network development plans. The purpose was to contribute to a more efficient implementation process in the Nordics. However, the pandemic has led to changes in the schedule, which is why this task has been postponed to 2021.

	Activities from 2020	Description
General guidelines on best administration of network developments plans in Nordic NRAs.	Paper on how the NRA best administrates network development plans.	
	NRAs.	The work has been postponed to spring 2021 due to the NRAs different implementation processes of the NDPs.
2	Report on price incentives and tariffs.	Paper was sent to the Board for approval in November 2020.



5. Demand Flexibility

The WG on demand flexibility was established in January 2015 assess demand response in the Nordic electricity market, and consider potential needs for Nordic initiatives that require coordinated actions at ministry level.

Over 2020, the WG has contributed to the coordination of implementation of the CEP, primarily through its proposal on the regulatory framework for independent aggregation, and helped ensure a strong NordREG voice on issues concerning demand-flexibility.

5.1 Highlighted activities from 2020

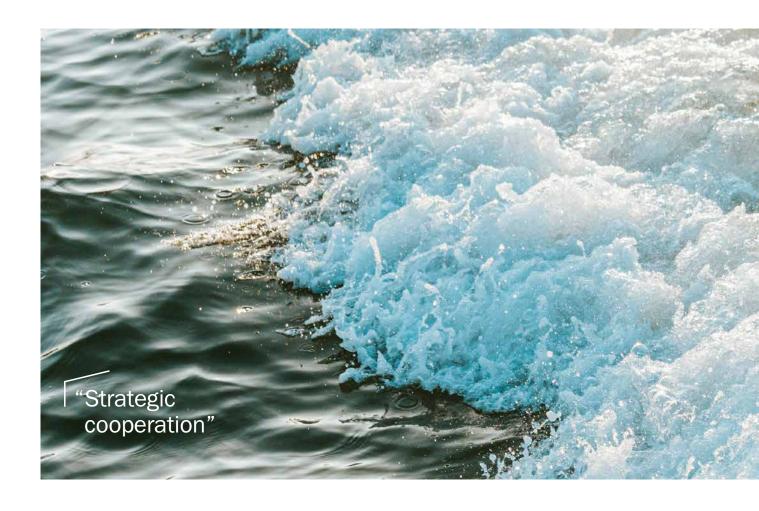
The key deliverable in 2020 was the recommendations on a Framework for Independent Aggregation in the Nordic Region.

The CEP has introduced the right for aggregators to operate independently of their customers' suppliers, in an attempt to increase the number of aggregators participating in markets and so raise the level of demand-response in Europe. This concept presents important opportunities for helping consumers support and benefit from the Energy Transition.

NordREG agreed that there should be a harmonised Nordic approach to how the idea of independent aggregators is introduced in the region, so as to avoid cross-border market barriers and increase the number of aggregators operating in Norden.

The WG therefore presented its recommendations on implementing independent aggregation in an optimal way for the Nordic market. The Flex WG has continued a dialogue with ministries and TSOs to continue this implementation work through the year.

	Activities from 2020	Description
1	Implementation of independent aggregation in the Nordic region.	Follow-up work on how harmonised the independent aggregation rules are implemented in the Nordic region.
2	Coordination of flexibility issues within NordREG.	Established a coordination process within NordREG for flexibility related issues, outlining clear objectives for NordREG on enabling market-based flexibility for the benefit of Nordic consumers.
3	Review of barriers to flexibility in Nordic region.	A review of barriers to flexibility in Nordic region identifying which issues had been addressed by developments since the 2017 report "Demand response in the Nordic electricity market" by Thema Consulting, and which barriers remain. The review process was begun and should be complete once the EB GL and the CEP are largely implemented, allowing identification of further areas for work if needed.



6. Strategy group

NordREG established in 2017 a dedicated strategy group with the mission to deepen the internal cooperation. The task of the strategy group is to revisit the vision of NordREG and provide a future proof strategy for the Nordic regulatory cooperation. In addition, the strategy group coordinates cross cutting issues and handles issues not covered by the other NordREG working groups.

In 2020 NordREG has continued the work to strengthen the organisational and procedural framework in order to secure an efficient cooperation.

6.1 Highlighted activities from 2020

NordREG's Long-term Strategy prepared and adopted in 2019 provides a clear guidance for strategic priorities in our cooperation during the years up to 2030. To support implementation of the Long-term strategy NordREG has also prepared a road map which identifies concrete actions for the coming three years. The road map forms a strategic basis for the preparation of our annual work programme.

In 2020, NordREG has analysed and updated NordREG's internal modus operandi and rules of procedure of the Nordic Energy Regulators Regional Forum (ERRF) to make our steering documents more streamlined.



	Activities from 2020	Description
1	Implement and support NordREG Long-term Strategy.	The Road map has been updated to cover actions NordREG will perform in years 2021-2023 and beyond. Long-term Strategy and Road Map form a basis for the preparation of the Work Program 2021.
2	Efficient organisational and procedural structures and framework.	NordREG's organisational structure has been analysed, to make sure that the organisation is fit for purpose and takes into account changes in NordREG's tasks. NordREG's Modus Operandi and Rules of Procedure of the Nordic Energy Regulators Regional Forum (ERRF) have been streamlined and updated.
3	Coordination of NordREG's work in connection to the Nordic Electricity Forum (NEMF).	NordREG has participated as an observer in the Nordic Electricity Market Forum Coordination Group (NEMF CG) set up by the EMG. Through participation NordREG supports the EMG in achieving the NEMF's Electricity Market Vision and in preparation of annual NEMF forums.
4	NordREG Strategy Day.	Each year NordREG Board meets for a day dedicated to strategy and discussions about the future with the objective to streamline and enhance our strategic cooperation. The Strategy Day 2020 has been postponed until 2021 due to the COVID-19 situation.

7. Upcoming work in 2021

NordREG WGs will continue coordinating the implementation of the EU's Clean Energy Package to ensure harmonised understanding and implementation of the rules and regulations. Additionally, focus will remain on the effective implementation of the European network codes and guidelines.

Decarbonisation of the society and transition towards clean energy system continues and requires adjustments in energy market design. The work within NordREG continues focusing on practical and relevant solutions to common challenges. Energy transition might bring also new topics, like sector coupling and power-to-x to be discussed within NordREG. NordREG tries to keep its organisation effective focusing on topics where cooperation of Nordic energy regulators will bring benefits to markets and consumers. We continuously strive for an efficient organisation fit for purpose; thus ad hoc working groups are started when needed.







Edulas Services







NordREG is a voluntary cooperation between the Nordic energy regulators. The presidency and secretariat rotate annually.

The presidency and secretariat of NordREG was during 2020 held by the Finnish Energy Authority (Energiavirasto).

Please contact us if you have any questions.

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