

2030 Vision for the Nordic Electricity Market

Core Purpose

To provide secure, affordable and sustainable electricity to the Nordic society, through competitive markets

Core Values

Productive and trust-based cooperation across the Nordic

Reliable and cost-efficient electricity supply

Transparent and market-based solutions

Constant improvements to low-carbon solutions, a driving force behind innovation and leading the way.

Emphasis on consumer-oriented solutions

2030 Goal

In 2030, the
Nordics have
the world's most
competitive,
innovative, and
consumer-oriented
electricity market,
that contributes
to reaching the
ambitious Nordic
climate goals.

The Nordic Electricity Market in 2030

A society characterised by digitalisation, automatization and electrification is backed by a highly reliable electricity supply

The electricity market brings increasing benefits to the society as it enables consumers and new market players to contribute to the energy transition with innovative solutions.

The grid infrastructure is smartly operated, cost-efficient, robust and without undue constraints, being optimised from a regional perspective

The Nordic electricity market is a positive driving force in the European electricity market integration, market development and in the effort towards reaching ambitious climate goals



In 2030, the Nordics have the world's most competitive, innovative and consumer-oriented electricity market, that contribute to reaching the ambitious Nordic climate goals.



Purpose of the online forum sessions 2021

Main theme: Future Flexibility Needs

- Strengthen our commitment to the vision for the Nordic Electricity Market 2030 and enable common understanding of progress made, our different roles and the way forward.
- Inspire further Nordic stakeholder dialogue and action contributing to moving towards the vision for the Nordic Electricity Market.
- Explore and mobilise around key topics and focus areas from the roadmap relevant for achieving the vision.





Forum process

Session 1

February 4, CET 09.00-12.00

- We learn, become inspired and engage in cross-stakeholder dialogue

Alignment and dialogue within stakeholder organizations

Input from session 1 and from stakeholder dialogues will form and influence the agenda for online session part 2.

Session 2
March 19
09.00-12.00 CET

 - We mobilize, conclude and plan for action



Program Nordic Electricity Market Forum Session 2

og.oo Welcome and Introduction

Electricity Market Group chair Tatu Pahkala and forum moderator Julia Karner, Odd Agency

PART 1)

og.15 Input and conclusions on future flexibility needs
Sharing how input received has been processed and key conclusions it has resulted in

PART 2)

og.35 Towards the vision for the Nordic Electricity Market 2030

Presentation of updated roadmap towards the vision for the Nordic Electricity Market 2030

10.05 Break

10.15 Breakout session

Reflection and discussion on updated roadmap focusing

11.00 Break

11.10 Learning from each other

We share and review the output from group dialouges

PART₃

11.40 Idea gathering: themes for next forum

A interactive and quick session to gather ideas for themes for future forums

11.50 Concluding the forum – sharing of next steps

Electricity Market Group chair Tatu Pahkala and forum moderator

12.00 End



Part 1) Input and conclusions on Future Flexibility Needs



2030 Vision for the Nordic Electricity Market

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To provide secure, affordable and sustainable electricity to the Nordic society, through competitive markets

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Productive and trust-based cooperation across the Nordi countries and between stakeholder groups

Reliable and cost-efficient electricity supply

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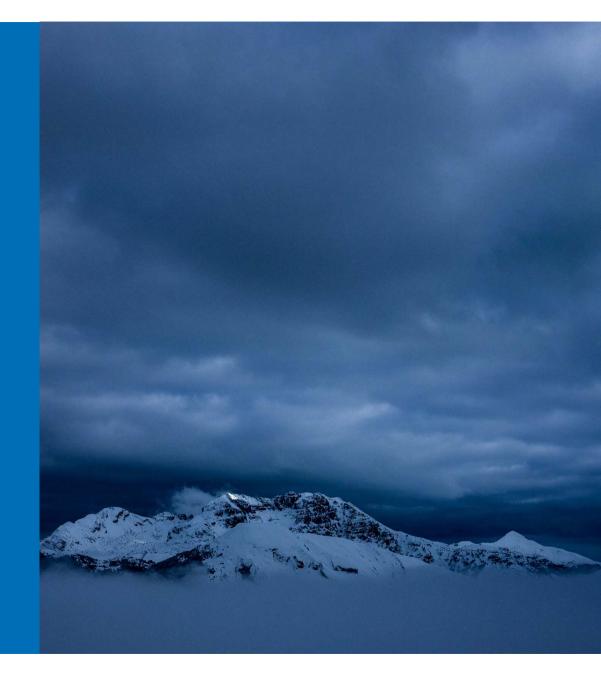


Overview of stakeholder input

— Questions in two areas:

- On the theme of Future Flexibility Needs
- On working towards the vision for the Nordic Electricity Market 2030
- 10 written answers 1 Nordic TSO answer, 1 industry answer, 1 district heating answer, 1 PX answer and 6 answers from the production side







Processing your input





- Updated long term objectives
- Updated immediate and short term action points



Examples of input on the theme of Future Flexibility Needs:

From your point of view, what are the main obstacles to bring existing flexibility into the system?

"As long as CAPEX-based costs are more attractive to system operators in terms of cost recovery than OPEX-based costs, they will always prefer to invest in hardware compared to software." (EPEX)

"Reliability of flexible load is variable" (Energy Norway)

"This implies especially the TSOs, and we regret to see still, for example, different prequalification processes, sometimes unnecessarily burdensome for smaller flexibility providers." (Finnish Energy Industries) "By not compensating fully for ancillary services critical resources such as nuclear and hydro go offline and thus increases the need for other flexibility resources to come online." (Fortum)

"Serving the power market is not the core business and focus of the end-use industry." (Norsk Hydro)

"The TSOs main identified obstacle is to find the right market signals to trigger the realisation of flexibility in the pace the power system needs it." (Nordic TSOs)



Examples of input on the theme of Future Flexibility Needs:

What do you propose to be done on the national and Nordic level to address these obstacles?

"Knowledge on demands as early as possible is important in order to affect investment decisions in heat producing technologies that supports the electricity system in different ways." (Danish District Heating)

"Nordic workshop for DSOs for the exchange of experience and best practice" (Energy Norway)

"We see a necessity for securing market based remuneration for the services production resources provide for the system, which of course should be done from a Nordic perspective" (Svensk Energi") "With correct price signals the need for new and more expensive flexibility resources to come online can be prevented and existing resources can be used instead. It is therefore important that Nordic TSO adequately remunerate both frequency and non-frequency related ancillary services." (Fortum)

"Consider and distinguish the ability of different flexibility products - a distinction is made between their ability to provide flexibility at system level (frequency) and distribution network level (voltage, power, etc. Perhaps every substation / conversion circuit, etc. accuracy) - assess the framework conditions for making it economically viable - especially in a cost-effective way for society." (Flexens)



Examples of input on working towards the vision for the Nordic Electricity Market 2030:

Which areas from the roadmap besides flexibility would you like to address on the Nordic level? Is an area missing to reach the vision??

"Flexibility should be recognized as an option that cannot stand alone neither on TSO-, nor on DSO-level. Instead, it should be seen as a means to a more cost-efficient grid reinforcement strategy." Dansk Energi

"One current topic is the necessity of a large-scale electrification to achieve ambitious climate targets, and Nordenergi is currently about to finalize a study on opportunities and barriers to electrification in the Nordic region." (Svensk Energi)

"A coordinated Nordic transmission grid development plan is essential in terms of reaching the vision." (Finnish Energy Industries) "It is becoming increasingly clear that scarcity pricing alone cannot guide new investments if the surrounding investment climate is unsupportive." (Fortum)

"We believe there needs to be some degree of harmonization and better co-operation in the Nordic climate and energy policies, if we aim for the electricity market to drive the investments." (Fortum)

"The topics in the upcoming TSO-strategy: Market based integration of both offshore and onshore wind and sector integration" (Nordic TSOs)



Conclusions

Very good strategic input concerning the flexibility perspectives used to update the objectives

• Concrete actions to be discussed in the breakout session

A lot of concrete actions on the perspective of "local flexibility"

- Proposal: new mandate for flexibility group (and a new recruitment of members to the group)
- Examples of themes for the flexibility group:
 - Local flexibility markets
 - Regulatory barriers for new flex providers
 - Prequalification criteria for flex providers
 - Exchange best practices





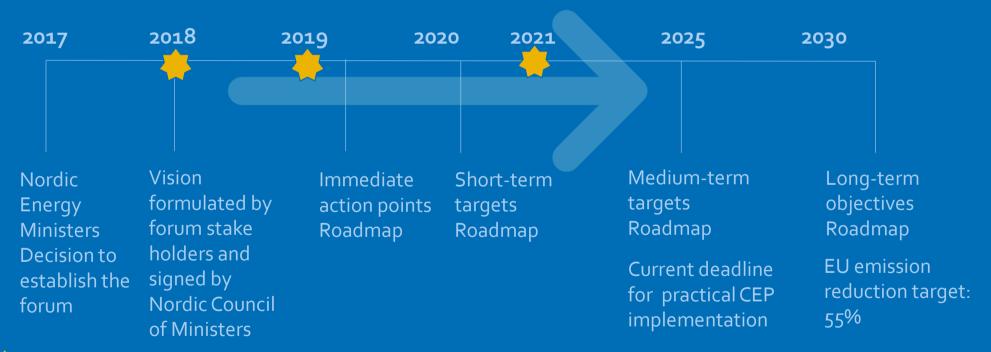


Part 2) Towards the vision for the Nordic Electricity Market 2030

Presentation of updated roadmap



Roadmap for reaching the 2030 Nordic Electricity Market Vision





Nordic Electricity Market Forums



An updated structure...

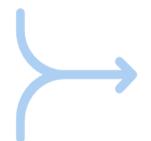
Former roadmap structure

2030 Objectives6 objectives



- New roadmap structure
- 2030 Objectives6 objectives, 2 of them new

- 2025 Medium Term Targets
- 2020 Short Term Targets
- Immediate and further action points



 Action points addressed to EMG, NordREG and Nordic TSOs



...and updated objectives

1. Flexibility to the markets

All flexible assets from producers, consumers and service providers can efficiently contribute to reliable and competitive functioning of the power system.

2. Clear price signals

Clear price signals for all system needs across all time frames, price areas and voltage levels (TSO/DSO), rewarding flexibility and system support were effective.

3. Enabling electrification

New sectors (transport, heating & cooling and industry (power to X)) are electrified and integrated into the electricity markets with their flexibility. Electricity markets enable system integration and support the move towards a cleaner Nordic society.

4. Nordic grid development

Welfare on a Nordic level is the guiding objective when preparing Nordic grid development plans considering large scale RES developments on- and offshore and designing Nordic bidding zone structures.

5. Open Market Access

All clean electricity sources (e.g. offshore energy) are seamlessly integrated into the Nordic market.

6. Resource Adequacy

Resource adequacy is ensured through marked-based solutions. Price signals guide investments, reflecting the value of resources in scarcity periods, and internalize the risk of inadequacy.





Objective 1: Flexibility to the markets

All flexible assets from producers, consumers and service providers can efficiently contribute to reliable and competitive functioning of the power system.

IMMEDIATE AND FURTHER ACTION POINTS FOR THE ELECTRICITY MARKETS

EMG

- 3 suggestions for action points currently
- From stakeholders:
 - Develop the flexibility working group under the NEMF Coordination group with a new mandate (local flexibility)
- From previous roadmap:
 - coordinate on the CEP implementation, e.g. regarding aggregators and the upcoming demand flexibility guideline

NordREG

- 3 suggestions for action points currently
- From stakeholders:
 - Enable DSOs in the regulatory model to use flexibility as an alternative for network investments.
- From previous roadmap:
 - Coordinate CEP implementation, e.g. regarding aggregators and the upcoming demand flexibility quideline

- 6 suggestions for action points currently
- From stakeholders:
 - Where possible, harmonize prequalification rules for flexibility providers to make it easier to be active in several markets
- From previous roadmap:
 - Regular assessment and publication of flexibility needs according to common Nordic and European principles to provide visibility for the market participants (also objective 2)



Objective 2: Clear price signals

Clear price signals for all system needs across all time frames, price areas and voltage levels (TSO/DSO), rewarding flexibility and system support were effective.

IMMEDIATE AND FURTHER ACTION POINTS FOR THE ELECTRICITY MARKETS

EMG

- 1 suggested action point currently
- From previous roadmap:
 - Coordinate on guideline revision (CACM) and CEP implementation

NordREG

- 2 suggested action points
- From stakeholders:
 - Every time there is a regional decision under the third package and the CEP, establish a coordination process to facilitate reaching a unanimous approval within the given times. Establish to this end all the necessary exchanges with the relevant TSOs and NEMOs.
- From previous roadmap:
 - Coordinate viewpoints on the revision of network codes and guidelines

- 8 suggested action points
- Example from stakeholders:
 - Creation of markets for ancillary and system services to create price signals
 - :Increased transparency on (close to) real-time system operation and prices and reporting on major incidents to the markets
- From previous roadmap:
 - Regular assessment of flexibility needs according to common Nordic and European principles to provide visibility for the market participants. (also under objective 1)



Objective 3: Enabling electrification

New sectors (transport, heating & cooling and industry (power to X)) are electrified and integrated into the electricity markets with their flexibility. Electricity markets enable system integration and support the move towards a cleaner Nordic society.

IMMEDIATE AND FURTHER ACTION POINTS FOR THE ELECTRICITY MARKETS

EMG

No suggested action points currently

NordREG

- 3 new suggested action points by stakeholders
- Example from stakeholders:
 - Assess regulatory barriers giving negative incentives for flexibility, taking into account new flexibility providers (e.g. district heating, industry) (also in objective 1)

- 2 new suggested action points by stakeholders
- Example from stakeholders:
 - Continue working on the Nordic TSOs strategy on sector integration (which is expected for stakeholder consultation before summer 2021)



Objective 4: Nordic grid development

Welfare on a Nordic level is the guiding objective when preparing Nordic grid development plans considering large scale RES developments on- and offshore and designing Nordic bidding zone structures.

IMMEDIATE AND FURTHER ACTION POINTS FOR THE ELECTRICITY MARKETS

EMG

- 1 action point
- Updated from previous roadmap:
 - Support coordination on TEN-E revisions

NordREG

No action points currently suggested

- 4 action points, 3 from previous roadmap
- From stakeholders:
 - Enhance the use of the PCI framework
- From the previous roadmap:
 - Develop a method for cost-benefit assessment if grid projects are clearly beneficial from a Nordic point of view but less from a national point of view



Objective 5: Open market access

All clean electricity sources (e.g. offshore energy) are seamlessly integrated into the Nordic market.

IMMEDIATE AND FURTHER ACTION POINTS FOR THE ELECTRICITY MARKETS

EMG

- 1 action point
- Updated from previous roadmap:
 - Contribute to coordination on TEN-E revision regarding offshore market design

NordREG

No action points currently suggested

- 3 action points
- From stakeholders:
 - coordination and exchange of views with stakeholders on issues related to financing and ownership to offshore infrastructure.
- Updated from the roadmap:
 - Designing and implementing a Nordic transmission grid development plan to integrate the expansion in RES production (also under a coordinated Nordic Grid Development)



Objective 6: Resource Adequacy

Resource adequacy is ensured through marked-based solutions. Price signals guide investments, reflecting the value of resources in scarcity periods, and internalize the risk of inadequacy.

IMMEDIATE AND FURTHER ACTION POINTS FOR THE ELECTRICITY MARKETS

EMG

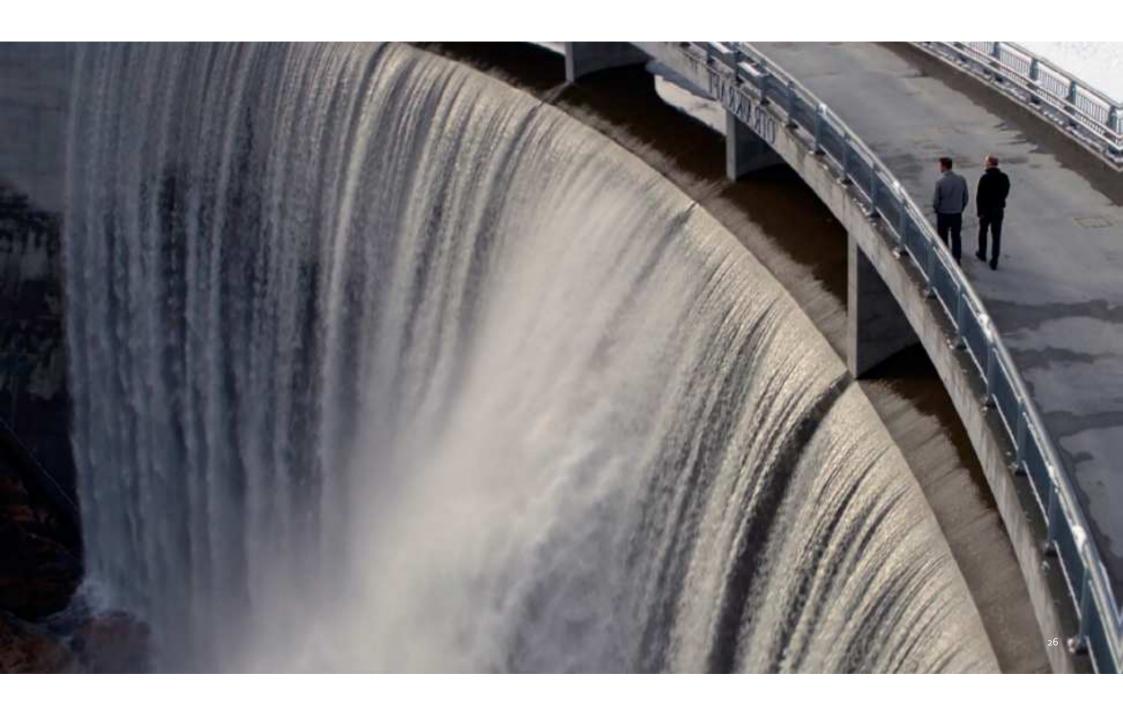
- 1 action point:
- From stakeholders:
 Coordinate the policy work regarding "security of supply"

NordREG

No actions point currently suggested

- 2 action points
- From stakeholders:
 - Coordination of possible measures to ensure resource adequacy
- From the previous roadmap:
 - Regional analysis of resource adequacy





Breakout session - updated roadmap



Purpose of breakout session

- Review current and suggest new action points related to the updated objectives.
- In different groups, we ask you to focus on action points related one of the six objective.
- You are free to add to the other objectives (in the group dialogue or afterwards in plenum) as well but we want you





Your task

Review the actions connected to the objective to which your group has been assigned.

Are there other actions that you would like to suggest to be added to the roadmap?

Be as specific as possible (who should do it when).





To be noted:

The output of these dialogues are to be seen as suggestions and recommendations to be processed in appropriate forums.

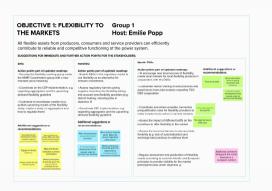
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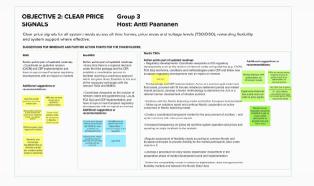


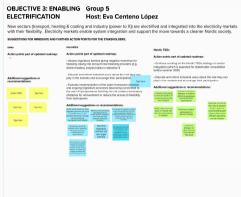


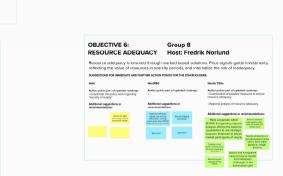
Overview of input

Objectives for the Nordic Electricity Market 2030









OBJECTIVE 4: NORDIC Group 6

SUGGESTIONS FOR IMMEDIATE AND FURTHER ACTION POINTS FOR THE STAKEHOLDERS;

Host: Marielle Lahti

Welfare on a Nordic level is the guiding objective when preparing Nordic grid development plans cons large scale RES developments on- and offshore and designing Nordic bidding zone structures.

GRID DEVELOPMENT









OBJECTIVE 1: FLEXIBILITY TO Group 1 THE MARKETS **Host: Emilie Popp**

All flexible assets from producers, consumers and service providers can efficiently contribute to reliable and competitive functioning of the power system.

SUGGESTIONS FOR IMMEDIATE AND FURTHER ACTION POINTS FOR THE STAKEHOLDERS:

EMG

Action points part of updated roadmap:

- · Develop the flexibility working group under the NEMF Coordination group with a new mandate (local flexibility)
- · Coordinate on the CEP implementation, e.g. regarding aggregators and the upcoming demand flexibility guideline
- · Contribute to knowledge creation (e.g. publish upcoming results of the flexibility study, maybe a study on aggregators and how to regulate them)

Additional suggestions or recommendations:

Accompaning the development af the network code for demand side flexibility

Give instructions to national NRAs and TSOs view on harmonisation

Engage the Nordic politicians

Make the Nordic institution act more coordinated

Clearer acions for the flexibility group

Market participants should be given the oppertunity to contribute to the ssesment of barrieres

NordREG

Action points part of updated roadmap:

- Enable DSOs in the regulatory model to use flexibility as an alternative for network investments.
- Assess regulatory barriers giving negative incentives for flexibility, taking into account new flexibility providers (e.g. district heating, industry) (also in objective 3)
- · Coordinate CEP implementation, e.g. regarding aggregators and the upcoming demand flexibility guideline

Additional suggestions or recommendations:

More harmonisation across the Nordic countries

More positive towards pilots. Make the proces regarding pilots easier

Accompaning the development af the network code for demand side flexibility

Market participants should be given the oppertunity to contribute to the assesment of harrieres

Nordic TSOs

Action points part of updated roadmap:

- To encourage new local sources of flexibility, create local markets for local flexibility products in cooperation with the DSOs
- · Coordinate Nordic sharing of best practices and experiences from pilot projects regarding TSO-DSO cooperation

Coordinate and where possible, harmonize This action point is prequalification rules for flexibility providers to make it easier to be active in several markets

- Assess the impact of different tariffs on the incentives to offer flexibility to the market
- · Assess the technical barriers to demand side flexibility (e.g. lack of automatization) and exchange best practices to address them
- · Regular assessment and publication of flexibility needs according to common Nordic and European principles to provide visibility for the market participants (also under objective 2)

Additional suggestions or recommendations:

Pose more pilots

More information about ongoing processes and initiatives

Accompaning the development af the network code for demand side flexibility

This might be more a DSO issue

too specific

Additional comment: Safeguard the nordic interests in a european context



OBJECTIVE 1: FLEXIBILITY TO THE MARKETS

Group 2 Host: Hege Holte Nielsen

All flexible assets from producers, consumers and service providers can efficiently contribute to reliable and competitive functioning of the power system.

SUGGESTIONS FOR IMMEDIATE AND FURTHER ACTION POINTS FOR THE STAKEHOLDERS:

EMG

Action points part of updated roadmap:

- Develop the flexibility working group under the NEMF Coordination group with a new mandate (local flexibility)
- Coordinate on the CEP implementation, e.g. regarding aggregators and the upcoming demand flexibility guideline
- Contribute to knowledge creation (e.g. publish upcoming results of the flexibility study, maybe a study on aggregators and how to regulate them)

Additional suggestions or recommendations:

Content of nwe mandate fot the flexbility: (To monitor the coordination of CEP can be part of the mandate)

We would priotitize the 1st and 2nd action points. Knowledge sharing is still key here.

Implementation and disc. on feedin tariffs of generators should be discussed in EMG (commersial aspects) Reg. point of knowledge creation, they can can highlight key regulatory topics of interest. Since we are in implementation phase, it is more recommendations on implementation in the countries that should have focus.

NordREG

Action points part of updated roadmap:

- Enable DSOs in the regulatory model to use flexibility as an alternative for network investments.
- Assess regulatory barriers giving negative incentives for flexibility, taking into account new flexibility providers (e.g. district heating, industry) (also in objective 3)
- Coordinate CEP implementation, e.g. regarding aggregators and the upcoming demand flexibility quideline

Additional suggestions or recommendations:

Action point on CEP implementation important. Could also share knowledge of the tasks delegated to the NRAs acc, legal framework. Look more into local flexibility markets. In action point 2 Include a positive incentives for DSOs to use flexibilityin a transition period

Action point1 good. Ensuring neutrality is an important task. New text on 1: Ensure neutrality between the use of flexibility between the DSO. Improve the regulatory models an sharing the best practices.

Nordic TSOs

Action points part of updated roadmap:

- To encourage new local sources of flexibility, create local markets for local flexibility products in cooperation with the DSOs
- Coordinate Nordic sharing of best practices and experiences from pilot projects regarding TSO-DSO cooperation
- Coordinate and where possible, harmonize prequalification rules for flexibility providers to make it easier to be active in several markets
- Assess the impact of different tariffs on the incentives to offer flexibility to the market
- Assess the technical barriers to demand side flexibility (e.g. lack of automatization) and exchange best practices to address them
- Regular assessment and publication of flexibility needs according to common Nordic and European principles to provide visibility for the market participants (also under objective 2)

Additional suggestions or recommendations:

Action point 1: Rather use investigate instead of create. Also incl. NordREG work on local flex markets.

Action point 4.(In Norway it is the DSO tariffs that be focus) Instead of assess, it is better to have sharing of best practices This point should be with the NRAs.

Action point 3 could also be relevant for NordREG Reg. 4 and 5 on tariffs and tech. barrieres: Coordination and cooperation is keyword, not assessments

On last action point i should be added systtem flexibililty needs



OBJECTIVE 2: CLEAR PRICE Group 3 **SIGNALS** Host: Antti Paananen

Clear price signals for all system needs across all time frames, price areas and voltage levels (TSO/DSO), rewarding flexibility and system support where effective.

SUGGESTIONS FOR IMMEDIATE AND FURTHER ACTION POINTS FOR THE STAKEHOLDERS:

FMG NordRFG Action points part of updated roadmap: Action points part of updated roadmap: Coordinate on guideline revision Every time there is a regional decision (CACM) and CEP implementation and under the third package and the CEP. have an eye on new European regulatory establish a coordination process to developments with an impact on markets facilitate reaching a unanimous approval within the given times. Establish to this end all the necessary exchanges with the Additional suggestions or relevant TSOs and NEMOs recommendations: · Coordinate viewpoints on the revision of network codes and guidelines (e.g. CACM, EMG does not have Also FCA and EB FCA GLs) and CEP implementation, and formal role in quidelines should be guidelines' have an eye on new European regulatory looked upon implementation developments with an impact on markets Additional suggestions or Make political decisions to push forward one Lower total recommendations: system (more integrated system costs market - one Nordic for customers system) in Nordics + NOrdREG should Try to be more forward SoS ensured looking and proactive gather input from with ACER etc when stakeholders -> Efficient system, price guidelines are opose changes in EL signals are relevant developed/revised regulation Enforcing rules - Nordic should be in front of Mandate and forcing 70% rule (make Type here encourage sure that rules are NordREG/TSOs to enforced) develop market (eg. enable trading closer to real time)

Nordic TSOs

Action points part of updated roadmap:

 Regulatory developments: Coordinate viewpoints on EU regulatory developments such as the revision of network codes and guidelines (e.g. CACM, FCA GLs) and terms, conditions and methodologies under CEP and follow new European regulatory developments with an impact on markets

Type here

- Third package and CEP implementation: Arrive at a common grid model and flow based, proceed with 15 minutes imbalance settlement period and related market products, develop a Nordic methodology to determine the 70% in a rational manner, development of intraday auctions
- Continue with the Nordic balancing model and further European harmonisation
- follow up on solutions report and continue Nordic cooperation on active consumers in Nordic balancing model.
- Create a coordinated transparent market for the procurement of ancillary and system services with clear price signals
- · Increased transparency on (close to) real-time system operation and prices and reporting on major incidents to the markets
- · Regular assessment of flexibility needs according to common Nordic and European principles to provide visibility for the market participants. (also under objective 1)
- Develop a procedure for early Nordic stakeholder involvement in the preparation phase of market development work and implementation
- · Define the compatibility needs in relation to digitalization, data management for flexibility markets and between the Nordic Data Hubs

Additional suggestions or recommendations:

Having dialoque with stakeholders on infromaion needs

SOs are already having ongoing process to gather inputs from stakeholders on concrete actions

Digtalization/datahubs (last bullet) might not relate to price signals

Not TSOs' task to define parket products in DA and ID - rather NFMO's responsibility with input from market parties (TSOs may provide ideas)

Market access equiation should be simplified to get as many market participants as possible (not only TSOs' task)

OBJECTIVE 2: CLEAR PRICE Group 4 Host: Karin Tvingsjö **SIGNALS**

Clear price signals for all system needs across all time frames, price areas and voltage levels (TSO/DSO), rewarding flexibility

and system support where effective.

SUGGESTIONS FOR IMMEDIATE AND FURTHER ACTION POINTS FOR THE STAKEHOL

Reliability of the price signal should be added. Important with long term reliable signals

needs to be highlighted

both dispatch signals and investment signals important

different time frames. reflecting the system needs (do not mix them) (PPAs, Citizens energy communities, Renewable energy communities)

EMG

Action points part of updated roadmap:

· Coordinate on guideline revision (CACM) and CEP implementation and have an eye on new European regulatory developments with an impact on markets

Additional suggestions or recommendations:

different regulation for different sectors hampers sector integration. How can we overcome that?

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NordREG

Action points part of updated roadmap:

- Every time there is a regional decision under the third package and the CEP. establish a coordination process to facilitate reaching a unanimous approval within the given times. Establish to this end all the necessary exchanges with the relevant TSOs and NEMOs
- · Coordinate viewpoints on the revision of network codes and guidelines (e.g. CACM. FCA GLs) and CEP implementation, and have an eye on new European regulatory developments with an impact on markets

Additional suggestions or recommendations:

Standardizing local flexibility markets across the Nordics

making the DSOregulation less capex heavy

of the Nordics that the local be strived for optimise the use of the

DSO NDPs and TSO TYNDPs can be an important tool in transparency and predictability

transparency needs to increase across borders so that tsos can understand and explain for market actors

Difficult for actors participating in several parts rules harmonisation should

new rules for the Directive

on NDPs could be a tool to

increase transparency and

transparency at network planning level in order for market actors to plan ahead and make sound

Nordic TSOs

Action points part of updated roadmap:

- Regulatory developments: Coordinate viewpoints on EU regulatory developments such as the revision of network codes and guidelines (e.g. CACM, FCA GLs) and terms, conditions and methodologies under CEP and follow new European regulatory developments with an impact on markets
- Third package and CEP implementation: Arrive at a common grid model and flow based, proceed with 15 minutes imbalance settlement period and related market products, develop a Nordic methodology to determine the 70% in a rational manner, development of intraday auctions
- Continue with the Nordic balancing model and further European harmonisation follow up on solutions report and continue Nordic cooperation on active consumers in Nordic balancing model.
- Create a coordinated transparent market for the procurement of ancillary and system services with clear price signals
- Increased transparency on (close to) real-time system operation and prices and reporting on major incidents to the markets
- Regular assessment of flexibility needs according to common Nordic and European principles to provide visibility for the market participants. (also under objective 1)
- Develop a procedure for early Nordic stakeholder involvement in the preparation phase of market development work and implementation
- Define the compatibility needs in relation to digitalization, data management for flexibility markets and between the Nordic Data Hubs

Additional suggestions or recommendations:

Coordination btw TSOs and DSOs, what can be harmonized on a nordic level and what needs to be local specific?

dsos is important, short term should be avioded, need to understand and look ahead.

what is the ontimal use of flexibility for the market altogether? how to coordinate this aspect?

so that tsos can derstand and explain for market actors

transparency at network planning level in order for market actors to plai ahead and make sound

Item 1-3 is "need to"

ncreased transparency is very important to market actors to make investment decisions

Regular assessment of flexibility also highly important

Standardised communication /IT environment more important.

make any difference? the plementation of IA regulation and BSP regulation more

OBJECTIVE 3: ENABLING Group 5 ELECTRIFICATION Host: Eva Centeno López

New sectors (transport, heating & cooling and industry (power to X)) are electrified and integrated into the electricity markets with their flexibility. Electricity markets enable system integration and support the move towards a cleaner Nordic society.

SUGGESTIONS FOR IMMEDIATE AND FURTHER ACTION POINTS FOR THE STAKEHOLDERS;

NordREG **EMG Nordic TSOs** Action points part of updated roadmap: Action points part of updated roadmap: Action points part of updated roadmap: Assess regulatory barriers giving negative incentives for • Continue working on the Nordic TSOs strategy on sector flexibility, taking into account new flexibility providers (e.g. integration (which is expected for stakeholder consultation district heating, industry) (also in objective 1) before summer 2021) • Educate and inform industrial users about the role they can • Educate and inform industrial users about the role they can play in the markets and encourage their participation Additional suggestions or play in the markets and encourage their participation recommendations: Type here • Evaluate implementation of the water framework directive Additional suggestions or recommendations: and ongoing legislative processes (taxonomy) connected to Instead of educated the use of hydropowerso that they do not create unnecessary Action 1 NEW Type here dialogue, it could be obstacles for reinvestment or reduce the access to flexibility one week ago, spring 22 will be published, TSO strategy on wond development and difficult to participate from hydropower. due to technical sector integration requirements Important to llok at Additional suggestions or recommendations: the role of exceed Type here Type here SKGS raises the work heat in order to The mandate for regulators is limities Some more words on what Point two is about Ministries should develop done in Finland with avoid building grid to gas and electrification but more regulatory barriers are such participation in right framework for tors need to be adressed to industry participating where other more as tariffs, taxes on for reserve markets example electricity storage in markets efficient solutions solved by others means such don't have the right correct princing, cooperation but in that case can be chosen regulatory framework Type here transparent and reliable Continous Taxonomy is out of the dialogue on mandate of the regulators regulatory for electrification, how can we improve the other reserves barriers but something for the possibilities for new at the Nordic also legal costumers to connect in lue time?NRAs, TSO an governmnent TSO level barriers production/consumtion reduce the need to bui the grid, not meaning to change priceareas but



OBJECTIVE 4: NORDIC Group 6 GRID DEVELOPMENT Host: Marielle Lahti

Welfare on a Nordic level is the guiding objective when preparing Nordic grid development plans considering large scale RES developments on- and offshore and designing Nordic bidding zone structures.

SUGGESTIONS FOR IMMEDIATE AND FURTHER ACTION POINTS FOR THE STAKEHOLDERS:

Nordic TSOs NordREG EMG Action points part of updated roadmap: Action points part of updated roadmap: Action points part of updated roadmap: · Develop a method for cost-benefit assessment if grid Support coordination on TEN-E revisions projects are clearly beneficial from a Nordic point of view but less from a national point of view Additional suggestions or Additional suggestions or recommendations: recommendations: Enhance the use of the PCI framework Help TSOs, coordinate Perhaps oversee for Perhaps areas Convey: The societys Designing and implementing a Nordic transmission grid on a Nordic level with example Nordic relating to permits vision, political vision the help of national electrification or other when grid development plan to integrate the expansion in RES and target electrification schemes area? development production (also under open market access) Is it sufficient with Regional or national The NRAs have based investments Volontary enhance political will? Permits somewhat different · Bidding zones should be assessed from a Nordic benefit different businesscases cooperation apart from need to follow roles and mandate Clear political direction EU-legislation, where The green notes point of view regulator needed connected to common interests below are not all legislation Perhaps enhance directed at the TSOs but rather reflects the Nordic cooperation Additional suggestions or recommendations: apart from EUdiscussion AP 1):The typical cases. Should we accept a regulation, where On the scoping of the objective National decisions on the CBA is somewhat include the whole investment certain amount of common interests arid development vs utside the scope.. What i How to do gridplanning? climate. For example security of congestion and use the decision criteria? The Nordic grid supply, how to invest in new Society point of view etc neration etc. Not only from a method is not an issue. other tools to cope development. Ex East-Main point 1: General dispatch perspective with this? West flows impact on SE Main point 2: Support comment, many initiatives investment climate, AP 2) Compare how More varying flows Alternative to grid On the objective:not are ongoing on a Nordic/ Baltics use EU-financing, the nordics: Ex FIN development, bidding going forward, new only large scale, also long term vision. what benefits does this one bidding zone. DK/ Baltic level. Why is this part zones. In the future strains on the grid. market driven evolution bring in the end apart from SE - several bidding of the work now? Is it Holistic approach getting EU-financing locally. Needs to be more or less bidding New congestion etc. necessary? more holistic approach zones Grid development: AP 2) Use PCI General comment. Perhaps possible to welfare maximisation many points already framwork on a Nordic Important to have a have more volontary point of view vs regulated for example level? road forward cooperation, apart from investment climate -AP 4 on bidding zones legal demands (EU) How to incorporate?



OBJECTIVE 5: OPEN Group 7 MARKET ACCESS Host: Peter Olsen

All clean electricity sources (e.g. offshore energy) are seamlessly integrated into the Nordic market.

SUGGESTIONS FOR IMMEDIATE AND FURTHER ACTION POINTS FOR THE STAKEHOLDERS:

EMG		NordREG		Nordic TSOs
Action points part of updated roadmap: Contribute to coordination on TEN-E revision regarding offshore market design Additional suggestions or recommendations:		Action points par	t of updated roadma	 Action points part of updated roadmap: Develop a Nordic solution on offshore market design
		Additional sugge recommendation		 Coordination and exchange of views with stakeholders on issues related to financing and ownership to offshore infrastructure.
TEN-E coordination a agional focus instead of a national one for enabling he next phase of the large scale offshore RES.	There might be a need for coordinating view on subsidy on production to deliver on the target or can the market deliver without coordinated subsidy?	Type here	Type here	 Designing and implementing a Nordic transmission grid development plan to integrate the expansion in RES production
Oo not loose sight of the target carbon neutrality and cost efficiency.	coordinate development of the taxonomy at nordic level		Type here	(also under a coordinated Nordic grid development)
				Additional suggestions or recommendations:
PRODUCERS FOR THE PRODUCE				
TEN-E coordination regional focus instead national one for enab large scale offshore RI	a coordinate of a development of the ing taxonomy at nordic			Type here Type here



OBJECTIVE 6: Group 8 RESOURCE ADEQUACY Host: Fredrik Norlund

Resource adequacy is ensured through marked-based solutions. Price signals guide investments, reflecting the value of resources in scarcity periods, and internalize the risk of inadequacy.

SUGGESTIONS FOR IMMEDIATE AND FURTHER ACTION POINTS FOR THE STAKEHOLDERS;

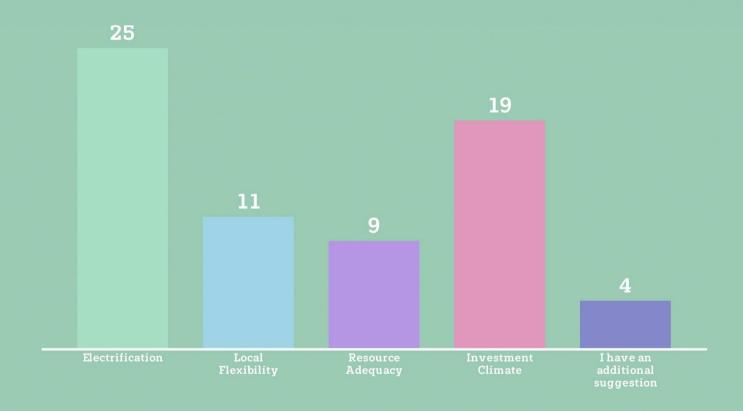
EMG	NordREG			Nordic TSOs				
Action points part of updated roadmap: • Coordinate the policy work regarding "security of supply"	Action points part of updated roadmap: •			Action points part of updated roadmap:Coordination of possible measures to ensure resource adequacy				
Additional suggestions or recommendations:	Additional suggestions or recommendations:			Regional analysis of resource adequacy				
Ensure the right	Important with price signals, but must be reasonable. Too high scacity price level (99000 EUR) can harm the market.	Ensure hedging possibilies		Additional sugg	commenda	ations:		
technology neutral investment climate				A CONTRACTOR OF THE PARTY OF TH	TSOs cooperate within NTSO-E regarding regional		Strive to minimize total system costs, both on Nordic and	
	Type here	Type here		analysis. Will be possibilities to u reserves. Importa	the basis for se strategic	national le	evel	
			market particip		its of results	grid develo	ordic perspective in d development (next	
				Consider cross- border bidding zones. (Process ongoing at		ENTSO-E	one within E, TYNDP- cess)	
		EU-level) Maximizing grid	Nordic and transpar view on how to han local adequacy					
				capacity for the market	challenge transmiss	es in the		



Part 3) Idea gathering: Themes for next forum



What do you think could be a relevant theme to focus on for our next forum?





In future forums, it would also be interesting to focus on:

RES market Integration

Electrification

Nordic ISO/ITO

I think the financing and develping the necessary infrasturure is of essence

How to even further reach a common grid without price area differences

We might need to be open also for what might appear within 6 months. Last Spring when flex was decided as the main topic, we didn't see Covid nor the take up of electrification

a) Development Network Code for Flexb)
Implementation EU Clean Energy Package: Market-based redispatch, Market-based flex procurement for DSOs

Wider Nordic based Sector Integration / e.g. electricity, gas, heating, cooling and transportation.

Offshore wind

Mentimeter

In future forums, it would also be interesting to focus on:

DSO Business model:

Comment to next: the challenges that electrification poses to the Nordic systems. And what mensurers med to be taken Nordenergi study, Swedish strategican be presented.

Concluding the forum...



The Forum Way of Work (2021)

Q4

Take stock of the virtual years and celebrate the success stories.

Find out how we continue to work on the Roadmap and the Vision Nordic Electricity Market Forum: IN REAL LIFE (?)

Coordination Group and Working group(s) meetings

Coordination Group Working group(s)

EMG meetings

September: Nordic Council Energy Ministers meeting Nordic Electricity Market Forum Online Session 1

Coordination Group Working group(s)

EMG meetings

Nordic Electricity Market Forum Online Session 2

01

Until 4. March: internal work on questions for the stakeholder

After 4. March: NEF and EMG collect input and work on session 2, with help of the NEMF coordination group

EMG

Update of Roadmap for the Nordic Electricity Market, work towards the Nordic Council meeting

Coordination Group/WGs

Contribute to new Roadmap Based on new roadmap discuss and find topics for the phycsial forum. Collect input from all stakeholders

Q₂

Presentation of the forum outcomes & Roadmap

Get a new subject for the physical Forum in December

Q3



Next steps

- Update the roadmap (and present it to the ministers in September)
- Start work on preparing the next Forum (hopefully physical) in December, where we will also follow up on the action points
- Work with the Coordination Group & Relaunch of the Flexibility working group to look into Local Flexibility
- Sendouts:
 - Presentations & murals
 - The roadmap
 - Publish the AFRY report on local flexibility markets





