Nordic Electricity Market Forum

First Annual Gathering Nov 21st 2018 Stockholm



Content

- Program overview
- Vision and roadmap framework description
- Result Values



PROGRAM

9:30 WELCOME & INTRODUCTION

Welcome by EMG

EMG Chair Markus Hübner and Sharissa Funk, Energistyrelsen, DK

Welcome by NCM chair country

Mr. Ibrahim Baylan, Minister for Policy Coordination and Energy, Sweden

Setting the scene for developing our joint Vision

Jens Skov-Spilling, Senior Adviser, Nordic Council of Ministers – "Nordic Energy Cooperation: Strong today – stronger tomorrow"

10:30 VISION FORMULATION - DEFINING CORE IDEOLOGY

- Introduction to the chosen Vision format
- Exploring core values of the Nordic Electricity Market

What essential and enduring features does the Nordic Electricity Market possess that should be retianed into the future? Core values should be unchangeable, even when circumstances change.

• Defining the core purpose of the Nordic Electricity market

The core purpose should answer the question: Why do we need a Nordic Electricity Market?

12:30 - 13:15 LUNCH

13.15 VISION FORMULATION - ENVISIONED FUTURE

Setting the scene

Anna Colucci Head of Unit, European Commission

Group reflection on envisioned future

What it will look like to achieve the Vision?

Goal definition

2030 ambitious goal

15.00 - 15.15 COFFEE BREAK

15:15 KICK-OFF OF ROAD MAP WORK & NEXT STEPS

1. Discussion of Road Map themes

Verification of initial themes in the light of the Vision development work: are all essential areas covered by the themes, or is there a need for amendments or additions?

Initial Road Map themes: 1) Retail market development, 2) Flexibility issues, 3) Digitalisation, 4) Integration of renewables, 5) Harmonising with EU regulations and developments

2. Reflections on Working Groups

Participants reflect on which themes their organisations plan to contribute to

3. Information on upcoming Working Group activities

Introduction of the planned processes, feedback format, deadlines etc.

4. Sum up and next steps

EMG Chair Markus Hübner and Sharissa Funk, Energistyrelsen, DK

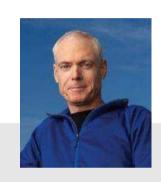
16:30 END

Vision Formulation & Roadmap development



Framework

- Why are some organisations able to become, and remain, visionary through multiple generations of leaders, across decades and centuries?
- The framework provides a structure for analysing and developing visions with several perspectives accounted for.



About Jim Collins

- Stanford Graduate School of Business, Distinguished Teaching Award in 1992
- "One of the 100 Greatest Living Business Minds" (Forbes, 2017)
- Renowned lecturer on the subject of sustainability and growth for corporate and social sectors
- Good to Great (2001), Good to Great and the Social Sectors (2001), How the Mighty Fall (2009), Great by Choice (2011)



From vision to tactics

- How it connects

| Vision | Core, unchanging qualities and desired future position | | |
|-------------------------------------|--|--|--|
| Roadmap | Focus areas and strategic objectives leading to the vision | | |
| Strategies for achieving objectives | Plan of action | | |
| Tactics required for implementation | Implementation | | |



What will we explore today?

| Vision | Core Values & Purpose What core values can be ascribed to the Nordic Electricity Market? | | | |
|---------|---|--|--|--|
| | How do we as a forum describe the purpose of the Nordic Electricity Market? | | | |
| | Envisioned Future How do we envision the next phase of the Nordic Electricity Market and what should be the goal of the market? | | | |
| Roadmap | Which themes should we cover to acheive our vision? How do we take the next steps with our roadmap? | | | |



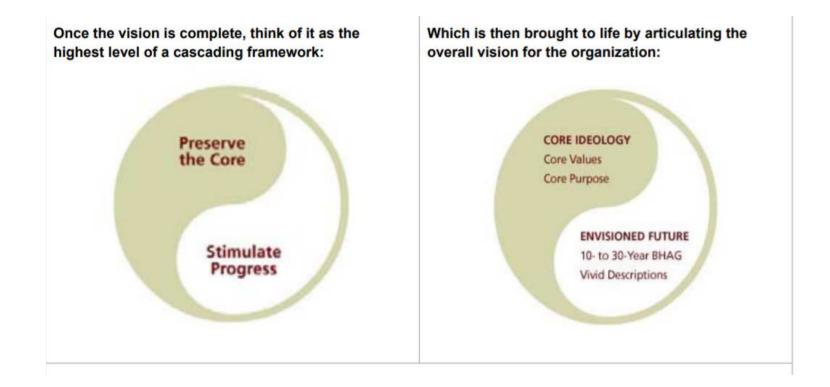
Elements of a vision

"A well-conceived vision consists of two major components: **core ideology** and **envisioned future**. The core ideology is unchanging while the envisioned future is what we aspire to become, to achieve, to create."

Jim Collins and Jerry I. Porras, 1996



The complete framework is a balance between preservation and progress...



https://www.jimcollins.com



Elements of a vision

Core ideology

Core purpose

- The reason for being your "why".
- Not to be confused with a goal or strategy.

Core values

- Essential and enduring tenants.
- Small set of timeless guiding principles.
- Do not confuse with operating practice, business strategies or cultural norms.

Envisioned future

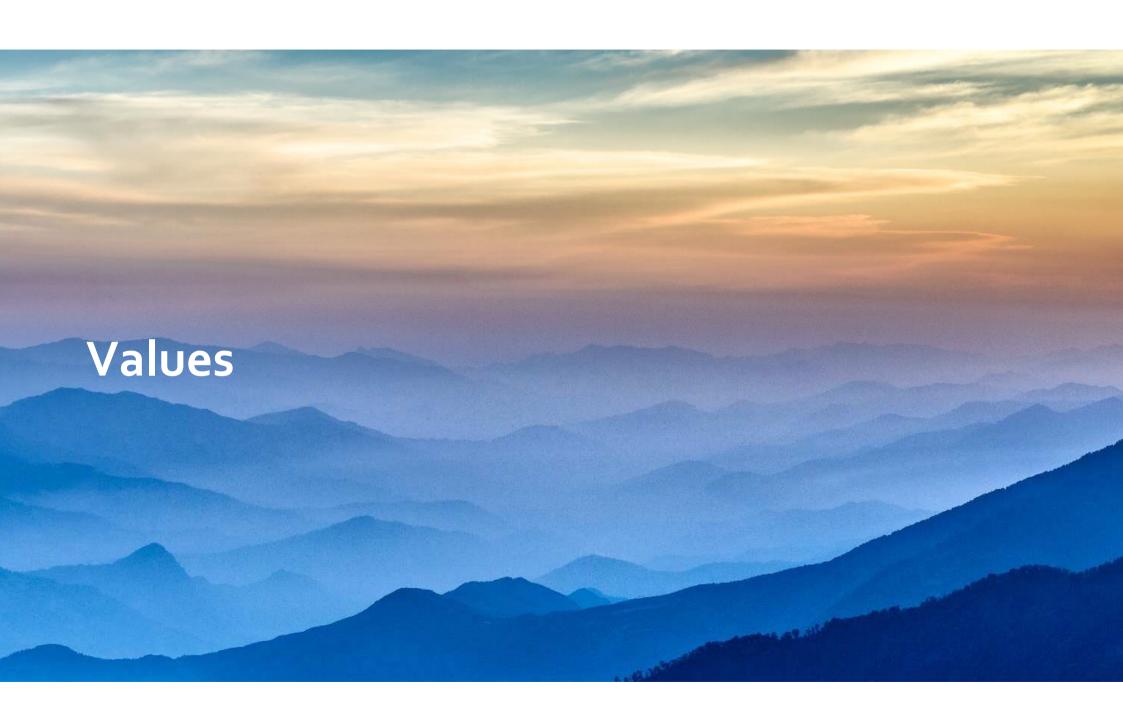
Goal definition: a 10 to 30 year ambitious goal

- Clear, compelling and unifying.
- A catalyst for a joint effort of different kinds of stakeholders.
- It has a finish line.

Goal description: A detailed description, illustrating what it will look like to achieve the ambitious goal

• An illustrative, engaging and specific description of what it will be like to achieve the goal.





A word on values

- The essential and enduring tenants of organisations or entities.
- Timeless guiding principles.
- Do not confuse with operating practice, business strategies, or cultural norms.
- Ensure that your final values do not fall into the category of "aspiration for the future".

Questions for reflection

- If you were to design a new market, would you build it around this core value regardless of the industry?
- Would you want the market to continue to stand for this core value 100 years into the future, no matter what changes occur in the outside world?
- Does this core value characterise the market as you perceive it today?



Values emerging in previous input from stakeholders

- Innovative
- Competitive (design, prices)
- Customer/consumer focused
- Green & low-carbon (Climate friendly, Decarbonisation)
- Decentralisation
- Digitalisation
- Open (Low-barriers to entry)
- Nordic integration
- Europan integration/harmonisation
- Democratic
- Data-driven
- Transparency

- Flexibility (new business models)
- Joint approach
- Strong political leadership and steering
- Active in development (role model)
- Efficiency (resource)
- Smart
- Cost-effective and efficient
- Cooperation
- Coordination
- Market liberalisation
- Well-functioning
- Well-designed





A word on purposes

- This is about finding your "why".
- The reason for being not to be confused with a goal or strategy.
- Your purpose should answer why there is a Nordic Electricity Market.

Questions for reflection

- Can you envision this purpose being as valid 100 years from now as it is today?
- Does the purpose help you think expansively about the long-term possibilities and range of activities the market can consider over the next 100 years?
- Does the purpose help you to decide what activities to not pursue, to eliminate from consideration?
- Is this purpose authentic—something true to what the market is all about—not merely words on paper that "sound nice"?



Examples of purposes

"To enrich people's lives with programmes and services that inform, educate and entertain."

The BBC

"Accelerate the advent of sustainable transport by bringing mass market electric cars to market as soon as possible"

Tesla

"To connect the world's professionals to make them more productive and successful"

LinkedIn

"To make technical contributions for the advancement and welfare of humanity"

HewlettPackard

"To be a role model and tool for social change"

Patagonia



Purposes emerging in pre-forum stakeholder input

- To serve its citizens in the best way and creates advanced business models for increased competitiveness of the economies of the Nordic countries
- To facilitate market penetration of renewable energy sources and linkages between local and regional markets
- To provide a sustainable, affordable and secure energy system
- To run the clean market driven power system

- To bring competitive prices, clean energy and excellent security of supply for societies and customers
- To provide consumers with clean, sustainable electricity at competitive prices with an adequate level of security of supply.
- To transform into a low-carbon green economy
- To provide reliable and secure electricity to all consumers at all times.
- To secure Nordic consumers emission free electricity to competetive prices



Processing of input

- The purposes identified in the material were broken down and compared in terms of themes such as:
 - Target audience
 - Level of security
 - Level of "green"
 - Key output
 - Key good

- 1. To serve its citizens in the best way and creates advanced business models for increased competitiveness of the economies of the Nordic countries
- 2. To facilitate market penetration of renewable energy sources and linkages between local and regional markets
- 3. To provide a sustainable, affordable and secure energy system
- 4. To run the clean market driven power system
- 5. To pring competitive prices, clean energy and excellent security of supply for societies and customers
- 6. To provide consumers with clean, sustainable electricity at competitive prices with an adequate level of security of supply.
- 7. To transform into a low-carbon green econonomy
- 8. To provide reliable and secure electricity to all consumers at all times.
- 9. To secure Nordic consumers emission free electricity to competetive prices

| For whom? | Citizens | Societies and customers | (All) consumers | |
|--------------------------|--------------------------|-------------------------|----------------------|-------------------|
| How secure? | Secure and reliable | Excellent SoS | Adequate SoS | |
| How green? | Renewable | Sustainable | Clean, emission-free | Low-carbon |
| How <mark>cheap</mark> ? | Affordable | Competitive | Market-driven | |
| For what? | Increase competitiveness | Market penetration of | Link markets | Advanced business |
| | | RES | | models |
| Do what? | Serve | Provide, bring, run | facilitate | Transform |
| What good? | Energy | Electricity | | |



Suggested purposes for review by forum participants:

A

To provide secure, affordable, and clean energy to all consumers.

B

To serve its citizens by providing sustainable electricity at competitive prices and with an adequate level of security of supply

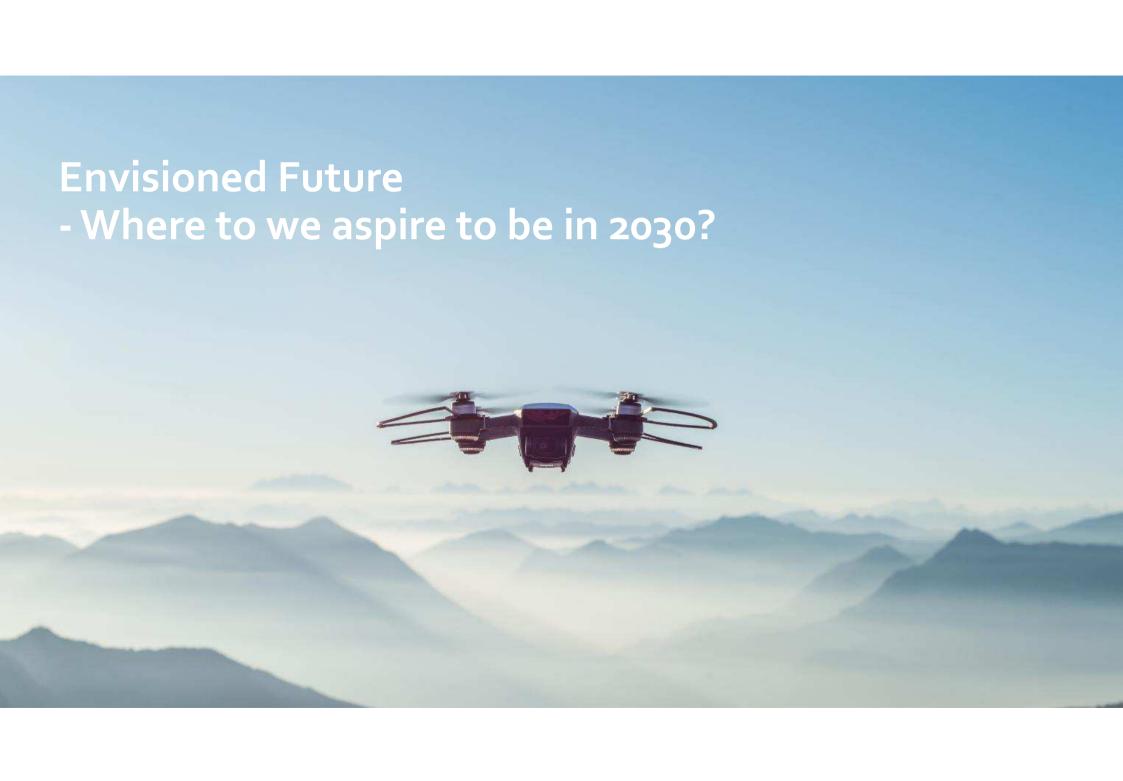
C

To facilitate penetration of renewable energy sources in a market-driven power system and the transformation into a low-carbon green economy.

D

Other





Descriptions of future positions previous stakeholder input

"Digitalization, electrification and automatization will lead to a society that will be even more reliant on an electricity supply with high reliability. the electricity demand will rather increase than decrease in the future decades, and the electricity system must be able to deliver that. "

"Electricity supply is a **fundamental infrastructure** in a **modern society**. Designing a cost-efficient system that can provide the electricity requested by the **consumers** – both in terms of quantity and quality - must be at center."

"The Nordic electricity market is a **role model** supporting the European de-carbonisation."

"An **enhanced** target model for the Nordic Electricity Market in a European context in order to put the Nordic region in the **forefront** as a target model for European development to the **benefit of Nordic consumers."**

"An Energy Union [...] efficient and powerful long-distance grid connections without physical or political barriers. Effective competition policies must provide companies with legal certainty and uniform application of the competition rules and principles across the EEA."



A word on goal formulation

- Clear, compelling and unifying catalyst for a joint effort of different kinds of stakeholders.
- It has a finish line, so you can know when you have achieved the goal
- Not a sure bet —perhaps only a 50% to 70% probability of success — but you must believe that you can reach the goal anyway.

Questions for reflection

Do you find the goal exciting?

Is the goal clear, compelling, and easy to grasp?

Does the goal connect to the core purpose?

By the finish line, will you be able to tell if you have achieved the goal?



Processing of input

- The majority of goal formulations in the input were theme-specific.
- Goals identified as overarching were broken down and compared using the following categories:
 - Scale/quantification
 - Key qualities
 - Output

- One of the world's most competitive, innovative and climate friendly system
- An enhanced target model for the Nordic Electricity Market in a European context
- The worlds smartest electricity market
- A competitive, low-carbon economy by 2050
- A completed internal energy market
- All European energy-only market assisted with balancing power as well as utilise the growing renewable surplus
- A role model supporting the European de-carbonisation

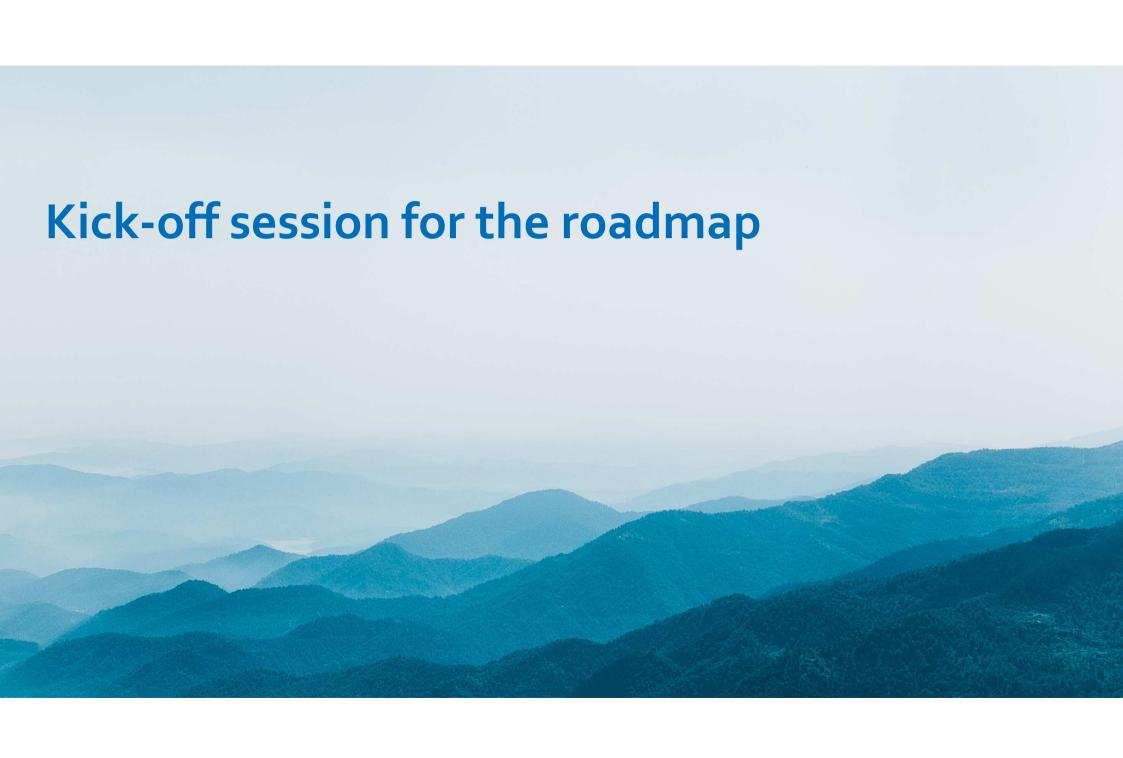
| Quantification/Scale | Key Qualities | Output | | |
|-------------------------|--|--------------------------------------|--|--|
| "the world's most" | "Competitive" | A system" | | |
| "in a European context" | "Innovative" | "a target model" | | |
| By 2050 | "Climate friendly" | "a role model" | | |
| | "Low carbon" "De-carbonization" | "All European energy-only market" | | |
| | "smart" | | | |
| | "Assisted with balancing power as well as utilize the growing renewable surplus" | | | |



Goal suggestions

- By 2030, the Nordic electricity market is one of the world's most competitive, innovative and climate friendly power markets and a role model for the development of the European internal electricity market.
- By 2030, the Nordics have the world's smartest carbon-neutral electricity system.
- By 2030, we have an all European energy-only market assisted with balancing power as well as utilising the growing renewable surplus.
- Other





A few words on the roadmap

- Overarching themes spanning a three-year (or more) time horizon.
- The themes highlight which areas to focus on to achieve the vision.
- The themes can be specified in the form of 'Strategic Objectives'.

| Theme: | [Name of theme] |
|------------------------------|--|
| Guiding 2030 objective | [2-3 sentences describing the sought-after situation within this particular theme] |
| Key challenges | [Key challenges to achieve the 2030 objective] |
| 5-year base targets | [Specifying desired position/achievements within the next 5 years] |



How did we arrive at the suggested themes?

- Quantitative and qualitative analysis of stakeholder input.
- The most commonly referred to areas were summarized into overarching headings.

| Road Map Key words (grey text below has been included in the summary heading | |
|--|--|
| Competitiveness / market based (competitive prices) | ### II |
| New business/market models | ### ### |
| Customer centred / active involvement of customers / prosumers | IIII I |
| Low-Carbon / Carbon-neutral / Zero-Carbon (enviro friendly / sustainable) | |
| Carbon pricing | III |
| Flexibility issues (flexibility market / Sector coupling for flexibility) | |
| Increased electrification (environmental motivation and for flexibility) | |
| Balancing market | IIII |
| Real-time market | 1 |
| Common risk strategies and reaction plans (security of supply) | II |
| Retail market development and harmonising | HH II |
| Harmonising with EU grid development and market | IIII I |
| Harmonising with EU regulation | II |
| Joint Nordic standpoints on EU regulations and implementation of them | IIII |
| SMART grid / meters / automatization (+pilots / forerunner) / digitalisation | |
| Harmonised and clear price signals | III |
| Data & datahubs integration (real-time data / open data / customer-owned data) | |
| 15 minutes products available | II |
| More/stronger interconnectors / integration – to "external" markets | ### II |
| Decentralised production | II |
| Increased cooperation between TSOs and DSOs | IIII |
| Market liberalisation / low-entry barriers | ### |
| Harmonising national policies (market design) | |
| Harmonising national regulation | IIII |
| Harmonised operation, planning and structure of transmission systems | IIII |
| Political commitment | II |
| | |



Roadmap themes based on previous stakeholder input

1. Market development

new business models / services / market design / customer centred / harmonising development / price signals

2. Flexibility issues

Flexibility market / Sector coupling for flexibility / Balancing market / increased electrification – flexibility support

3. Digitalisation Integration

real-time data / open data / customer-owned data) / SMART grid / meters / automatization (+pilots / forerunner) / digitalization

4. Integration of renewables

Carbon-neutral / Zero-Carbon / increased electrification – environmental reasons

5. Harmonising with EU

Regulations, market- and grid development / harmonised Nordic standpoint on EU issues



Next steps & Wrap-up



Next steps

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|------------------|---|----|---|---|----|---|--------------|
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Sign up for working groups via website

December 20th

WG members will receive mail from EMG and be asked to point out contact person

February 2019

Status update – EMG and WG contact person

March 15th

Working groups deliver final input to roadmap to EMG

June

EMG presents input to Nordic Council of Ministers meeting in June.



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