Nordic TSO Perspective on the future of the Nordic Electricity Market

Erik Ek, Svenska kraftnät
Regional Electricity Cooperation and Nordic Perspectives on Europe
22nd November 2017


NA

Mörka affärer och hissdrama

NÄR HELA ÖREBRO SLOCKNADE

NA:s löpsedel i går. Det var många som drabbades av det stora strömavbrottet i Örebro under tisdagen.

– Olyckligt, säger Erik Ek, chef för avdelningen Drift på Svenska kraftnät om att 60 000 örebroare blev strömlösa när något gick snett med arbeten vid en ny kraftstation i Karlslund. Händelsen ska nu utredas.

FOTO: FREDRIK SANDBERG / TT

Svenska kraftnät tar på sig skulden

ÖREBRO Statliga Svenska kraftnät höll på med arbeten vid en ny kraftstation i Karlslund när något gick snett och 60 000 örebroare blev strömlösa. En ny transformator skulle installeras.

Ett installationsjobb som gick snett eller för känsligt inställda reläer? Nu ska Svenska kraftnät och Eon reda ut vad som hände när

Det ska naturligtvis inte få konsekvenser för elleveransen till slutkunderna och att det har fått det här är mycket olyckligt.

hade behövt justeras för att passa förändringar i elnätet.

– Men det kan också finnas andra orsaker. Utredning får utvisa det, säger Erik Ek.

Olika bolag har ansvar för olika delar av elnätet. De inblandade för Örebros räkning är statliga Svenska kraftnät, Ellivio som tidigare hette Fortum och Eon.

Förenklat fungerar det så här: 400 000 volt strömmar

i Örebro är den nere på 400 volt.

Från och med Lindbacka har Eon ansvar för ledningarna.

– Vi ska reda ut vad som hände, säger Björn Persson, chef på kraftbolaget Eons region Mitt.

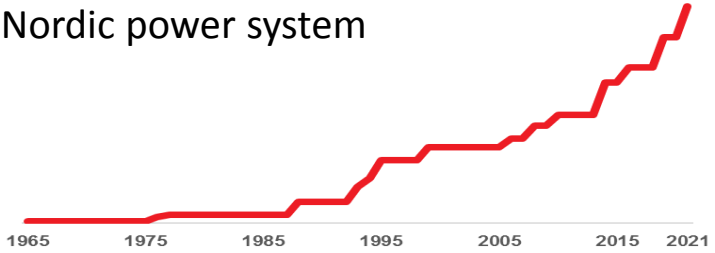
Det var Eons skyddsreläer i Lindbacka som reagerade på elektriciteten som kom från Karlslund på tisdagen.

– Svenska kraftnät kopp-

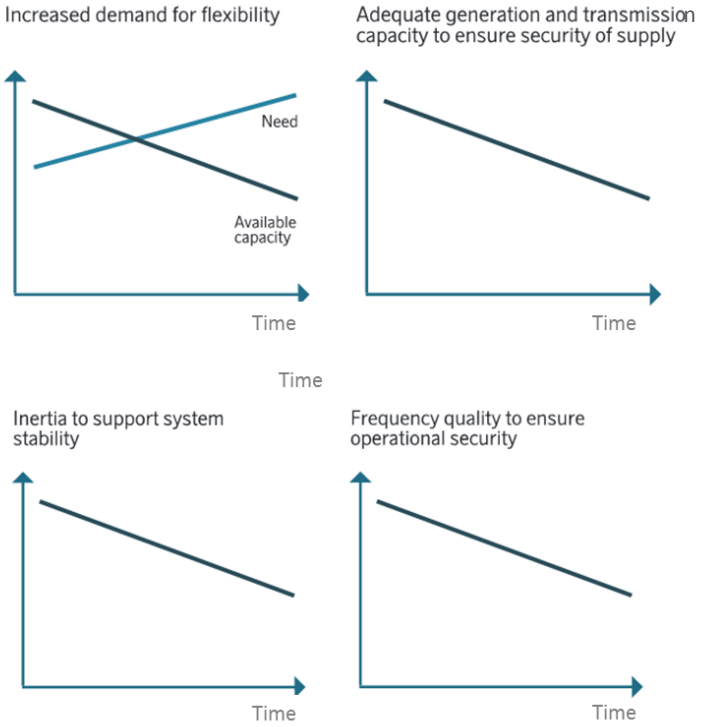
The changes of the Nordic power system are driven by climate policy, technology development and integration

The main changes are:

- The closure of thermal power plants in Finland and Denmark
- Rising share of wind power
- Decommissioning of Swedish nuclear power plants
- Increase in interconnector capacity out of the Nordic power system



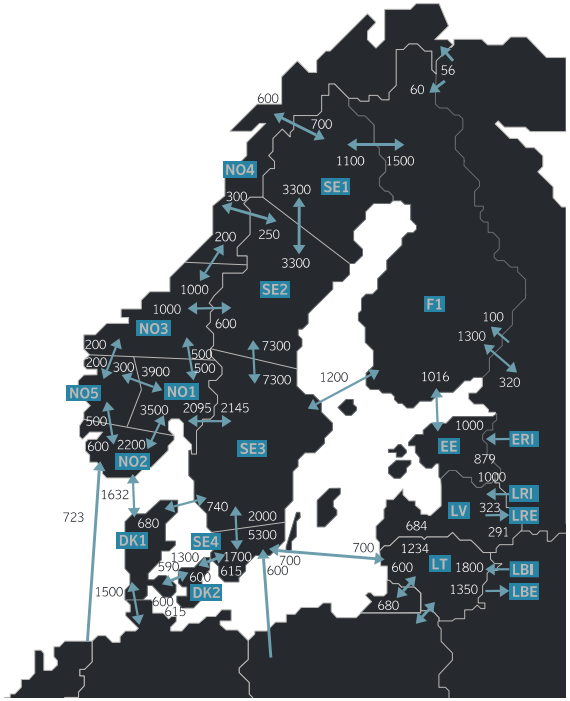
Challenges in the Nordic power system



Possible solutions to meet the challenges

- Introduce higher time resolution
- Utilize the transmission capacity more efficiently
- Demand side response
- Stronger incentives for the Balance Responsible Parties to support the system
- Harmonize products and market solutions for frequency and balancing regulation
- Identify mitigation measures to address adequacy in a Nordic perspective
- Market solutions or incentives to ensure that enough inertia is maintained in the system at all times
- Technical specifications to increase inertia in the system

Transmission adequacy to ensure security of supply



Challenges

- Value all benefits when planning the transmission network
- Maintain operational security and an efficient market while reconstructing the grid

Possible solutions

- Improve modelling tools and a robust scenario strategy
- Clarify differences and common goals for grid development in the Nordic countries
- Develop the grid and additional transmission capacity

There are well functioning regional and European TSO-cooperations on technical / commercial level…

ENTSO-E as main platform

Joint entities for commercial operation of interconnectors

RSCs as service-providers to TSOs

Successful implementation of **Market coupling**

Regular **bilateral solutions**

Successful development of **Grid Codes**

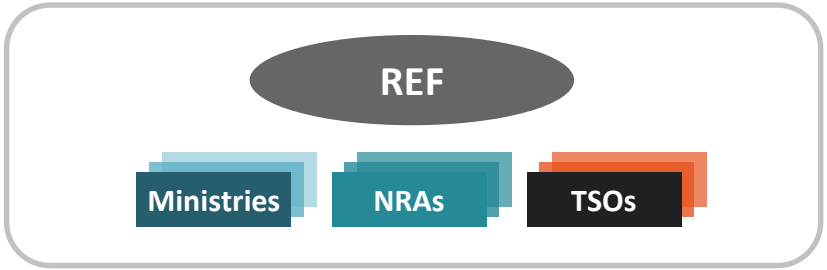
Regional and European cooperation is firmly rooted in the European TSOs DNA

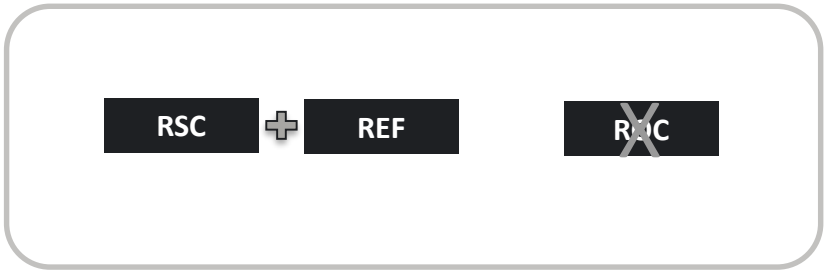
...however, there are political issues which are challenging for regional TSO-cooperation

Handling of Loop-Flows (price zones versus redispatch)	Effects of different national energy mixes / strategies	Adequacy on regional and national level	Questions on welfare allocation
Impact of national capacity instruments	Capacity calculation for meeting import needs	Development of interconnectors	Impact of RES development

In addition to the existing regional TSO-cooperation, a platform for stronger regional cooperation on cross-border policy and regulatory issues is needed.

A proposal from the European TSOs:
A concept of obligatory Regional Energy Forums (REFs)





The energy system in Europe **require further regional cooperation**. Establishing the Regional Security Centers (RSC) as service providers for the TSOs is an important first step.

The Clean Energy Package (CEP) strengthen regional cooperation but the proposal for **Regional Operating Centers (ROCs)** for the TSO's does not meet all challenges.

European TSOs propose to establisbe Regional Energy Forums similar to Ollila's proposition on Nordic Energy Forum.

Having **REFs in addition to RSCs:**

Ministries, regulators and TSOs will be able to coordinate sufficiently, based the following **obligations**:

- ✓ Meetings at least (two) times a year
- ✓ Development of regular (yearly) reports on status and development of regions
- ✓ Problems can be brought in by all involved parties, Commission consultation can be requested in case of no agreement

The Ollila report proposes to establish a Nordic Electricity Market Forum:

The Nordic TSOs are positive to establishing forum for increased cooperation

All relevant stakeholders

- Government officials, TSOs, DSOs, regulators, producers, consumers, etc

It's not a conference…

- …but a tool for responding to common challenges
- Inform the Nordic energy ministers prior to their annual meeting

A strong Nordic voice

- Achieving an integrated Nordic electricity market as a main focus