

13th of June 2022

Nordenergi position paper

Increased Nordic Efforts on electric mobility

Decarbonising the transportation sector is one of the key measures to ensure emissions cuts compatible with the Paris agreement targets. The Nordic countries are important early markets for electric mobility. Maintaining this leading position is important both to cut emissions and provide early mover opportunities for Nordic business including in grid optimization, charging infrastructure and platforms and in the automotive industry.

The Nordenergi member organizations, Finnish Energy, Swedenergy, Energy Norway, Green Power Denmark and Samorka therefore call on increased efforts to develop and implement electric mobility in the Nordic countries.

Electric transport has great advantages as, in addition to benefiting the climate, it is also quiet and exhaust-free when driving. With noisy and exhaust-emitting fossil-powered vehicles out of the picture, a number of new possibilities open up.

Key points when electrifying Nordic transportation sector

- ➔ The electricity sector shall be an enabler of fossil-free transport. Charging infrastructure must not become an obstacle for the electrification of the transport sector. This means that charging infrastructure should always be one step ahead of the electric vehicle fleet.
- ➔ The roll-out of charging infrastructure should primarily be market-driven and be a breeding ground for business opportunities throughout the e-mobility value chain.
- ➔ In cases where the market fails to provide the necessary infrastructure required for the entire transport sector to become fossil-free, the state should contribute with support and subsidies.

More specifically, we suggest the following measures:

1. Incentives for electric vehicles

In the first stage, the sale of electric vehicles should be supported with grants that enable customers to take the first step to e-mobility. In the longer term, the support should be phased out, but it is important that this does not happen too quickly as it is absolutely critical that we keep fast steps in climate change in the transport sector:

- Stimulus for purchase of electrical vehicles
- Reinforce the principle that the polluter pays the costs of emissions from fossil-fueled vehicles

2. Grid development

A significant obstacle to the expansion of fast charging infrastructure is the lack of available capacity in the electricity grid. This applies especially to fast charging of heavy vehicles but is also a massive hurdle for the roll out of fast charging stations for light electric vehicles. To address this challenge, extensive action is needed in these areas:

- Regulations that allow much smoother grid development, for example through faster permitting and acquisition of land use rights
- Make sure the required investments to the grid can be done proactively based on forecasted demand
- Efficient use of the grid, for example by incentivizing flexible solutions to grid capacity

3. Charging infrastructure

Within a few years, there will be a large number of electric vehicles on the roads in our Nordic countries that need to be recharged regularly. This will of course be a challenge for the electricity system. However, there are a number of ways to reduce any negative consequences if we implement smart charging infrastructure in a cost-efficient manner. There are opportunities in several areas:

- Enable time-limited conditional / flexible connection agreements to be able to connect fast charging infrastructure to the grid at an earlier stage, instead of having to wait until the grid is strengthened. With a flexible agreement, a customer can make full use of their subscribed power as long as there is capacity in the electricity grid. In very rare situations, when an acute shortage of capacity risks occurring, the charging point operator allows the DSO to temporarily reduce the power.
- Smart charging – tariffs that provide incentives for efficient grid use
- Vehicle to grid – functionality that enables energy to be pushed back to the power grid from the battery of an electric car. The battery can be charged and discharged based on different signals depending on the grid status.

4. Heavy vehicles

Electrification of heavy vehicles is expected already during this decade. Many manufacturers have introduced new models capable of long distances.

- To ensure a swift decarbonization, the charging infrastructure for heavy duty vehicles needs public assistance. This can come in the form of smoother regulation, national and regional planning, and when needed, economic support. There is also a need to evaluate and enable public/private partnerships.
- The expansion of charging infrastructure should be based on analyzing the needs together with the automotive/freight industry. Based on the range that electric trucks have on the market today, the regional transports with large volumes of goods, are well suited to be electrified. Above all, depot and destination charging are needed here. For transports over longer distances, fast charging is needed along our major roads.
- Although electric heavy vehicles will likely be the primary technology, we will also need to use other technologies such as hydrogen and biogas to some extent for certain use cases.

5. R&D investments

The Nordic countries are far ahead in the transition to electric transport in a global perspective. There is great potential in using our markets for research and development of new products and services. We therefore see a need for a permissive regulatory framework (regulatory sandbox, for example) and subsidies that enable pilots and tests. This can create conditions for Nordic companies and start-ups to develop their technology, solutions and business concepts ahead of a global launch.

- Increase investments in e-mobility technology and solutions, including charging infrastructure, customer behavior and new business models

6. Role of states, municipalities, cities and counties

Regional and local public frameworks and activities need to support the introduction of e-mobility and, for example, be a driving force when it comes to sale of zero emission vehicles and expansion of charging infrastructure.

- Public actors play key roles in planning for charging infrastructure and permitting
- Public procurement involves large volumes and is an important driving force in the transformation of the transport sector

For more information regarding Nordenergi please visit www.nordenergi.eu



Nordenergi is the joint collaboration between the Nordic associations for electricity producers, suppliers and distributors. Members are Swedenergy, Green Power Denmark, Energy Norway, Finnish Energy and Samorka. Overall, Nordenergi represents more than 800 market actors (member companies), most of them active in the electricity sector, but also in other areas such as district heating, gas and services.