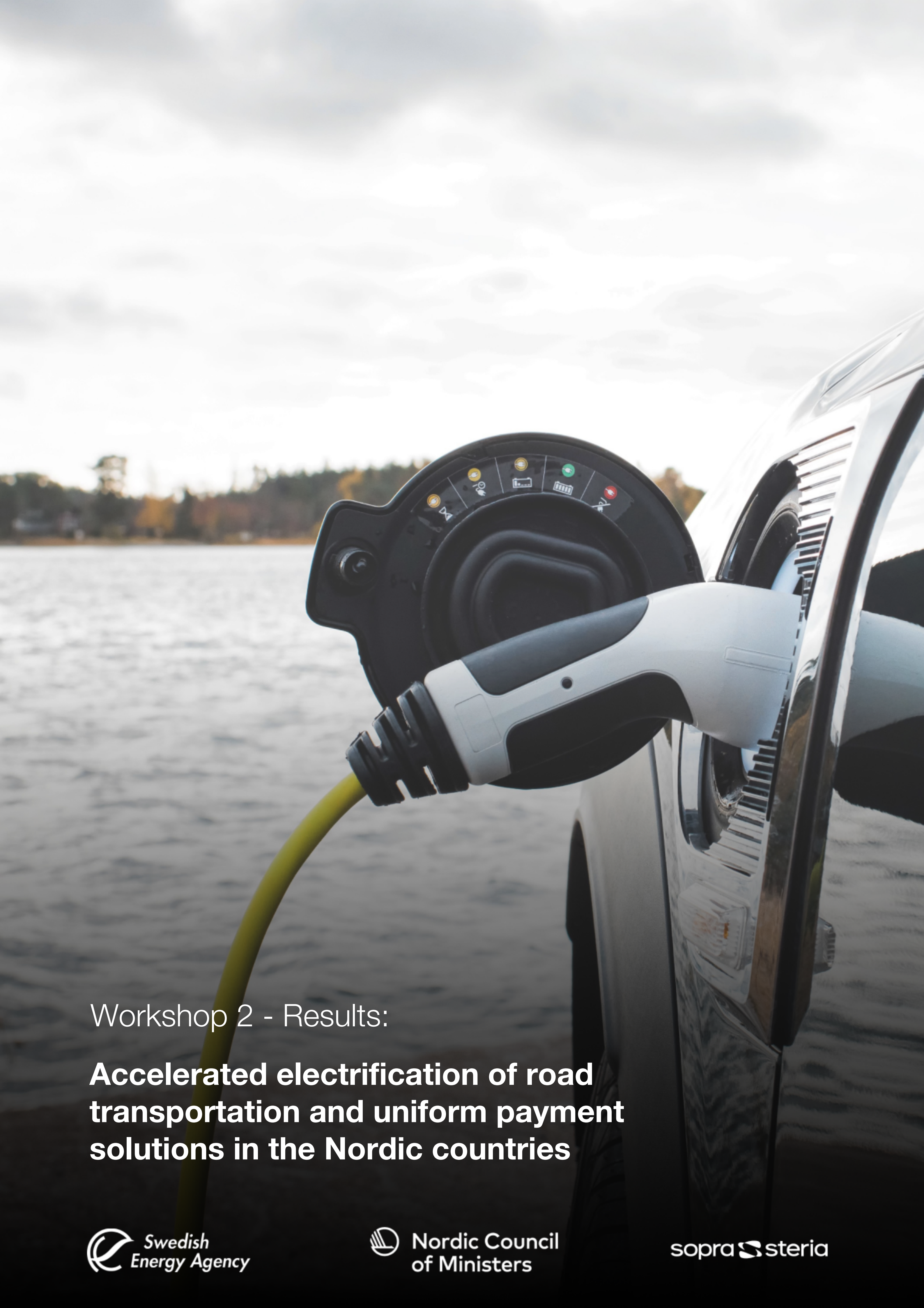

Workshop 2 - Results:

Accelerated electrification of road transportation and uniform payment solutions in the Nordic countries

Swedish Energy Agency

Nordic Council of Ministers

sopra steria

Introduction

Background

On behalf of The Nordic Council of Ministers the Swedish Energy Agency invited participants to a workshop series with the aim of reaching a Nordic consensus regarding the development of payment solutions.

Since the workshop series started the European Parliament and the Council produced a proposal concerning the creation of a new regulation for the deployment of alternative fuels infrastructure (AFIR).

Purpose

This document aims to give an overview of the results in the second workshop. The first workshop focused on understanding obstacles and challenges connected to the payment solutions for the EV charging market. The second workshop focused on enablers, solutions and initiatives to develop a foundation for how EV drivers pay for charging their vehicles in the future.

This document presents the results from the second workshop and the opinion of the participants. The Swedish Energy Agency and Sopra Steria have facilitated and compiled the results from the workshop.

Workshop 2

The second workshop focused on enablers, solutions and initiatives connected to three main obstacles & challenges identified and discussed in the first workshop. The three main obstacles & challenges were compiled into the following questions:

1. How can we work to increase collaboration?
2. How can we work to consolidate available payment solutions?
3. How can we work to increase price transparency?

Question 1: How can we work to increase collaboration?

An obstacle and challenge that was highlighted in the previous workshop was the lack of collaboration between actors on the market. The EV charging value chain is complex and consists of numerous types of actors.

Close the knowledge gap between public and private sector

A current knowledge gap has been identified between the public and the private sector. The public sector is considered unaware of market challenges and the latest technology meanwhile the private sector is generally considered unaware of current regulations and their potential impact. To increase collaboration the participants believed that the knowledge gap needs to be minimized.

Platform and dialogue moving forward

The participants are in agreement that there is a lack of structure concerning collaboration. A suggestion from the workshop is that The Nordic Council of Ministers should own and pave the way forward for a discussion forum for EV charging market actors. Regardless of the ownership, it is discussed that the market would benefit from a forum in terms of involvement of market actors before any regulations are instituted. It was also suggested that interest organizations could act as a bridge between the private and public sector, by facilitating forums with the goal to initiate discussions, align development, share knowledge etc.

Data collaboration

The workshop participants discussed the concept of sharing data, which is considered complex but there is an overall ambition that market actors should increase their willingness to share data. Both user data, charging data and market insights were of interest to the participants. Due to the complexity of the matter and heavy regulations, the participants requested further research considered on both how to share data but also the potential benefits of data collaboration.

Value chain collaboration

The EV charging value chain ranges from car manufacturers, to energy grid companies, to app creators and classic CPOs. In the collaboration moving forward, the workshop participants expressed their ambition to involve the entire value chain as to not miss out on important aspects.

Question 2: How can we consolidate payment solutions?

An obstacle and challenge that was highlighted in the first workshop was that there are too many solutions on the Nordic market. The market is seen as fast-paced with a lot of different solutions and no clear direction. At the same time, a legislation that favors specific technologies should be avoided as it drives costs for the end user and restricts innovation.

Market development

The EV charging market is considered as immature with a lack of established central coordination, planning and standardization. The large amount of available payment solutions is seen as a result by the immature market. Several participants from the private sector believes that the market will in time consolidate and favor the best solutions by default. On the other hand various actors believed that regulating the market would help consolidating available solutions much faster and increase the overall user experience.

Roaming

One suggestion discussed in the workshop, that the participants believed would favor consolidation, is the implementation of roaming. This would benefit the usage of apps and RFID chips as the user would only need one of each to be able to charge everywhere within the roaming network. However, the opinion varies and the participants agree that this solution could potentially be very costly and some even mean that roaming opens up for even more available apps and RFID chips.

Cheaper ad-hoc solutions

Another aspect that was discussed was how to make ad-hoc payment solutions cheaper to implement as current ad-hoc payment solutions are often seen as expensive by the private sector. The workshop participants believed that if ad-hoc payment solutions were cheaper to install and use than card terminals, this could potentially lead to a consolidation of solutions. There are currently alternative ad-hoc payment solutions, other than card terminals, but many lack in security and/or availability.

Consolidation for normal and high power chargers, 50 kW and over

The workshop participants highlighted the importance to differentiate between normal power and high power chargers for EVs. This is especially true when trying to consolidate payment solutions. Certain payment solutions are more fit for normal power chargers and other are more fit for high power chargers. Therefore, it is important to differentiate the two types when developing regulations and initiatives when consolidating.

Question 3: How can we work to increase price transparency?

An obstacle and challenge that was presented in the first workshop was the lack of price transparency for the user when charging their EV. At a charging point it is difficult to see the price difference between different payment solutions as well as between different alternatives of the same payment solution. As long as there is a lack of price transparency the market will not favour the most cost effective solution for the user, i.e. ineffective market, by economic theory.

Overall willingness of price transparency

The workshop participants are generally positive to price transparency and are in agreement that there is a lack of it today, even if price transparency is legislated. The implemented legislation means that it is mandatory to showcase the upfront cost meanwhile the driver faces a plethora of different prices dependent on payment solution. There is an overall wish that it should be easy for the EV driver to be informed of all the available prices.

Presenting prices

It is discussed how prices should be showcased to the EV driver. At a CPO prices are often displayed as a printed sticker or by a digital display. However, this only lets the driver see the CPO’s prices and not the prices of other MSP:s. It is also discussed that one could benefit from a separate price comparing service, similar to solutions available for other types of markets i.e. comparing prices for flight tickets etc. Further investigation on how prices should be reported and who would be responsible for this type of service is unresolved and would need further investigation.

Standardized price unit

An obstacle regarding price transparency is the lack of a standardized unit to present and compare prices for EV charging. The workshop participants are in agreement that price transparency would benefit from a standardized unit, preferably on European level. It was also discussed that the public sector should take lead on this matter moving forward.

Involvement of competition authorities

Due to the young and immature market, it is currently perceived that the private sector is closely supervised by the competition authorities in some Nordic countries to avoid the formation of price cartels. Furthermore, some participants suggests that the authorities should be involved in initiatives and regulations aimed at increasing price transparency.

Initiatives

The workshop participants was asked to discuss what actions and initiatives could be implement to increase collaboration, consolidation of payment solutions and price transparency. Below are some of the discussed initiatives.

- The public sector could implement a standardized price unit for EV charging. Preferably volume-based pricing (kWh/currency).
- The public sector could define clear guidelines for what level of collaboration is permitted without overtrading the competition law.
- Interest organizations could continue to develop a database with available charging points in the Nordic countries.
- The public sector could investigate if a roaming standard should be implemented on EU-level.
- The Nordic Council of Ministers could create a platform for market actors to continue the dialogue and further collaborate about payment solutions moving forward.
- The public sector could promote research and innovation to allow the private sector to develop cheaper ad-hoc payment solutions.
- Interest organizations could continue drive forums for market actors to meet and share knowledge.
- Interest organizations could continue to distribute surveys to EV drivers and publish the results concerning user data and experience.
- Further research could be funded from the public sector about the benefits of data sharing, what specific data and how to share it.