

# The Norwegian EV success story



“Imagine your city without noise and exhaust”



# The Norwegian EV Association

- is probably the world's largest EV user organization, currently exceeding 10,000 members.
- now represents the majority of more than 15,000 EV users in Norway.
- provides valuable input to policy makers and the EV industry based on our members' experiences with driving and charging their electric car.
- runs an annual survey among Norwegian electric car users asking about their experiences and opinions on the market and policy concerning EVs.
- develops and maintains the Norwegian charging station database (NOBIL).
- promotes Norway as the EV country of the world and Oslo as the EV capital of the world.



## 18 years of electric growth

Ever more EVs have hit the road in Norway as a consequence of our presence. During all of its 18 years of official operation The Norwegian EV Association has been working for the successful introduction of electric vehicles that run fully or partially on renewable energies.

This is our key objective. To promote our primary goal we cooperate with national and local authorities, the electric car industry and other organizations.

In the beginning, the purpose of the association was to support the prosperous Norwegian EV industry. As years passed by, the industrial EV adventure came to an end. By then, at the end of the 1990s, the transformation into a dedicated member's organization had already begun (the ties to the Norwegian EV industry were formally cut in 2010).

Our continuous efforts to influence the political parties, industrial stakeholders and other interests are essential to keep the Norwegian EV success story afloat in upcoming years.

These efforts will continue after the election of the new Government last September.

# A few keywords on history and affiliation

- The Norwegian EV Association (Norsk Elbilforening) was founded in 1995.
- Until 2011 the name of the association was Norstart - Norsk Elbilforening.
- The initial name was inspired by an American organization called Calstart, which is also dedicated to the growth of clean transportation technologies.
- The Norwegian EV Association is a Non-governmental organization (NGO). The members elect a Board of Directors and the daily business is operated by four employees.
- The organization is a member of AVERE (The European Association for Battery, Hybrid and Fuel Cell Electric Vehicles) and WEVA (World Electric Vehicle Association).

## Rapid growth in members and website recognition

We currently support about 10,000 unique Norwegian members. Our daily contact with members nationwide represents the basics of our work, giving advice and answering questions. The memberships are spread among individuals, families, organizations and companies.

We also run our own website **elbil.no** (publishing relevant EV news and consumer related topics on a daily basis). Our site has been a great success among EV users and other readers, enjoying a rapid growth in recognition, both domestic and worldwide.

Only in the last year the number of unique visitors has been doubled:

From Jan 1 2012 to Sep 30 2012: **250.000 visitors** (95.000 unique).

In the same period 2013: **509.000 visitors** (189.000 unique).

Our website also incorporates the prosperous discussion forum **elbilforum.no** and **Elbil-Wiki**, where technical information and practical repair tips are gathered.

Not to forget three other important sites under our umbrella: **evnorway.no** (upcoming site in English), **ladestasjoner.no** (a site containing nationwide charging information) and **elbilpaanorsk.no** (a site promoting the new book on Norwegian EV history).







# Our beliefs – and some fabulous key numbers

When taking local environment, climate, energy efficiency and economy into consideration, we believe EVs represent the best alternative for individual transport. Not to forget, of course, public transport, biking or walking when suitable.

In October 2013 there were more than 15,000 electric cars registered in Norway. The most remarkable fact: This has happened in a population of just 5 million people and makes Norway by far the world leader on introducing and making use of electric vehicles. (In comparison our neighboring country Sweden, with twice Norway's population, had 800 EVs at the same time.)

**An example of the EV growth in Norway: During 2013 the EV population is set to grow by some 90 percent compared to 2012 (based on a population of 9.580 EVs by Jan 1 2013 and a prognosis of 18.500 by Dec 31 2013).**

The Norwegian EV Association believes a similar amount of EVs might be sold during 2014. This growth means Norway is a clear example of the need for more charging infrastructure. At the same time it's obvious that infrastructure has not, in the past, been the driving force behind the Norwegian EV revolution.

The benefits offered to those who have chosen - and choose - to become EV drivers are far more important.

Domestic access to EVs produced by the Norwegian automotive

industry in the early days has of course also contributed to the rapid market progress in recent years. Bigger manufacturers have been able to take advantage of the maturing Norwegian EV market.

## No questions asked

The Norwegian Electric Vehicle Association doesn't ask why Norwegians choose to opt for an EV. Whether the motivation is practical, economical or environmental, we think the result stays the same:

**The environment benefits from more people choosing EVs.**

Still the environmental angle is an important one to us. Cities with clean

air that are also less noisy bring health advantages to everyone that can't be ignored.

We have a pragmatical way of thinking. In short: We acknowledge the notion that EVs aren't necessarily suitable for all personal transportation needs. We think it can make a tremendous difference if all Norwegian households that presently possess two fossil cars replace one of them with an EV. Most people

drive shorter distances daily than they imagine when asked.

This means an EV is able to cover most of their personal transportation needs, and the fossil car may be used for longer journeys where charging opportunities are scarce.

Besides we experience a tendency that more and more people - regardless of the size of their household - want to drive solely electric.

## Very happy EV drivers

Even if sales numbers are at an all time high, we still have a long way to go before all fossil cars are replaced with zero emission vehicles (ZEV).

In this context our last member survey brings some good news:

**Existing EV drivers are very happy.**

With the alternatives “yes”, «no» and “don’t know” more than 6 out of 10 confirmed that they would buy an EV again. Only 86 out of 1.858 respondents answered “no”.

The answers more than confirm that the majority of Norwegian EV owners are pleased with their current

cars. It’s also clear that happy owners act as the best possible EV ambassadors in neighborhoods across Norway.

Their influence has a highly positive effect on changing the national automotive market.



## The road to a sustainable market

The benefits guaranteed by the Norwegian Parliament, and also the newly elected Government, will run until 50,000 zero emission vehicles are sold or until 2018.

The Norwegian EV Association is setting sights even further: We have set a goal of 100,000 electric cars within 2020. We believe this is necessary to achieve a sustainable market for elec-

tric cars and charging infrastructure in Norway.

In 2020 the Norwegian Parliament has also defined an average CO<sub>2</sub> emissions level from new passenger cars of 85 g/km. This goal was defined through «Klimaforliket» (the Climate Agreement in English) last year.

**We believe this average is unreachable unless further facilitation for EVs and plug-in hybrids (PHEVs) is guaranteed.**

In September 2013 electric cars constituted for 8,6 percent of new cars sold in Norway, according to sales numbers from statistics supplier Opplysningsrådet for veitrafikken (OFV). The EV market share so far this year is about 4 percent, rapidly increasing in just a short time.

2013 is already by far the most successful EV year in Norwegian history. The current sales figures in Norway clearly show what can be done using political incentives to change behavior in the marketplace.



# The most important benefits for EV users

Because of the EV association's and other stakeholder's efforts, the benefits for electric cars in Norway include:

- No purchase taxes (unlike other EU countries extremely high for ordinary cars)
- Exemption from 25 percent VAT on purchase
- No charges on toll roads
- Free municipal parking (and charging where available)
- Free access to bus lanes

These primary benefits make the electric car competitive with fossil cars.

In our recent member survey almost 25 percent (of nearly 1.900 respondents) stated charge free toll roads as the most important EV benefit.

Furthermore:

- 17 percent think no purchase tax and exemption from VAT is most important
- 15 percent emphasise low "fuel" costs

- 14 percent appreciate free access to bus lanes most

Low annual road tax (415 NOK), free charging, a network of charging stations and free access to highway ferries are also rated as important goods.

Our members' answers underline the fact that people are willing to choose less environmentally straining vehicles if rewarded.



## The need for charging infrastructure

Today there are more than 4,500 public charging points in Norway. At present time Norway has about 125 fast charging stations (44 of those as a consequence of Tesla's supercharger initiative).

Location data and other information for all the public charging stations in Norway are available from a database called NOBIL, which is developed and maintained by the EV association in cooperation with Transnova.

The EV association is working restlessly to influence the Government to found a national support scheme to establish a national charging network.

This network should include both normal and fast(er) charging stations and make a substantial difference compared to the present situation.

The Norwegian EV Association underlines the importance of new infrastructure supporting the new multi standard (all kinds of faster charging).

# Where do Norwegians charge their EVs?

- **80 percent answer that they charge their car at home**
- **60 percent charge at work**
- **50 percent are able to use public charging points**

The answers given by our members in our last survey clearly show that most Norwegian EV users find it convenient to charge their cars at home. Many commuters also have the possibility to charge while at work.

But there are still challenges, in addition to launching a national charging network in the near future:

Only 10 percent say they are able to charge their EV if living in shared apartment buildings or flats.

The EV association is currently working to increase this share significantly, through direct advice and public relations activities. A guide called “Slik setter du opp ladestasjon for elbil” (“How to install charging points” in English) has also been published recently to support this cause.



## What will it take to make more people opt for an EV?

In our annual survey we also asked our members what they find crucial to increase the Norwegian EV fleet in the future.

- **30 percent think increased range is most important**
- **23 percent emphasize improved political EV framework**

This means the automotive industry has to do its part, related to increased range and battery capacity. In Norway range can be a particular challenge during cold winters, as a consequence of decreased battery capacity and higher consumption.

Through its members, Norwegian EV Association, has already influenced the industry significantly to make numerous improvements on previous and existing EV models. Even though Norway represents a small market, we're still a key player in the development of EVs.

The Norwegian Parliament and Government also have to take into further consideration consumers' needs for prolonged predictability, in terms of political framework. An EV represents a high cost to many consumers. At the same time many potential buyers feel uncertain about

the battery lifespan and the EV driving range.

The Norwegian EV Association states, on this basis, that rewarding through political predictability is essential to move even further.

These are the other, all-important factors to increase the EV fleet, according to our members (all numbers in percent):

- More fast charging stations (16)
- More parking spaces with charging opportunity (11)
- More EV models to choose from (9)
- Lower EV prices (7)
- Better information about EVs (4)





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