Towards zero emission transportation in Norway

Washington, DC. Karine Hertzberg, January 14, 2019
Norway aims to become a low emission society

- **2020:** Reduce global greenhouse gas emissions by 30% compared to 1990 level.

- **2030:** Reduce emissions by at least 40% compared to 1990 level.

- **2030:** Carbon neutrality.

- **2050:** A legally binding target of being a low-emission society.
Norwegian Greenhouse Gas Emissions

Greenhouse gases, by source 1990-2016
(1 000 tonnes CO2-equivalents)

Norwegian emissions 2014
Million tonnes CO2 equivalents

Norway's main strength

Surplus of zero-carbon electricity
  • First phase of the green transition completed

Transport is next
  • March 2018: 37% of new cars electric
  • Ambitious targets on biofuels

➢ New business opportunities in other sectors
Target: Reduce emissions in the transport sector by 50% from 2005 to 2030
Reducing emissions from transport

1. **Reduce transport need.** Urban planning, coordinated spatial and transportation planning.

2. **Transfer to transport with lower emissions,** e.g. cars ⇒ buses/biking, lorries ⇒ ships.

3. **Reduce emissions from the individual transporter,** e.g. electric vehicles.
Oslo 2016: More people use public transport than cars for their commute

• The largest cities are committed to a goal of no growth in passenger car transport.
• All growth in transport shall be walking, cycling and public transport.
• In return for the commitment, the government provides funding for public transport improvements.
Zero emission transportation targets

• 2025: All new private cars and light vans should be zero-emission vehicles.
• 2025: All new city buses should be zero-emission vehicles or use biogas.
• 2030: All new heavy vans, 75 % of new long-distance buses, and 50 % of new lorries should be zero-emission vehicles.
• 2030: More or less emission free goods distribution in large urban area

*Important: These are targets. The government does not have plans of banning internal combustion engine vehicles.*
More than 30% of all new cars sold in 2018 were zero emission vehicles.
Accumulated sales of electric cars, Norway


Sources: OFV, Elbil på norsk (2013)

Kewet (Buddy)
Pivco (Think)
Zero registration tax
Zero tollFree parking
Zero VAT
Access to bus lanes
Mitsubishi I-Miev
Peugeot Ion
Citroen C-Zero
Nissan Leaf
Volvo V60
Toyota Prius
Opel Ampera
Chevrolet Volt
Tesla S
BMW i3
VW e-up!
Ford Focus
Mitsubishi Outlander

Today: Almost 200 000
Why has Norway become the third largest market for zero emission vehicles in the world?

1) **Economic incentives** at the point of purchase – exemption of VAT (25%), registration tax.

2) **Pricing of emissions** – CO2 tax of around $50/ton

3) **User incentives** - Free tollroads, public parking, free access to public charging stations, use of public transportation lanes, reduced fares on ferries

4) Support for **fast charging infrastructure**

5) **Predictability**
Market-based development of infrastructure

- In urban areas, there is a commercial market for rapid chargers. Some public support to specific areas with low uptake of EVs.
- If by 2025, all new passenger cars are ZEVs, 50 per cent of passenger car fleet is ZEV by 2030.
- Big market for charging providers. Ambition: fully commercial market in the long run.
- Studies show power system will handle it.
Maritime e-mobility

Electric ferries
- World's first electric ferry Ampere
- Around 70 electric car ferries by 2021 (1/3 of car ferries)
- Autonomous electric cargo ship
- Coastal route
- On-shore power also for large cruise ships
Transport emissions are going down

9,5% reduction in emissions from road transport from 2016-2017

- Higher shares of biofuels
- Higher shares of public transport in cities
- Higher shares of zero emission vehicles