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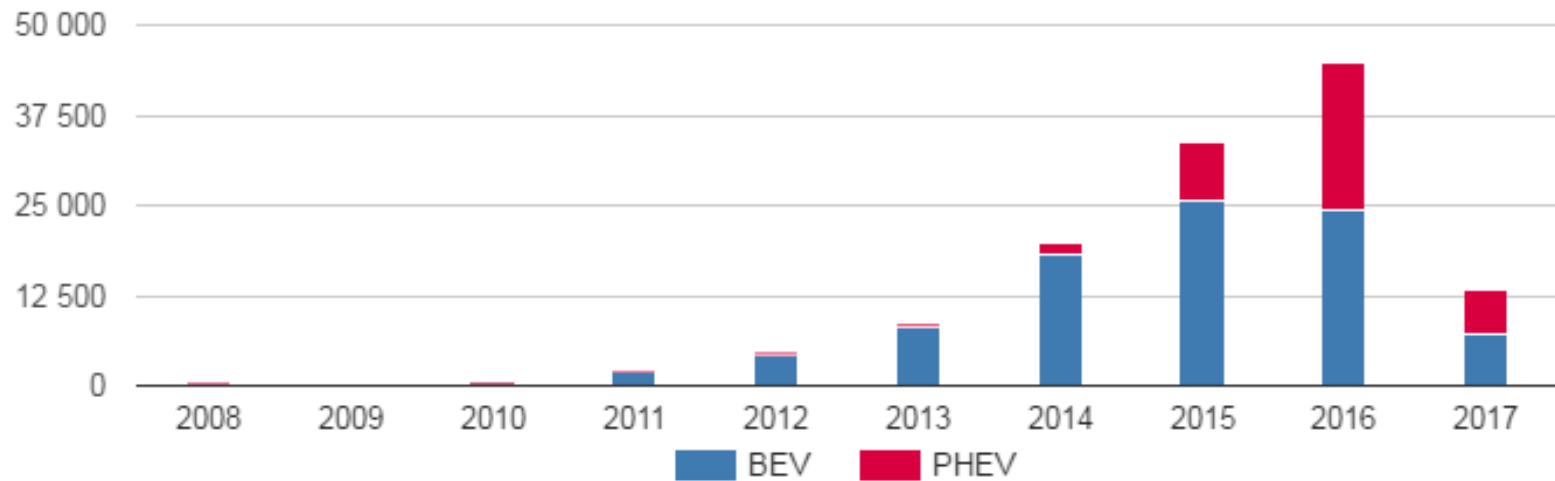
Norway's e-mobility policy experience

Tom E. Nørbech, Senior Adviser
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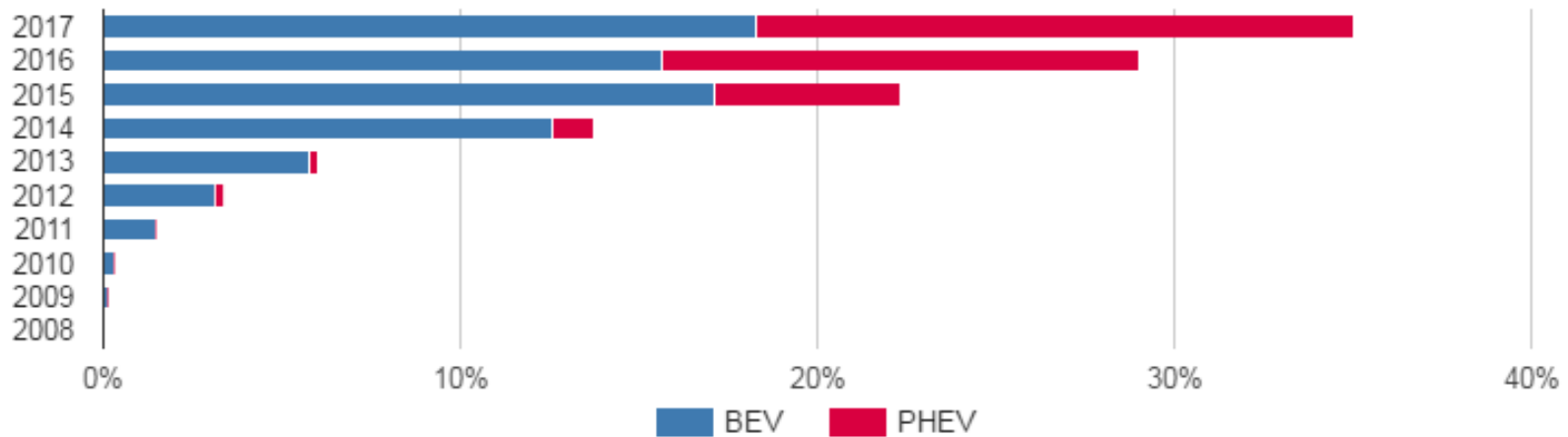
New registrations of EVs 2008-2017





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EV market share in Norway 2008-17

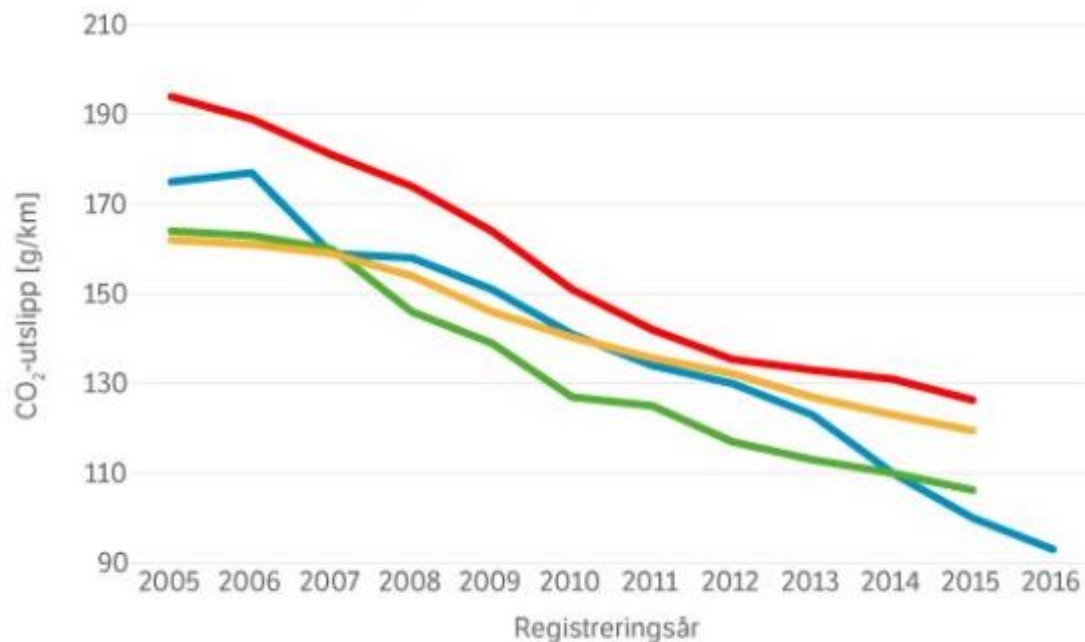


110 000 BEVs by the end of Q1 2017



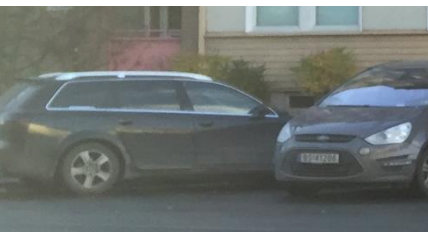
The highest share of EVs in the world

- 2016
 - 17,5 % of all new cars registered were fully electric EVs (including imported used cars)
 - Average CO₂-emission from new cars: 93g/km



— Norge — Sverige — Danmark — EU

Kilde:
European Environment Agency 2015
OFVAS 2017





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How?

- ✓ Incentives and infrastructure



Infrastructure...

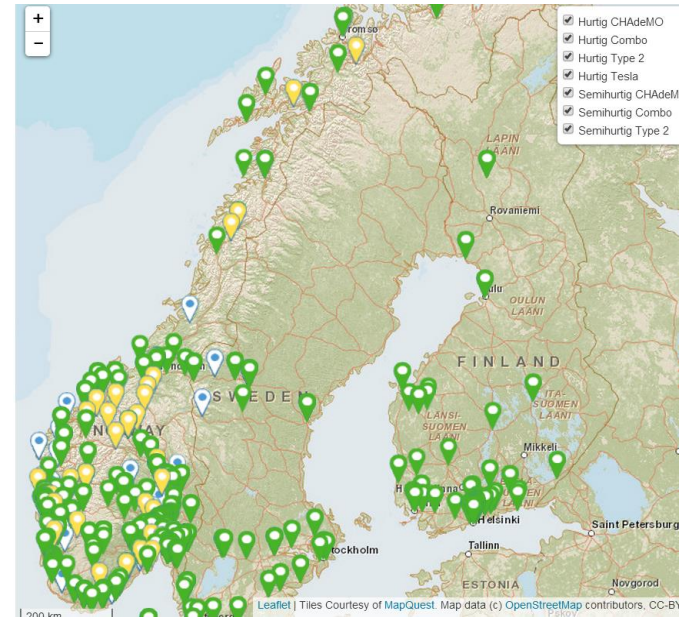


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- ✓ Charging points: 9000
- ✓ Charging stations: 2000

- ✓ Fast charging points
 - ✓ Chademo: 603
 - ✓ Combo: 555
 - ✓ AC Type 2: 64
- ✓ Semi-fast charging points
 - ✓ Chademo: 1
 - ✓ Combo: 1
 - ✓ AC Type 2: 811
- ✓ Tesla
 - ✓ 246 charging points (at 30 charging stations)

- ✓ All in all, 500 fast charging/semi-fast charging stations throughout the country (May 2016)



Pop-group a-ha and
NGO Bellona, supported by
Harald N. Røstvik, join forces
to promote BEVs in Norway

1989



Temporary abolishment of
import tax. Made permanent
in 1996

1990

The Norwegian EV producer
PIVCO (later Think)
successfully operates 12 EVs
during the Lillehammer
winter olympics

1994

Norwegian industry sets up
the Norwegian Electric Vehicle
Association to promote EV
interests

1995



1996

Reduced
annual registration
tax

Introduction of special "EL"
registration plates
Free parking in public spaces
Ford Motor Company buys
Think

International launch of Think
at EVS15 in Brussels

1998

1997

Exemption from
road toll

The Danish company Kewet
(later Buddy) becomes
Norwegian

1999

Reduced
company car tax

2000



California abolishes Zero
Emission Vehicles
credit program
Ford sells Think

2002



Access to bus lanes
in the Oslo region

2003

0% VAT

& Incentives



Free access to road ferries

The government launches Transnova, and a 7 million euro EV infrastructure program resulting in 1.900 charging points by the end of 2011

EVS24 held in Stavanger, Norway

2009



Oslo launches municipal EV charging infrastructure program

Think City launched at the Geneva Motorshow

2008



Access to bus lanes made permanent, and extended nationwide

New Buddy launched at EVS21 in Monaco

2005



First CHAdeMO fast charger opened

Mitsubishi i-MiEV launched in Norway. Sells 1.050 units during first year

Buddy goes bankrupt. Assets bought by Norwegian investors

Think goes bankrupt

2011



Cross-party political consensus to uphold Zero Emission Vehicles financial incentives until 2018, or until there are 50.000 Zero Emission Vehicles on the road

10.000 EVs in Norway. EVs account for over 3% of car sales

2012



& Incentives



Importance of incentives for EV buyers

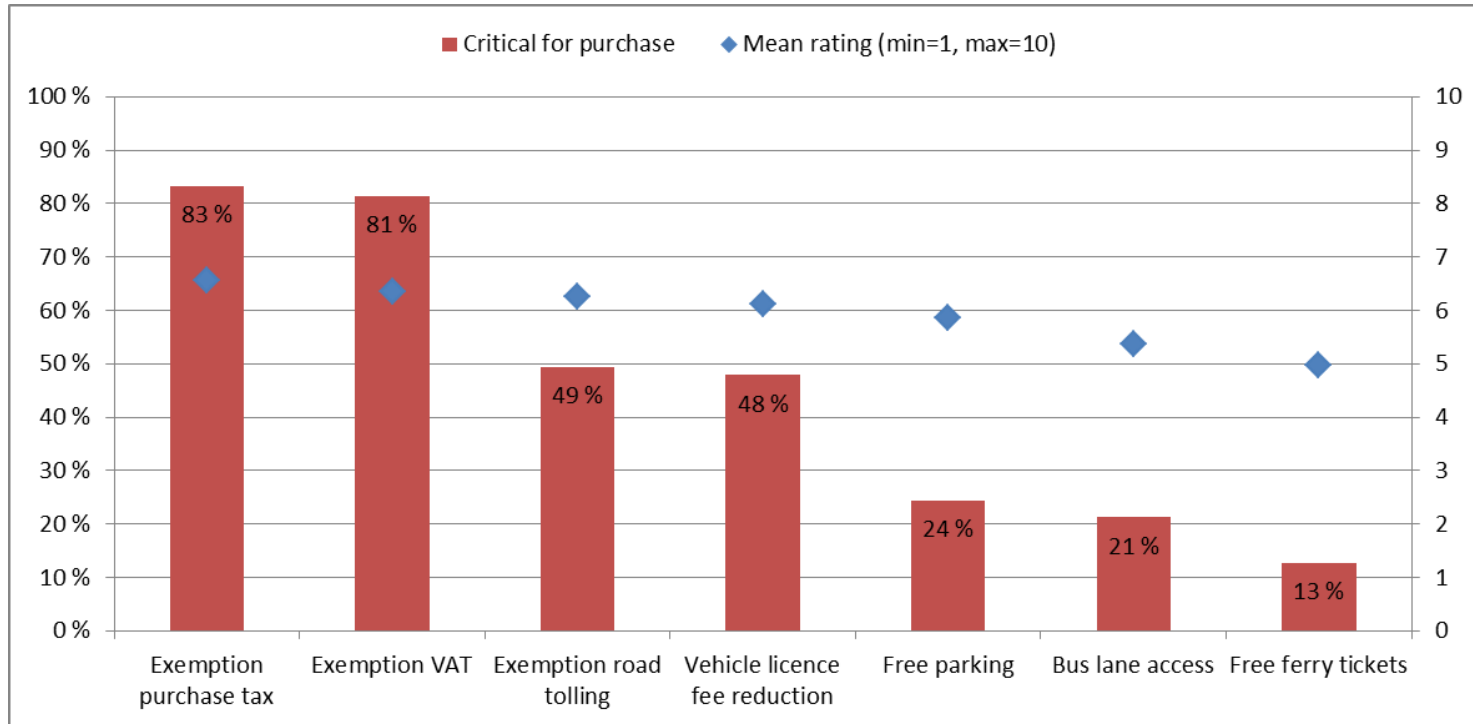


Figure 2. Role of incentives for BEV purchase (N=3384)

Reference: Bjerkan, K.Y., Nørbech, T.E, Nordtømme, M.E. (2016): Incentives promoting Battery Electric Vehicle (BEV) adoption in Norway. *Transportation Research Part D: Transport and Environment* (submitted)



Revisions of the EV incentive package

- planned revision of vehicle taxation presented in the revised national budget of 2015

Current incentives	Future (after 2017)
No import tax	Until 2020
No VAT	Gradual decline
Reduced annual fee (80%)	Half fee 2018, full fee 2020
No road tolls	Partial payment
Access to bus lanes	Local decision
Free parking	Local decision (already in effect)
Free access to ferries	Partial payment (already in effect)
Half company car tax	Not continued
VAT exemption for leasing	Continues



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The solution to crowded bus lane in Oslo:
EVs required to have passenger to use bus lane
in rush hour

VG NYHETER

< Nyheter Innens Utenens Side 48t Meninger

Tatt for å kjøre med dukke i kollektivfeltet



FALSK PASSASJER: Denne sjåføren var i overkant kreativ for å få kjøre i kollektivfeltet på E18 i morgenushet.
FOTO: POLITIET

Av **AMALIE FRØYSTAD NÆRØ**
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ANNONSE

22/05/2017



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Conflicting strategies for cities? After all, the EV is a car.....

- Do we have to make a choice?
 - Public transport, walking and cycling or EVs?
 - Public transport, walking and cycling and EVs?
- More EVs = more cars?
- Increased share of EVs = increased share of cars in traffic??



City Centre 2017

- Distribution of parking places

Ordinary
parking lots



Zero Emission
parking lots





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City Centre 2022

Ordinary
parking lots



Zero Emission
parking lots





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City Centre 2030





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Thank you for your attention

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