

A Business Model for charging infrastructure

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A Norwegian charging network operator

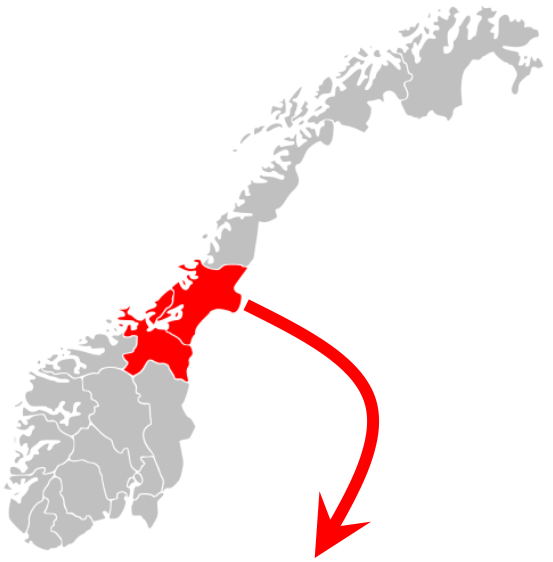


The Polar Bear just don't know.....



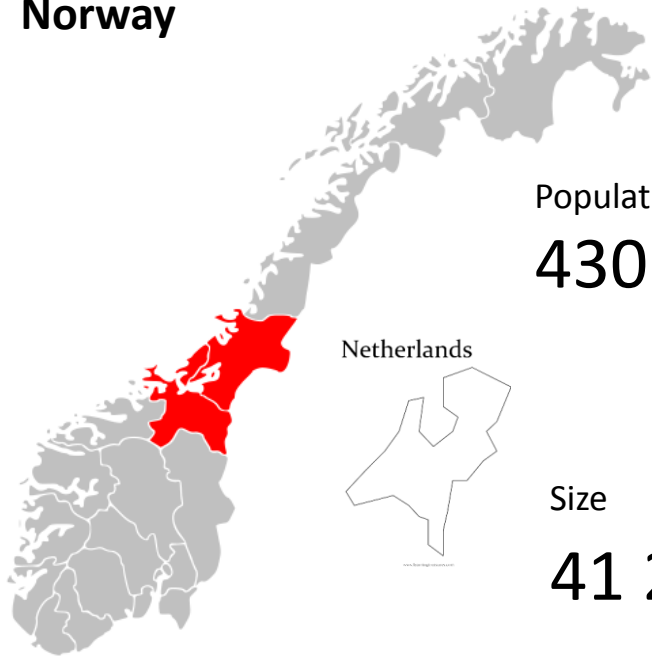
A successfull deployment of charging infrastructure is depending on finding viable business models

A local energy company enters new business

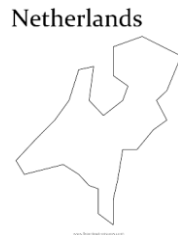


From a region with few people and large distances

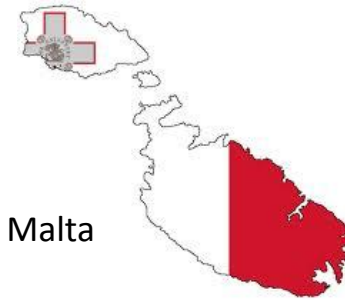
**Trøndelag,
Norway**



Population
430 000 people



Size
41 270 sq.km



Malta



Netherlands

Population density:
Approx 10 people per square kilometer

.....same as in
Turkmenistan



A scenic landscape of a fjord with mountains and a red house. The sky is blue with white clouds. The water is clear and blue. The mountains are dark and jagged. A small red house with a white roof is visible on the right side of the image.

Or not quite...

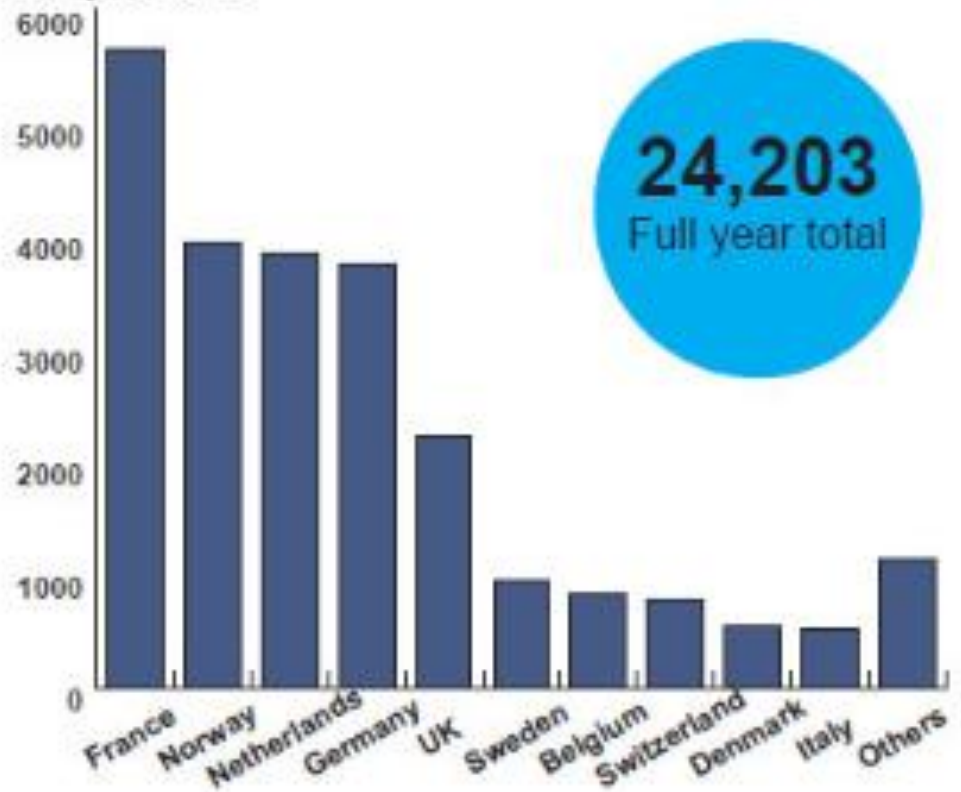
- Topography
- Climate
- EV density

Incentives:

- No import tax
- No VAT
- Parking free of charge
- Toll roads free of charge
- Bus lanes

West European Electric Car Sales

Full year 2012






How many charging locations, and where?



The value of a remote quick charger

© DYLAN PASSMORE



We need a substantial network of QC

The Network

Live Availability Map

[-]



Kart

Satellitt



Trondheim
Orkanger

E6

Stjørdal

Levanger

Verdal

Steinkjer

Namsos

Google

Kartdata ©2013 Google - [Bruksvilkår](#) Rapportér en feil med kartet

8 fast charging locations with CHAdeMO charging facilities

3 – 5 new locations to be constructed this year



The value proposition:

A scenic view of a fjord in Norway. In the foreground on the left, there is a wooden cabin with a gabled roof made of dark, weathered logs. The cabin's roof is covered in reddish-brown tiles. The fjord is a deep blue color, winding through a valley. In the background, there are high, rugged mountains with patches of snow. The sky is a clear, bright blue. The overall scene is peaceful and picturesque.

True mobility is the
absence of planning

It's a convenience
proposition

The product



- RFID tag for authentication
- Access to the network
- Roaming agreements with other operators
- Fixed monthly fee
- Other access technologies to be introduced

What is the value of mobility to EV customers?



RFID tag



Pod point home charger

Basic



Monthly fee
(incl. vat)

€ 38,9

Price use
(incl. vat)

Free

Premium



€ 90,9

Free

Flexi



€77,9

€10,0
(per min)

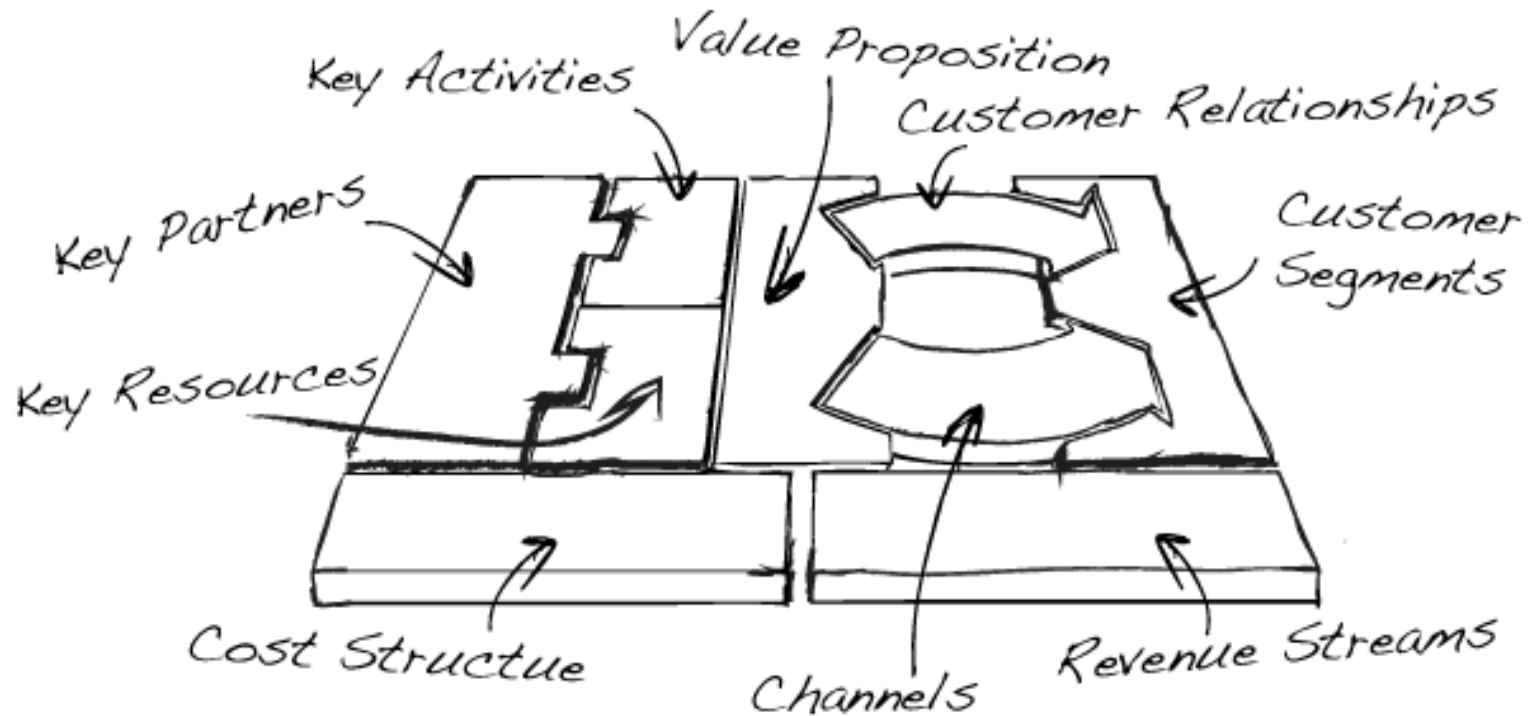
Mini



€ 6,6

€ 13,5
(per min)

We believe strongly in creating a stand alone commercial business model



BACK-OFFICE IS THE BACKBONE OF THE OPERATION

The screenshot shows the EV Power AS website. At the top is a navigation bar with links: Hjem, Om Ev Power, Prosjekter, Kart, Produkter, Biler og leding, Kontakt, Nyheter, and Logg Inn. Below the navigation is a hero section with the text "EV Power AS" and a description of the company. A news article titled "Ny hurtigladdestasjon på plass i Levanger ved E6 – Virkelig en attraksjon for regionen" is featured, along with a map of Norway showing charging stations and a list of news items.

MANAGEMENT TOOLS

The illustration shows three devices displaying management tools. A laptop shows a "Billing List" with columns for date, amount, and status. A tablet shows a "PODs List" with columns for location, status, and date. A smartphone shows a map with a location pin. The devices are arranged in a stack, suggesting a multi-device management system.

INFRASTRUCTURE

The infrastructure section features three types of charging stations:

- 50.X Base Station:** A large, grey, boxy unit with two charging ports.
- AC-DC Combo Post:** A tall, slender, grey unit with a single charging port.
- 50.1 Charge Station:** A smaller, grey unit with a single charging port.

 Below the station images are three photographs showing the stations in use: a worker in a high-visibility vest charging a car, a row of cars charging in a parking lot, and a car charging at a station with a blue sign.

INTEROPERABILITY AND DIFFERENT USER NEEDS

The EV owner/driver

Public and private infrastructure

Different operators - interoperability

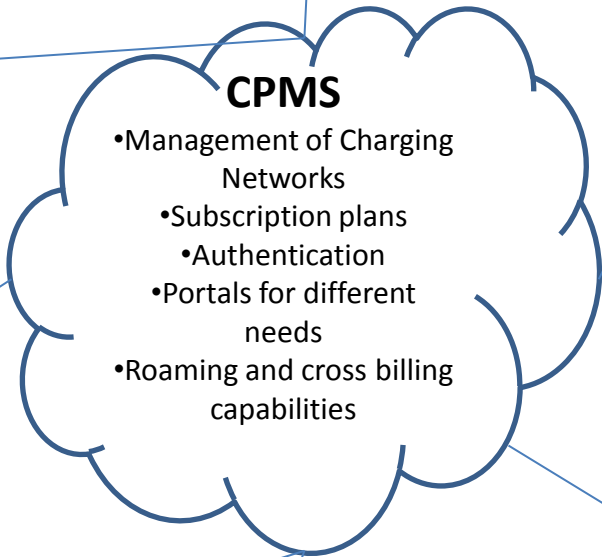
Owners of infrastructure



Cell Phone access



Different operators - interoperability



Owners of infrastructure



User portal

EVPOWER
TRYGGHET - MOBILITET - MILJØ

31st October 2012

Ditt forbruk

Den siste viser hvor mye energi du har brukt over en gitt periode. Du kan bruke de interaktive verktøyene på denne siden til å gjennomgå ditt forbruk og annen nyttig informasjon.

Oppsummering | På ladestasjon | På bilplate

Skil	Energi brukt	Total ladetid	Antall ladinger
LADSTASJON	52.39	3 timer 46 minutter 18 seconds	13
BILPLATE	54.84	2 timer 22 minutter 55 seconds	11
UUTALDNING	43.53	1 time 15 minutter 25 seconds	10
MTAT SKIL-UK	20.49	46 minutter 25 seconds	4

Kart over ladestasjoner

Kart





Thank you all!

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