

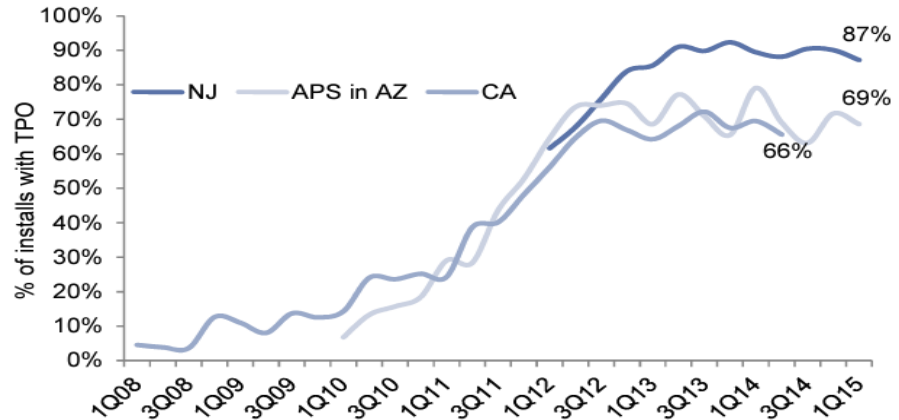
# New business models in the energy sector

*Pål Brun, Nordic Sustainable Ventures, 24. Mai 2016*

## Example of business model innovation: Decentralised solar with third-party financing and zero-money down



*Percentage of solar installs with third party ownership*



Source: APS, New Jersey Clean Energy Program, BPU, Goldman Sachs Global Investment Research.



Sun as a service



Administrerende direktør Andreas Thorheim i OTOVO. Foto: Per Ståle Bugjerde

## Solcelle-gründere fikk 800 henvendelser på fem dager

En rekke profilerte investorer bruker nå tilsammen syv millioner kroner på å kjøpe seg inn i OTOVO - to uker etter oppstart.

# Why don't you have solar panels on your roof?



## *Inconvenient and inaccessible*



Never thought of it

Too hard to figure out

Can't be bothered

## *Expensive*



It's not economical

It's too expensive up front

# The energy company of the future – distributed – digital – disruptive

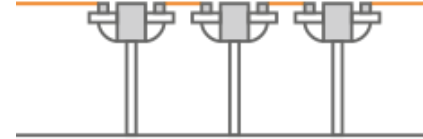
consumer



- Signs up for solar subscription contract
- Puts roof at disposal
- Enjoys clean energy at a fixed low price



- Plans, installs and owns solar panels on roof
- Services and maintains
- Upsells battery, smart home, app, and additional services



- Provides the necessary top-up power (winter/night)
- Sells to homes with digital meters
- Offers new, smart, simple price plans

# So the job is to simplify and sell solar while cutting operations and finance cost

Type of job

Consumer sales

Simplify and sell solar

Installations

Improve value chain

Asset financing

Lower finance cost

Comparable to



norwegian

CIRCLE K



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*Expensive*

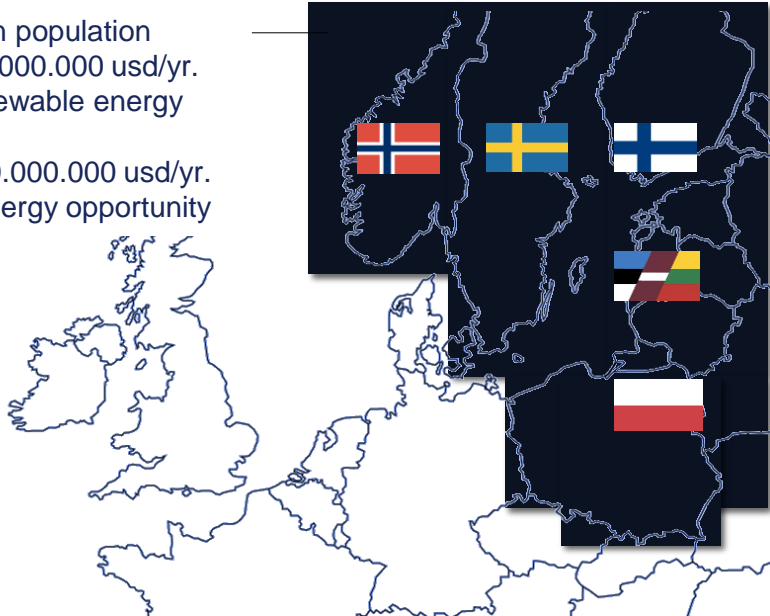
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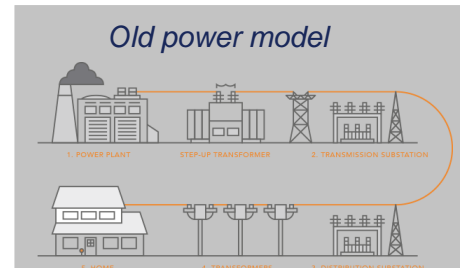
# Is it worth it? Yes, Nordic & Baltic power market is valuable and about to change

## Target market (dark area)

70 million population  
110.000.000.000 usd/yr.  
50% renewable energy  
→ 50.000.000.000 usd/yr.  
Clean energy opportunity

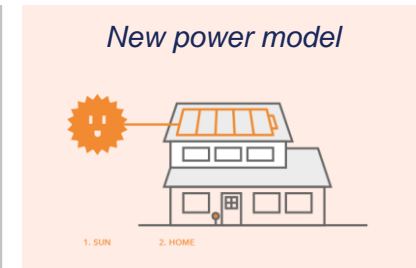


## Big change in power system



Centralized value chain  
with grid supplement

Analog monthly  
one way metering

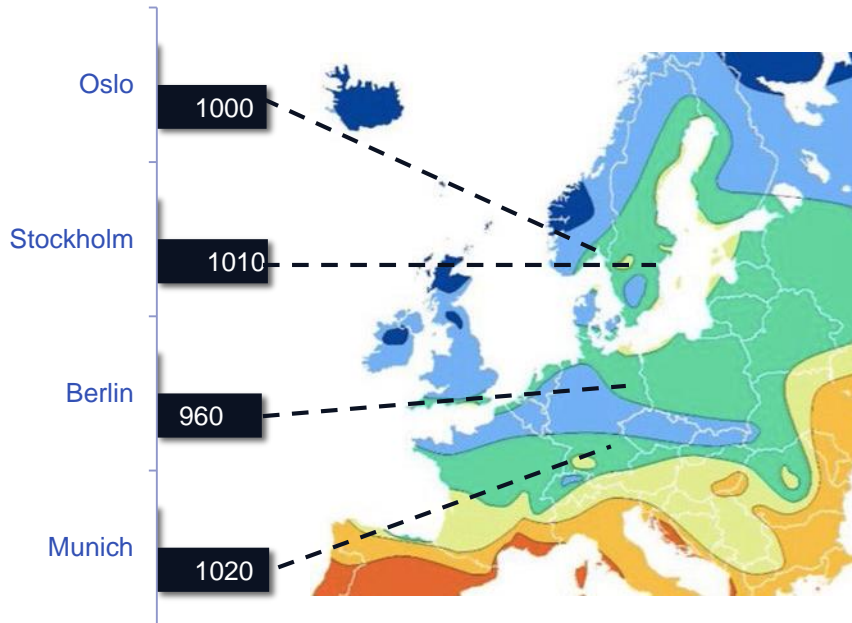


Distributed power  
with grid supplement

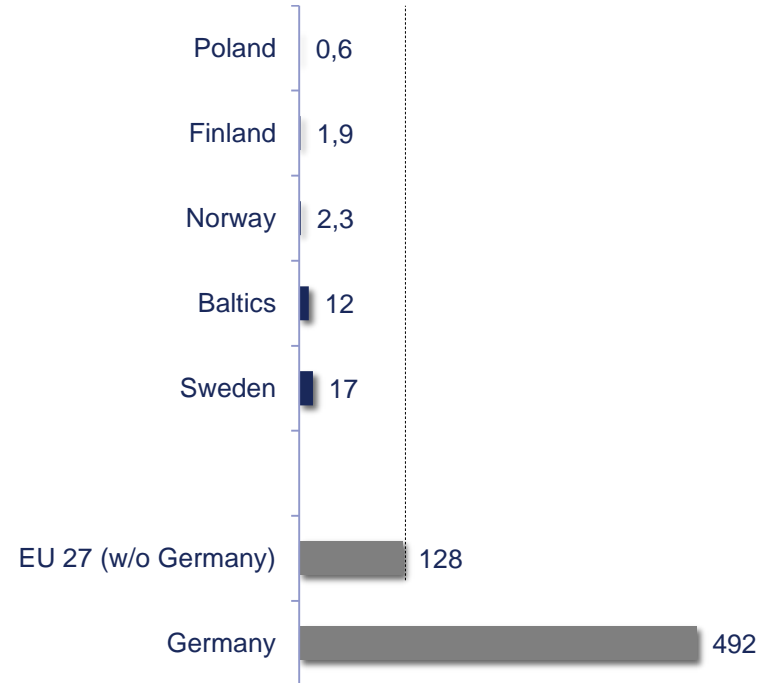
Digital real time  
two way metering

# The region has plentiful solar resources, yet almost no solar panels

*Sun power is on par with Germany (kWh/kWp)*

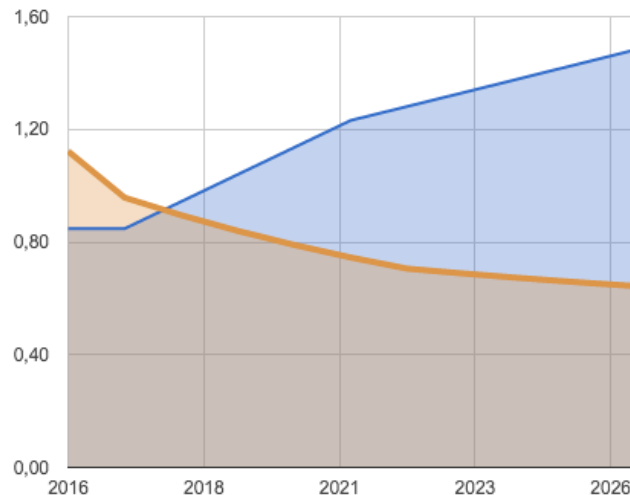


*Solar penetration (Watts/capita)*





# That is about to change now, as solar reaches competitiveness with grid



**Grid power prices**  
(20 yr fw. average)

- Big grid investments ahead
- Cost of digitalization
- More international trade cancels out low Nordic price
- Decommissioning of plants
- Increased taxes and tariffs

**Solar power price**

- Global fall in module prices
- Local steep reductions in soft costs



OTOVO

Aim:  
To build  
the energy company of  
the future