

# Rabie BELATHCEN

Smart homes (HEMS)

①

- heat pumps \*1
- room water heaters
- car chargers
- room heating
- ↓ + washing/dishwasher/....

→ how to Manage Energy Systems in Nordisk homes?

→ <sup>x</sup> how to Manage

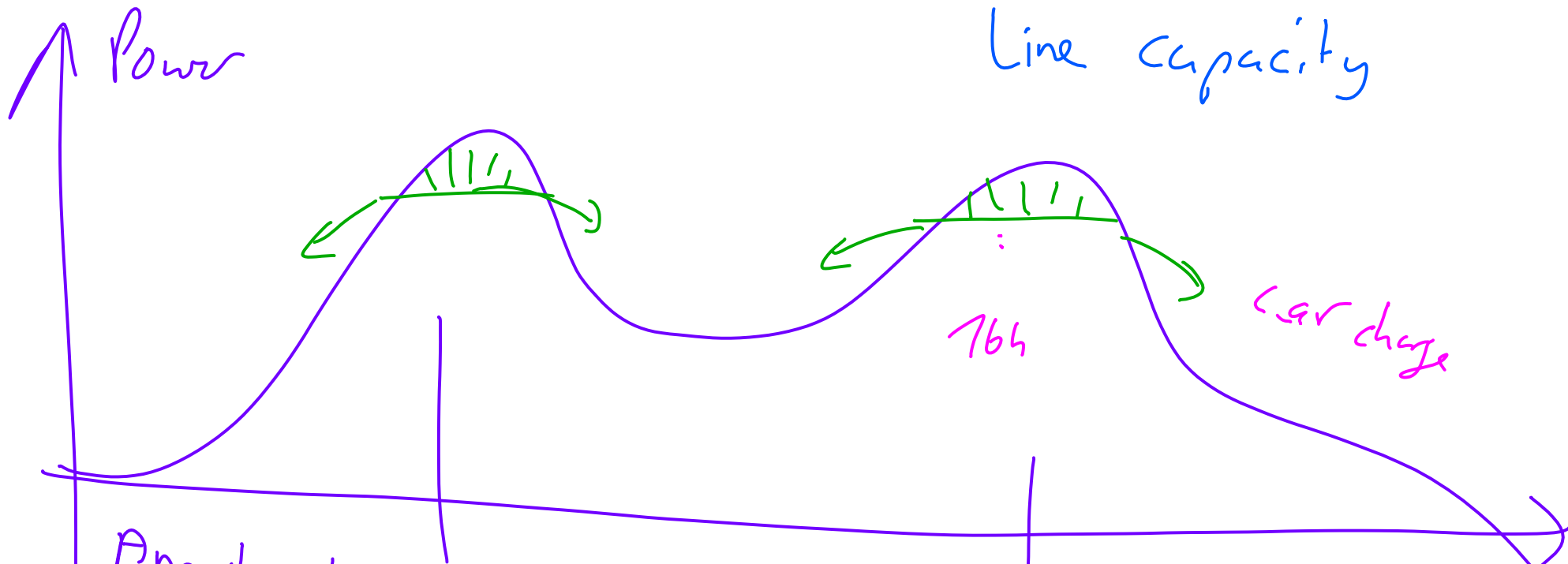
↳ specific devices

\*1 Appliances

- NVE
- SSB
- 

? Relation to Bosch products & tech.

↳ ! Smart Boiler  
HP



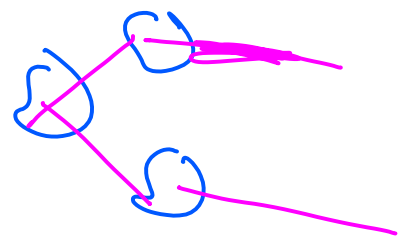
Kirsten Stangebye, 9329 4890

Apartment blocks:

Friday afternoon:

- electric car  $\Rightarrow$  hvt/cottage
- "call hvt"  $\Rightarrow$  warm

Josef hejlskov  
 - Peter Aspholm  
 Hvaler (Norges energi net)



Example 2:

today

New tariffs

3x50A

connection capacity  $\rightarrow$  top

peak

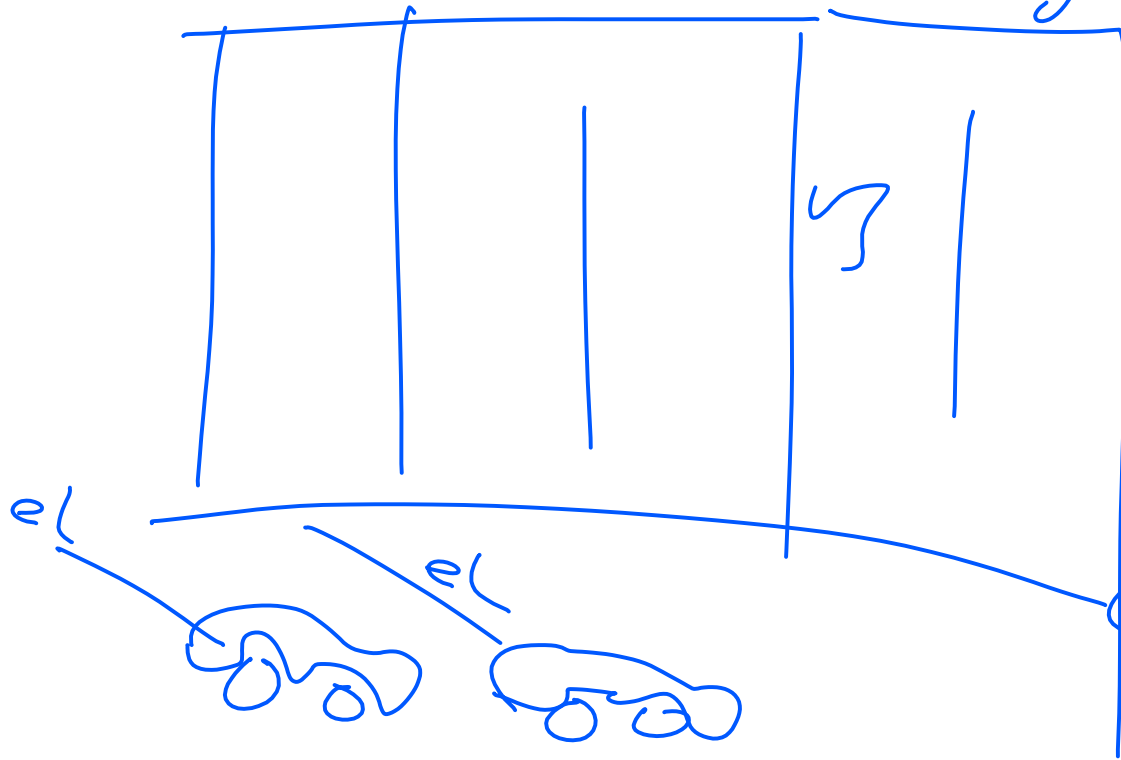
30A --  
~ 20kw

< 20kw

1kr/kwh

>

10kr/kwh




Limited top peak

car charger 40-90 kWh

this page was created by *Special:FormEdit/Meeting*, and can be edited by *Special:FormEdit/Meeting/EyeNetworks Fagdag Apr2019*

Category: *Meeting*

For Agenda, see: <https://eyenetworks.no/display/EN/Shared+Insights+2019%3A+Tillit>  See

Presentations at: <https://eyenetworks.no/shared-insights-2019-tillit/> 

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1 EyeNetworks Fagdag Apr2019

1.1 Some "take-aways" by Josef and Maunya

1.1.1 F-Secure (Tom Gaffney)

1.1.2 Zyxel (Tore R. Andreassen)

1.1.3 WAOO (Martin Jürgensen)

## Some "take-aways" by Josef and Maunya [\[edit\]](#)

### **F-Secure (Tom Gaffney)** [\[edit\]](#)

Smart = Vulnerable - Mikko Hyppönen's Law (F-Secure)

Mirai: 1 Mio DE, UK (61 username/passwd) combinations

IoT threats

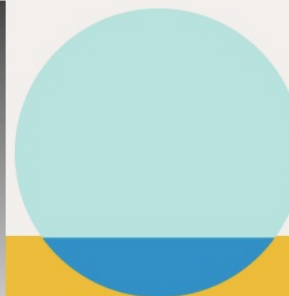
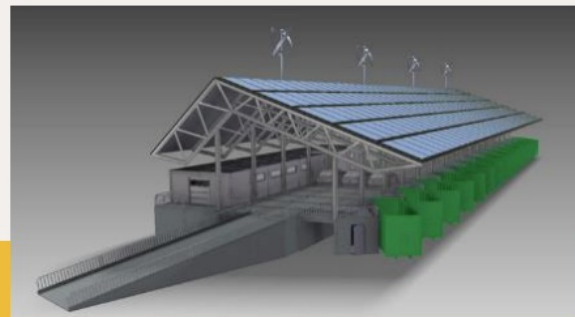
- 2016 - 5 family threats Remaiten, Mirai, Hajime, Leet
- 2017 Satori, Persiraij, IoT\_Reaper, Brickerbot, Amnesia,
- 2018 - 35 family threats: Torai, Hide N'Seek, Satori CoinRobber, ADB.Miner, Mushtik, Prowli, GoScanSSH, VPNFilter, Anarchy, Death, Hakai,...

Router Vulnerabiliti

- "IoT is wild west

## VISJON

- Hvaler kommune skal være i stand til å motta og håndtere alle avfallsfraksjoner i henhold til dagens og fremtidens føringer og forskrifter.
- Sandbakken miljøstasjon skal være fremtidsrettet i bruk av ny miljøteknologi for materialbruk, solenergi og microvind.



# Kontakt

SSB Oslo

heat pump / on/off  
compressor speed

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21 09 49 37

SSBs informasjonstjeneste

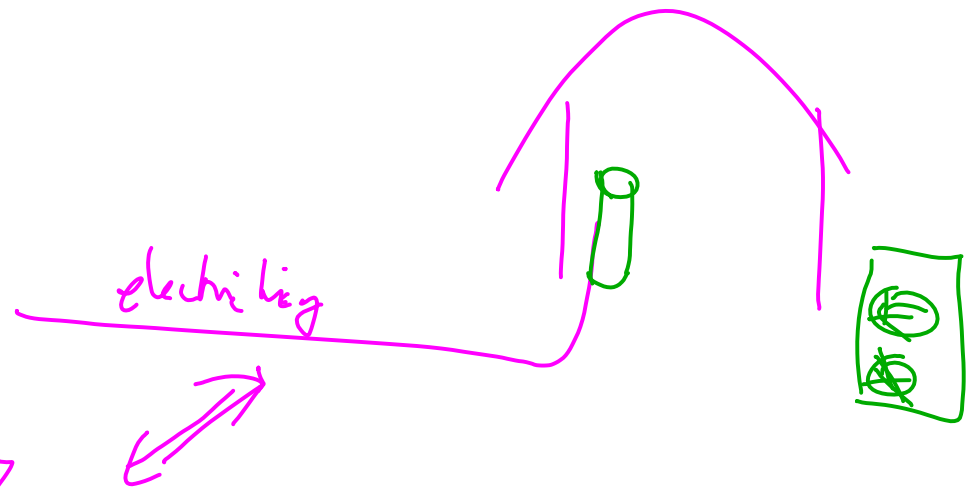
[informasjon@ssb.no](mailto:informasjon@ssb.no)

21 09 46 42

how to ~~control~~ ?

contribute to...

sustainability  
stable network



How to control:

Security / <sup>autonomy</sup> privacy

- central (DSO grid operator)

+

-

- local (home, app.....)

0

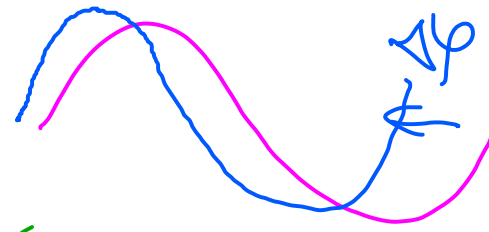
+

- automatic, based on energy frequency

2

49.9 <sup>too much</sup> energy?

edge computing regulation



50 Hz ++

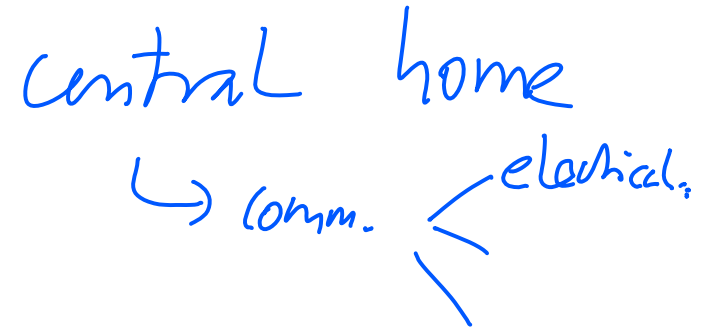
50.7 <sup>too little?</sup>



3 Bosh.....

1) measure  $\Delta \varphi$

2) adjust energy



3) total effect? (per house)

in the device  
heat pump

→ report of bus model energy provider