

Rabie BELATHCEN

Smart homes (HEMS)

①

heat pumps X1
warm water heaters
car chargers
room heating
✓ + washing/dishwasher/....

→ how to Manage Energy Systems in Nordisk homes?

→ ^xHow to Manage

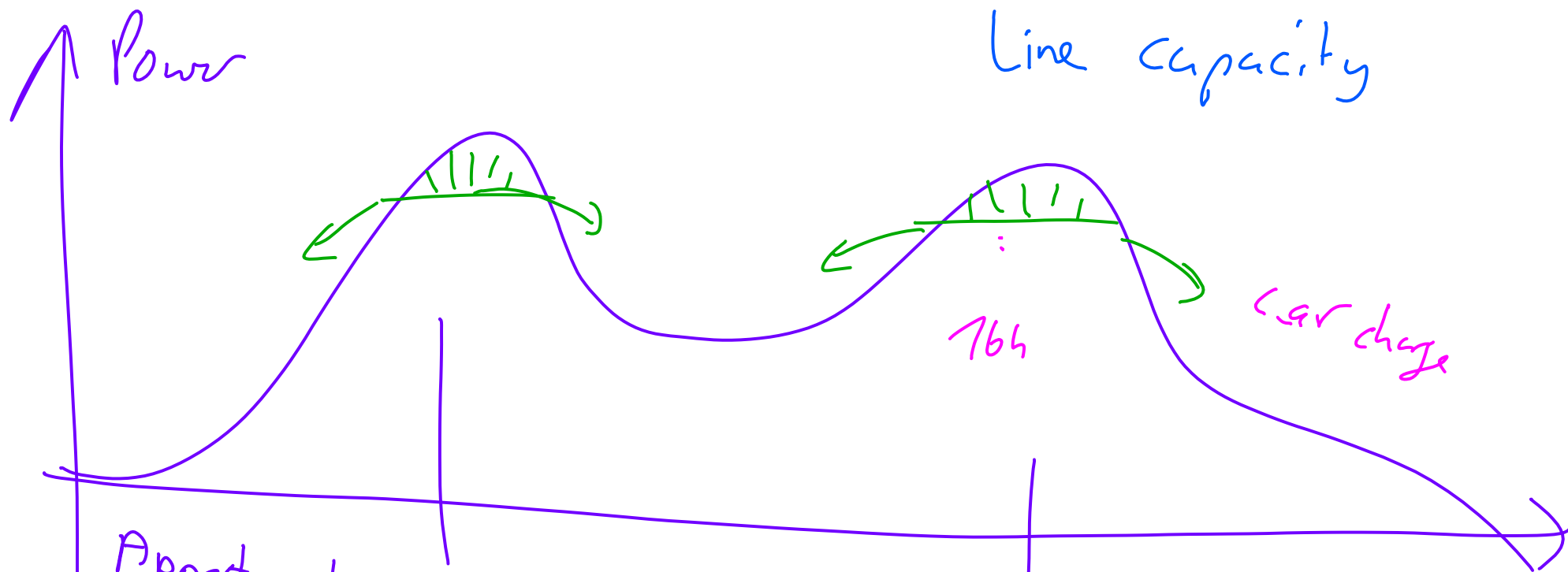
↳ specific devices

X1 Appliances

- NVE
- SSB
-

? Relation to Bosch
products & tech.

↳ ! Smart Boiler
HP



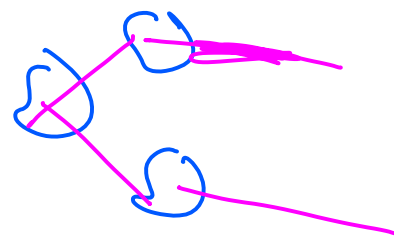
Apartment blocks:

Friday afternoon:

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

Kirsten Stangebye, 9329 4890

Josef heigher day
 - Rear Aspharim
Hvaler (Norges angsj netl)



Example 2:

today

New tariff

3x50A

(connection capacity) $\rightarrow$ top

peak

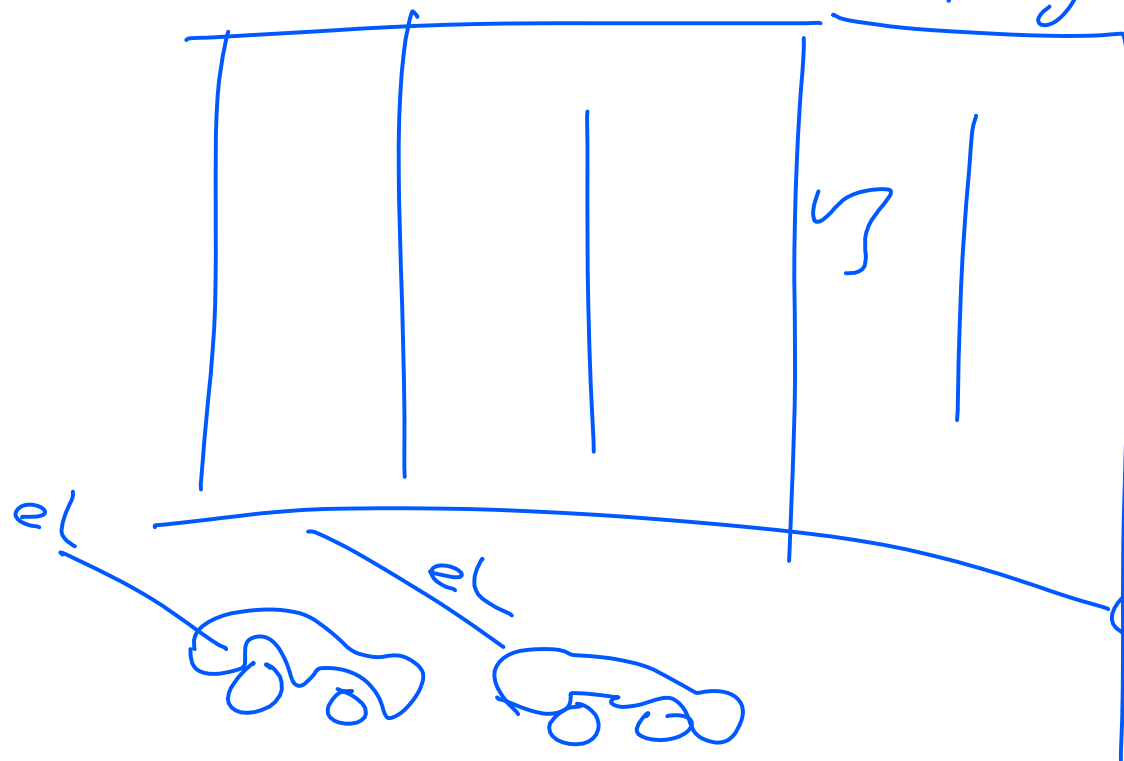
30A --
~ 20kW

< 20kW

1kr/kWh

>

10kr/kWh



Limited top peak

for charger 40-90 kW

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/>

[hide]

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

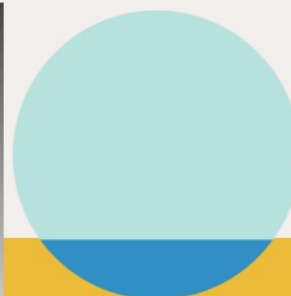
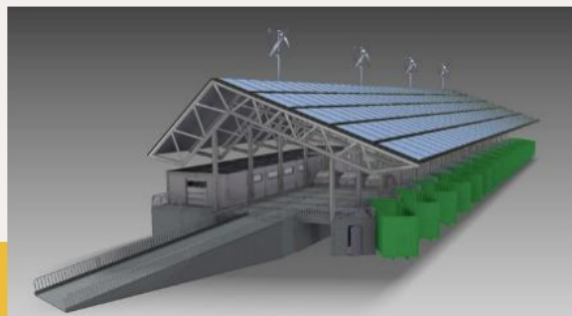
- 2016 - 5 family threats Remaiten, Mirai, Hajime, Leet
- 2017 Satori, Persiraij, IoT_Reaper, Brickerbot, Amnesia,
- 2018 - 35 family threats: Torai, Hide N'Seek, Satori CoinRobber, ADB.Miner, Mushtik, Prowli, GoScanSSH, VPNFilter, Anarchy, Death, Hakai,...

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.



heat pump / on/off
compressor speed

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SSBs informasjonstjeneste

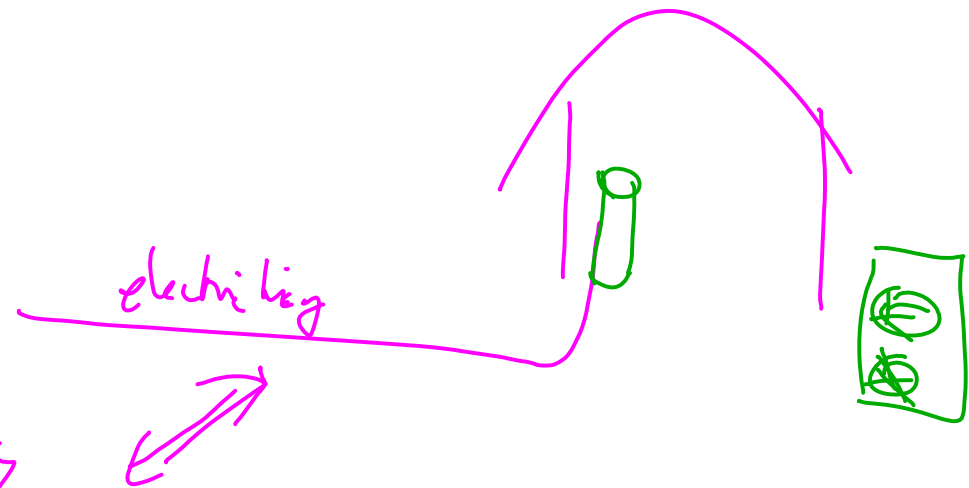
informasjon@ssb.no

21 09 46 42

how to ~~control~~ ?

contribute to...

sustainability
stable network



How to control:

Security / ^{autonomy} privacy

- central (DSO grid operator)

+

-

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

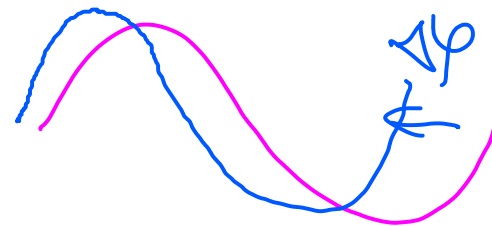
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+

- automatic, based on energy frequency

edge computing
regulation

②



too much
energy?

50.1 Hz

too little?

③ Bosch.....

1) measure $\Delta \varphi$

2) adjust energy

- central home
 - comm. $\leftarrow$ electrical
- in the device
- heat pump

3) total effect? (per house)

$\rightarrow$ report of bus model energy provider