

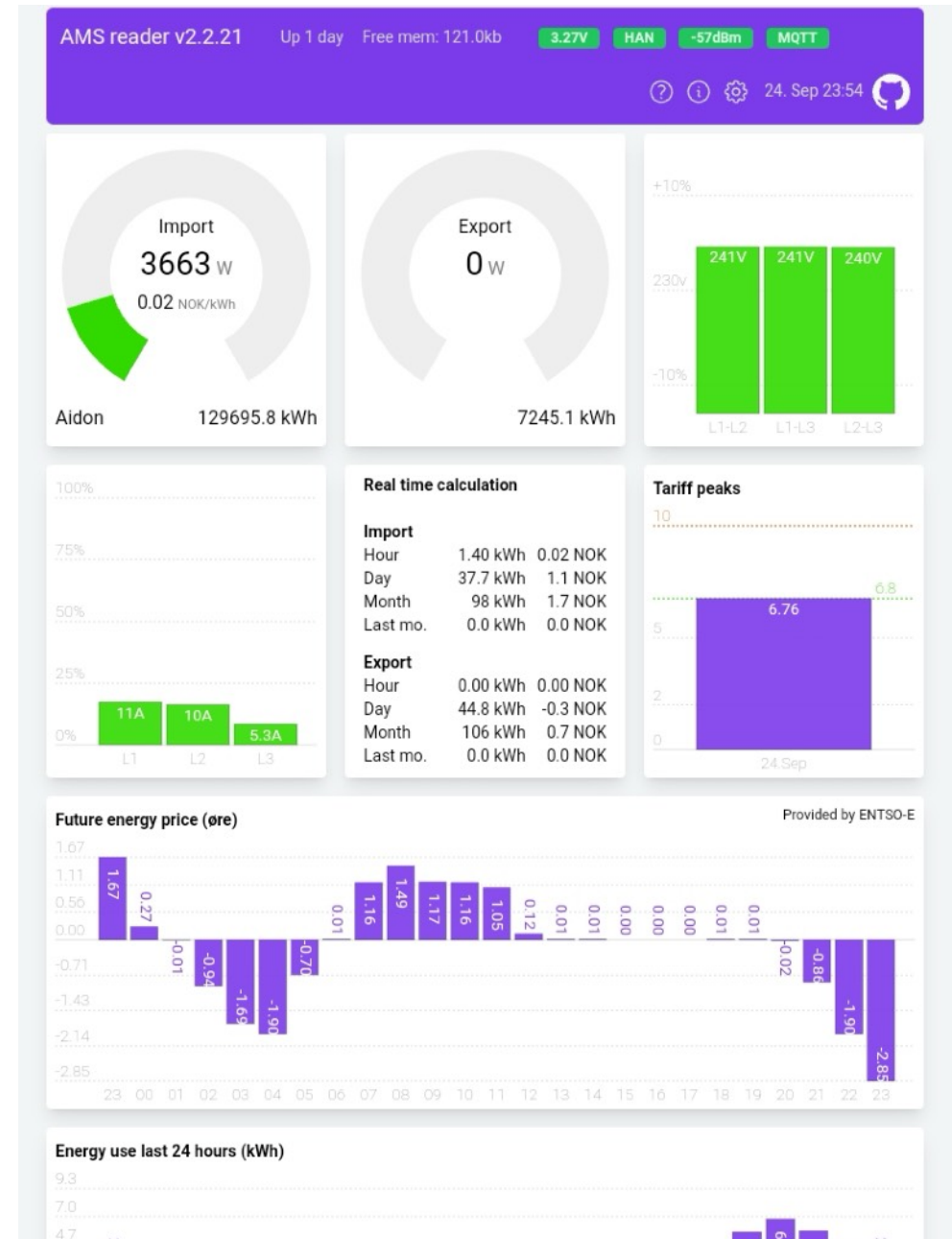
UNIVERSITY OF OSLO

EyeNetworks kick-off 2024, 18Jan2024

EyePoint Academy og det digitale skiftet

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What is it that I do not know?
but always wanted to know

Bærekraftig utvikling

hva er katalysator for Bærekraftsmålene (SDGs)?



SDG 1.4 Equal access to basic services

SDG 4.A Education facilities for effective learning for all

SDG 5.B Use of enabling technologies

SDG 9.C universal and affordable access

SDG 16.10 ensure public access to information

SDG 17 Partnerships for the Goals

Data & Energiforbruk
henger de sammen?

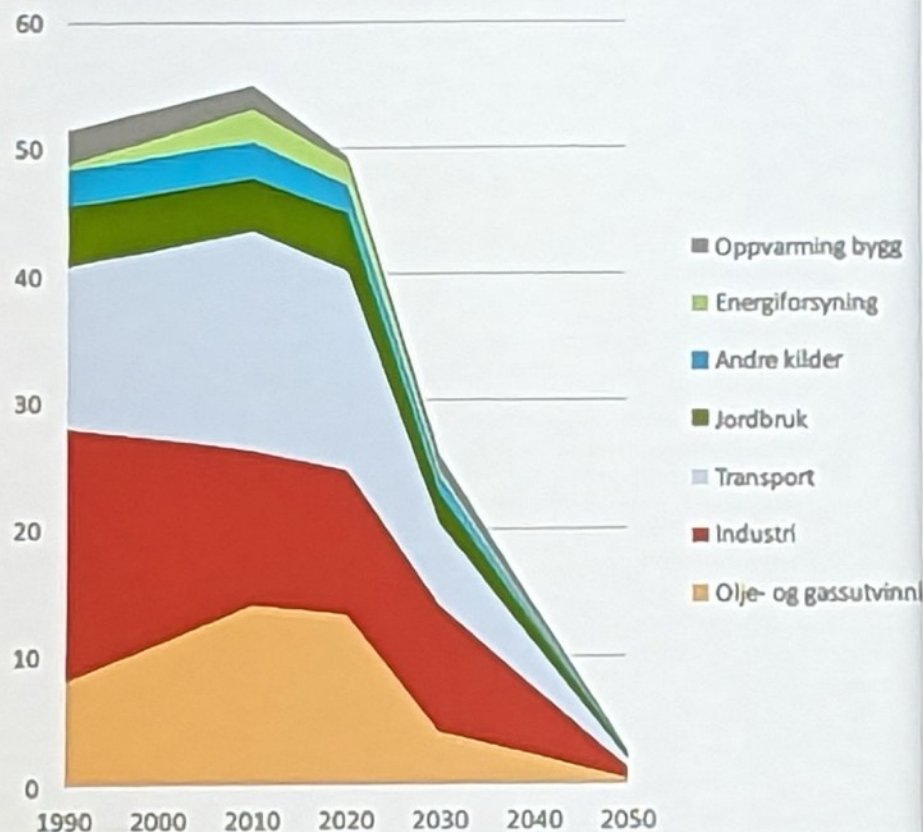
Sustainability and electrification

Source: Statnett LMA 2022

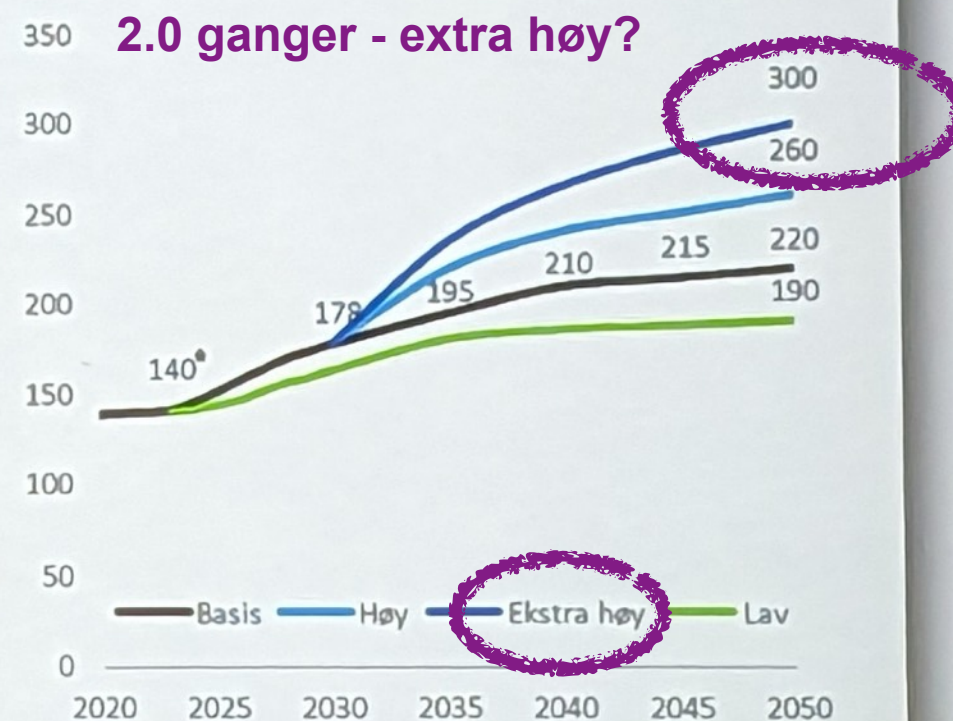
~~CONFIDENTIAL~~



Klimagassutslipp til luft i Norge, millioner tonn CO2-ekvivalenter*



Ulike scenario for forbruksutviklingen i Norge (TWh)



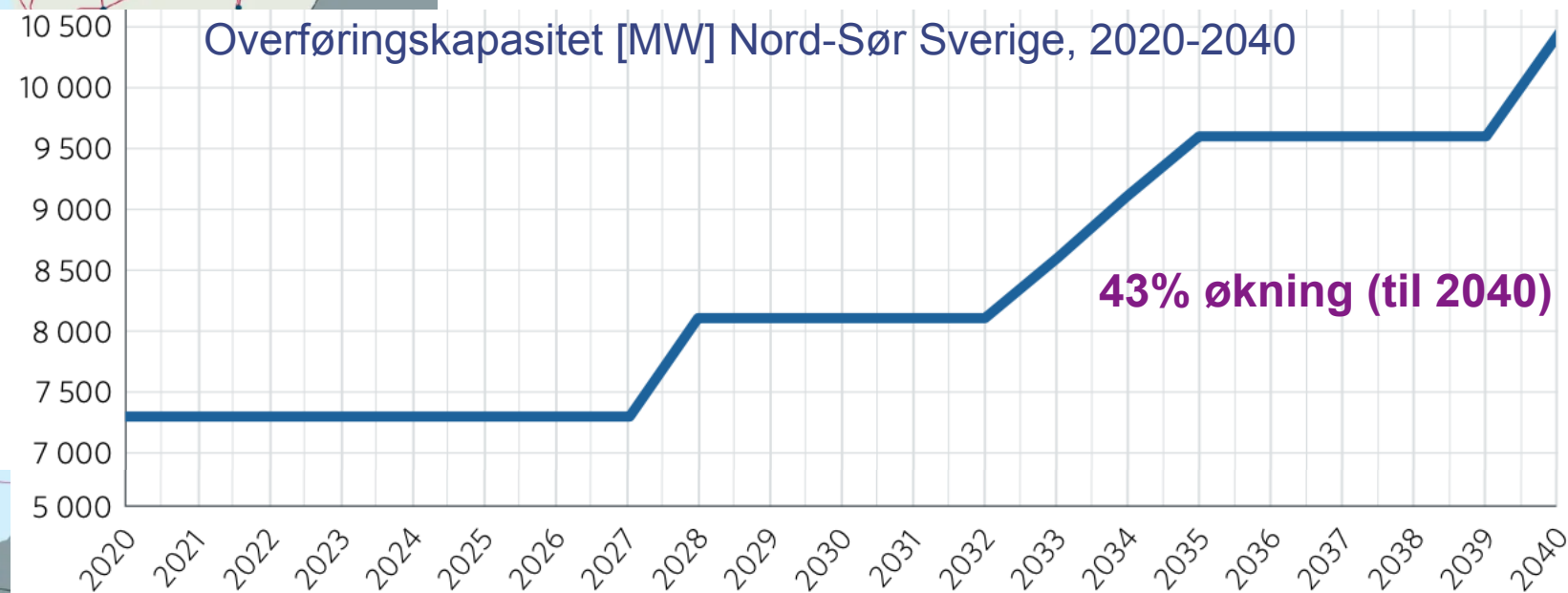
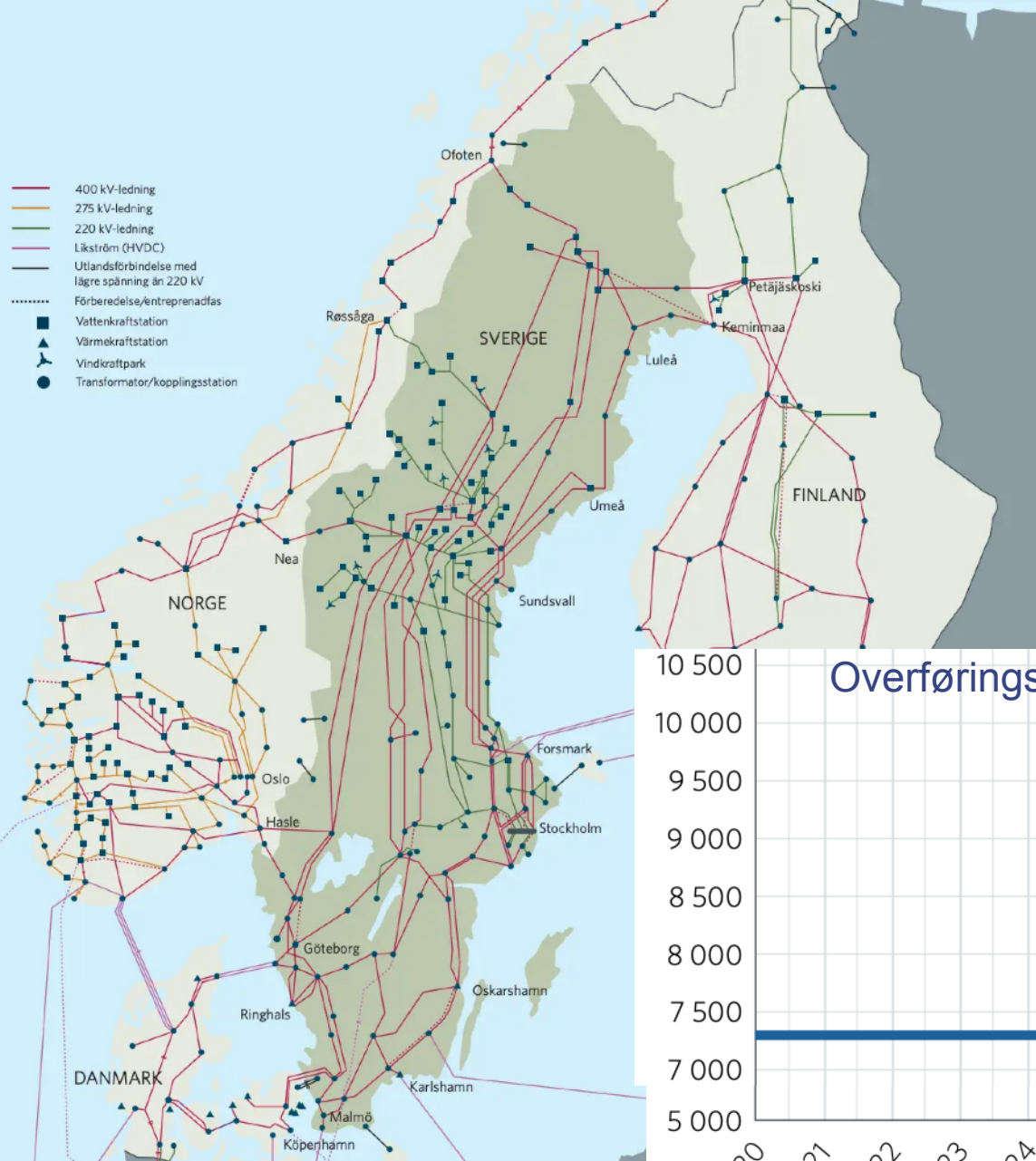
Basis for forbruk og produksjon i Norge (TWh)

[Source: SmartGrid Conference 27Sep2023]

Per-Oddvar Osland
GlitreNett.no

Simon Koopmann
Envelio.com

Grid utviklingen

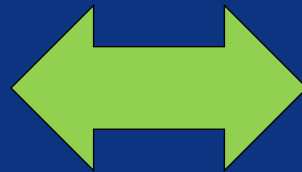


<https://www.aftenposten.no/norge/politikk/i/z7vWJw/statnett-vil-ha-mer-flyt-av-kraft-mellom-nord-og-soer-men-det-vil-ikke-sp-og-sv-ap-er-i-tenkeboksen>

The Power is in the Edge
of the grid

Det grønne skiftet

*For samfunnet handler det om
å redusere utslipp av
klimagasser, bevare og
gjenopprette naturen,
reversere miljøforringelse og
sikre at fremtidens energi
kommer fra fornybare kilder.*



Det digitale skiftet

*berører alle nivåer i samfunnet
som produserer og bruker
infrastruktur, tjenester,
applikasjoner og menneskelig
atferd som er avhengig av
digital representasjon av
kunnskap og datamaskinkraft.*

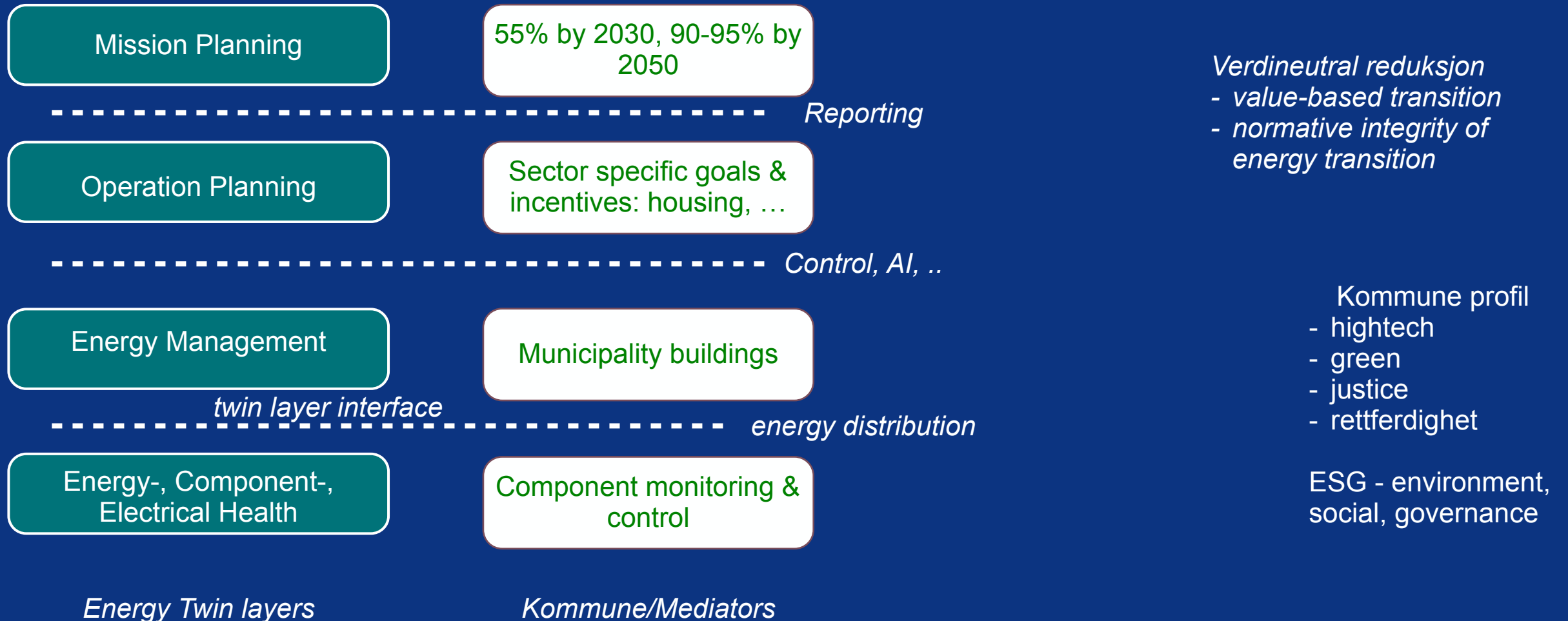
og alle er med
vi kan det, alle har Wifi



Måling og styring

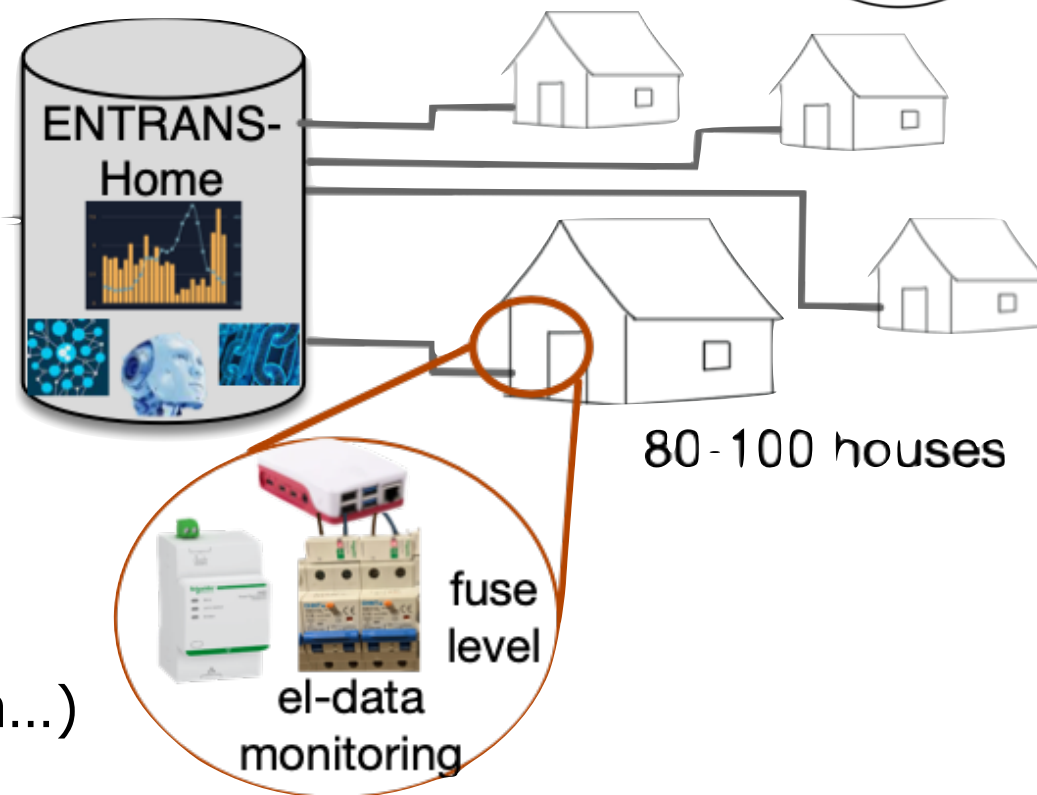
ved kanten av nett

Energy Twins struktur og deltagelse



DESSI scientific database

- ➔ Unique Scientific database
 - high-resolutions electricity data
 - every 10 s, per fuse
 - commercial actors (tibber, homely,...)
- ➔ Outcome
 - Samarbeid: VGS (Strømmen...)
 - Forskning:
 - privacy awareness (10 s, 1 min, **15 min, 1 h...**)
 - H2020 unique database
 - Recommendations: "*Nettleiemodell*"



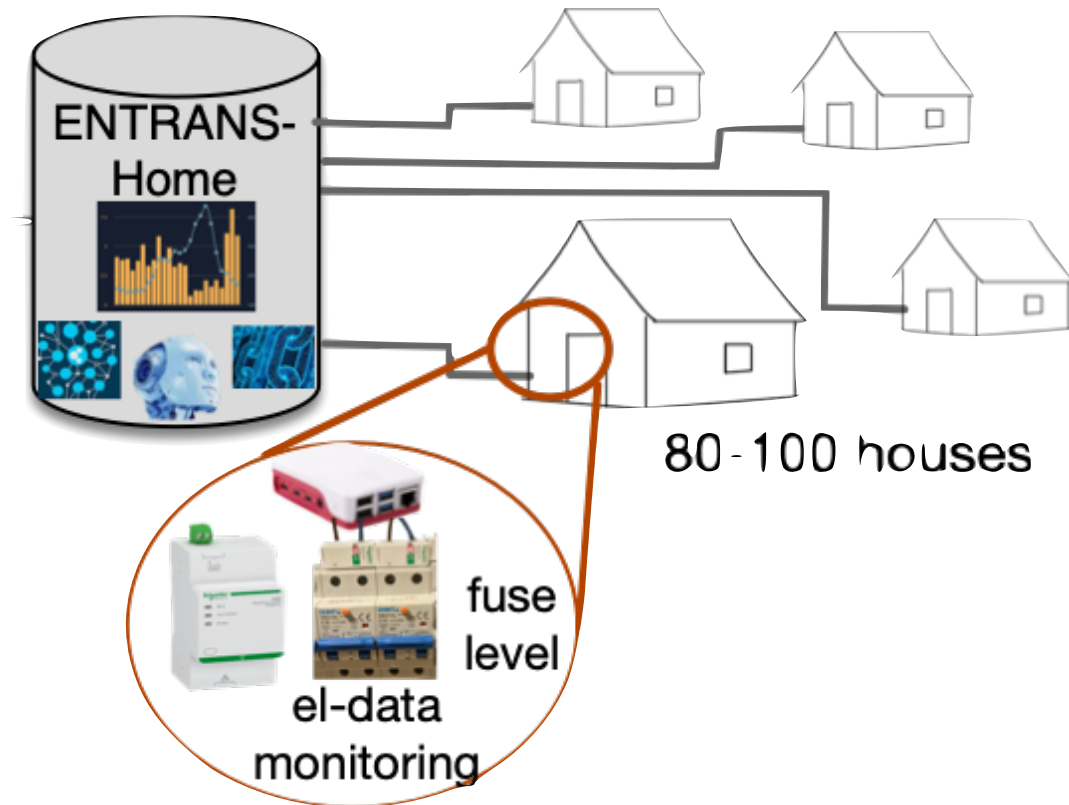
Bruk aldri vaskemaskin, tørketrommel eller andre husholdningsapparater når du ikke er til stede eller sover.

[Source: <https://www.elvia.no/nettleie/alt-du-ma-vite-om-ny-nettleie-for-2022/>]

Hva er det som jeg ikke forstår?

1. RPI monitoring of Fuses

- ➔ how much energy does each of my appliance use?
- ➔ What is the characteristics of my appliance?
- ➔ Which device uses lot's of energy?
- ➔ Is my freezer ruined?
- ➔ Is the door of my fridge open?

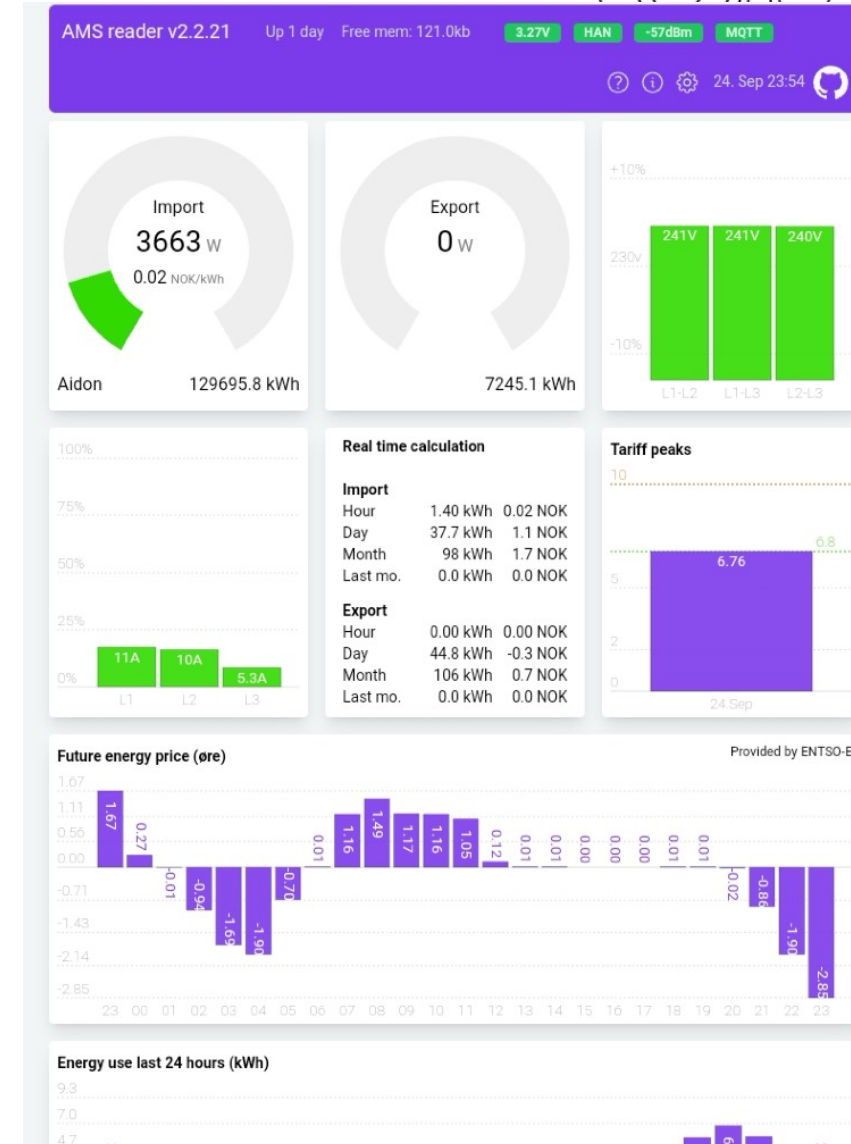


2. HAN port reading with AMSleser.no

→ Energy reading from the HAN port of my Smart Meter

→ Minimum Viable Product (AMS reader & RPI = 2200 NOK)

→

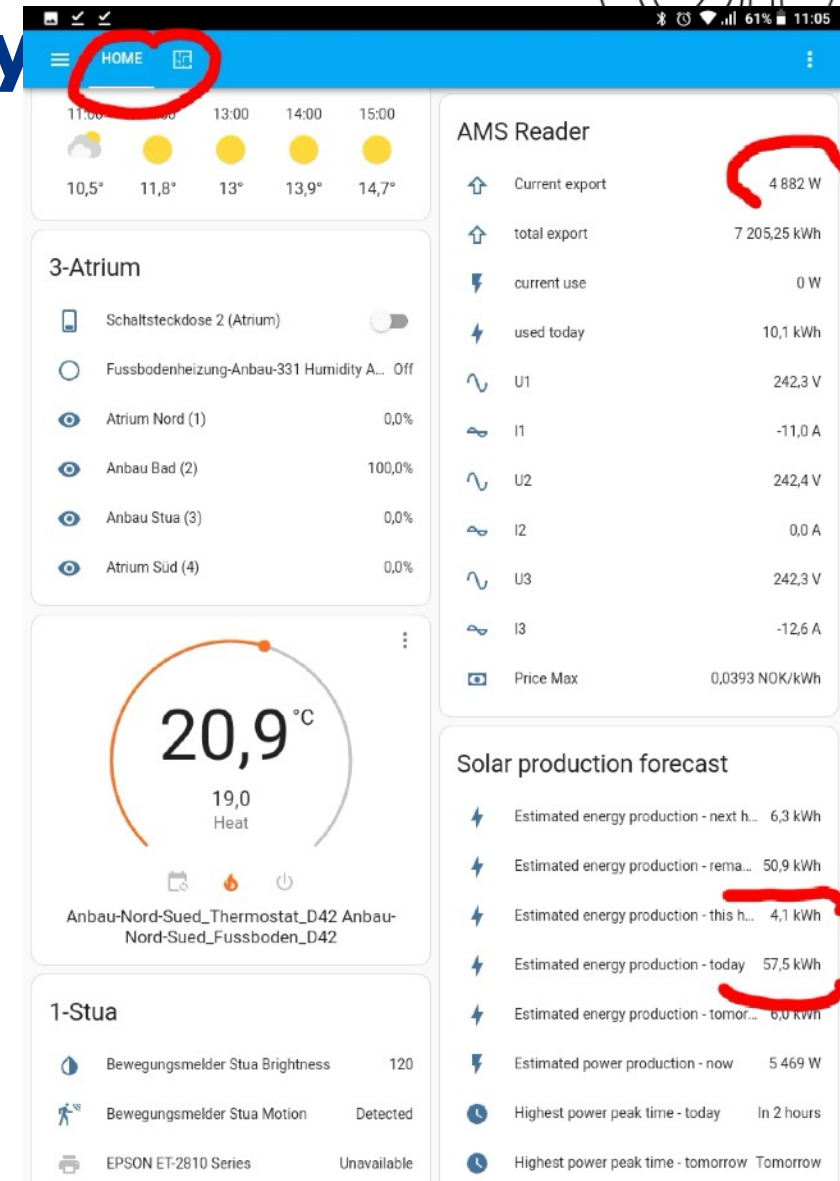


3. Optimisation control for weather forecast, price level and "home latency"

→ Optimise electricity usage (0-3, 3-5, 5-10 kW max per hour) & price

- Heat pump
- hot water
- isolation of my house

→ Output: max comfort, min cost

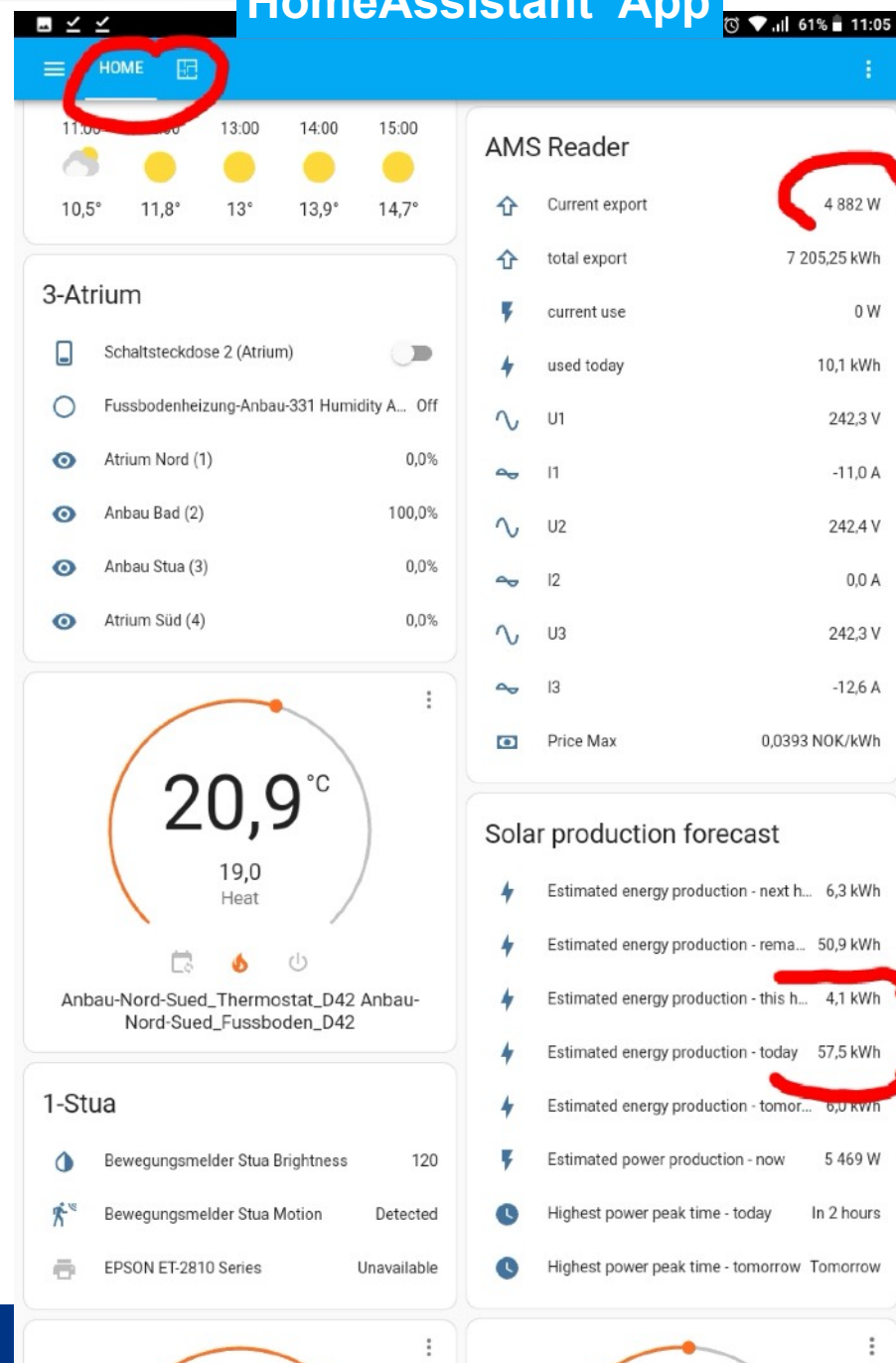


Vil du være med?

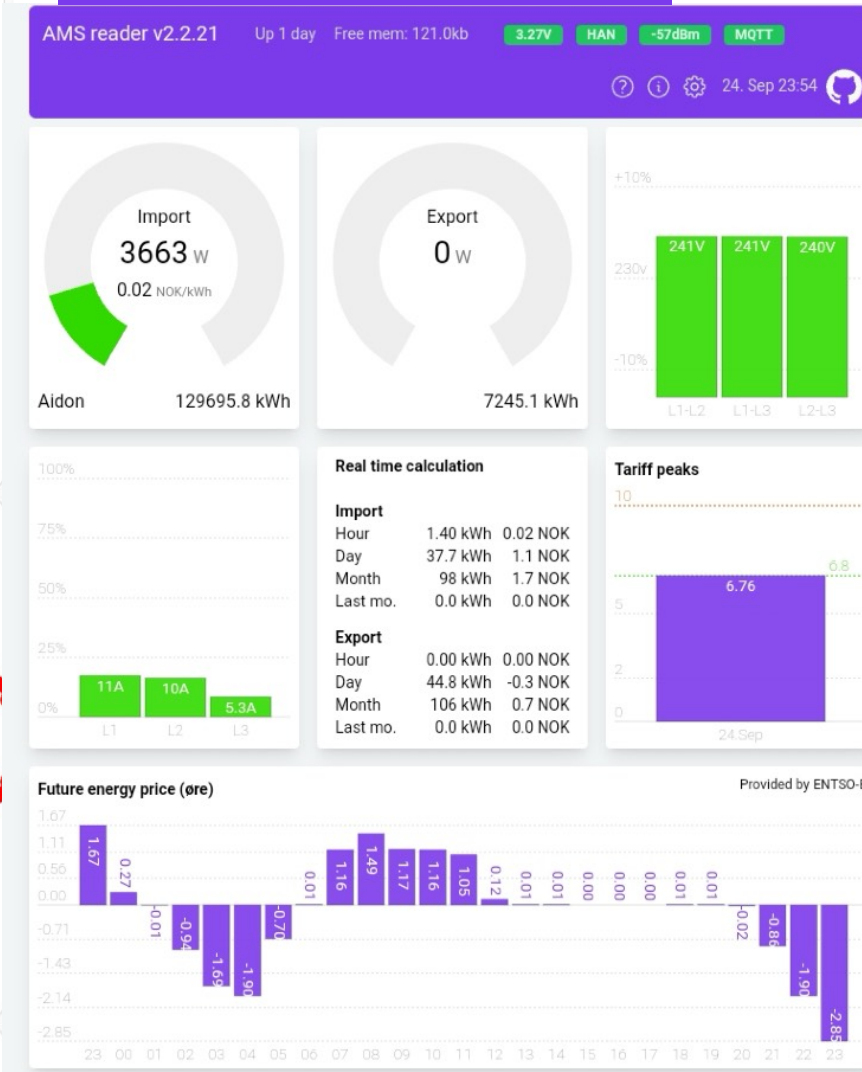
Kontroll over strømforbruk i ditt hus

- UiOs studenter og forskere vil hjelpe deg å forstå energi i huset
- Utstyr (dekket av UiO for de første 100 kunder)
 - Strømmåler (900 kr)
 - Raspberry Pi (1400 kr)
 - Home Assistant App
- Hva ønsker vi fra deg?
 - anonymiserte strømdata til vitenskapelig arbeid
- Interessert?
 - <http://DESSI.its-wiki.no>

HomeAssistant App



AMSleser data fra ditt hus

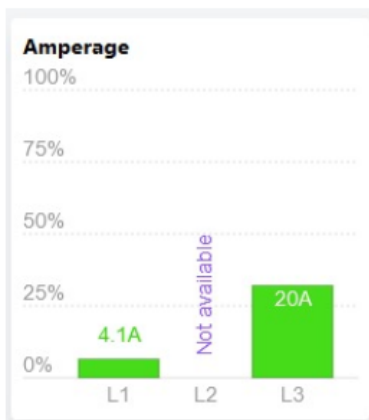


EyePoint Academy

hvordan kan vi hjelpe?

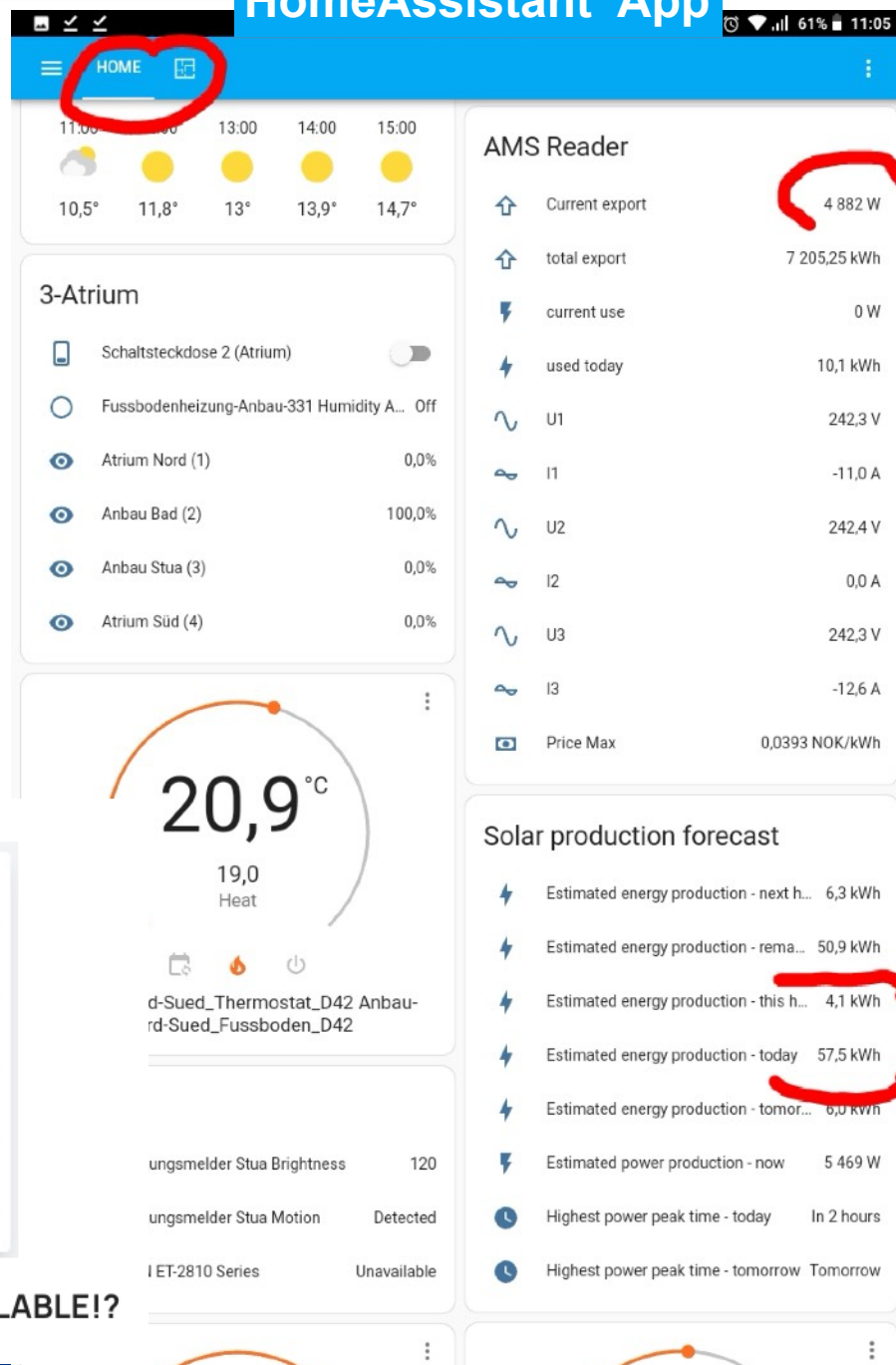
EyePoint - Labs

Kontroll over strømforbruk

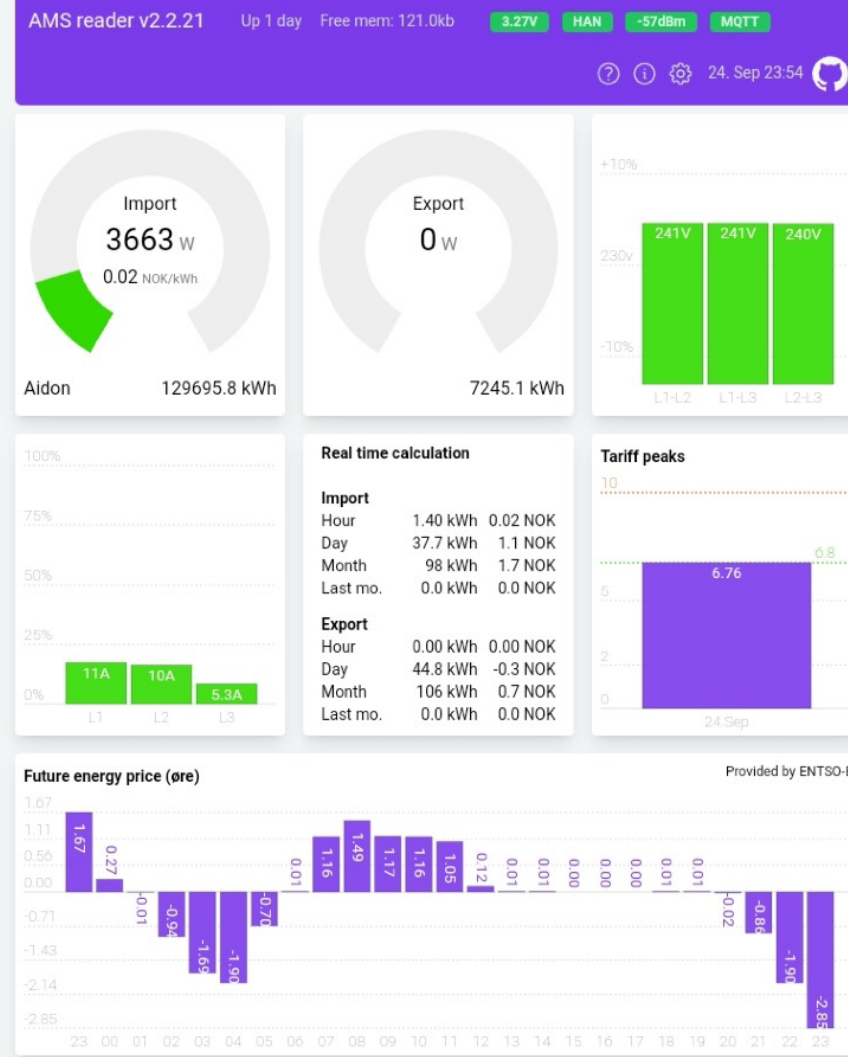


L2 CURRENT NOT AVAILABLE!?

HomeAssistant App



AMSleser data fra ditt hus



EyePoint Academy

- "Vi hjelper deg til å kunne hjelpe andre"
- Linjesupport til å "sortere mess" fra kunder
- anbefalinger for portfolio
- ...
- EyePoint Labs - testsenter

EyePoint Academy & EyePoint Labs

Hvem støtter vi, og hvordan?

Line support
Installers
Middle managers
Purchasers
Network engineers
Studenter og enkeltemner

Hvordan

Oppbygging
Kursmaterial
Sertifikat

Neste skritt og avklaringsbehov

ToDo
Avklaringer/Open Issues

EyePoint Labs

https://docs.google.com/document/d/1m_qTHmQ53yoKCWNJBafnTbuoDksGXBZKoB50YV3561Q/edit