

HOUSING ASSOCIATIONS AS ENERGY COMMUNITIES: FLEXSHAPE IN DENMARK

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www.flexshape.dk

WHO AND WHERE?

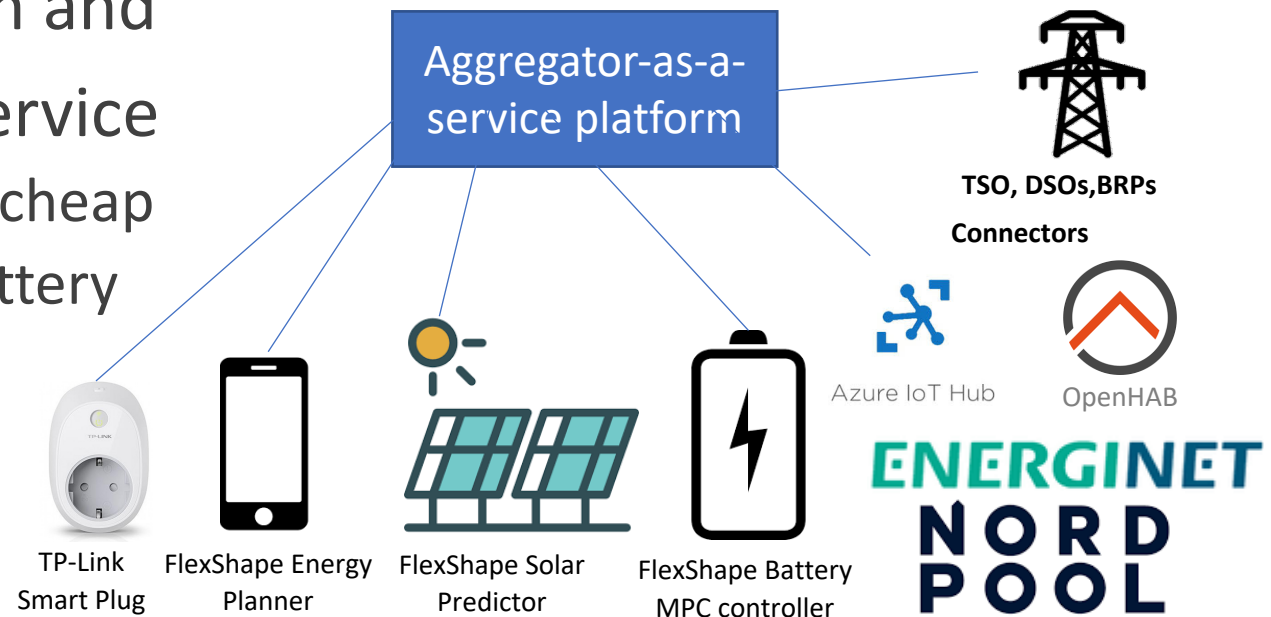
- In Denmark
 - Very **high electricity taxes** (wholesale <0.04€/kwh, consumer>0.3€/kwh)
 - Very **attractive business case** for **self-consumption**
 - Many non-profit **housing communities** renting flats to **tenants**
 - A (part of a) housing community can become a **self-led** energy community
- Where: Aarhus, Denmark
- Who:
 - DanSolar: PV turnkey solutions **and** electricity supplier
 - VisBlue: Down-scaled vanadium-flow batteries
 - FlexShape: ICT platform for energy communities – big and small

PURPOSE AND ACTIVITIES

- Purpose
 - Turn a housing community into a self-sufficient renewable energy community
- Activities:
 - Housing community **signs contract** with DanSolar as electricity supplier
 - Single meter "at the entrance", all flats are "behind the meter"
 - Dansolar **finances and installs PV+battery**, FlexShape **installs ICT system**
 - Housing community tenants use electricity - **with help and guidance**
 - FlexShape ICT platform **optimizes self-consumption, battery (de)charging, electricity procurement from grid, providing grid services from battery**
 - After 10 or 15 years, **PV+battery ownership transfers** to housing community

How Does It Work ?

- FlexShape Solar Predictors **predicts PV production**
- FlexShape Energy Planner **app predicts and optimizes loads** to increase self-consumption
- FlexShape Battery MPC Controller **plans battery (de-)charging** to maximize self-consumption and
- FlexShape Aggregator-as-a-Service
 - **Procures grid electricity** when cheap
 - **Provides grid services** with battery



BENEFITS, BUSINESS MODEL, TRANSFER

- Business model: 2 options
 - Tenants pay **same** price as before, ownership transfers after **10 years**
 - Tenants pay **20% less** than before, ownership transfers after **15 years**
 - DanSolar **finances installation, paid by no tax** on self-consumption
 - After ownership transfer, **>80% discount** on self-consumption
- Benefits
 - **No installation expenses** for housing community or tenants
 - Electricity **same price or cheaper** for tenants
 - **Higher savings and income** due to FlexShape ICT platform
- Transfer to other places
 - Technically straightforward, but business case depends on taxes (VAT++)

STATUS AND CONTACTS

- Status
 - First installation expected fall 2020
 - Stay tuned for experiences
- DanSolar www.dansolar.dk
- VisBlue www.visblue.dk
- FlexShape www.flexshape.dk torben@flexshape.dk



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