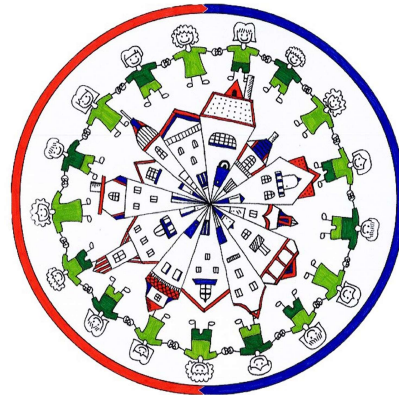




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## **EBO Consult:**

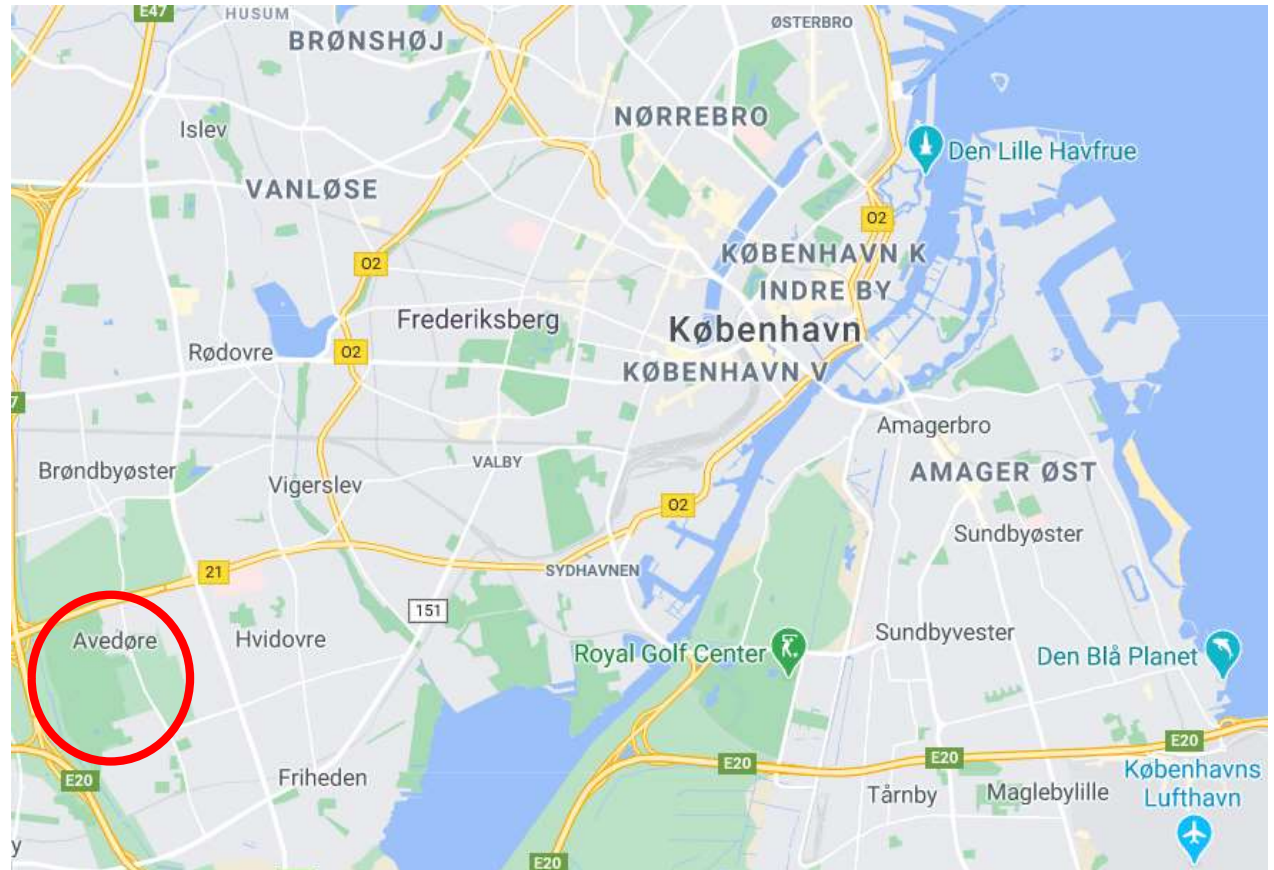
Operate, develop and expand district heating cooperatives.  
Develop and operate energy communities.  
Renewable energy is our core business.



[www.ebo.dk](http://www.ebo.dk)



# Avedøre Green City - Citizens empowering local energy transition.





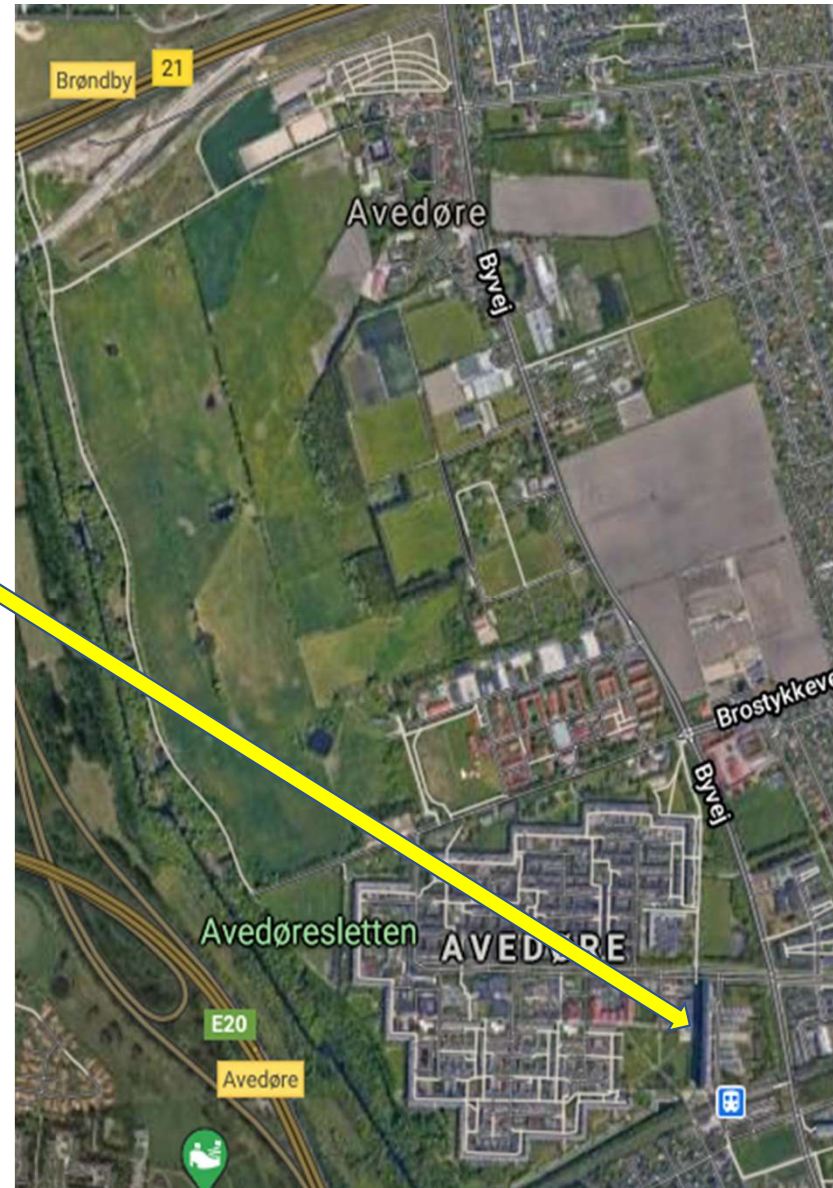
## Avedøre District Heating Cooperative:

- owned by all consumers (4,000)
- platform for local energy ideas
- board of directors (consumers)
- non profit district heating utility



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The first innovative project:  
"The Solar House" 2009 - at that  
time in a ghetto area with social  
challenges. UN Summit 15 as a  
driver.



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## From the big house to the solar house:

- Got the idea to promote solar energy in a CHP area and to create the first Solar CHP multi-storey building in the area with no subsidies.
- PV-panels on the South facade of the building and solar thermal installation on the roof.
- The tenants paid for the PV-panels and the district heating cooperative paid for the solar thermal installation.
- A new image for the area was created.







**EU Sustainable Energy Week**  
Awards Ceremony 2010

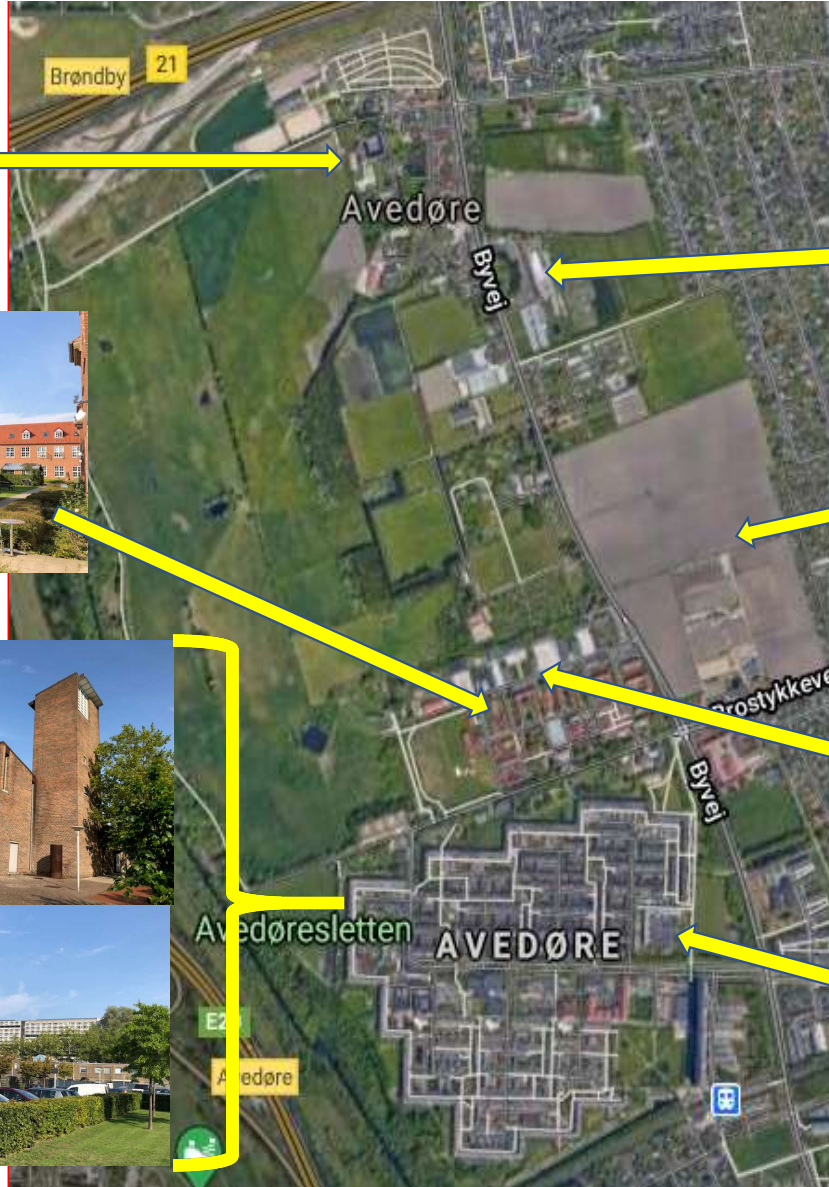
## Demonstration and Dissemination

<i>Nominated Project</i>	<i>Country</i>
Hungarian Schools Illumination Programme	Hungary
The Solar CHP Multistorey Building	Denmark
Econav: pilot implementation of the Eco-Saver Technology	Spain
REWE Green Building – Konzept Zukunft	Belgium
Faluház demonstration project	Hungary



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# SHARED VISION OBJECTIVES AND BASELINES



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Based on UN Goals (3-13, 15 and 17)  
Manual with actions and initiatives  
Developed by the steering committee  
Communicated to the local area





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# Defined An Overall Development Plan

## First Step: A Strategic Energy Plan

- What is sustainable energy in our area?
- Which technologies? Which data do we possess?
- Do we need changes in infrastructure?
- How can buildings and land improve our plan?
- How can we influence the energy infrastructure?
- Can we obtain energy savings?
- Investment plan schedule?



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# Citizen Energy Community

Denmark's first – founded as a cooperative.

Approx. 7,500 stakeholders in Avedøre as members.

Electricity for the future (renewables).

Power and heat – demand and supply.

EBO Consult = administration & catalyst.







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# First Energy Steps – 2021-2023

## *District Heating:*

Infrastructure ready for reduced flow temperature – from 90° to 65°.

Communal heat pump and excess heat from datacenter.

Energy savings: 10-20 % - reduced heat bills.

Energy saving measures – e.g. new heat meters  
and free technical service.







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## *PV Installations*

Since 1st January 2023:

- Size: 254.20 kWp
- Production per year: 233,353 kWh
- CO<sub>2</sub>-reduction per year: 109,589 kg
- Paid by members of the community
- Big tender = cheap PVs and installation
- Operated by the energy community

In Spring/Summer 2023 more big PV-installations are following, e.g. financed by the municipality.



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# *Charging Stations For EV*







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# *Battery - 600 kW – April 2023*





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# Next Steps – 2024-2030

”Energy Selfsufficient Village”



Expansion of sustainable district heating.  
Renovation of facades and roofs – PVs and PVT.





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# Most Important Lessons Learned

It's all about people and thorough planning.

Citizens are decision makers.

Technology/energy saving measures must adapt to local conditions – keep it simple and trustworthy.

Legal framework is important.

Good business cases and financing tools are crucial.

Finally: Communication, information & transparency!



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Thanks!

Erik Christiansen

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