



Gasification of Biomass & Waste

Country Report Denmark

IEA Bioenergy Task 33
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Alkmaar – The Netherlands

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What do we discuss in Denmark?

DEA: 43% of Danish electricity consumption covered by wind in 2017

- At Christmas the electricity demand was covered 100% by wind

Government has proposed an energy agreement to replace current one (2012)

- Announced new 800 MW off-shore wind in 2024 and decisions for further parks to be taken in 2022
- Electricity tax reduction to promote green electricity for large heat pumps
- Probably no subsidy for further biomass CHP
- Deregulate the district heating sector and introduce competition
- Abolish energy saving/efficiency scheme
- Equalise subsidy levels/"technology neutral" tenders

- Green gas development and deployment from 2021, subsidy DKK 4 B/20 years
- Double subsidy of Danish biogas (FIT and certificates) to be handled
- Inequality between biogas and producer gas to the gas grid – to be adjusted

Company (CWC) announced two straw pyrolysis-oil plants to be built in Denmark

Proposal

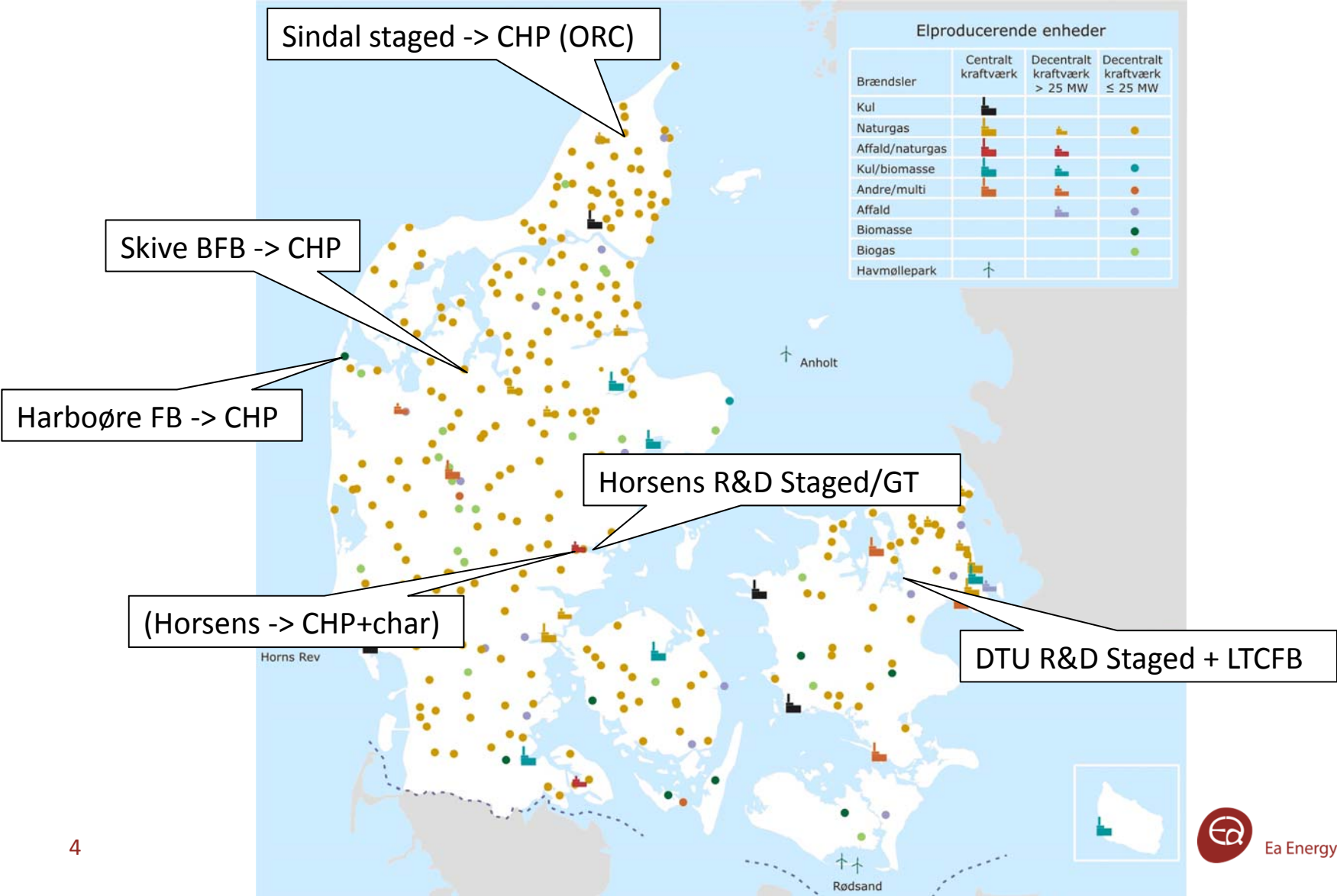
The goal is: Minimally 50 % renewable energy by 2030

”The Government wishes that Denmark can realise the high goal and ambitions without entailing unreasonably high extra cost for society, citizens and businesses.”

”We must move away from a detailed and inflexible planning of the energy policy to take in and exploit the speed at which the energy system changes these years.”



Biomass gasification plants



Dall Energy - Sindal

- Staged updraft with ORC unit
 - $5.5 \text{ MW}_{\text{fuel}} - 5 \text{ MW}_{\text{th}} - 0.8 \text{ MW}_{\text{e}}$
 - Wood chips and GPW
- Co-financed by the EUDP
 - Counting on gasification FIT
- Construction ongoing
 - [Condenser placed in January](#)
- To be commissioned in 2018



Partnership for Thermal Gasification

- Study on framework conditions and LCoE in 2030
 - Presented in Innsbruck
 - Could be a template for a Task 33 project
- Strategy for RD&D in thermal gasification technology in Denmark
 - Contributions from members/stakeholders
 - Edited by Ea Energy Analyses
 - Targeted decision makers/politicians
 - In Danish



Thank you!

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