nature energy

Biogas is a key driver in Denmark's green transition

The World Biogas eFestival

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Introduction to Nature Energy

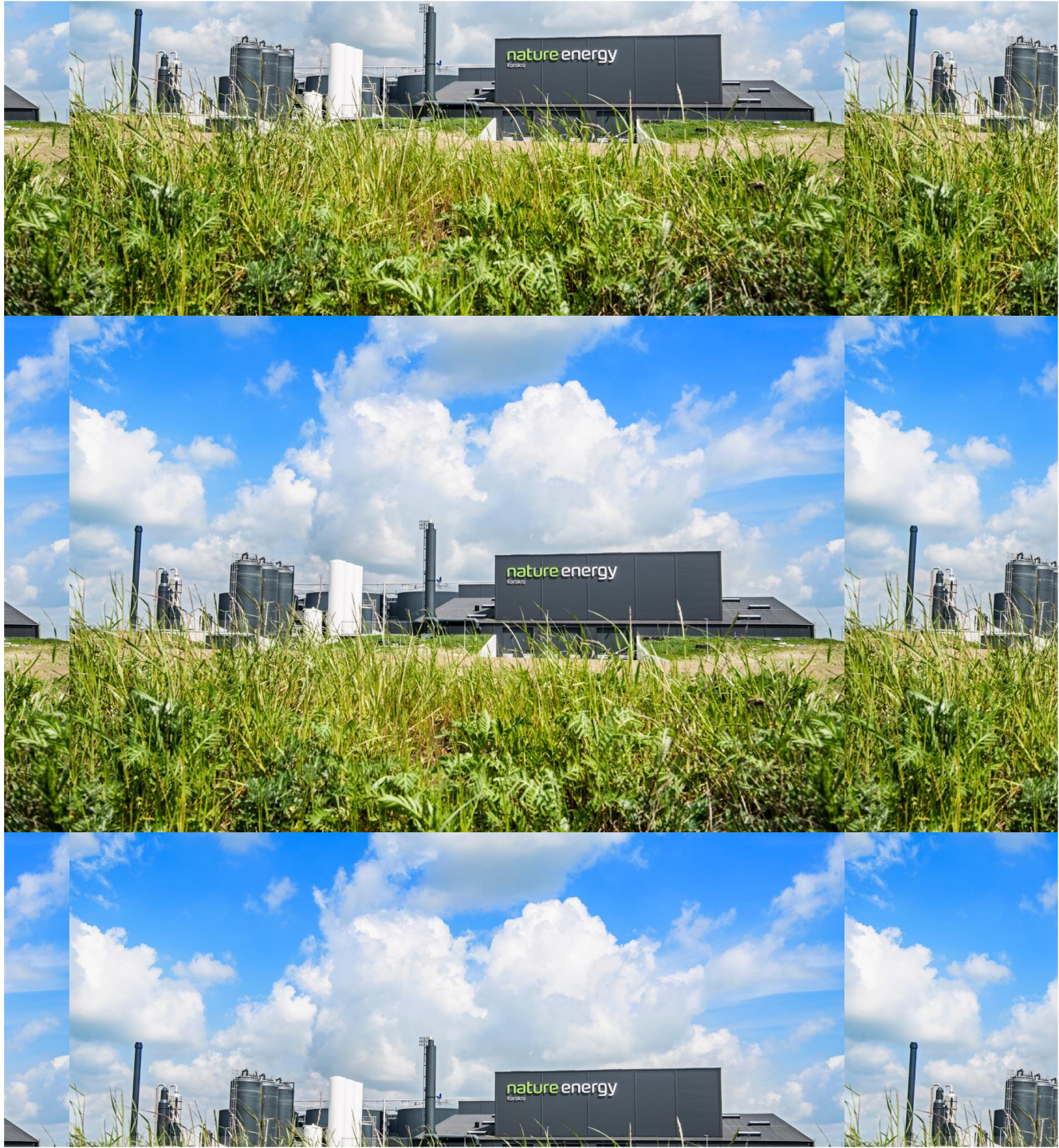
Nature Energy is **one of the world's largest producers** of biogas – with 10 large scale biogas plants located in Denmark.

In 2020, Nature Energy estimates to convert around **5 million tonnes of biomass**, which corresponds to **170 million m³ biogas.**

This is enough biogas to **keep 10,000 trucks driving 50,000 km a year on the roads** - or enough to **heat more than 71,000 homes** with green and CO_2 neutral biogas.

In 2019, Nature Energy generated a **revenue of approx. 1 billion DKK**.

Nature Energy is headquartered in Odense, Denmark, with **250 employees.**



Biogas plays a key role in Denmark’s transition

- Last year, the Danish Parliament agreed on a **climate law** demanding a total **CO2 reduction on 70% in 2030.**
- To come up with **concrete initiatives,** the Government established **13 Climate Partnerships** representing all parts of the business sector in Denmark.
- The Partnerships have now published their **recommendations**.
- Several Climate Partnerships **highlight biogas as a central part of Denmark's overall green transition.**

This is how the individual Climate Partnerships view the potential of biogas

Climate partnerships with a comprehensive focus on biogas:

- The Climate Partnership for **Food and Agriculture**
- The Climate Partnership for **Energy and Supply**
- The Climate Partnership for the **Energy-heavy Industry**
- Climate Partnership for **Land Transport**

The Climate Partnership for **Food and Agriculture**

- The sector can contribute with **a reduction of 62% towards 2030**, while striving to become **climate neutral in 2050.** Here, biogas plays a key role.

- There is a need for a **new regulatory framework** for biogas, in order to **increase production by 20 PJ** towards 2030. The 20 PJ will be production of **new biogas**.

- If the use of **Power to X** is increased, the Partnership assesses that the biogas potential can be **increased by another 40 PJ.**

- The Partnership focuses on **reducing greenhouse gas emissions from livestocks**. Here, biogas is a central method in reducing emissions.

The Climate Partnership for **Energy and Supply**

- With **already known technologies**, Denmark can reach a **64% CO_2-reduction by 2030**.
- This includes **increased use of biogas in transport**, **households and industry**.
- To reach 70%, the Partnership points to **Power to X** and **capturing CO_2** as key technologies.
- The partnership assesses that the **biogas production must be increased from 4.4 TWh in 2019 to 13.3 TWh in 2030**.
- **Large scale production and efficiency** can at least **halve the production costs of biogas pr. TWh** by 2030 compared to today.

The **energy-heavy industry** highlights biogas as its green solution

- The industry can reduce its emissions with 70% by 2030. To achieve this goal, **biogas plays a crucial role for the industry.**
- **20% of the sector's 70% target can be achieved by replacing coal and natural gas with biogas.**
- The industry's high-temperature processes **require biogas and can't be electrified.**
- The energy-heavy industry are dependent on biogas and ready to take over **almost all of the biogas produced today.** It recommends a production of **17 PJ biogas for the industry alone.**
- **Price is a crucial element.** The transition requires a significant reduction of the costs associated with biogas production in the coming years. This is a **key focus point for Nature Energy**.

The Climate partnership for **land transport**

- The Partnership proposes to **restructure the fuel taxes** so they promote CO_2 reduction.
- This must be done by **decreasing the charges on alternative fuels such as biogas.**
- It is recommended that **Denmark exempts biogas, biofuels and hydrogen from both energy and CO_2 taxes** - just as it has been done in Sweden.
- Biogas for heavy transport is a **ready and CO_2-neutral technology**, and it can be produced locally in Denmark with use of Danish raw materials.

We are ready to **increase production** and build new biogas plants

We can **increase production** and **reduce our costs** within 2030

- Several Climate Partnerships underline the need to **increase the biogas production significantly** to comply with the 70%-target in 2030.
- New research studies show that **the biogas production can be quadrupled** in 2030.
- We are ready to build **new large scale biogas plants** in Denmark to increase production
- We strive to constantly **optimize our plants** and **reduce production costs**.
  Our production costs can be halved in 2029 compared to today's costs.
- However, to reach this stage **we need subsidies in the coming years.**

Thank you for your time