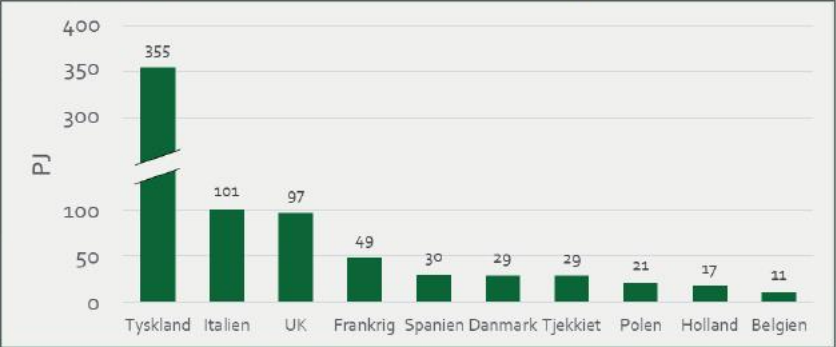


Biogas In Denmark

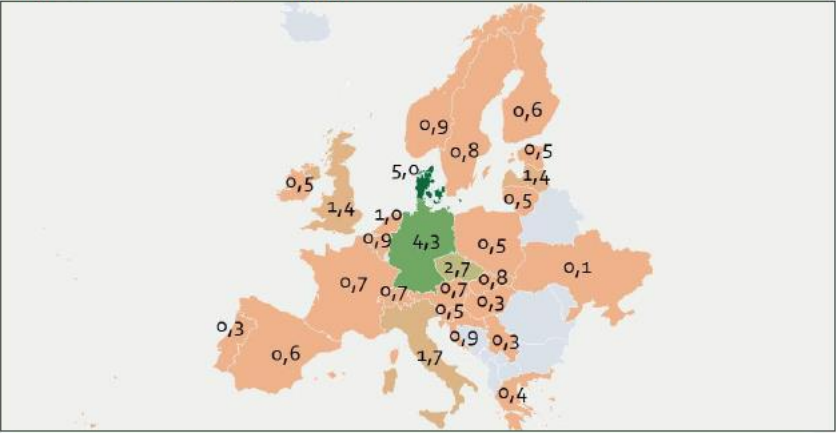
Status and Outlook

Danish Biomethane Production in Comparison

Samlede biogasproduktion for de 10 lande med størst produktion i EU (38)



Biogasproduktionen pr. indbygger i EU-landene. (GJ / person)



The Producers

Approx. 180 biogas plants in Denmark

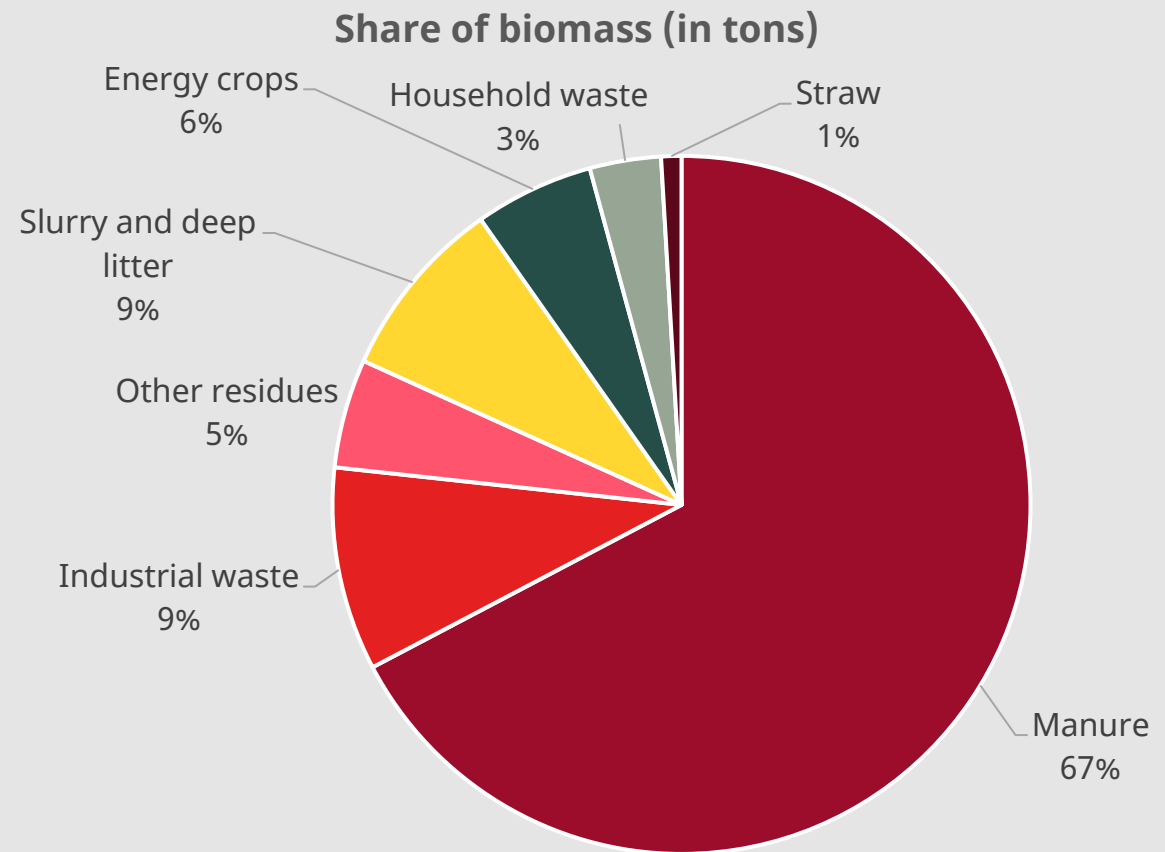
Agricultural biogas plants: 100, of which 55 with upgrading capabilities

Waste water plants: 49, of which 2 with upgrading capabilities

Industrial biogas plants: 7, of which 1 with upgrading capabilities

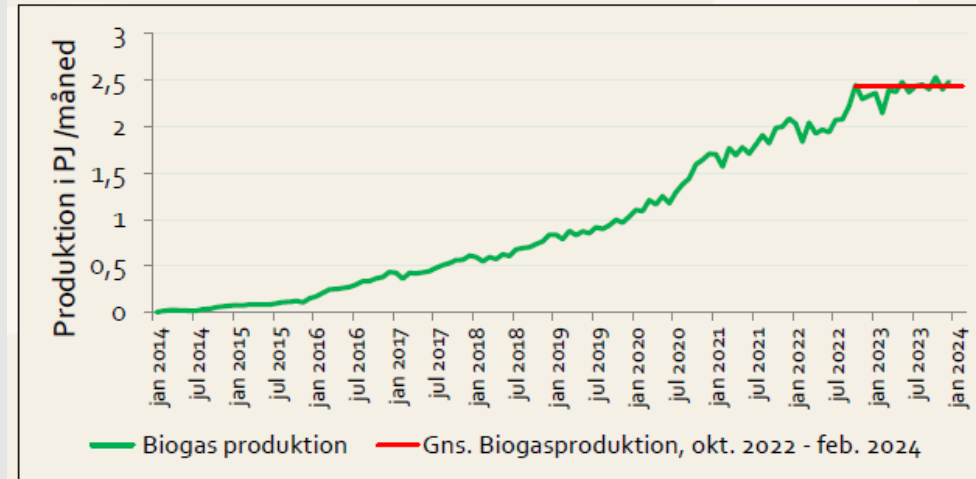
Plants that extract biogas from landfill sites: 27 plants

Total production in 2023: 7,227 GWh (1,594 GWh biogas)

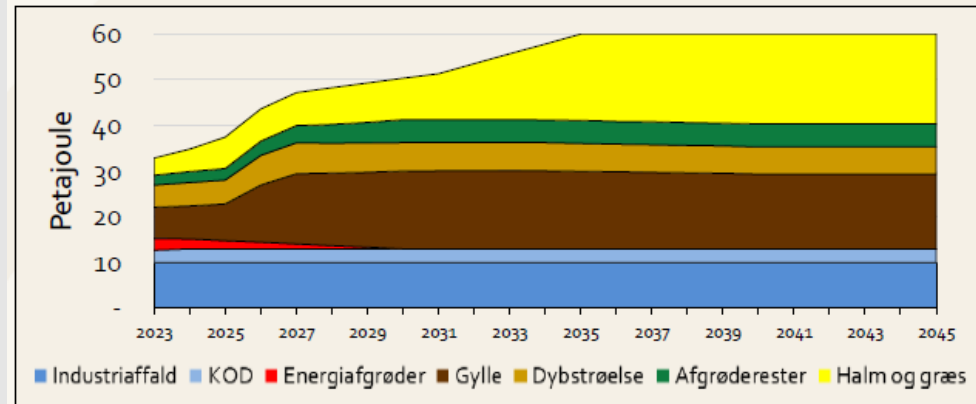


Biomethane Production in Denmark

Udvikling i biogasproduktion til gasnettet siden 2013



Biogasproduktion fordelt på bioressourcer i petajoule – Frozen Policy

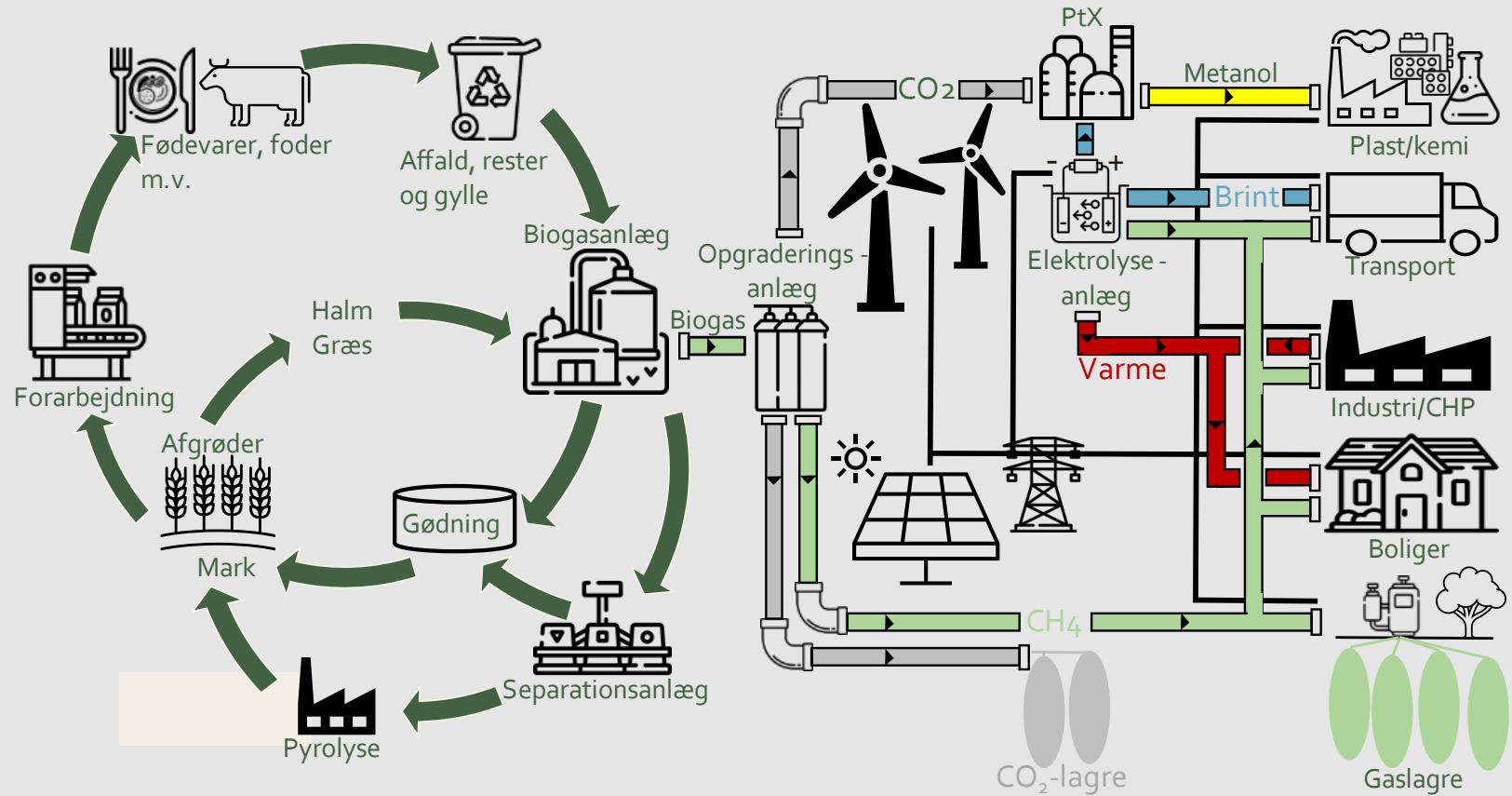


The Danish Model

The Danish model envisages a central role for biomethane in the energy system.

With a major focus on upgrading, the biogas industry becomes the link between agriculture and waste management and a sustainable energy system.

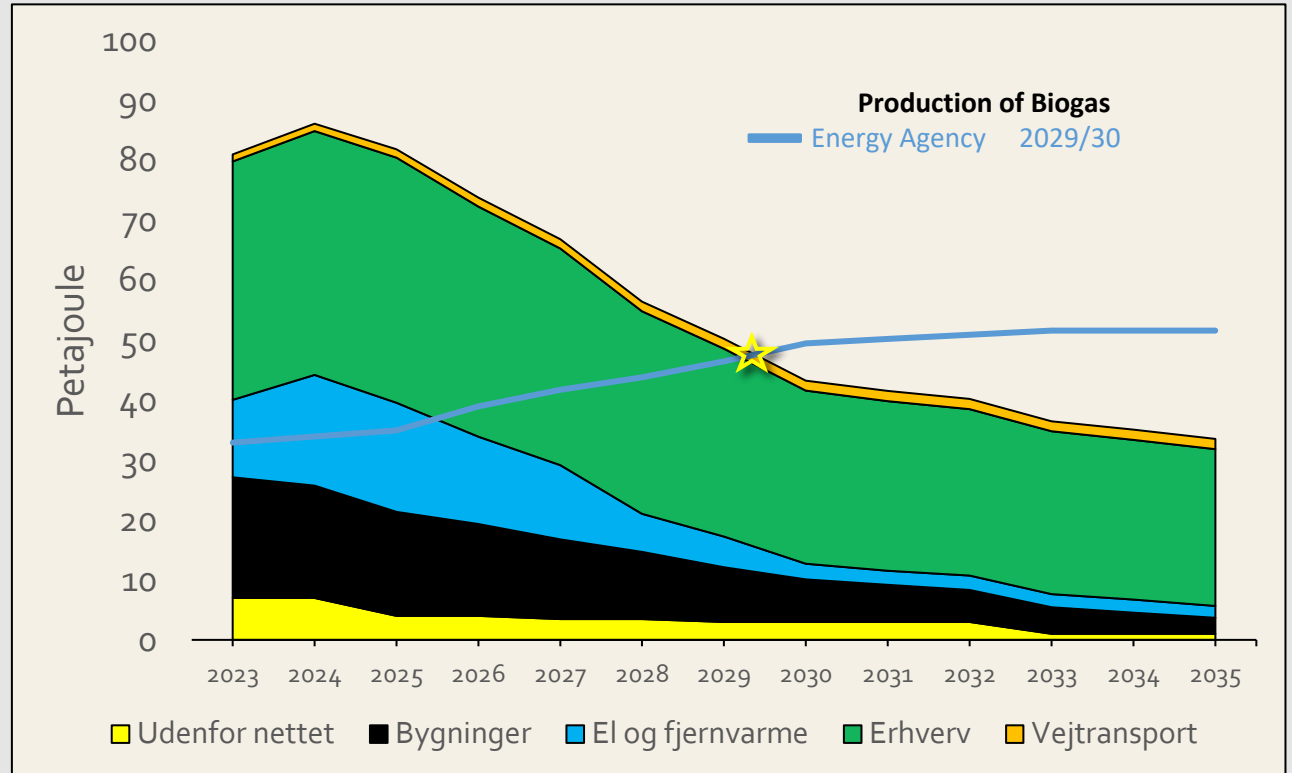
In the future, biomethane and the capture of biogenic CO₂ will also play a key role in PtX projects.



Source: Biogas Denmark

Targets 2030

- Denmark has set itself the target of having 100% biomethane in the gas grid by 2030
 - This will be achieved by decoupling individual gas consumers (by 2035) and expanding biomethane production capacities
 - This also includes energy efficiency measures to reduce gas consumption in industrial companies



Source: Biogas Denmark

In 2023, 38% of total gas consumption was covered by biomethane

Lessons learned From Denmark

- A high degree of upgrading opens up many perspectives for sector integration and multi purpose application
- A cost efficient production is possible without a high share of energy crops
- The local area, municipality and inhabitants are key partners in biogas projects. Through open dialogue, local value can be created together
- Environmental permits are very much standardized, so as to be efficient in the approval process, which takes approx. 8-12 months
- Flexibility in the projects to allow for adaption in relation to permits