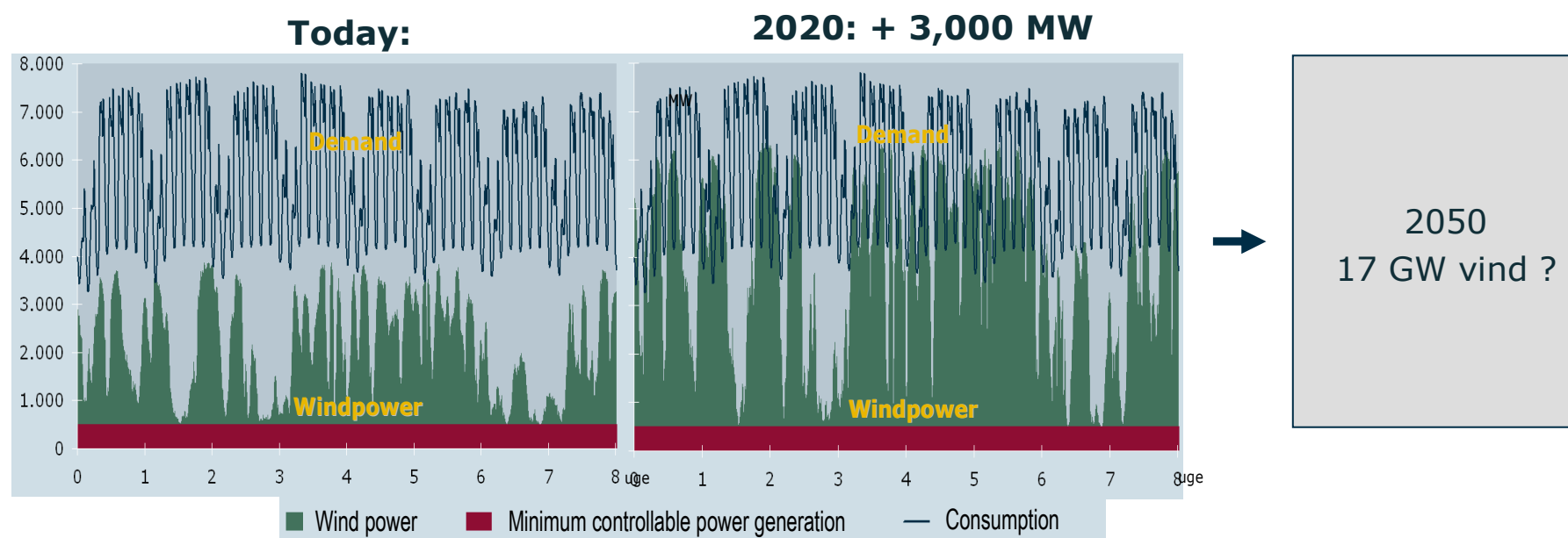
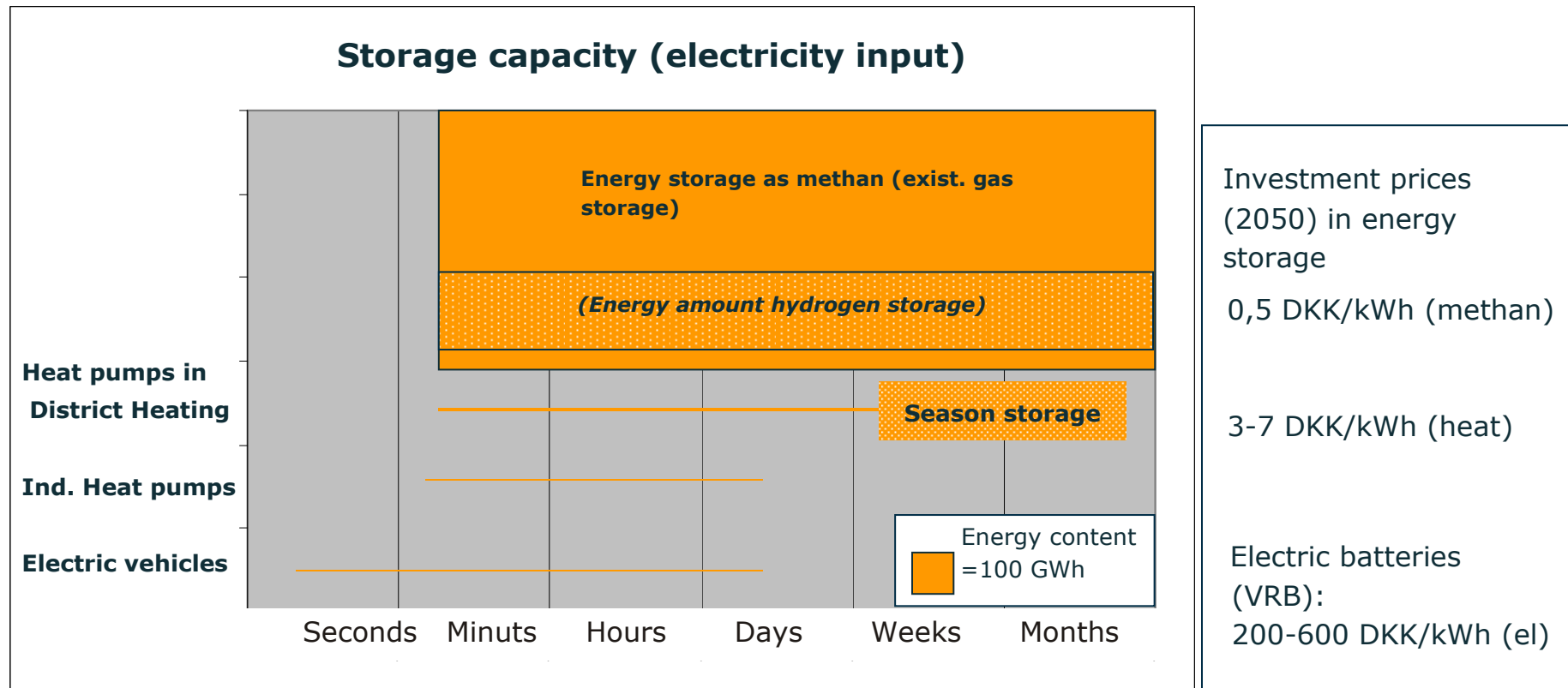


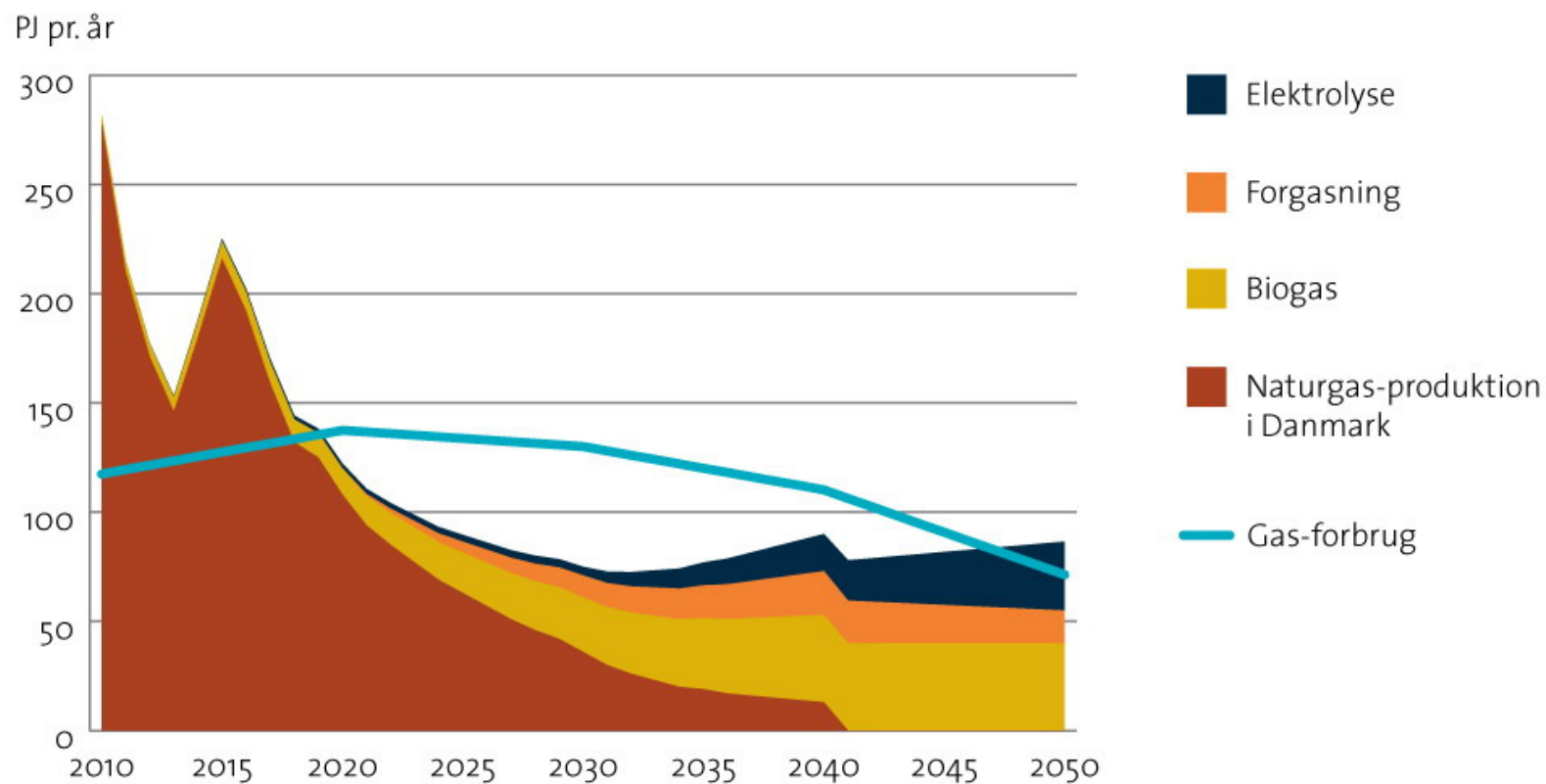
Integration of additional 3,000 MW wind power– a for vision 2025



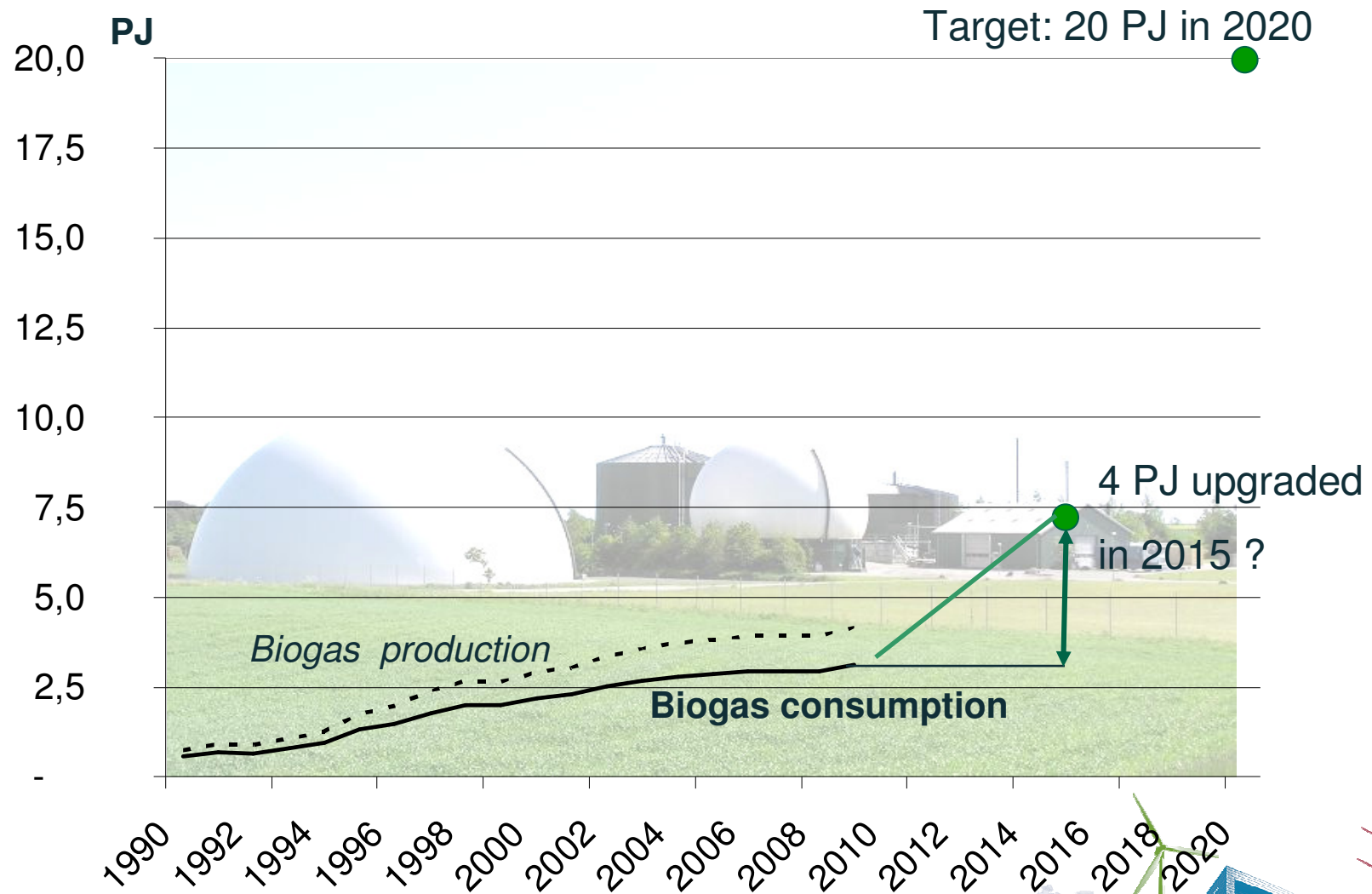
Power balancing and stability in power system



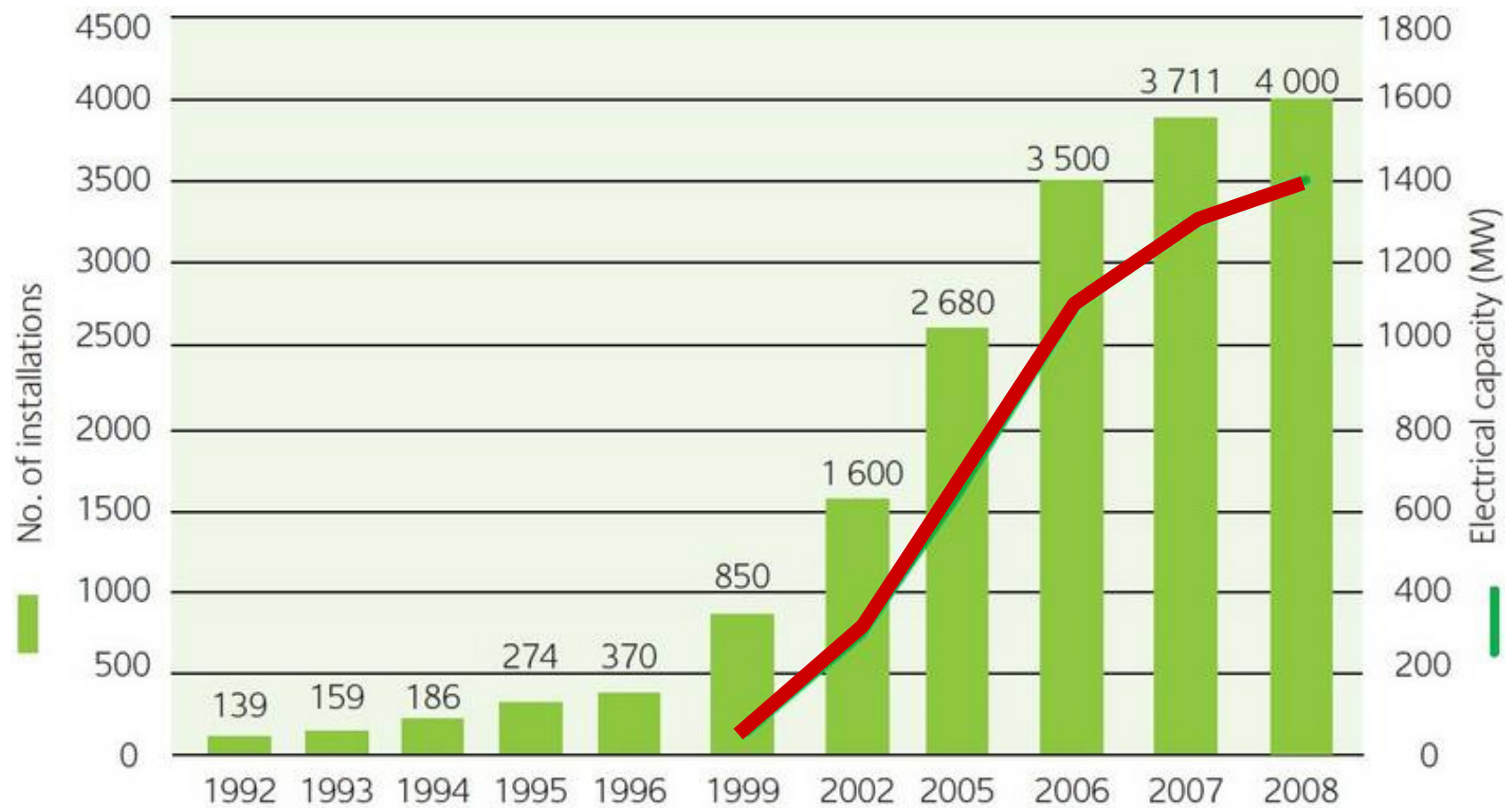
2025 – natural gas, 2050 Green gas



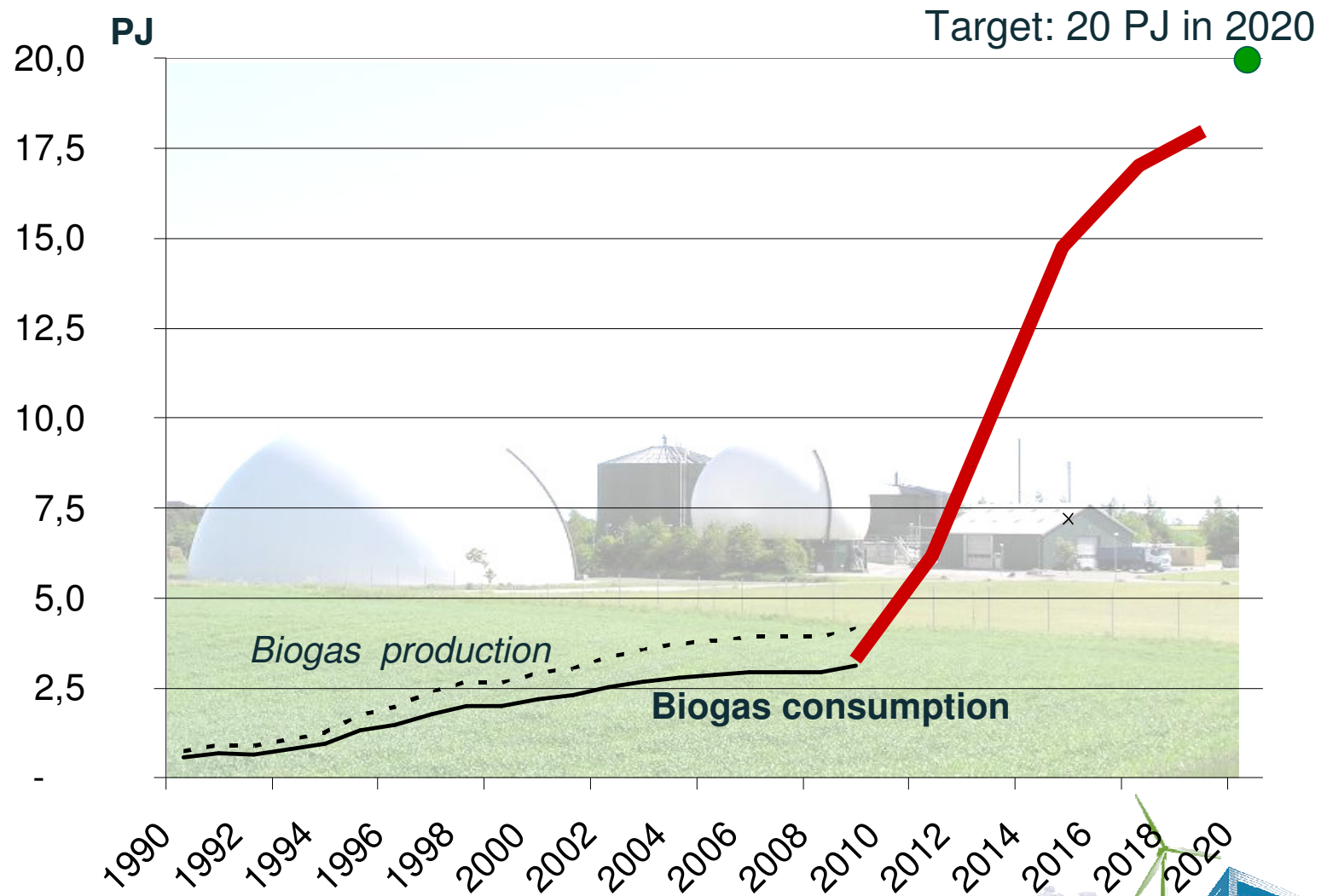
Danish Biogas Production target



The Germans did it



The Germans did it

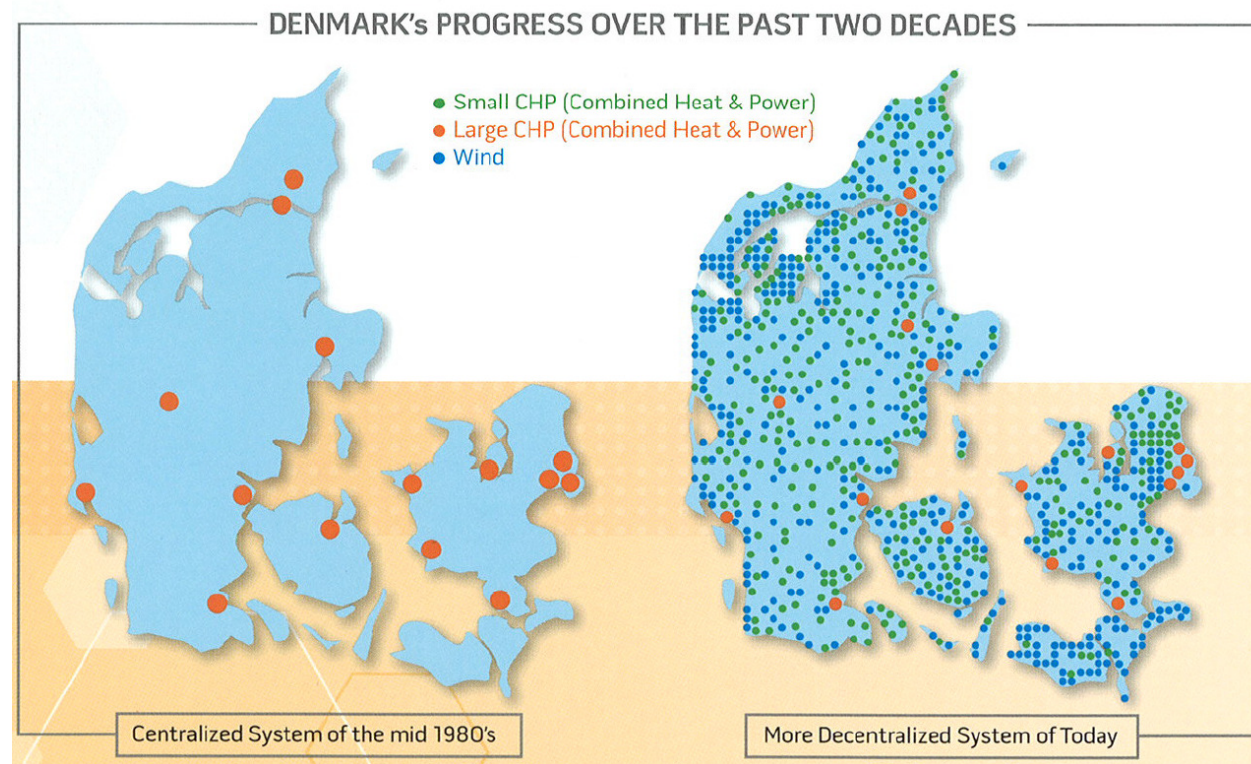


Agenda

- What is Renewable Gas?
- Energinet.dk's vision for RE-gasses
- **Market integration of RE-gasses**
- Virtual upgrade ?



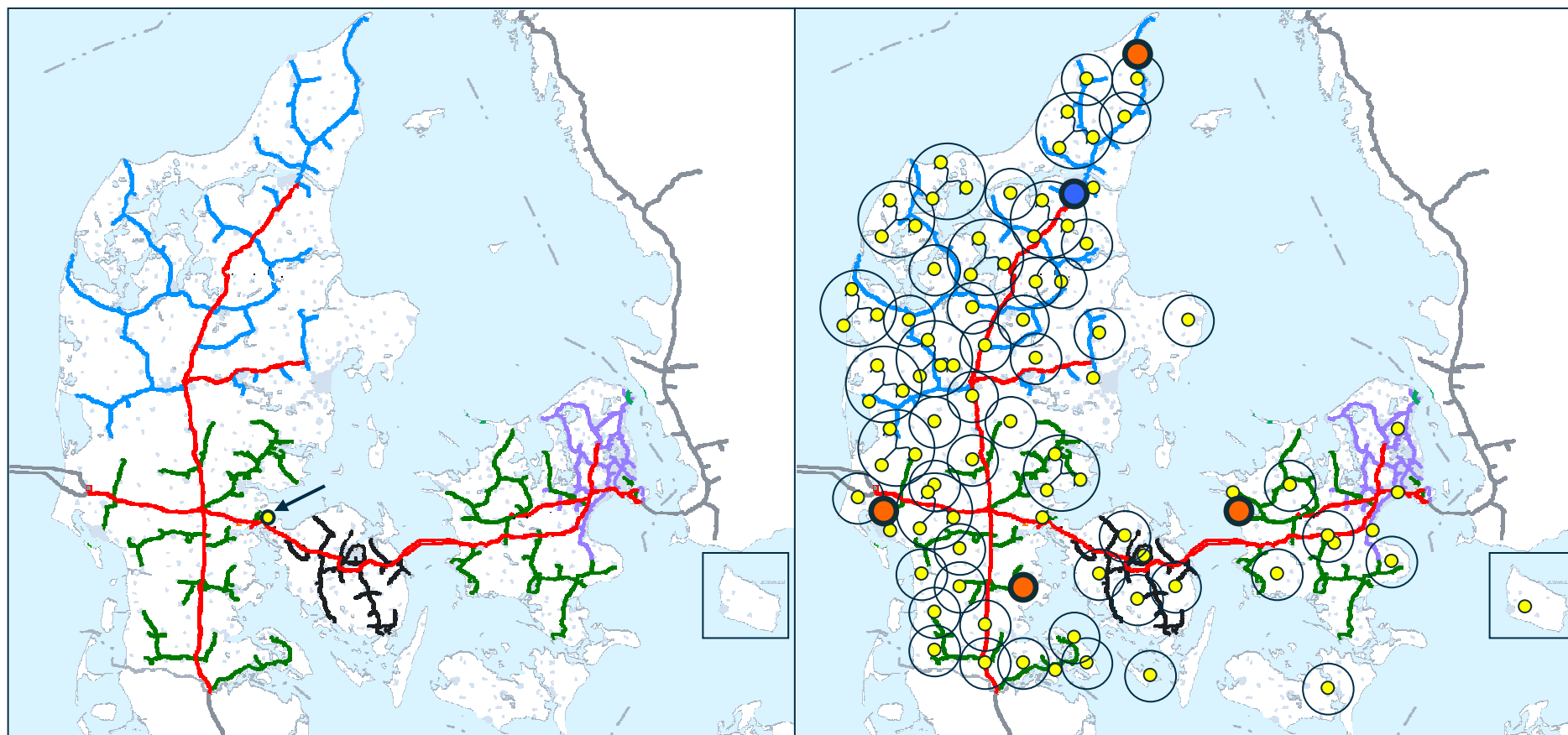
The development of the electrical grid 1980 - now



Development in the gas sector 2011 -

2011

2025 ?



Biogas



Thermal gasification

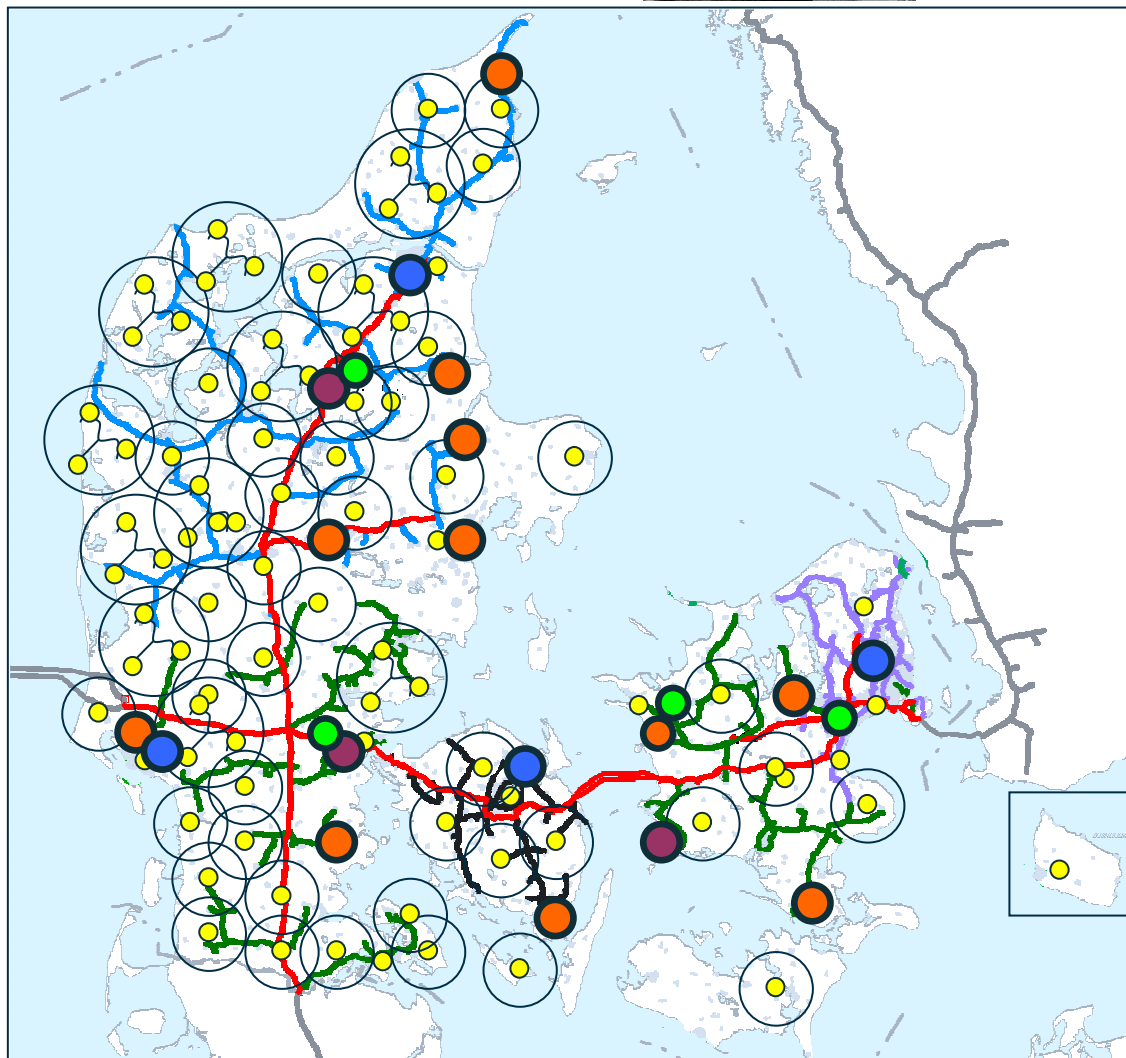


Electrolyse

Tentative illustration



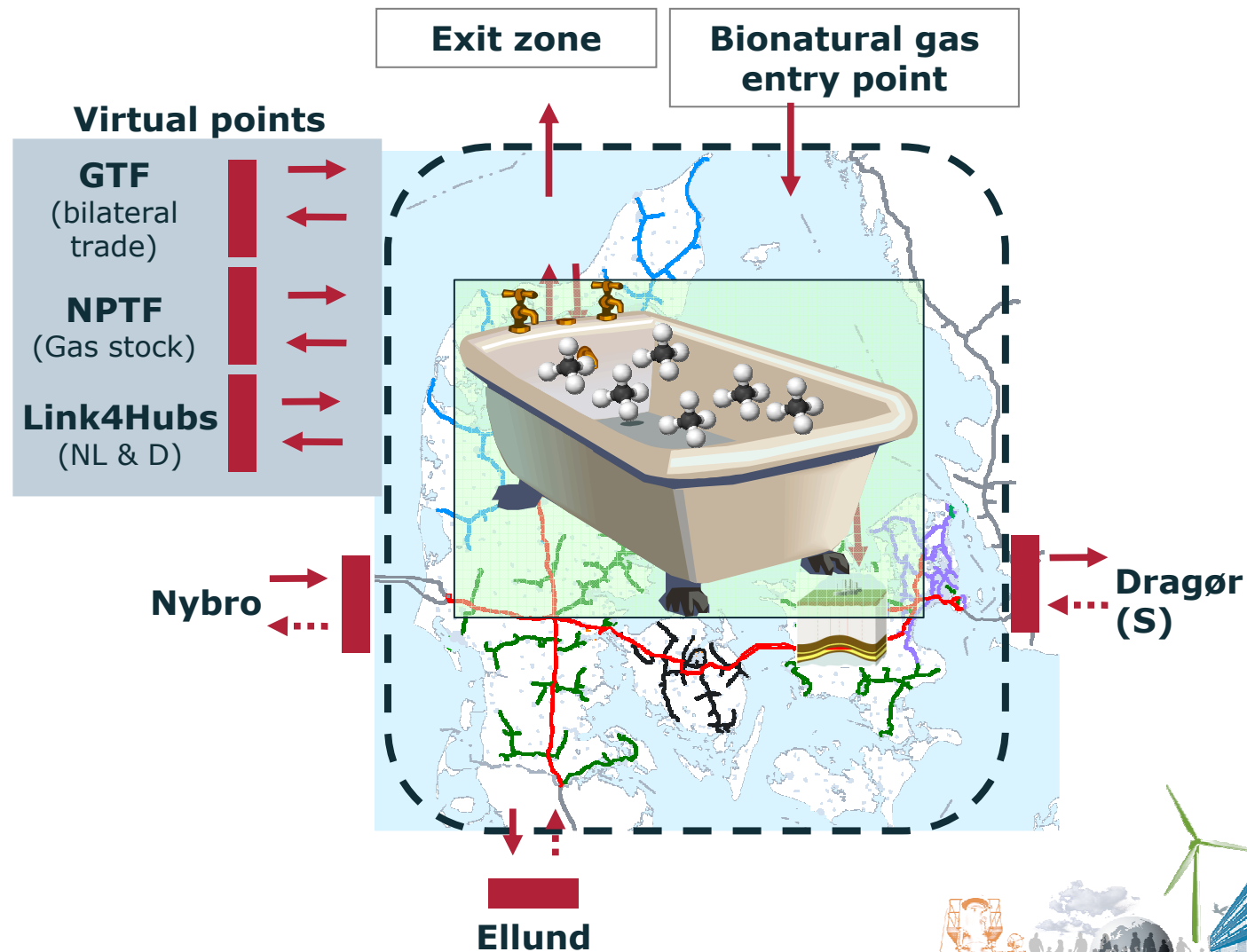
2050 ?



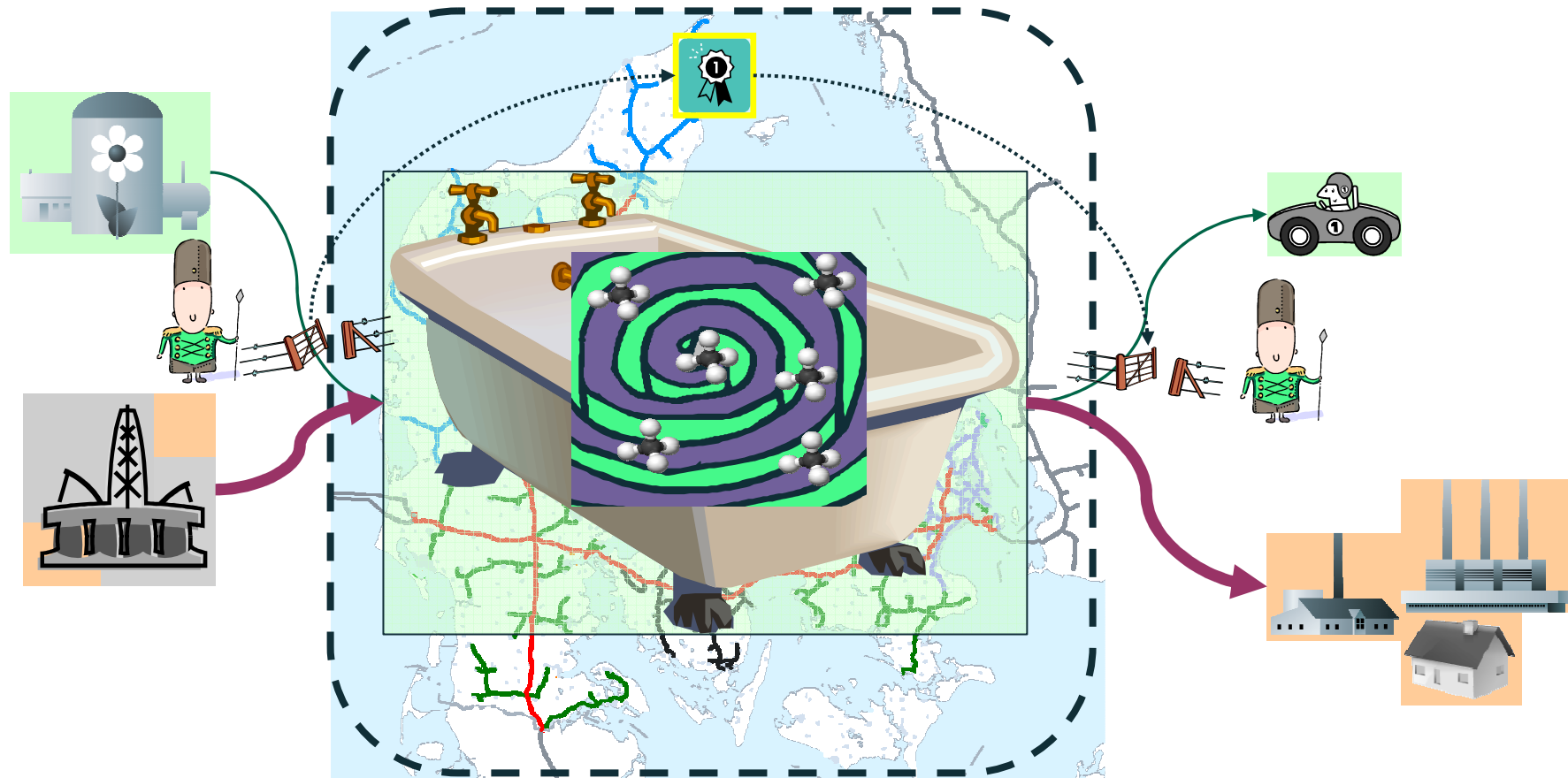
- Decentral production
- Different RE-gasses
- Several subnets
- Full biomass utilization
- CO2 as a resource
- A "internet" or three



The Danish gas market

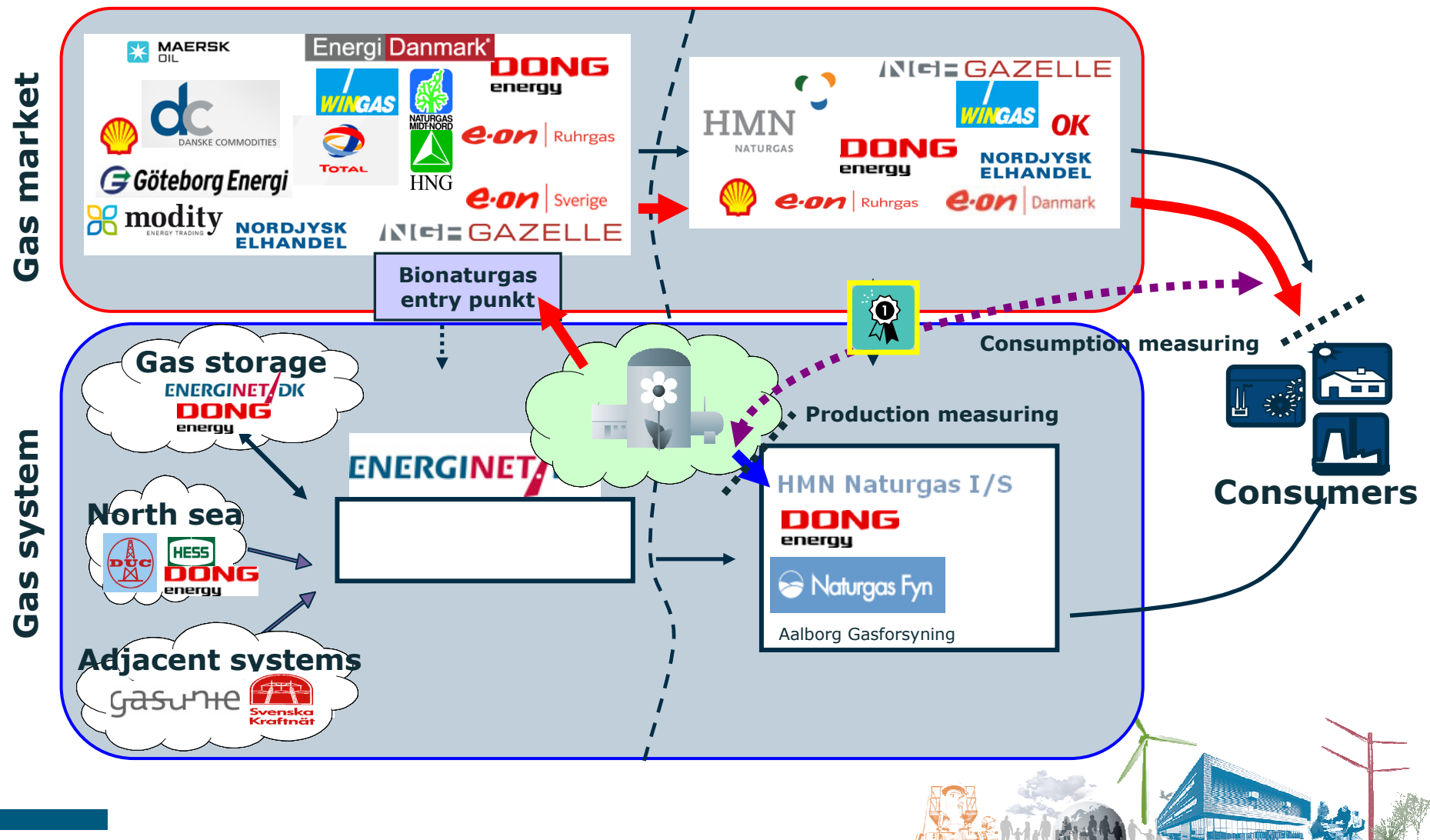


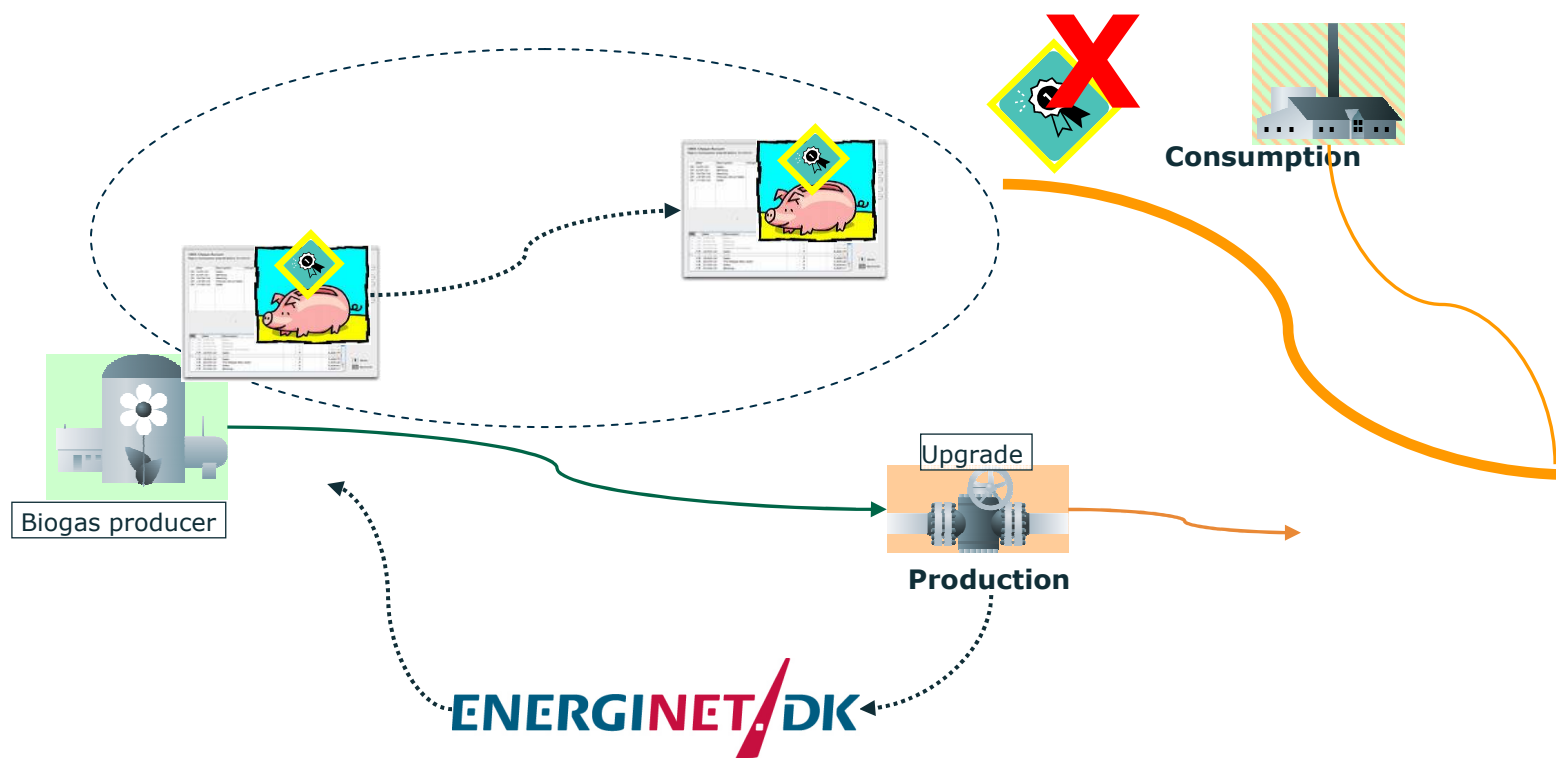
Potential barriers for biogas certificates



- Communication. Have to explain that gas trade is virtual
- Virtual trade in the ETS Directive -> redemption of CO2 routes
- Virtual trade in the RE Directive -> Biogas in transport and 20/20/20 target compliance

Biogas in the Danish Gas market model





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