

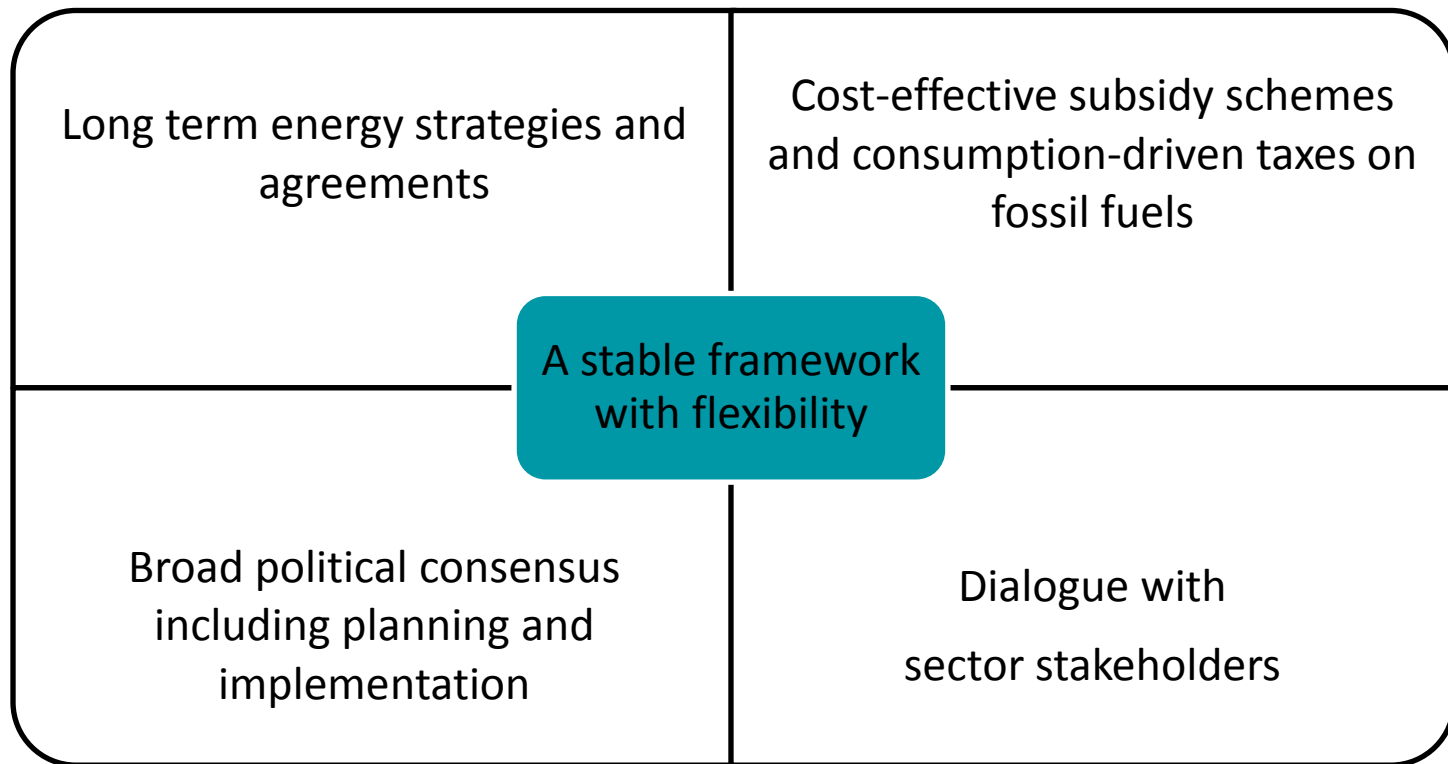
# Danish Energy Policy

The legal framework for Renewable Energy in Denmark especially for Onshore Wind Energy

# Out line

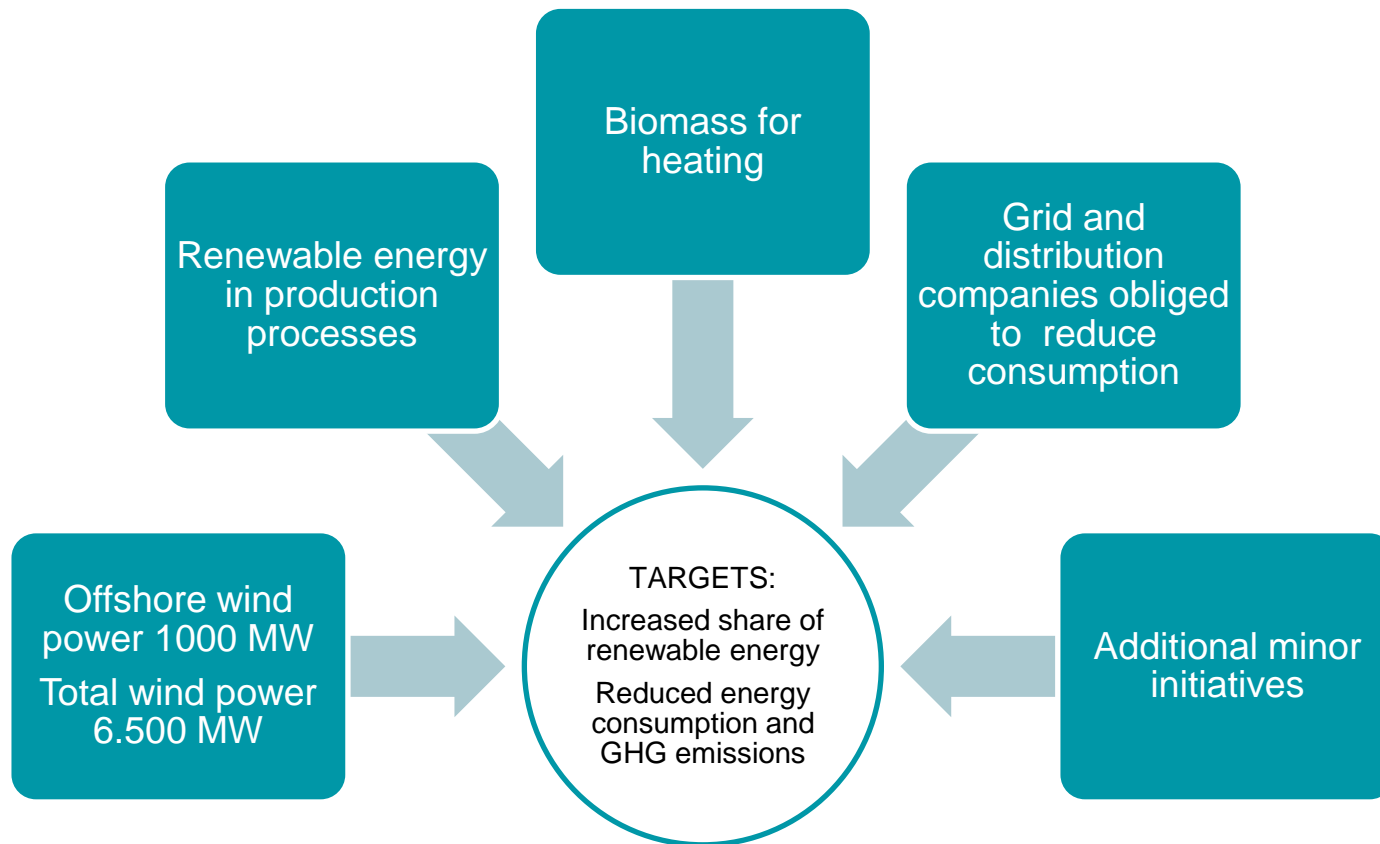
- Key elements of Danish Energy Policy over time
- Legislative framework
- Physical planning of wind power
- Policy implementation – integrating RE in the power system

# Key Elements of Danish Energy Policy over time



# The current Energy Agreement

## - 2020 targets and means



# Legislative framework

Danish Promotion of Renewable Energy Act from 2008 - new schemes

- The loss-of value scheme
- The option-to-purchase scheme
- The green scheme
- The guarantee scheme

Local planning

# The loss-of-value scheme

When erecting new wind turbines with a height of 25 meters or more

Erector must provide information material to the neighbours

Neighbours must give notification on potential loss of value

Voluntary agreement or involvement of the valuation authorities

# Option-to-purchase scheme

Wind turbines with a total height of at least 25 metres

Offer for sale at least 20 % of the wind turbine project

Who can purchase

Sales material

Information meeting

# The green scheme

Promote local council's commitment and local acceptance of new wind project

DKK 0.004 per kWh for the 22,000 full-load hours from wind turbine project connected to the grid

Amount of money depends on how many wind turbines and of what size are connected to the grid



# The guarantee scheme

Provided local wind turbine owners' association and other initiative groups opportunity to initiate preliminary investigations, etc., for wind turbine projects

Guarantee to take out a loan of maximum DKK 500,000.

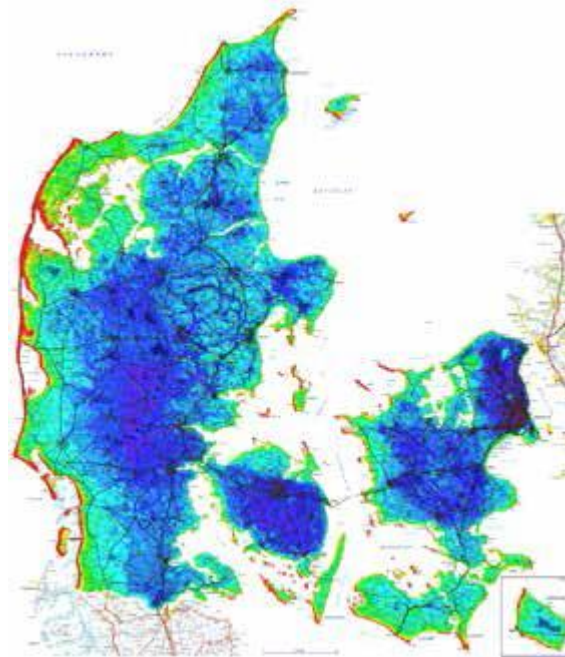
# Physical Planning of Wind Power

General and local planning are important for reaching the targets set by the political agreements

# Key points

- Map wind resources
- Consider designating areas to wind turbines
- Cluster wind turbines in the landscape
- Define clear noise limits
- Grid connection and planning
- Public acceptance
- One-stop-shop

# Onshore Wind Atlas for Denmark



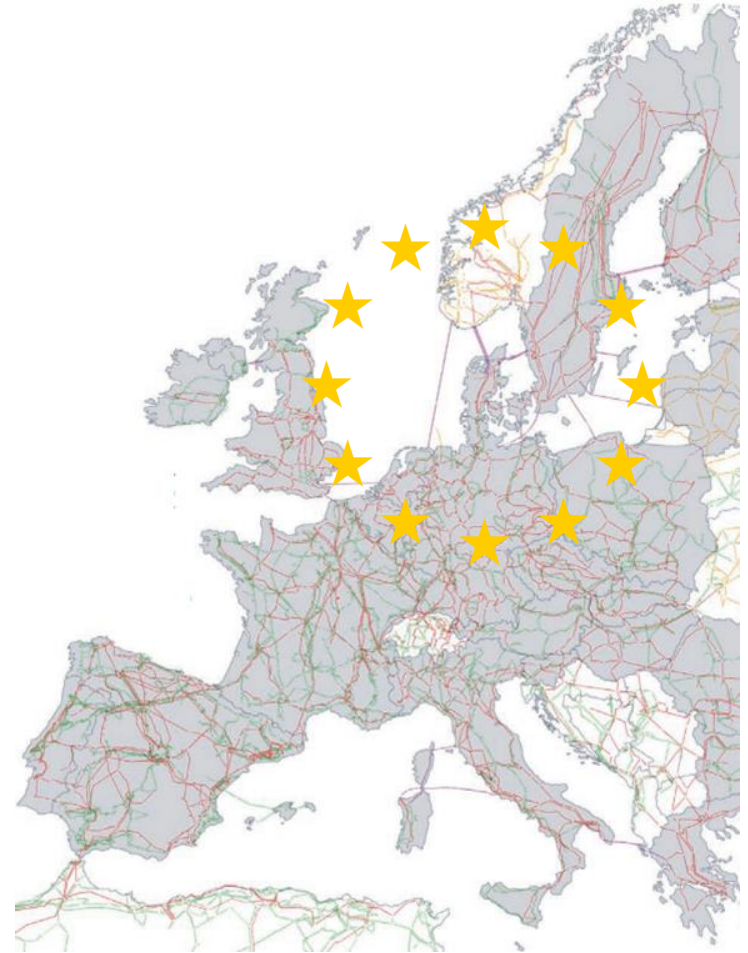
- Vindmøller
- Havvindmøller
- Interconnector (AC)
- Interconnector (DC)
- Transmission (400 kV)

Kun kraftvarmeværker med kapacitet over 0,5 MW er vist.

# Policy implementation – integrating RE in the power system

# The Danish energy system is in a transitional phase

- Small system sandwiched between two, large regional electricity systems
- Internationalisation of the energy system – increased focus on regional cooperation and market integration







# Parallel developments

- towards renewable energy and open markets

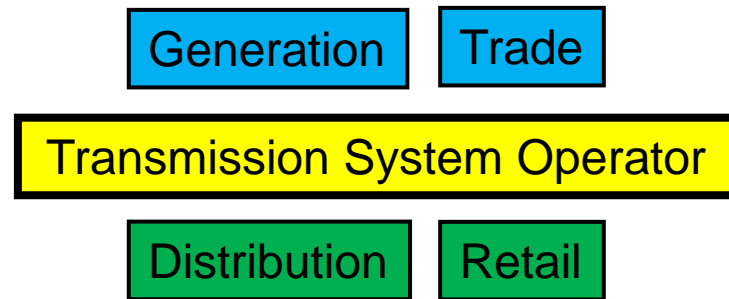
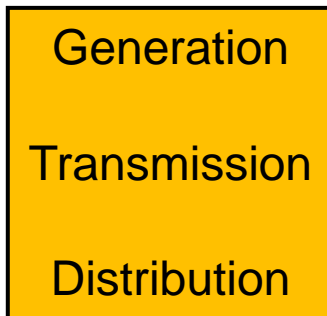


**From primary coal fired to local CHP and wind power**

2000

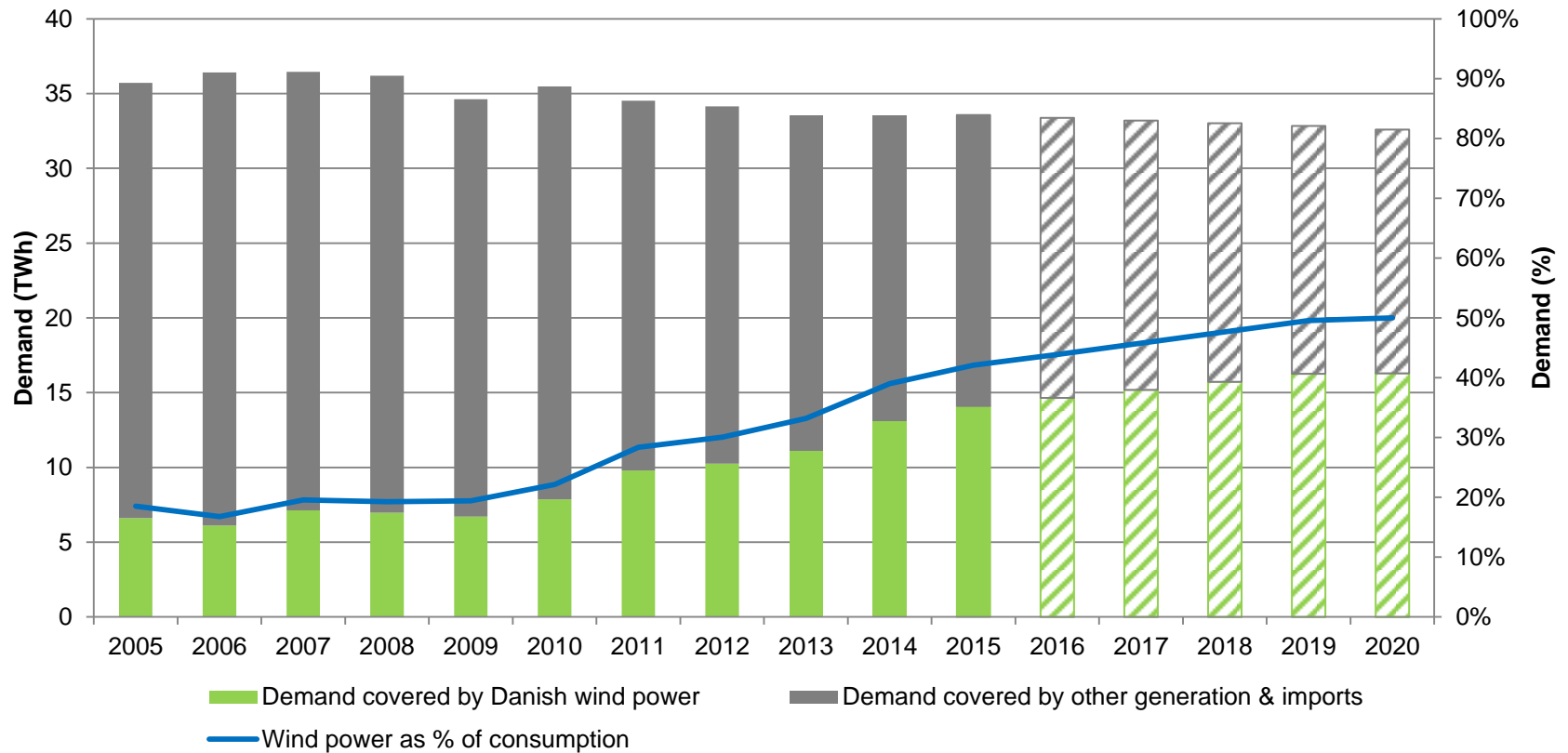


**From vertically integrated monopoly to competitive electricity market**





# Danish electricity system will soon be dominated by variable RE



# Thank you

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