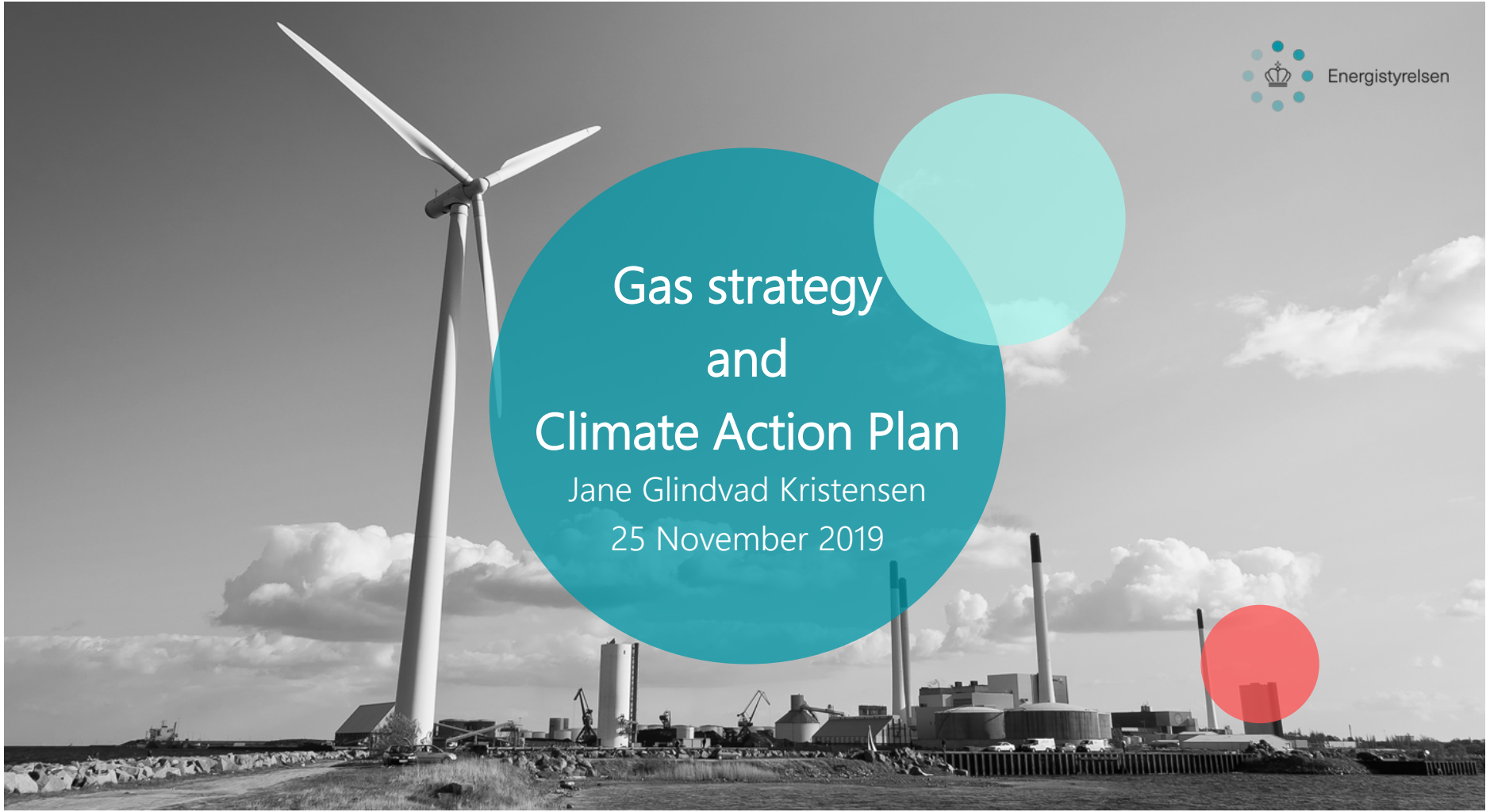
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Gas strategy
and
Climate Action Plan
Jane Glindvad Kristensen
25 November 2019

Recap – gas strategy

The Energy Agreement:

“A gas strategy focusing on how the Danish gas infrastructure can be used commercially in the green transformation of the energy system.”

Will look at the framework conditions for:

- Competitive increase of biogas and other green gases
- Investments and activities in the North Sea
- Integration of energy systems

Organisation of the gas strategy

Our thinking untill late summer

Three parts

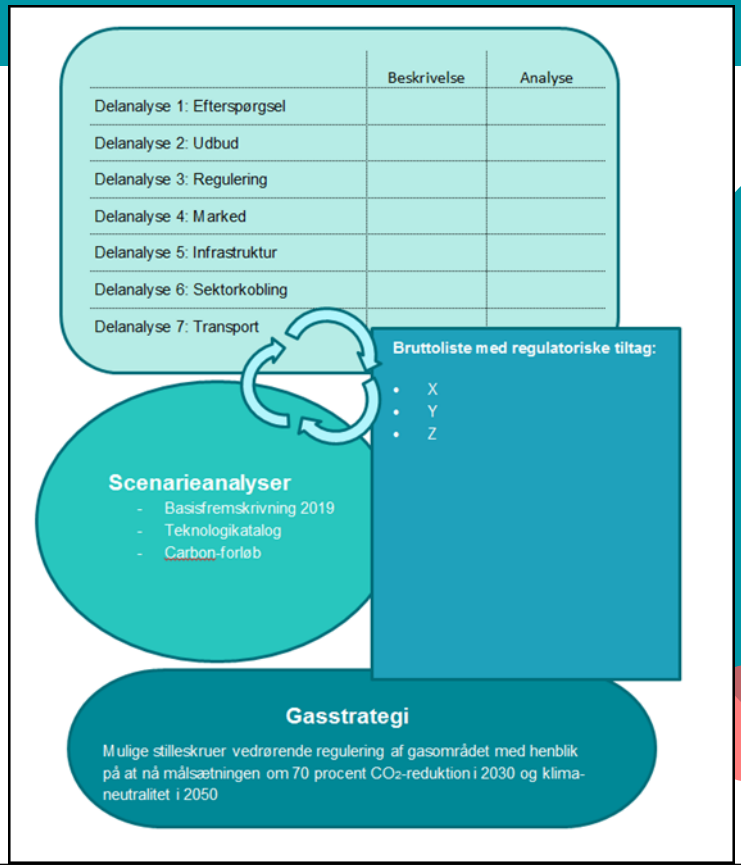
1. Analysis
2. Regulatory tools
3. Scenaria

Involvement

- Basecamp
- Regular dialogue

In interaction with

- The Climate Act and the Climate Action Plan
- The European framework – EU decarbonisation package



The Government's target

Reduction of greenhouse gasses by 70 % in 2030

- *"The Government will propose a binding Climate Act. It will be presented in the first year in power. The target is reducing greenhouse gas emissions in 2030 by 70 percent compared to 1990"*

- *" The Climate Act shall be followed by a Climate Action Plan participating to assure that the national reduction targets will be reached."*

Climate Action Plan and the gas strategy

Background

- What / where / how
- Consumption today
- Green gas production today

Heating

- What role does gas play in district heating and individual heating?
- How much can gas consumption for individual heating be reduced before the cost for gasinfrastructure will get to high?

Industrial consumption

- Critical gas consumption – where and how much
- Alternatives to gas?
- Gas as an alternative to coal and oil?

Transport

- Green gas in heavy transport?
- In what form – and will the gas infrastructure be used?

Green gas production

- Development of biogas production
- Perspectives for PtX

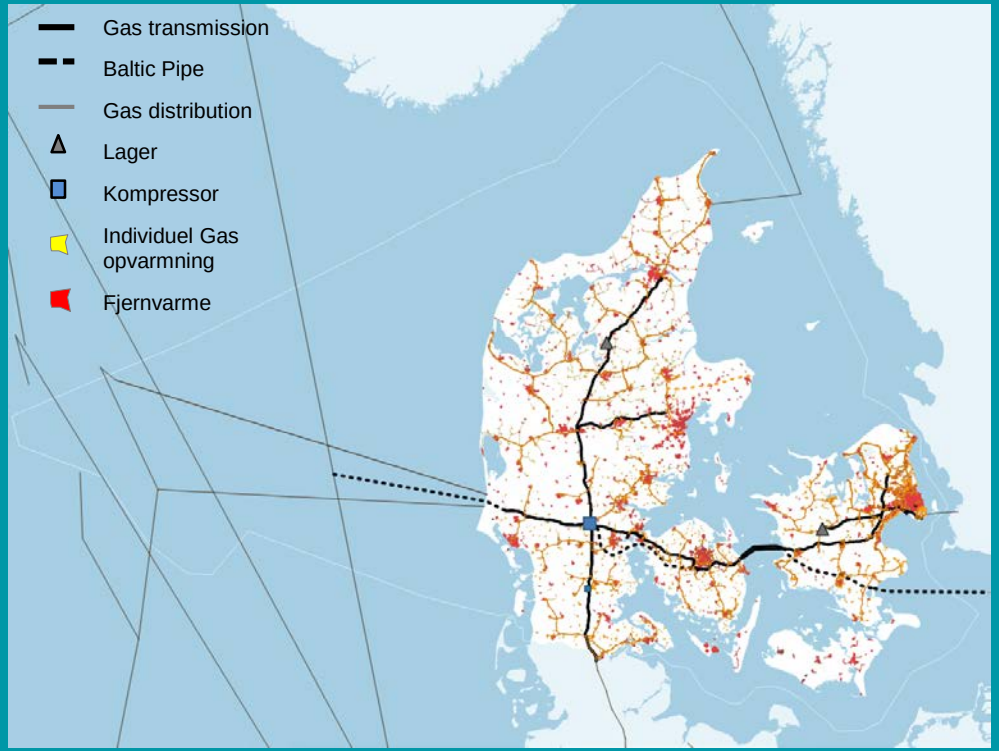
Infrastructure

Bindings in the system

Baltic Pipe
⇒ Transmission and up stream

Biogas production
⇒ Distribution

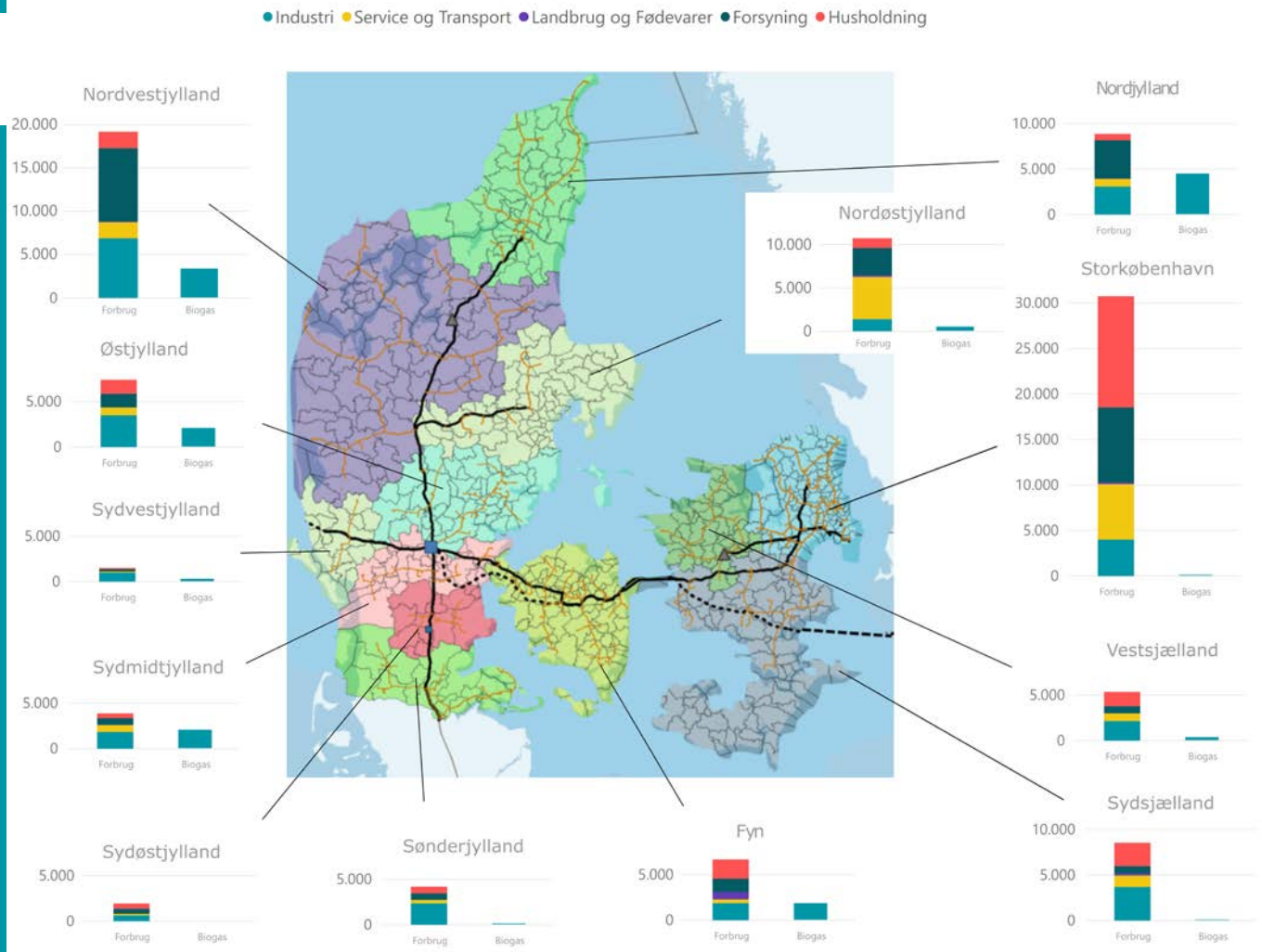
Security of Supply
⇒ Gas storage



Gas consumption

General observations

- *The highest share of gas for heating in households is around Copenhagen, where biogas production is small.*
- *In Nothern Jutland biogasproduction is higher than industrial consumption.*
- *On Fuen and in parts of Southern Jutland biogas production equals industrial consumption.*



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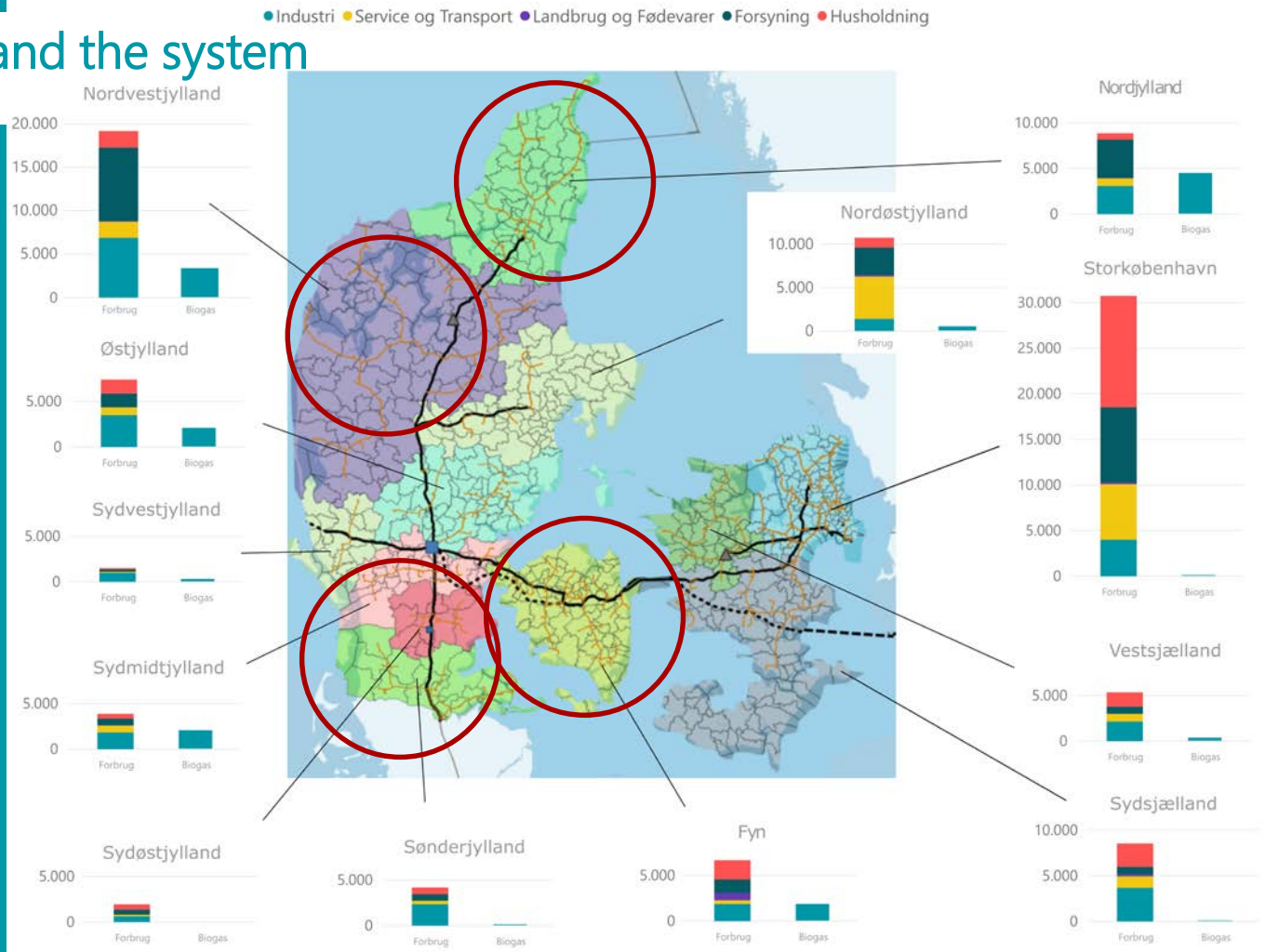
Gas consumption and the system

Possible future uses

- *Gas infrastructur prepared for PtX*
  - *Methanol*
  - *Methanisation*
- *Possible use of Ll Torup gas storage for hydrogen and CO2-storage*
- *Possibilities for export of hydrogen?*
  - *Via Ellund-duplication*
  - *Via the North Sea*
- *Possibilities for returning CO2*
  - *Via up stream gas pipelines from the North Sea*



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What / How / When?

How will the future look like?

- *Multi supply can play an important role in the future energy system.*
- *Sector coupling would help to handle peak situations and storage of other energy forms.*

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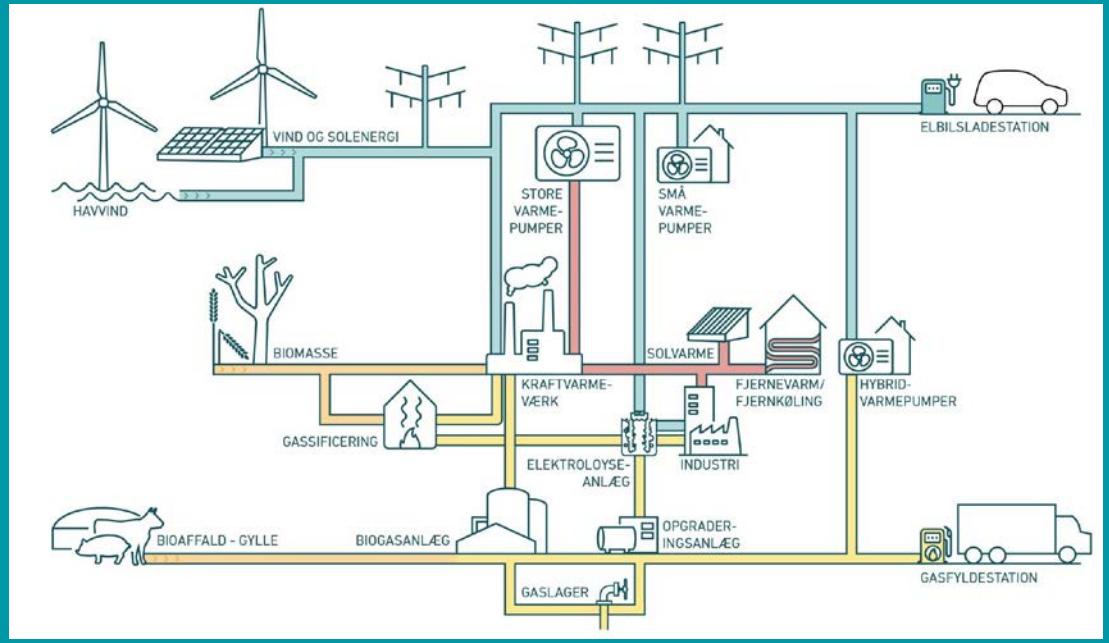


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Thank you for listening
Questions?