

Sustainability approach of AkzoNobel

Utrecht, November 2016
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Agenda

1. Introduction to AkzoNobel
2. Sustainability
3. Energy consumption
4. Approach to lower our carbon footprint
5. Conclusions

Messages

AkzoNobel is taking steps to make its carbon footprint 25-30% lower by 2020 by energy efficiency measures and sourcing of renewable energy

We are taking initiatives, follow a product cycle approach and we seek collaboration with other organisations

More drastic reduction of our carbon footprint is needed and this requires adaptive regulatory frameworks especially to decarbonize feedstocks

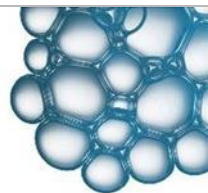
Paints, coatings and specialty chemicals

Leading global paints and coatings company
and a major producer of specialty chemicals

Consistently ranked as one of the leaders
in the area of sustainability

Committed to our customers and society through our
brands and hands-on community projects

Passionate about innovation,
with 4,000 scientists at over 160 laboratories



Our sustainability strategy



**Sustainable
business**



**Resource
efficiency**



**Capable,
engaged people**

Sustainable business focus areas



Raw Materials

Sustainable sourcing of raw materials e.g. renewables

For example, using algae-based oil as renewable raw material for hair products



Products in use

Developing products and solutions with a sustainability benefit for our customers

For example, our antifoulings help to cut carbon and costs for ships



End of life

Designing products that allow safe and sustainable disposal at the end of the lifecycle

For example, our world's first fully compostable and recyclable coating of paper cups

Resource efficiency

We're increasing our resource efficiency across the value chain, including our use of renewable materials, to reduce our environmental footprint and to create more value from fewer resources

25-30%

more efficient resource and energy use across the entire value chain by 2020 (measured by cradle to grave carbon footprint reduction)



Although energy is no core business, it is core to our business

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Energy

- Total spend of € 0,7 billion (AkzoNobel 2015)
- Largest cost component in the chemical production

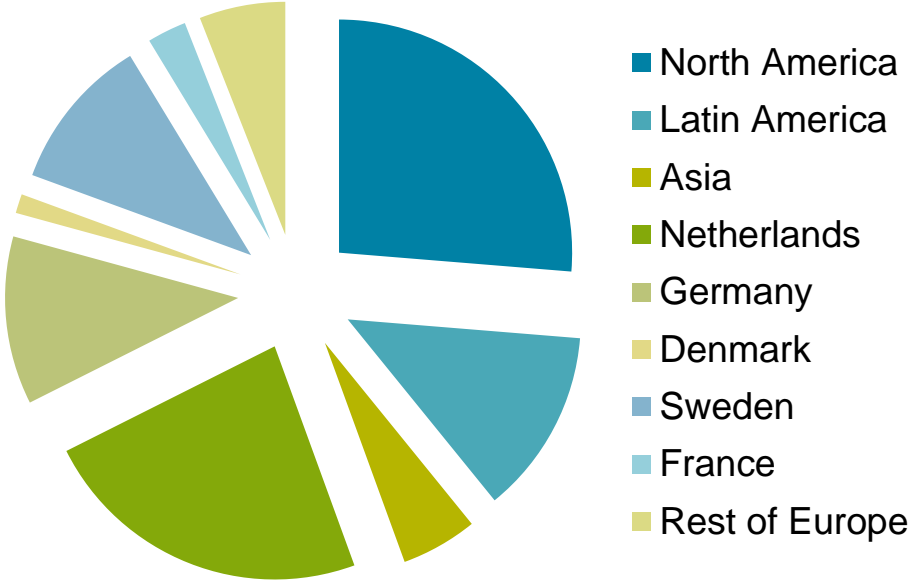
Carbon Footprint

- Diversifying our energy mix for steam
- Development of renewable electricity options i.e. wind
- Energy-efficiency

Sustainability

- Dow Jones Sustainability Index (DSJI)
- Worldwide energy use is ~30% renewable
- Strategic aim 45% worldwide renewable energy use in 2020

Energy consumption AkzoNobel in 2015 by region



Locations in the Netherlands with high energy use

Energy intensive sites NL



#	Site:	Highly Energy intensive Products
1.	Delfzijl	Chlorine Salt
2.	Hengelo	Salt
3.	Rotterdam	Chlorine

Our path to sustainable energy started years **AkzoNobel** ago...

Biomass steam Mariager



- In operation
- Wood chip boiler
- On site operation
- Carbon free steam

Steam from waste



- In operation
- Delfzijl and Hengelo
- New infrastructure
- Carbon free steam

Vindin consortium



- In operation
- Wind Sweden and Finland
- Carbon free power

...and continues today...

Biomass steam Delfzijl



- New steam source
- Under construction
- First delivery Dec. 2016
- Carbon free steam

New office Amsterdam



- Solar panels and 100% renewable energy
- In operation
- Carbon free energy

The wind consortium



Announcement of Wind consortium on the 14th of October 2016

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Consortium members



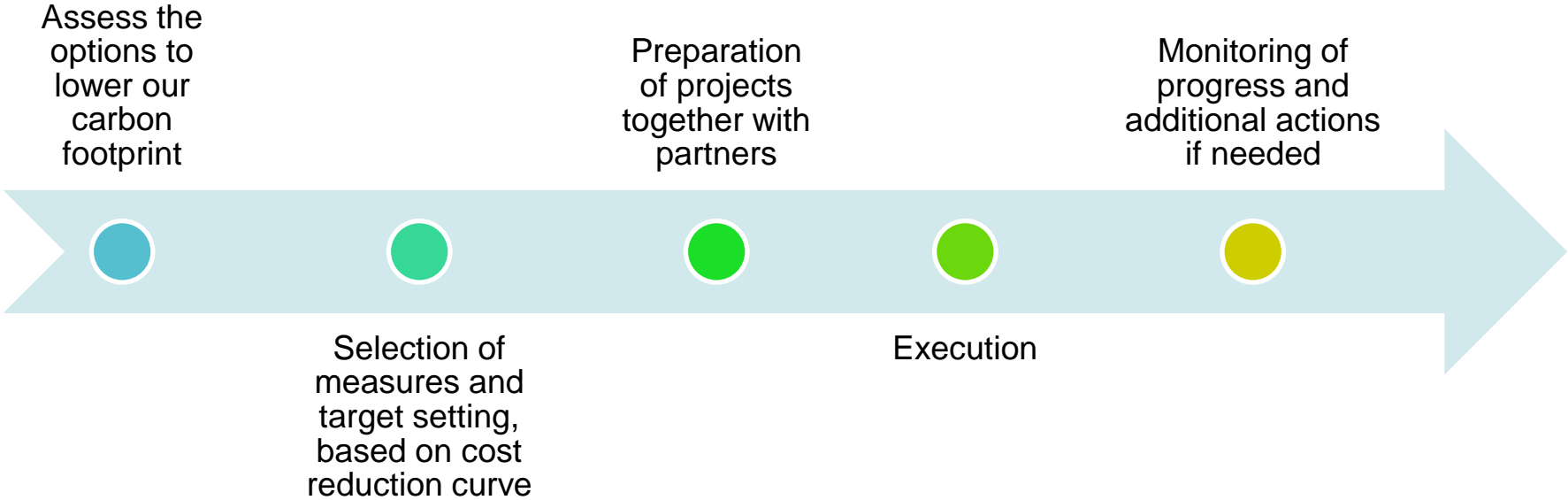
Windpark Krammer

- 35 Windmills x 3MW
- 105MW total capacity

Location: Krammersluizen
in Province of Zeeland (NL)

Shareholders:
Majority owned by two local
corporations (4000
members). Ensuring local
commitment

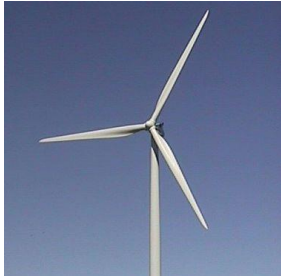
Our approach to reduce our Carbon Footprint



From renewable power to renewable products

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Ren. power



H2 production



H2-tank-infra



Mobility

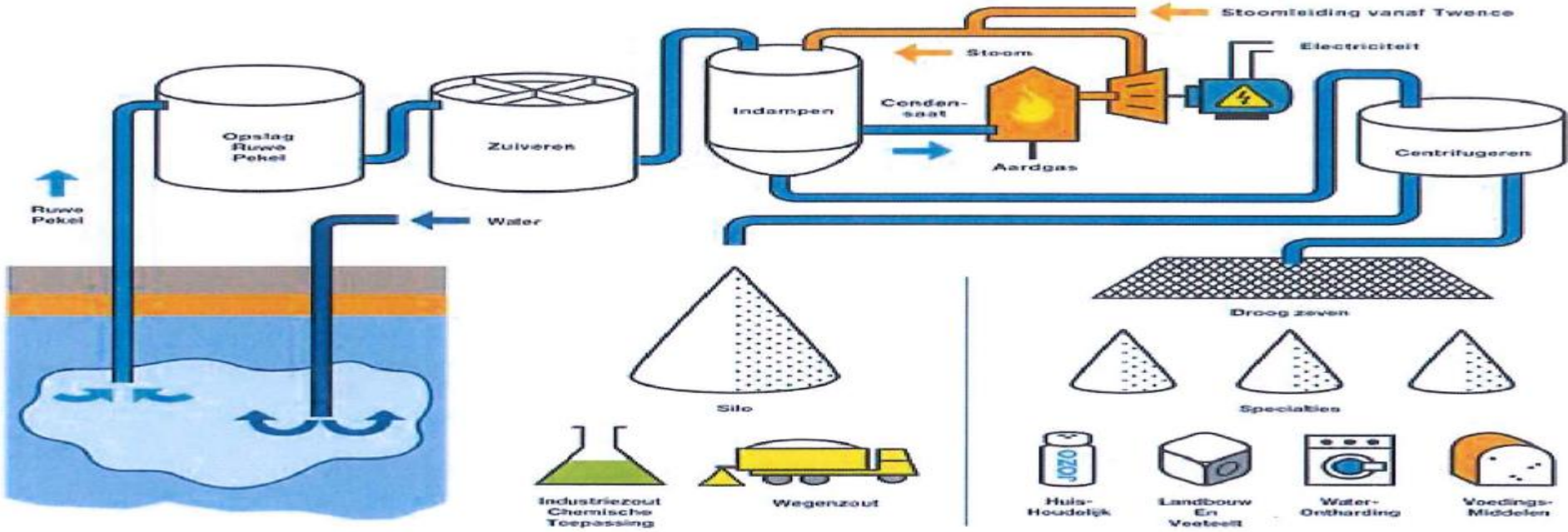


certiq

*Green electricity
certification system*

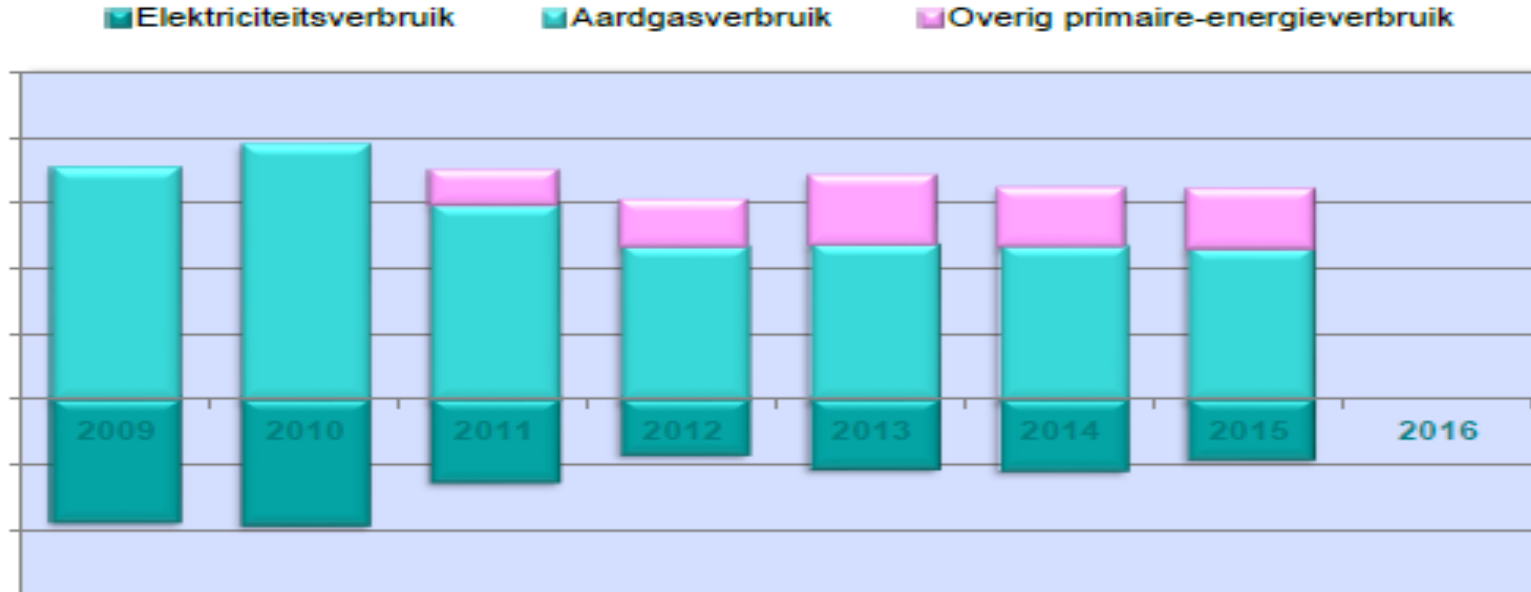
Green Hydrogen certification system

Process of salt production



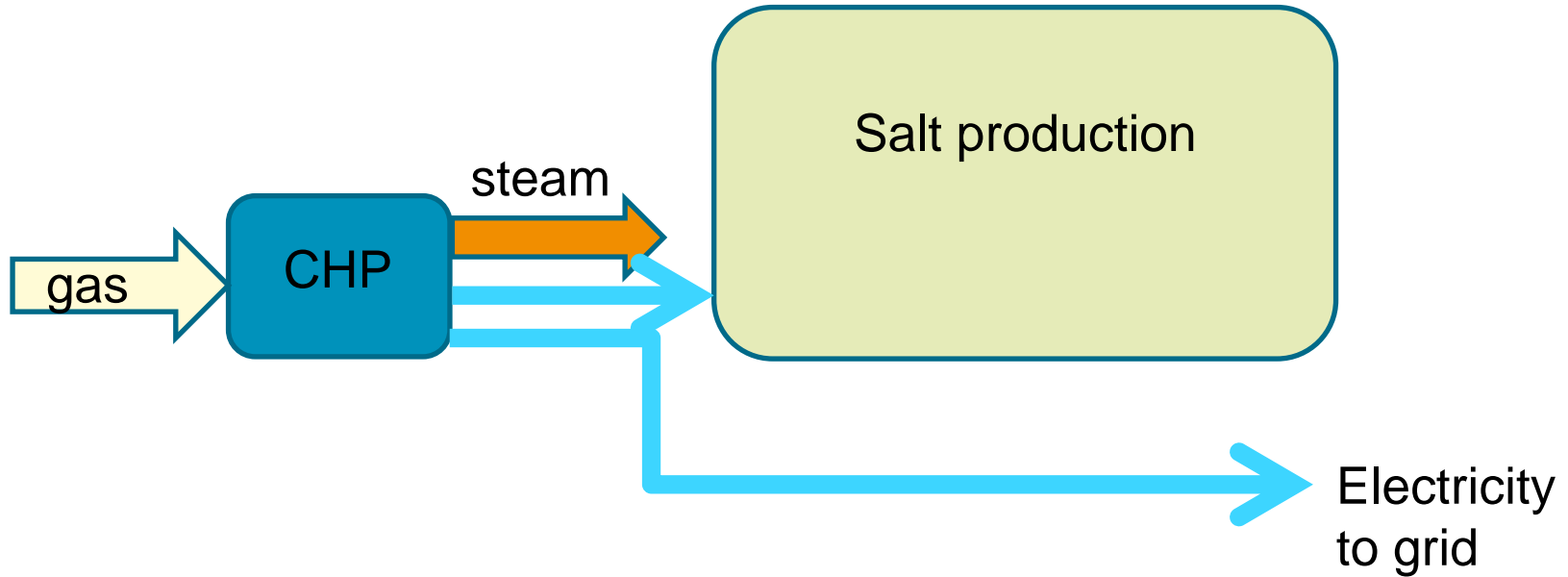
Annual energy use AkzoNobel Hengelo

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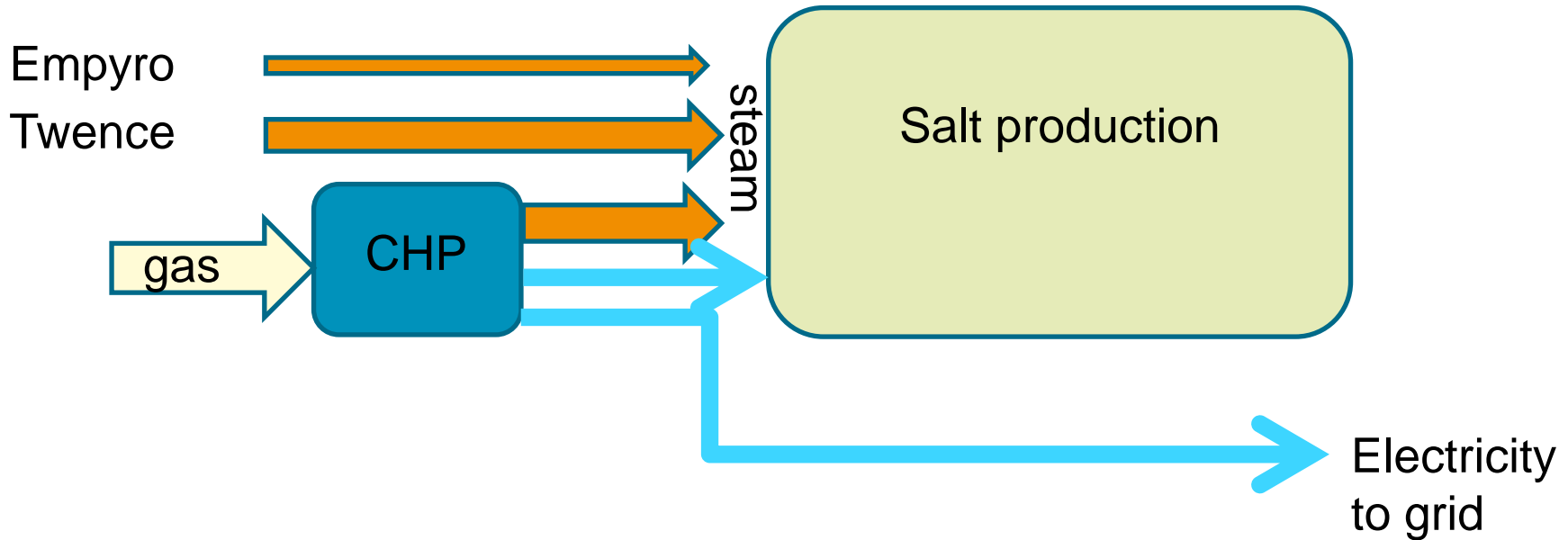
Level of energy integration increases Hengelo situation 2010

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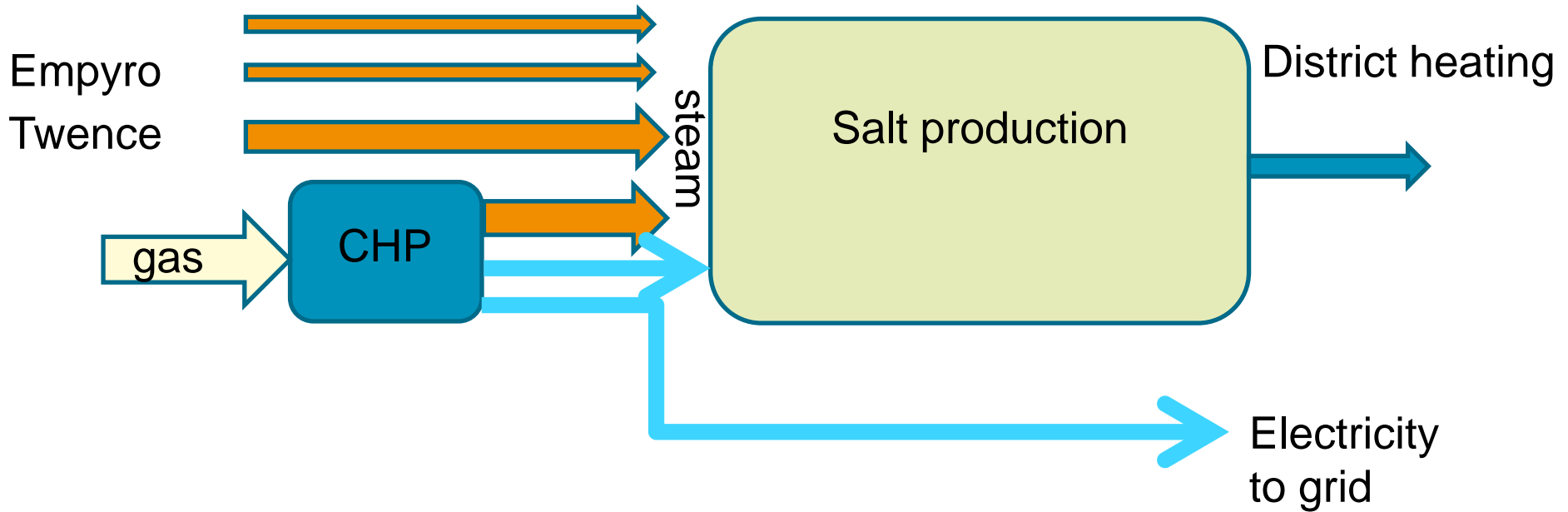
Level of energy integration increases Hengelo situation 2016

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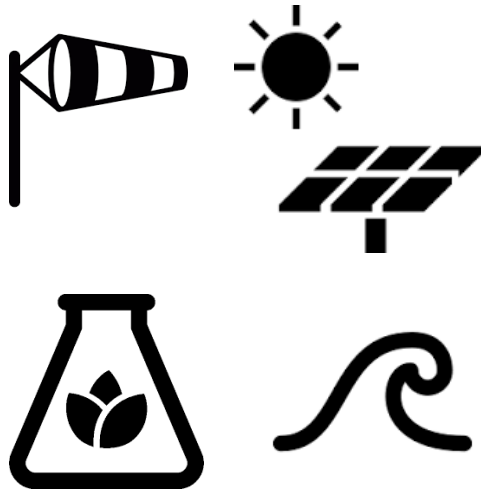
Level of energy integration increases Hengelo situation 2020

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...what about tomorrow. This is our agenda!

Decarbonization of our energy portfolio



Developing smart flexible industry



Decarbonization of our feedstock



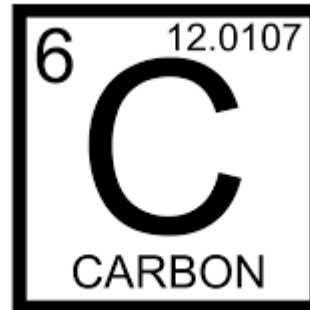
Regulatory framework and incentives

Renewable energy



- **Long term investment certainty**
- **Incentives for renewable feedstocks**

Energy market reform and ETS/carbon pricing



Innovation arrangements



Conclusions

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Questions ?

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