

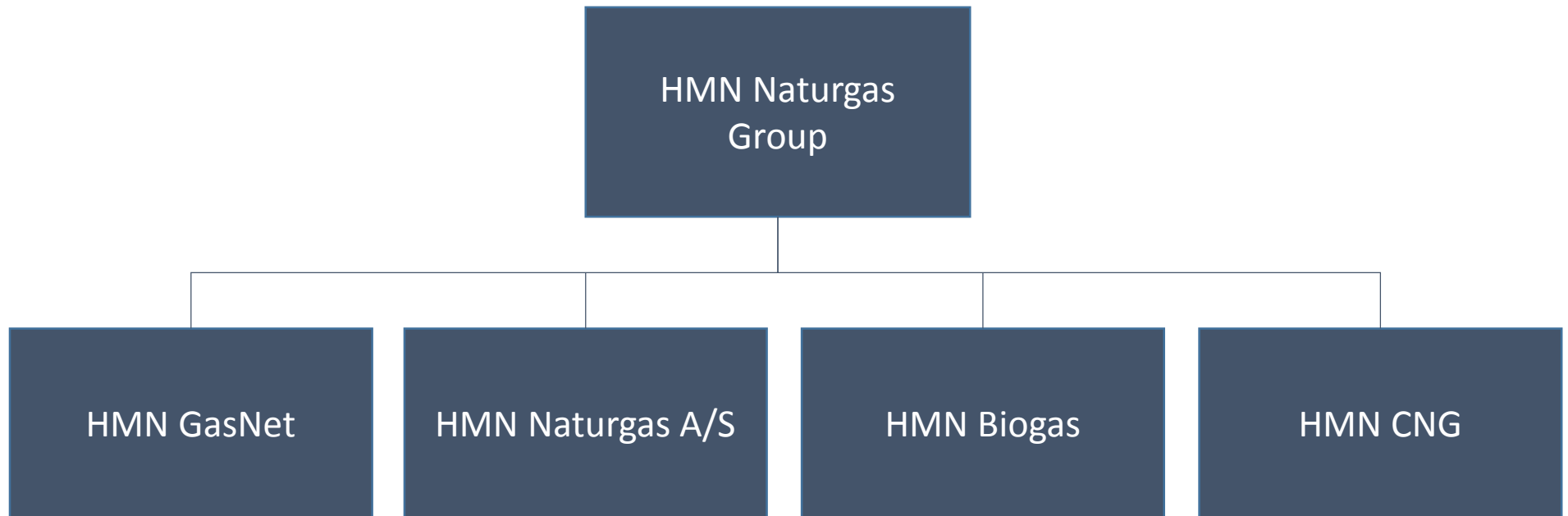


Biogas som forretning

Biocertifikater

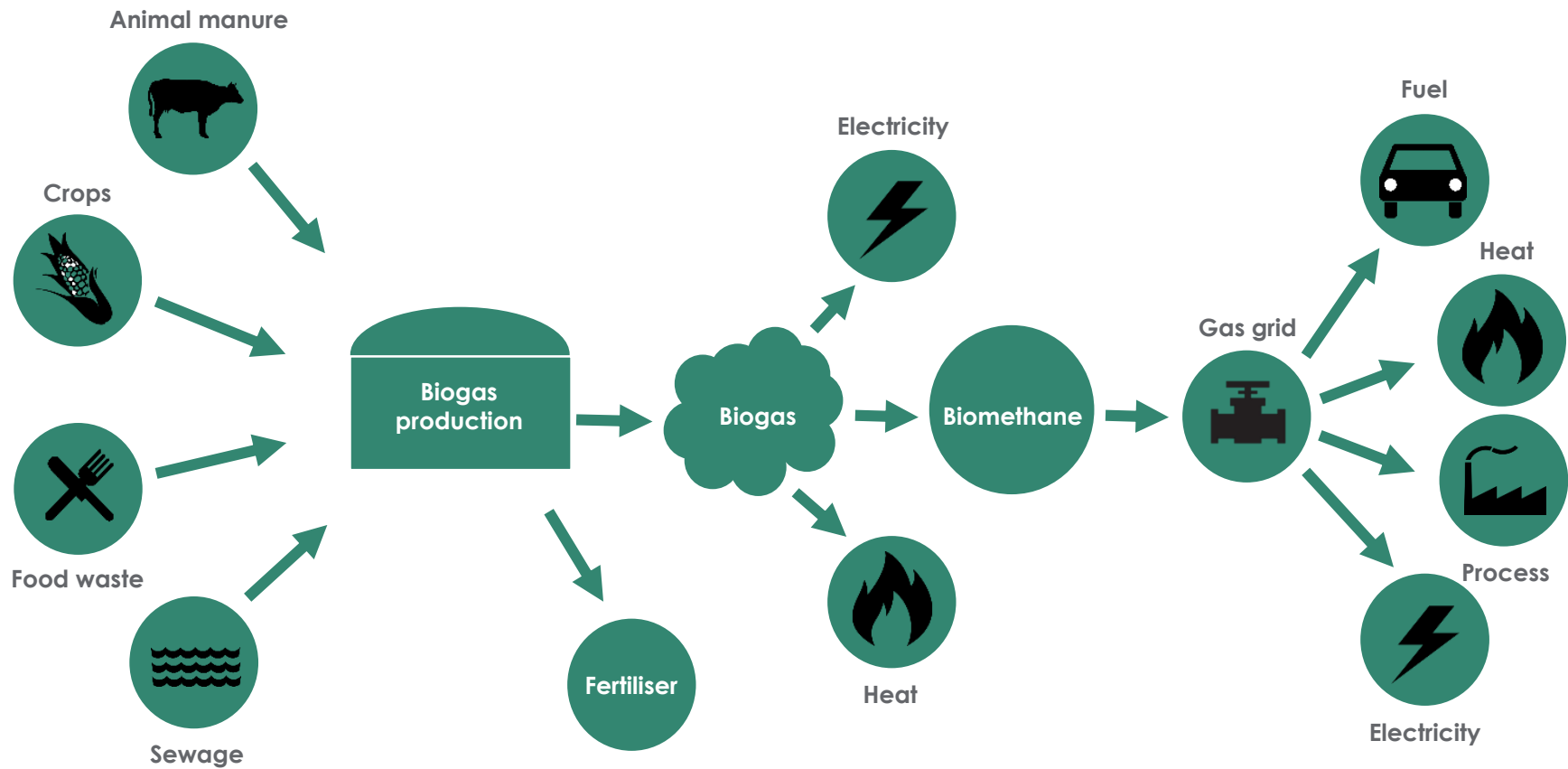
Henrik Iversen, HMN Naturgas A/S
8. november 2017

The HMN Group

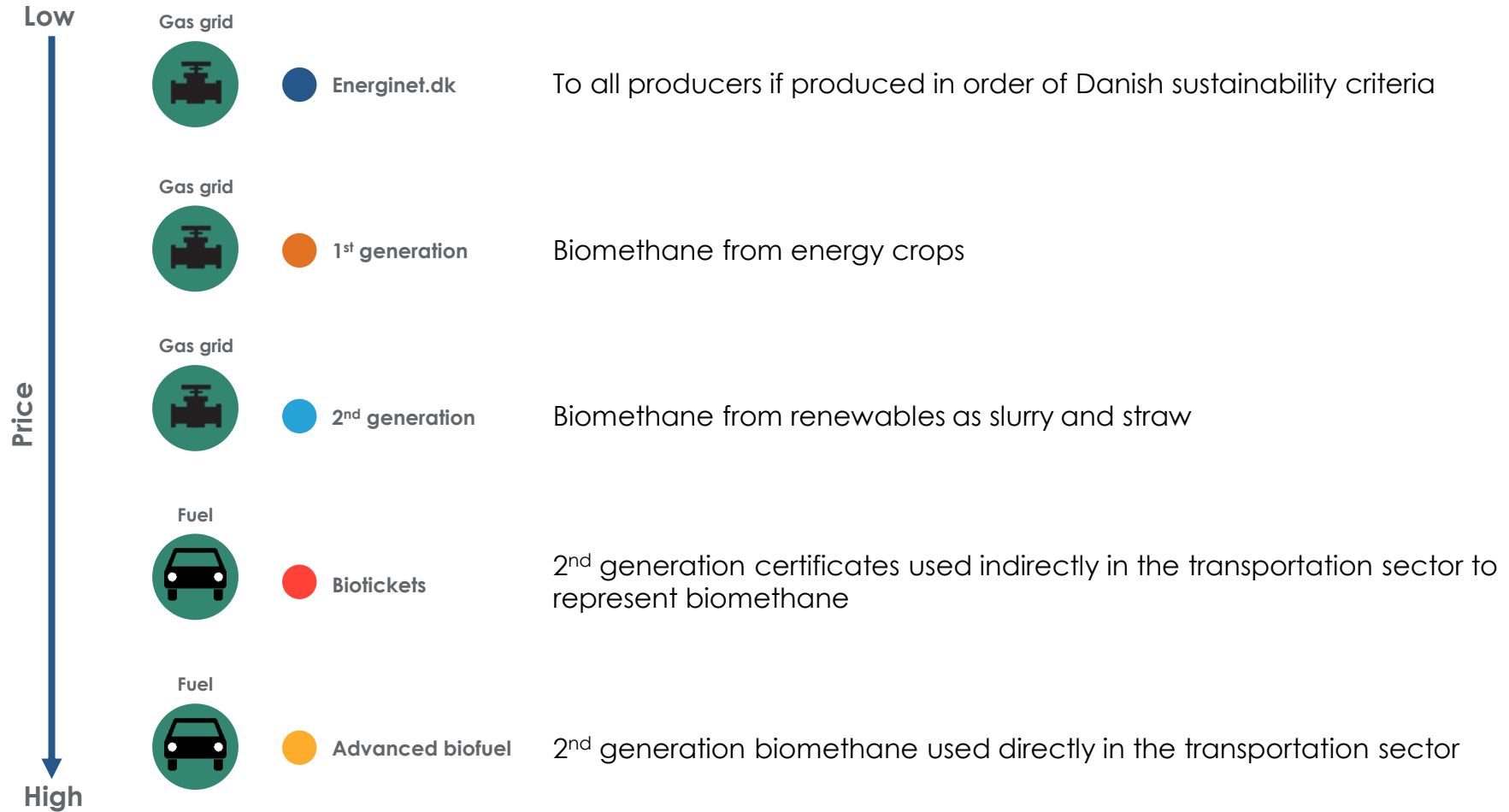


Biogas

Increase the future value of biogas



Biogas certificates



EU – certification



Certificate

EU-REDcert-552-20161118-2518

A/S Baltic Control Ltd.
Sindalsvej 42 B
DK-8240 Risskov, Denmark

approves that
HMN Naturgas A/S
Vognmagervej 14
DK-8800 Viborg, Denmark

complies with the requirements of the certification system
REDcert

which is approved by the European Commission by 24 July 2012
as scheme for demonstrating compliance with the sustainability criteria under Directives
98/70/EC and 2009/28/EC of the European Parliament and of the Council

The certified system user is a
(502) Supplier/dealer (after the last interface)

This certificate is valid from 28.11.2016 to 27.11.17

Risskov 28.11.2016
Place, Date

The Certification Body is responsible for the accuracy of the certificate

A/S BALTIC CONTROL
LTD. Aarhus
Sindalsvej 42 B DK-8240 Risskov
Tel: +45 86 86 86 86
www.balticcontrol.com

Biofuel Sustainability Statement
-Biomethane

HMN Naturgas A/S, Vognmagervej 14, 8800 Viborg (CVR 27001889)

28. June 2017

Batch ID	
Company Name	HMN Naturgas A/S
Production Site	
Contact Name & Telephone number	Kevin Carlson, +45 31 61 39 68
Certificate	REDcert EU
Certificate number	
Delivery period:	June 2017
Invoice number	
Item	
Quantity, Mwh (higher calorific value)	
Biofuel Feedstock	Biomethane 2. generation
CO ₂ e g/MJ (incl. feeds, prod, transport)	Biomethane 2. generation: 1.921
CO ₂ savings %	
EU CO ₂ default/Actual value	11.8
Country of origin	Poland, Barley Straw, Deep litter & Crude Glycerin
Facility in operation 5. October 2015	80%
Cross Compliance	Actual Value
	Denmark
	Yes

The product that was delivered to the consumer complies with requirements in
EU Renewable Energy Directive 2009/28/EC.

CHG emission CO₂ eq/MJ and savings have been calculated according to the
methodology in Directive 2009/28/EC. The Reference CHG value in RED/di-
rective 2009/28/EC for fossil transport fuel is equal to 83,8 g CO₂eq/MJ

Value drivers for certificates

- EU certification (REDcert/ISCC or similar)
- Energy from renewable sources (second generation biomass)
- The degree of greenhouse gas emission reduction (CO2 savings)
- Biogas used for transportation (DK/EU)
 - Second generation biofuel (lignocellulosic biomass)
- LBG

The coming LNG / LBG plant in Hirtshals



Figure 3: Planned location for the LNG Plant

Protect the good story
the perception can quickly be changed

- Biogas PSO subsidy currently at about DKK 0.45 per kWh
- A European alignment of the biogas support scheme will improve the possibilities for export
- Biogas is subsidised in a category with other fluid/transportable/storable CO₂ neutral energy sources
- More advanced green gases is still not competitive due to the associated cost level
- Current model with double subsidy via (1) certificates and (2) PSO subsidy is assumed terminated. However, even after 2023, the Danish cost advantage for advanced biofuels should allow above normal margins

Thank you for your attention

Henrik Iversen

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HMN  NATURGAS A/S