



BIOENERGY & THERMAL POWER INTRODUCTION

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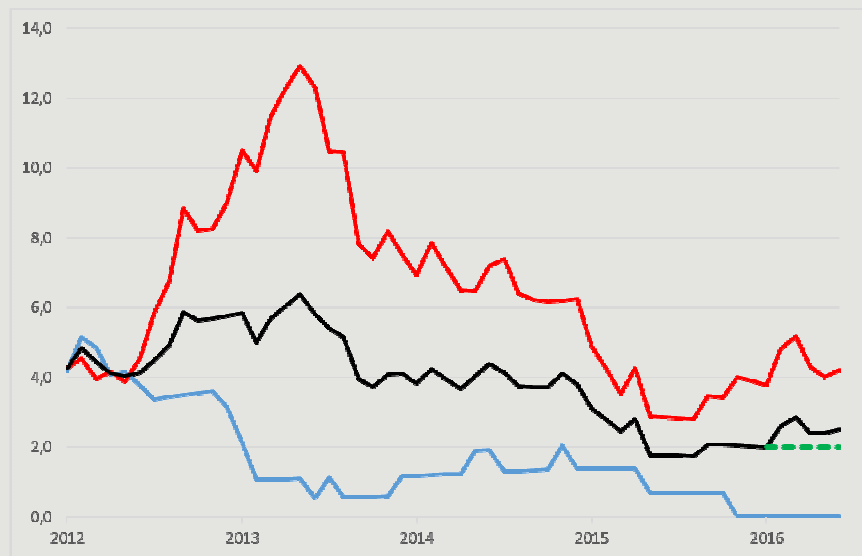
the safe way
or no way

Safety performance

Safety performance

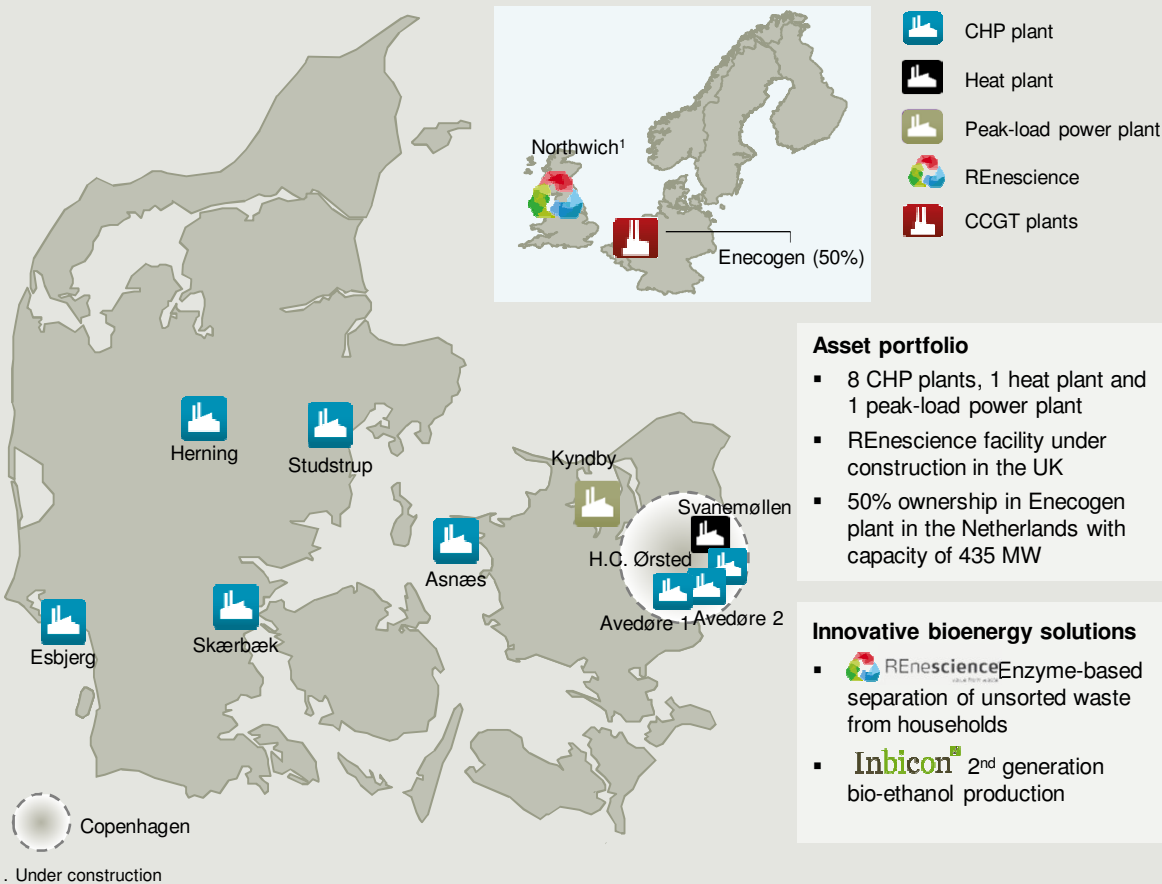
LTIF, 12m rolling (June 2016)






- LTIF total
- LTIF own employees
- LTIF contractors
- - - LTIF Target 2016
- Fatalities



DONG Energy Bioenergy & Thermal Power overview

Danish central CHP plants account for the majority of the asset portfolio





-  CHP plant
-  Heat plant
-  Peak-load power plant
-  REEnescience
-  CCGT plants

Asset portfolio

- 8 CHP plants, 1 heat plant and 1 peak-load power plant
- REEnescience facility under construction in the UK
- 50% ownership in Enecogen plant in the Netherlands with capacity of 435 MW

Innovative bioenergy solutions

-  REEnescience Enzyme-based separation of unsorted waste from households
-  Inbicon[®] 2nd generation bio-ethanol production

Key highlights

- Largest producer of heat and power in Denmark
- Long-term heat supply contracts (15-20 years) provide stable and regulated income
- Provider of ancillary services in the Danish and Northern European markets
- Strong focus on CO₂ emissions reduction with some of the world's most efficient power stations and a pipeline of bio-conversions well under way
- Differentiated capability in developing innovative bioenergy technologies supplementing heat and power production

Key figures 2015

- DKK 5.2 Bn revenue
- DKK 283 m EBITDA
- Total operational capacity in Denmark of:
 - Heat: 3,437 MWth
 - Power: 2,979 MWe
- 9.3 TWh heat generation
- 7.1 TWh power generation (of which 1.1 TWh relates to Enecogen)

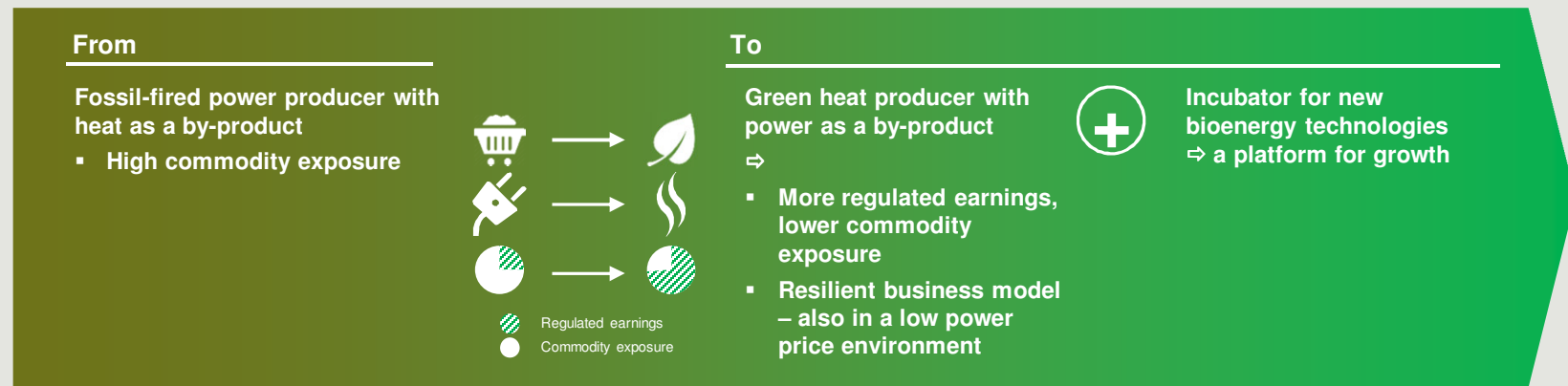
A new business model for thermal assets

Transformation of business model is well underway

Market drivers:

- 1 Declining margins and low power prices
- 2 Stable demand for (green) heat
- 3 Increasing market for ancillary services
- 4 Growth opportunities within European bioenergy

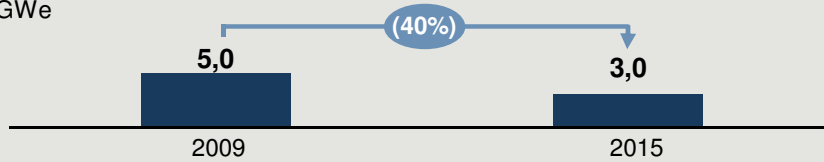
Business model transformation:



Effective operations driven by significant reduction in capacity and OPEX since 2009

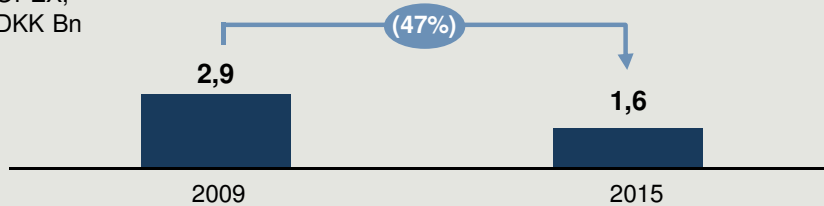
BTP has carried out major reductions in power generation capacity since 2009...

Danish portfolio of central plants, GWe



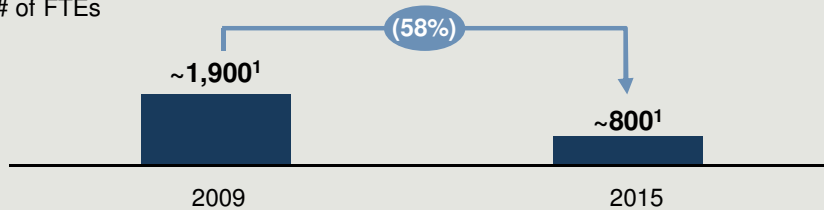
... as well as in OPEX spend...

OPEX, DKK Bn



...and carried out FTE reductions

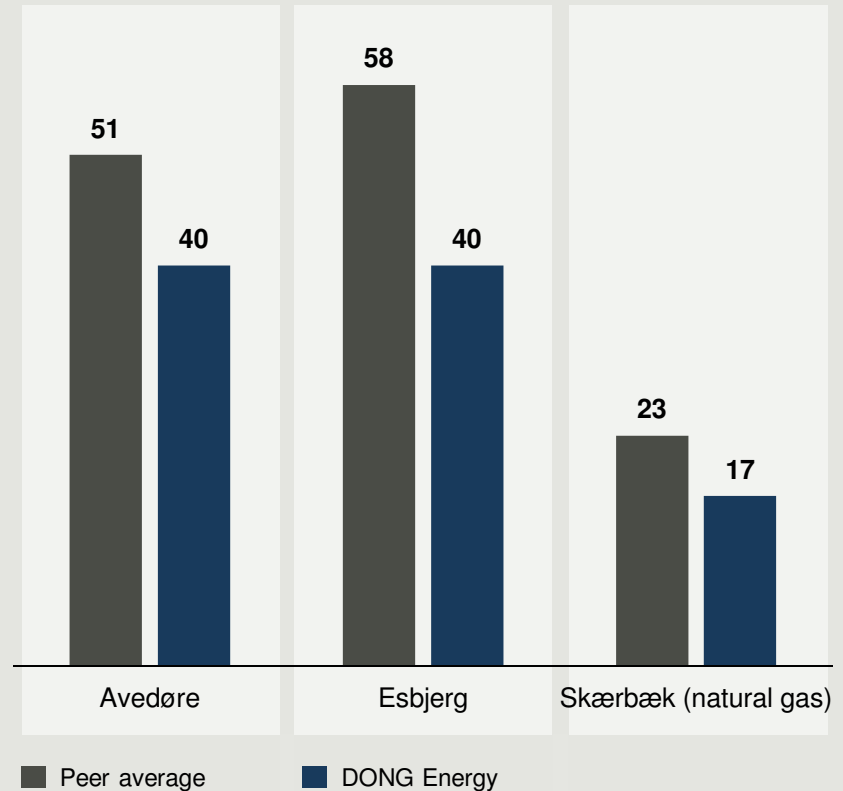
of FTEs



1. Adjusted for divested activities

Effective operations compared to peers








Total adjusted O&M costs, 2013
EUR '000/MWe



Source: UMS benchmarking report 2014

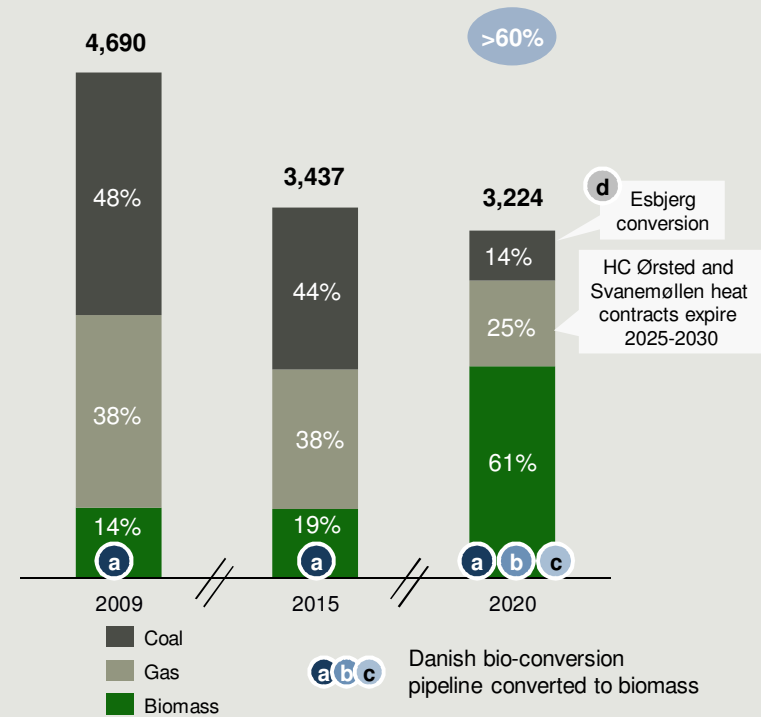
DONG Energy has a strong pipeline of plant bio-conversions in Denmark towards 2020

Strong Danish Bio-conversion Pipeline for BTP

Conversion CHP (MWe/MWth) ¹	CoD	Primary fuel types ³
a Converted 471 MWe/ 647 MWth	Herning (77/150) 	2002 (co-firing) 2009 (conversion) Gas → Chips / pellets
	Avedøre 2 (394/497) 	2002 (80% biomass) 2014 (100% biomass) Natural gas → Pellets
b Under construction 709 MWe/ 1,194 MWth	Studstrup 3 (360/515) 	2016 Coal → Pellets
	Avedøre 1 (254/359) 	2016 Coal → Pellets
	Skærbæk 3 (95/320) 	2017 Natural gas → Chips
c Expected 25 MWe/ 125 MWth	Asnæs 6 (25/125)² 	2019 Coal → Chips
d Potential 190 MWe/ 250 MWth	Esbjerg (190/250)² 	+2020 Coal → Chips or pellets
Total conversion pipeline	(1,395/2,216)	

On track to meet ambitious biomass strategic target

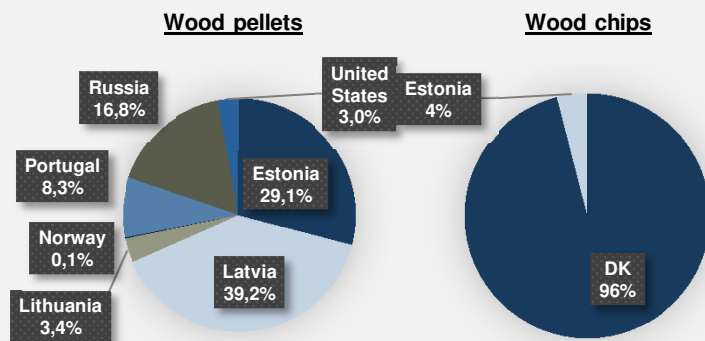
DONG Energy heat capacity per fuel type, MW, %⁴ Strategic target: at least 60% of Danish heat capacity converted by 2020



1. MWe refers to converted power capacity, MWth refers to converted heat capacity. Plant capacities represent bio-converted capacity only and therefore differ slightly from total plant capacities in 2020. Kyndby, Svanemøllen and HC Ørsted not included as these plants are out of the scope for bio-conversions
 2. Setup for conversion not yet decided
 3. Main fuel type (not exhaustive) before and after conversion
 4. Excludes back-up capacity

DONG Energy sources biomass both locally and internationally

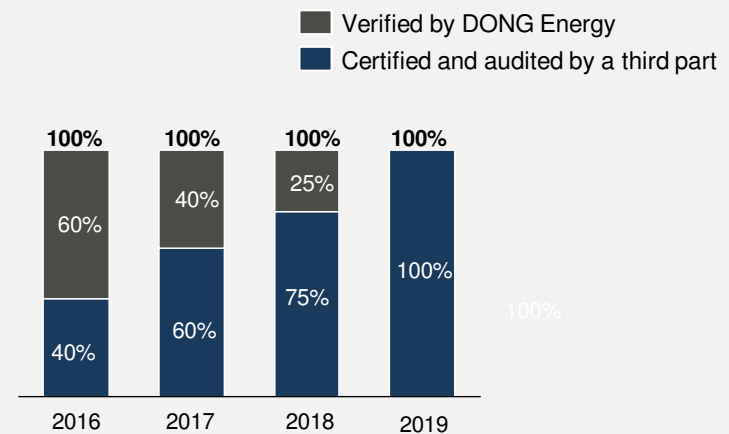
The origin of DONG Energy's biomass in 2015



Primary expected sourcing countries for SKV in 2017

- The Baltic countries
- Norway
- Sweden

Shares of DONG Energy's biomass, which is certified and audited by a third part



Third party auditors are responsible for the certification:

- Check suppliers comply with SBP requirements
- Annual inspection visit
- Re-certification every five years

DONG Energy Programme for Sustainable Biomass Sourcing describes how we ensure sustainability and our goals

We must ensure the following:

- Compliance with the industry agreement for sustainable biomass
- Compliance through SBP or FSC certification

DONG Energy only buys biomass where the following is secured:

1. Replanting
2. Protection of ecosystems and biodiversity
3. Protection of areas with high conservation value
4. Legal compliance as well as protection of social and human rights
5. Compliance with DONG Energy code of conduct

