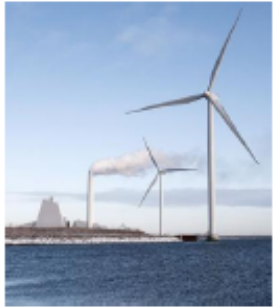


Joint Reaserch Projects between CFEM and DONG Energy

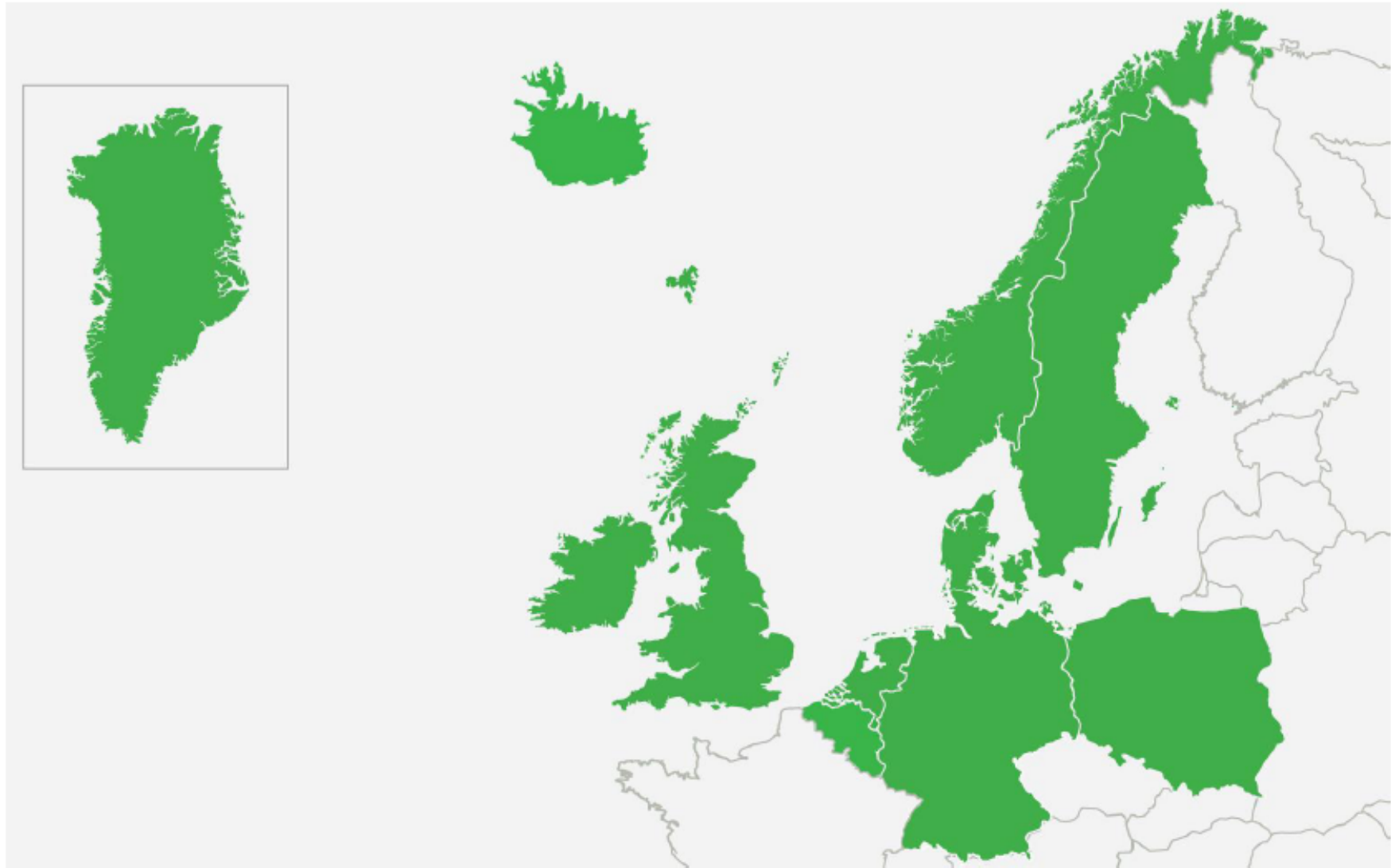
Aarhus University, October 14, 2010

DONG Energy at a glance



- DONG Energy is one of the leading energy groups in Europe
- We are headquartered in Denmark
- Our business is based on procuring, producing, distributing and trading in energy and related products in Europe
- We have approximately 6,000 employees and generated just under 50 billion DKK (approximately 6.6 billion EUR) in revenue in 2009

Focus areas for current activities



CFEM has identified three possible projects related to DONG Energy's regulated infrastructure in DK

Two Smart Grid projects:

1. Tariffs and consumer behavior
2. Future power grid regulation and investment incentives

One project regarding Gas Storage:

- Minimize consumer-uncertainties
- Facilitate trading on secondary markets

Project 1: Tariffs and Consumer behavior

Distribution and transmission networks are largely designed in order to match demands of the energy-suppliers.

Current consumer tariffs are based on allocation of current costs of constructing and operating.

A new wave of electrification is coming (Electric Vehicles, Heat Pumps and micro-generation). These new consumer-patterns requires new tariffs?

DONG Energy intend to start some pilot-studies where customers reaction-pattern towards different tariffs are investigated.

Similarly, there has been made attempts to study the patterns of energy savings; results have not always been significant.

Project 2: Future power grid regulation and investment incentives

Implementation of Electric Vehicles and Heat Pumps in the Danish power system, may require excessive network investments. Nationwide Smart Grid investments are estimated to approximate 10 billion DKK.

A significant part of the economic gains from Smart Grid lies outside the power grid.

▷ doubts whether power distribution companies will invest in Smart Grid under current regulatory regime.

Dilemma: On one hand regulator needs to design a regulation that promotes intelligent network solutions. On the other hand regulator also needs to include a stop-mechanism that removes incentives for over-investments.

Scoping-phase of our joint project:

- Can CFEM design a new regulatory benchmark-model that gives the right investment-incentives?
- Joint project with Danish regulator?

Project 3: Gas Storage Auctions – two major challenges

A number of actions has been identified. Two major issues are:

1. Multiple auctions on various storage-products (and volatile prices) create uncertainty about the price of future auctions, as well as the price of current auctions.
2. Customers must be able to trade with each other on secondary markets; ie. both offer and buy products (and, respectively. composite "bundled" and individual "unbundled" products) at the secondary market.