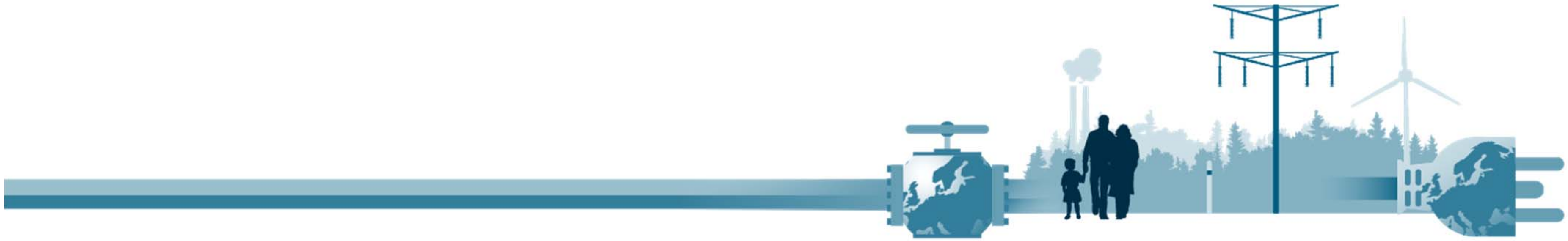
Welcome to Shippers’ Forum

Jeppe Danø, 8 September 2016



Agenda

12-13	*Lunch and networking*
13:00	**Welcome**
	Jeppe Danø, Energinet.dk
13:10	**Swedish market development**
	Johan Zettergren, Swedegas
13:30	**Status on the supply situation**
	Jess Bernt Jensen, Energinet.dk
13:45	**Status on the capacity situation at Ellund**
	Jeppe Danø & Christian Rutherford, Energinet.dk
13:55	**Open Season Baltic Pipe expectations**
	Christian Rutherford & Julie Frost Szpilman, Energinet.dk
14:15	*Coffee break and networking*
14:45	**Gaspoint Nordic joins the PEGAS platform**
	Jacob Pedersen, Gaspoint Nordic
14:55	**Acquisition of DONG Gas Distribution A/S**
	Christian Parbøl, DONG Energy A/S, & Torben Brabo, Energinet.dk
15:15	**Energinet.dk Gas Storage**
	Iliana Nygaard, Energinet.dk Gas Storage
15:25	**If I were Energinet.dk**
	Peter Biltoft-Jensen, DONG Energy A/S
15:55	**End of programme**

Rules for Gas Transport

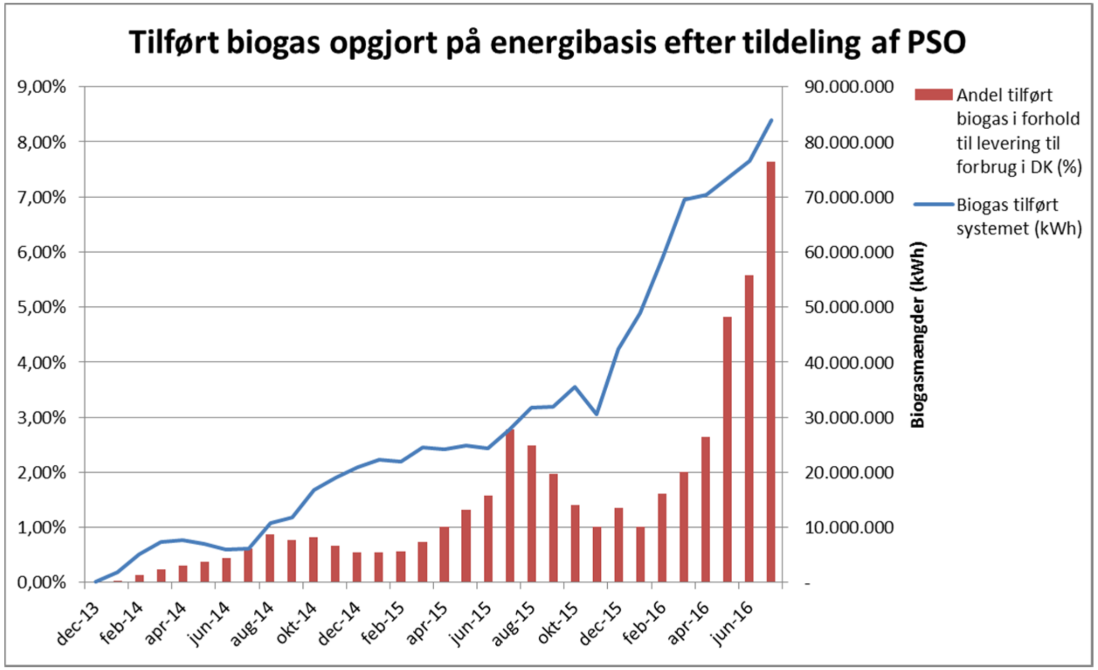
Version 15.1 (effective September 2016)

- Special Nomination Arrangement

Version 16.0 (effective from 1st October 2016)

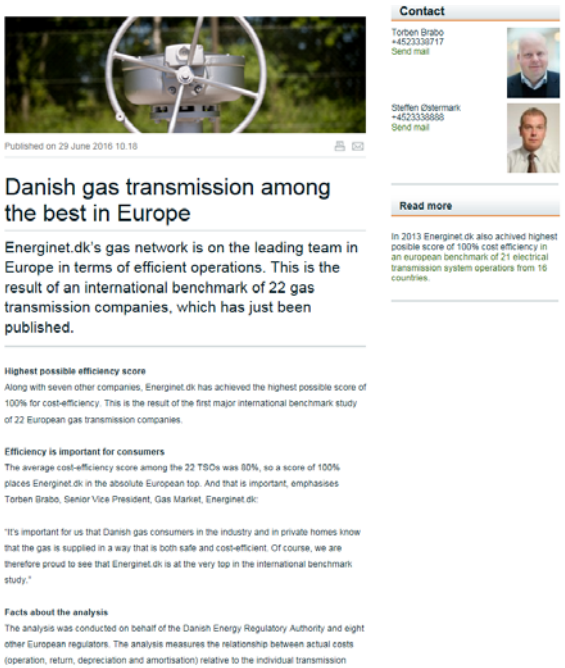
- Hyper72 interruptibility product cancelled
- Changes to balancing model (neutral gas price = within-day; flexible trading windows with flexible quantities)
- Quality specifications for natural gas in the transmission grid

Biomethane in the Danish gas system



ENERGINET.DK

Benchmarking European Gas TSOs


Published on 29 June 2016 10.18

Danish gas transmission among the best in Europe

Energinet.dk's gas network is on the leading team in Europe in terms of efficient operations. This is the result of an international benchmark of 22 gas transmission companies, which has just been published.

Highest possible efficiency score

Along with seven other companies, Energinet.dk has achieved the highest possible score of 100% for cost-efficiency. This is the result of the first major international benchmark study of 22 European gas transmission companies.

Efficiency is important for consumers

The average cost-efficiency score among the 22 TSOs was 80%, so a score of 100% places Energinet.dk in the absolute European top. And that is important, emphasises Torben Brabo, Senior Vice President, Gas Market, Energinet.dk:

"It's important for us that Danish gas consumers in the industry and in private homes know that the gas is supplied in a way that is both safe and cost-efficient. Of course, we are therefore proud to see that Energinet.dk is at the very top in the international benchmark study."

Facts about the analysis

The analysis was conducted on behalf of the Danish Energy Regulatory Authority and eight other European regulators. The analysis measures the relationship between actual costs (operation, return, depreciation and amortisation) relative to the individual transmission

Contact

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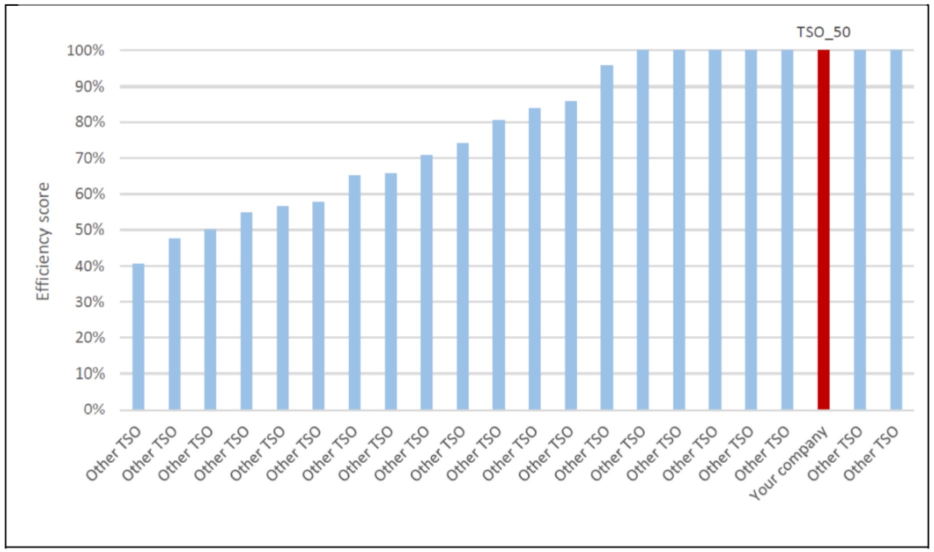
Read more

In 2013 Energinet.dk also achived highest posible score of 100% cost efficiency in an european benchmark of 21 electrical transmission system operations from 16 countries.



Customer Satisfaction Survey 2016

Background

- 35 respondents: Shippers, suppliers, authorities, partners and certificate traders (new)
- Response rate 26% (54% in 2014)

Results

- Increased satisfaction: **communication**, **service** and **overall satisfaction**
- Decreased satisfaction: **awareness** of the market´s **needs**

”Energinet.dk is more focused on meeting requirements from NCs than listening to the shippers´needs”

“Energinet.dk employs a very large extent of people who have most of their professional experience from TSO related work and they have no experience from Energinet.dk´s customers. This means that the understanding of issues that concern the customers can somethings be very little – or misunderstood”

“When changes are made, Energinet.dk is listening to much to the ‘big old’ shippers”

You speak, we listen…… Action plan

Ambition

- Overall satisfaction score≥ 90 %
- Increase Energinet.dk's **awareness** of markets needs (score≥4)

How?

- Continue bilateral customer meetings including experience exchange
- Continue dialogue in User Group, Shipper Task Force, Shippers Forum
- Explore stationing possibilities for staff/recruiting
- Prototyping – how does our market model look on your screens?
- Market monitoring and better understanding/use of price/capacity data

Suggestion?

- **Please speak up**: Send an e-mail to anmodning@energinet.dk


SWEDEGAS

SWEDISH MARKET DEVELOPMENT

Energinet.dk Shippers' Forum

2016-09-08

SWEDEGAS

SWEDEGAS

SWEDISH ENERGY & GAS MARKET

SWEDEGAS' INITIATIVES

THE COOPERATION WITH ENERGINET.DK

SWEDEGAS

Swedegas operates and invests in infrastructure for gas

- Invests in infrastructure for gas
- Owns and maintains the Swedish transmission system for gas
- Well-invested and young asset base with limited maintenance capex requirement
  - 620 km pipeline and 40 Measuring and Regulation stations
  - Skallen Gas cavern 8.75 MNm3 (working volume)
- No Supply Disruption
- Transports gas to distributors and end-users
- Looks for synergies between existing gas grid and new energy gases such as biogas and LNG
- Certified TSO (2012)
- System Balancing Administrator (2013)

Established	1976
Yearly transport	1.0 – 1.6 bcm
Revenues (2014)	376 MSEK
Employees	40
Owner	Enagás / Fluxys (2015-04)

Vision, Mission & Business Idea

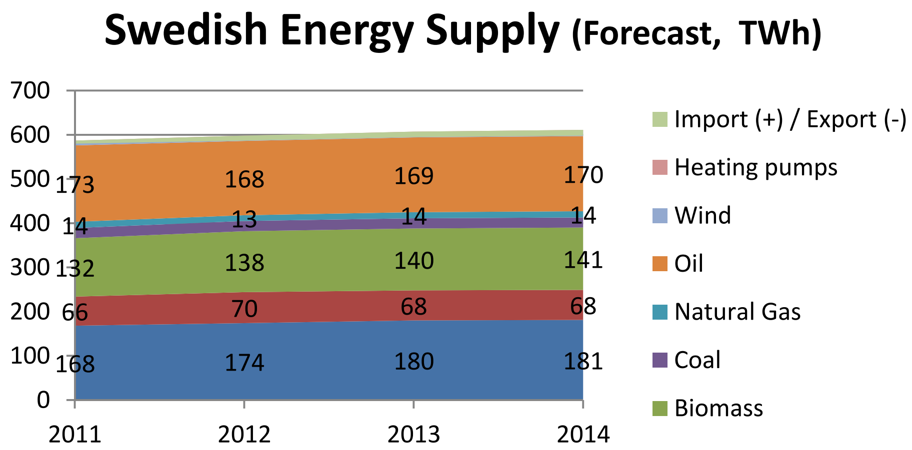
- Vision
  - Swedegas is a leading company in the energy industry that develops and invests for sustainability and competitiveness

- Mission
  - Swedegas invests long-term in gas infrastructure which contributes to the energy transition
  - Swedegas maintains, develops and invests in gas infrastructure and related services for the benefit of its stakeholders. We offer a secure supply of gas, both as a source of energy and a raw material, for the benefit of growth, employment and environment.

- Business idea
  - We strive to enhance the efficiency of the Swedish gas market, maximising synergies with the European gas market, resulting in improved competitiveness for our customers and our society

SWEDISH ENERGY & GAS MARKET

Swedish Energy Market and Natural Gas



- Natural Gas ~ 2.5 % of the energy mix
- Expected to remain at this level short-term
- In the areas where the gas grid is established ;
  - 1/5 of the industrial jobs in Sweden
  - gas usage is approx. 20 % of total energy consumption

Assessment of country performance and opportunities from the Energy Union

Sweden shows strong performance especially in three dimensions of the Energy Union: Concerning *decarbonisation of the economy,* Sweden has the lowest carbon intensity of all Member State economies, has a comprehensive set of policies to support renewable energy and to reduce CO2 emissions. Sweden has the highest share of renewable energy in the energy mix and has already exceeded the 2020 target for renewable energy in transport. Sweden is also well on track to meet its 2020 target for non-ETS emissions. With regard to the *internal energy market*, the Swedish electricity market is functioning well and is part of the integrated Nordic electricity market. Sweden is well connected to neighbouring states. With regard to *research, innovation and competitiveness*, electricity prices for industrial consumers are particularly competitive compared to most other Member States. Sweden also performs better than most other Member States and main trading partners with regard to low-carbon technologies patents per capita. Remaining challenges in these dimensions relate to the need for further electricity interconnections with the Baltic States, and further reduction of CO2 emissions from the transport sector which remains the biggest challenge.

As regards the two remaining dimensions of the Energy Union, however, **Sweden faces several challenges**. With regard to *energy efficiency*, more efforts are needed to reach its 2020 target for energy efficiency. The relatively high energy consumption in the residential sector is to some extent explained by climate conditions, but further efforts will be necessary. At the same time, Sweden has over time reduced significantly the use of fossil fuel for heating purposes, resulting in low CO2 emissions from the residential sector despite relatively high energy consumption. The energy intensity of passenger transport is significantly above the EU average, influenced by a preference for larger and less fuel efficient passenger vehicles. With regard to *energy security, solidarity and trust*, Sweden is 100 % dependent on imports from Denmark to meet its natural gas demand (while there is some domestic production of bio gas) and does not have any substantial storage capacity. The associated risks are however limited due to the small role of gas in the energy system and the Danish infrastructure system being connected to continental Europe. Low wholesale prices and uncertainties around the future of nuclear energy reduce investment incentives and may pose new challenges to meet electricity demand and ensure stable base load.

Vice-President Šefčovič said: "*Over the last decades Sweden has gone through a significant energy transition. This has resulted in a far-reaching decarbonisation of the energy system across this country. It is an inspiring example for all other European Union countries and I encourage Sweden to lead the charge in the energy transition for Europe that is the Energy Union project*."

Energy Agreement

- A political agreement reached between 5 political parties on Sweden´s long-term energy policy
- The agreement consists of a common road map for a controlled transition to an entirely renewable electricity system, with a target of 100 per cent renewable electricity production by 2040.
- This is a target, not a deadline for banning nuclear power, nor does it mean closing nuclear power plants through political decisions.
- The so-called "capacity tax" – (tax on nuclear thermal output) - will be phased out in 2 years starting 2017
- The fee for nuclear waste will be increased as well as an increase in liability in the event of radiological accidents to SEK 12 billion from SEK 3 billion today.
- The general subsidy program for producers of renewable energy will be extended and expanded, introducing 18 TWh of new electricity certificates to the market from 2020 to 2030 with focus on wind, solar, hydro and bio-energy.
- The tax on hydro power will be lowered to the same level as for all other production types, starting in 2017
- A goal for energy efficiency for the period 2020-2030 shall be presented and decided on in 2017

The All-Party Committee on Environmental Objectives ("Miljömålsberedningen")

- 70 % emissions reduction for inland transports 2030/2010
- Etc.

SWEDEGAS' INITIATIVES

Swedegas Marketing & Business Development strategy

Regulated Transmission Business

- Allowed cash generation

Business Development - Projects

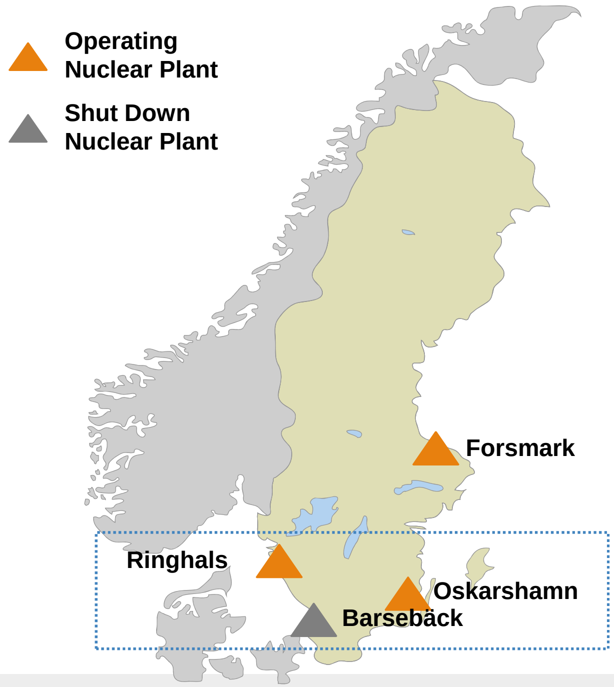
- Mid-term off-grid growth opportunities consistent with investment criterias

Business Development - Gas Advocacy

- Positioning gas long-term in the Swedish energy mix

Nuclear Phase-out Expected to Impact Southern Sweden in Particular Where Gas is a Natural Substitute

Nuclear Plant Overview



Comments

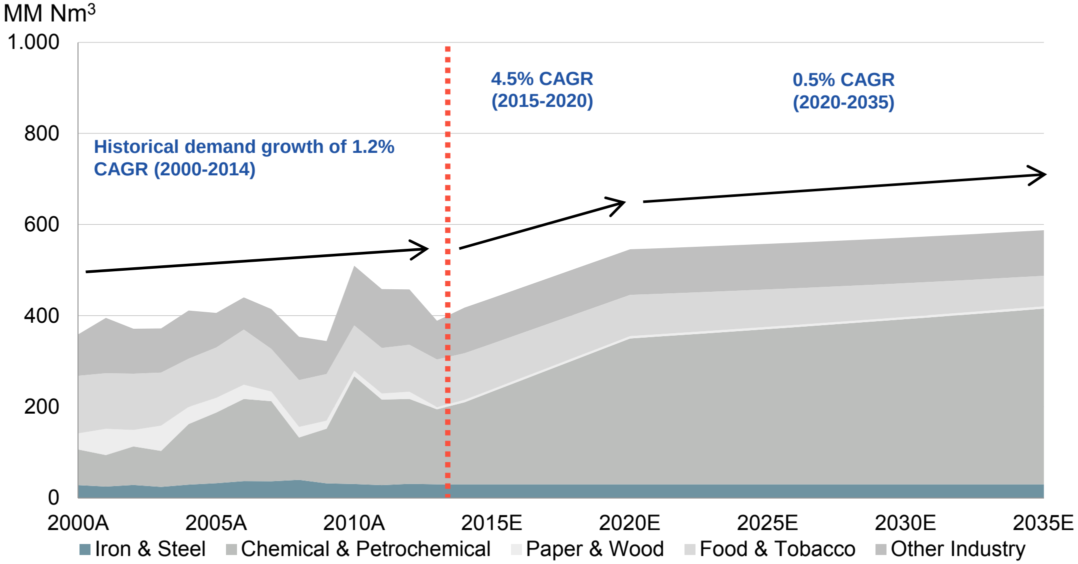
- High demand for electricity and power in southern Sweden
- Oskarshamn 1 has to start decommissioning by mid-2017. Oskarshamn 2 will be shut down as well but no timetable is official yet.
- Ringhals reactors to be shut down 2019/20
- Existing generation capacity will be favoured vs. making new investments
- CHP plants can be used initially to meet existing demand
- Gas is an attractive new base-load fuel compared to alternatives, strengthening the essential role of the transmission network
- Swedegas network passes both Ringhals and Barsebäck plants

Swedegas to introduce daily capacity products as from the gas year 2016/17

Strong Industrial Demand Growth Driven Mainly by Chemicals and Petrochemicals

Industrial Gas Demand Expected to Reach c.550 MM NM³ by 2023

Industry Sector Gas Demand 2000 – 2035E



Source: Gas Strategies

Industry Sector End-Customers

The gas trade suggests a national-policy target of 15 TWh biogas use by 2030

NATIONELL BIOGAS-STRATEGI

Biogasmål 2030: 15 TWh

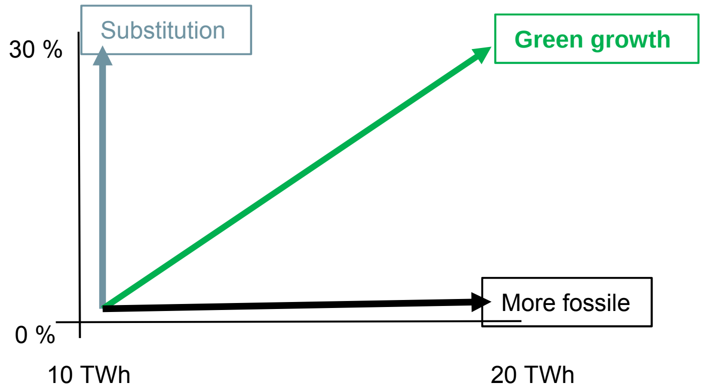
Transportsektorn 12 TWh

Industrin 3 TWh

Greeening the Swedegas Infrastructure

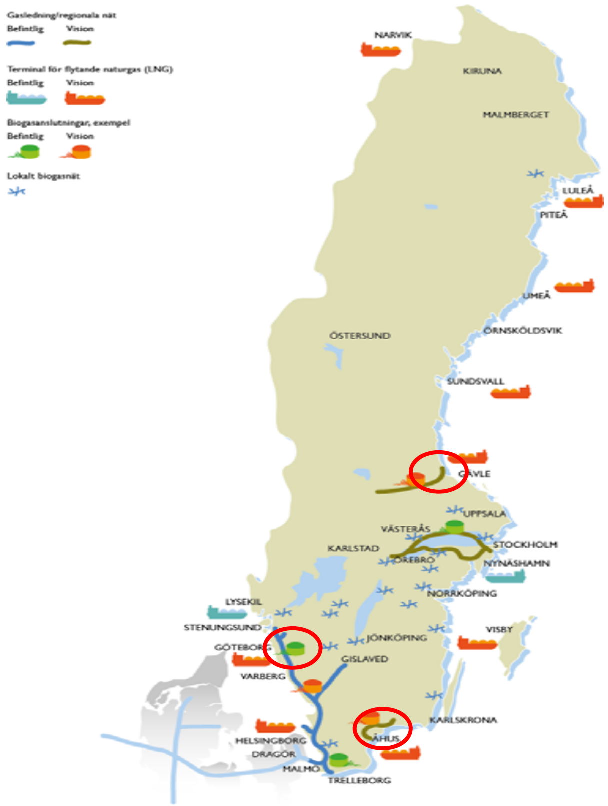
- **Vision**
  - 30 % green gas in Swedegas infrastructure by 2030 (currently 1-4 %)
  - 100 % by 2050

- **Rationale**
  - Consistent with political targets
  - Protects existing assets
  - Allows growth opportunities in and off-grid



SWEDEGAS

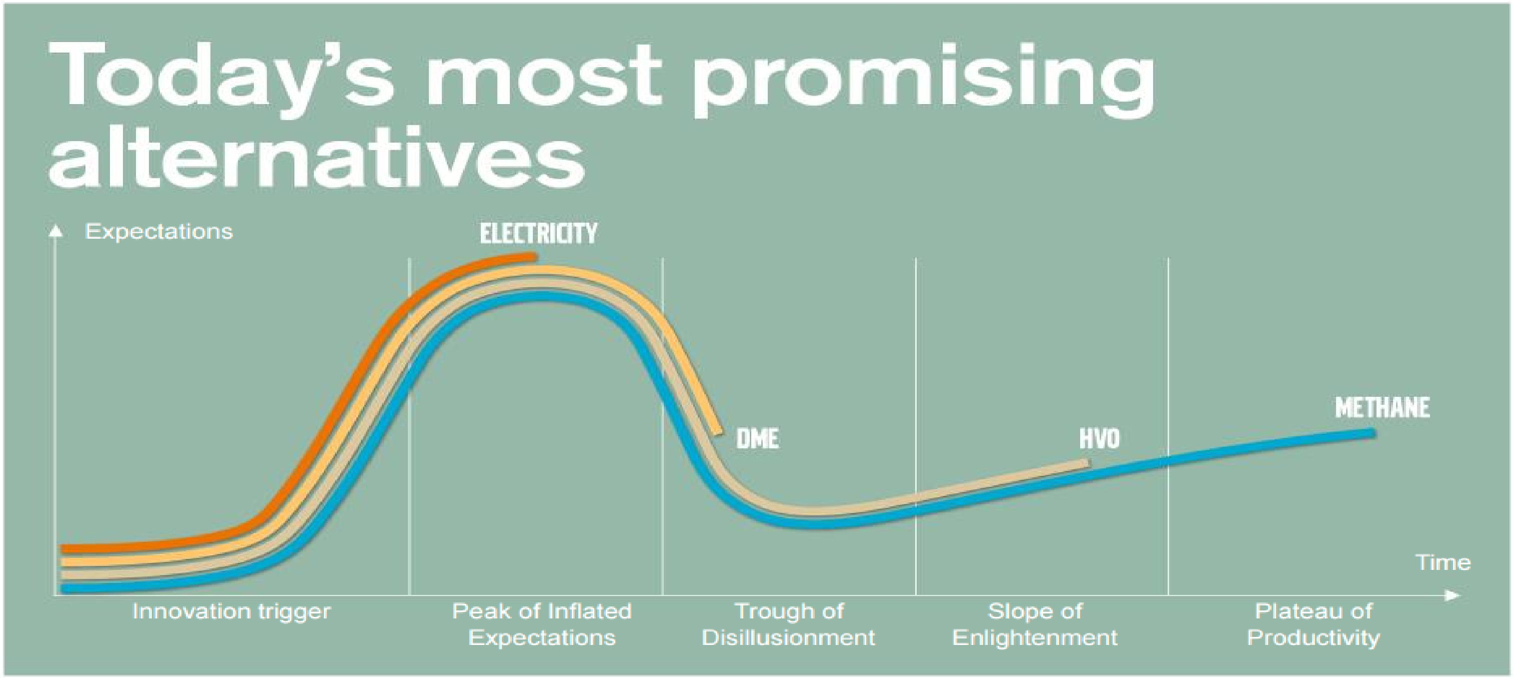
Other projects to develop the potential



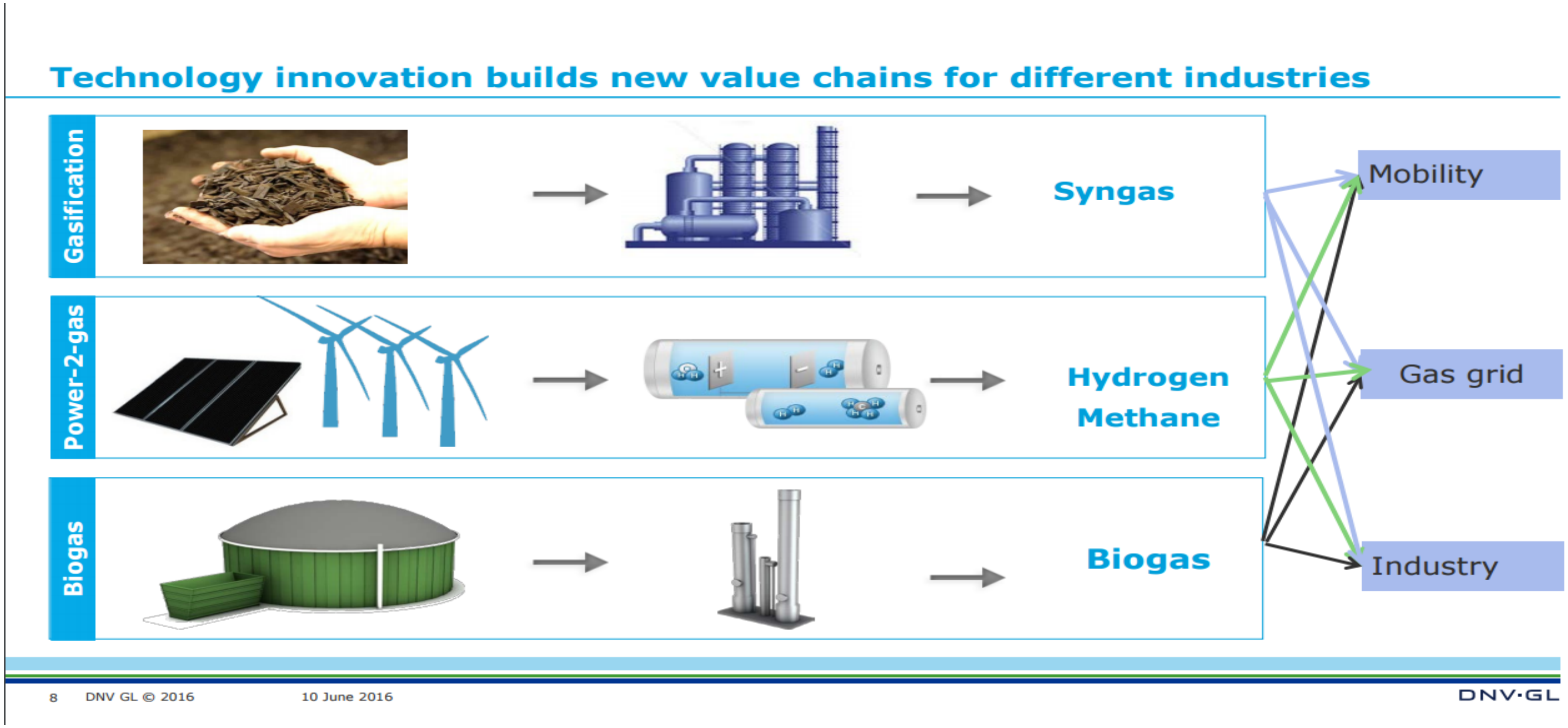
- Go4LNG
- Gävle
- Regional LNG/biogas grid Skåne

SWEDEGAS

”The future long-distance transports will be powered by gas” (Volvo)



New definitions of gas infrastructure (enablers)



THE COOPERATION WITH ENERGINET.DK

Areas of and examples of cooperation

- SoS; Hyper 3, Tyra consequence analysis
- Operations; daily operations, issues management
- Green Gas Commitment; e.g. sharing best practices on biogas development (greening the grid)
- Stakeholder Management; Participating in each others' Shippers' Forums
- Long-term infrastructure development; DE/DK, NO/DK?
- Market development; Network Codes, Joint Balancing Zone DK/SE?


SWEDEGAS

Joint balancing zone

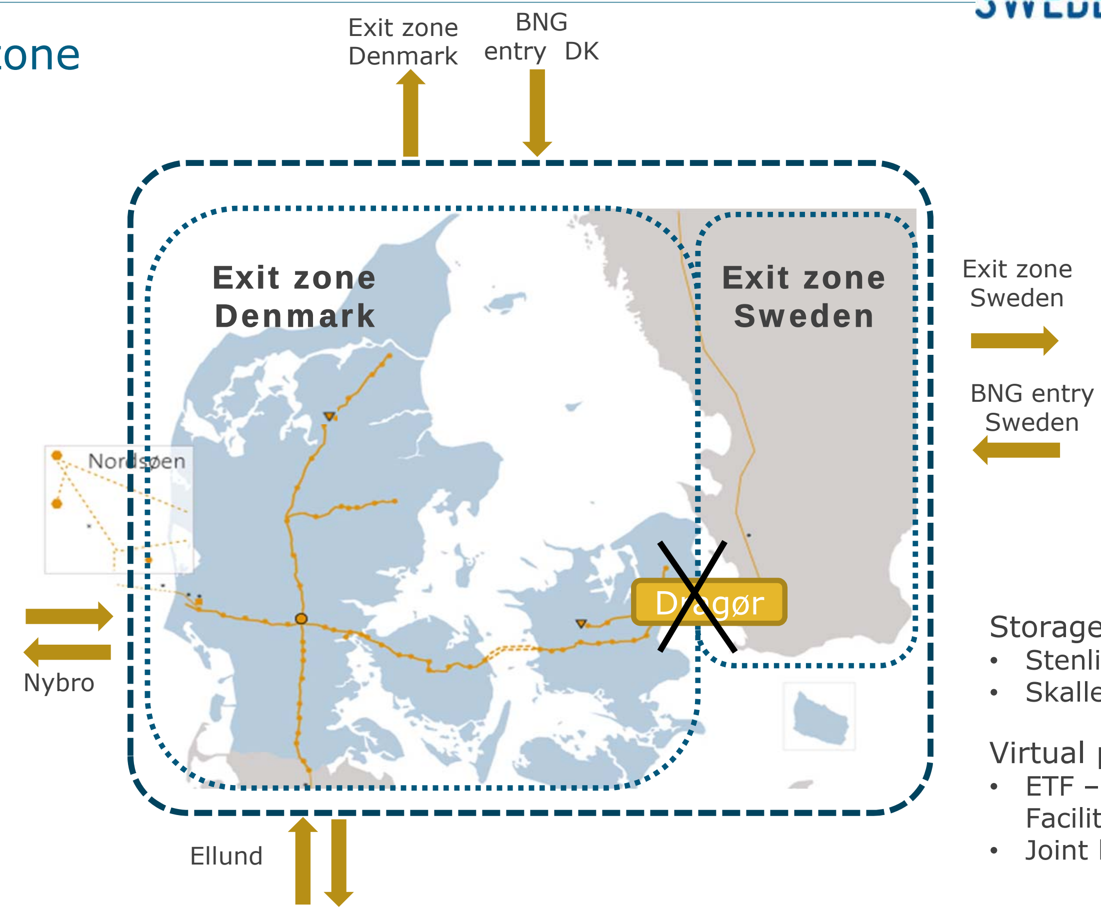
Shippers’ Forum 8 September 2016

Swedegas and Energinet.dk

Joint balancing model
- Purpose and objective of project

Purpose	To analyse if a joint Danish and Swedish balancing zone can be considered as having net positive effects on the development of the Swedish and Danish gas markets in general
Objective	The project will evaluate the cost and benefits for the Swedish and Danish gas markets respectively of introducing a joint balancing zone and will recommend a decision (go/no go) to the respective decision bodies of Swedegas and Energinet.dk before the end of 2016/beginning of 2017.

Joint balancing zone
- Concept model



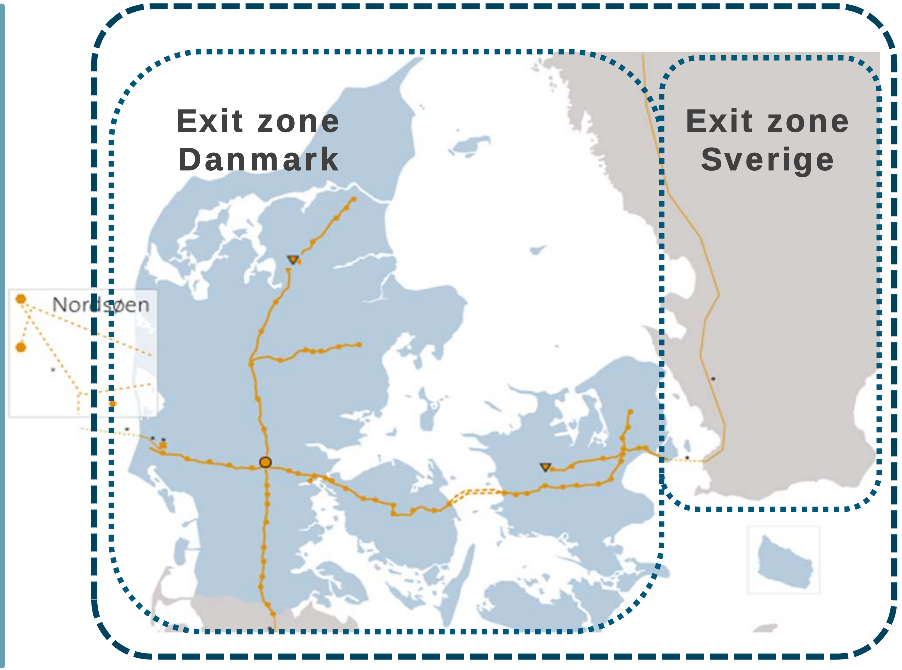
Storage points
- Stenlille and Ll. Torup
- Skallen

Virtual points
- ETF – Exchange Transfer Facility
- Joint bilateral point

Joint balancing zone
- Concept model

The concept model

- Joint balancing zone with the possibility of using the Energinet.dk model for operational balancing and daily imbalance charges
- National differences in attributing physical gas quantities to shippers can be handled through separate exit zones
- IP Dragør is eliminated as a commercial capacity point and the loss of exit DK payment should be compensated
- For legal reasons, separate registration/framework agreement with each TSO in order to deliver to the respective exit zone is needed
- Joint balancing tasks to be distributed between the TSOs, appointed to one TSO or one joint BAM
- In general, there is no need for completely harmonised rules, but certain clauses must be aligned (e.g. balancing rules)



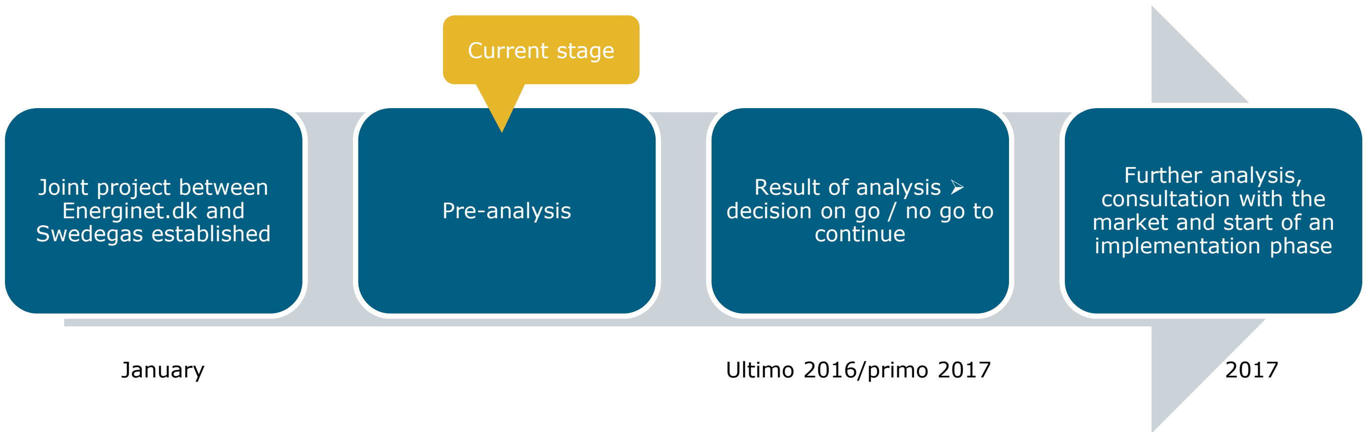
Potential areas of benefits and issues

Potential benefits
- Improved Security of Supply
- Compliance with Network Codes at minimum cost
- Enhanced market area
- Improved liquidity
- More efficient market
- More efficient TSO operation

→ Improved competiveness of gas

Potential issues
- Governance of Balancing Management
- Tariff Dragör
- Harmonised SoS rules?
- IT-investments
- …

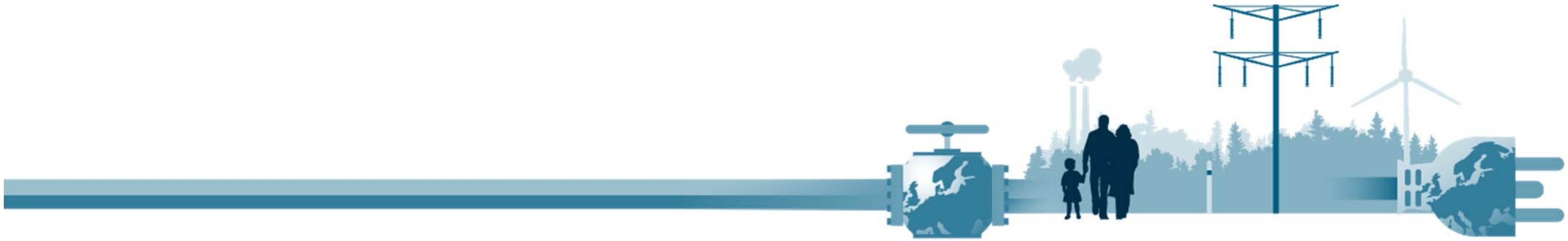
Joint balancing zone
- Time schedule



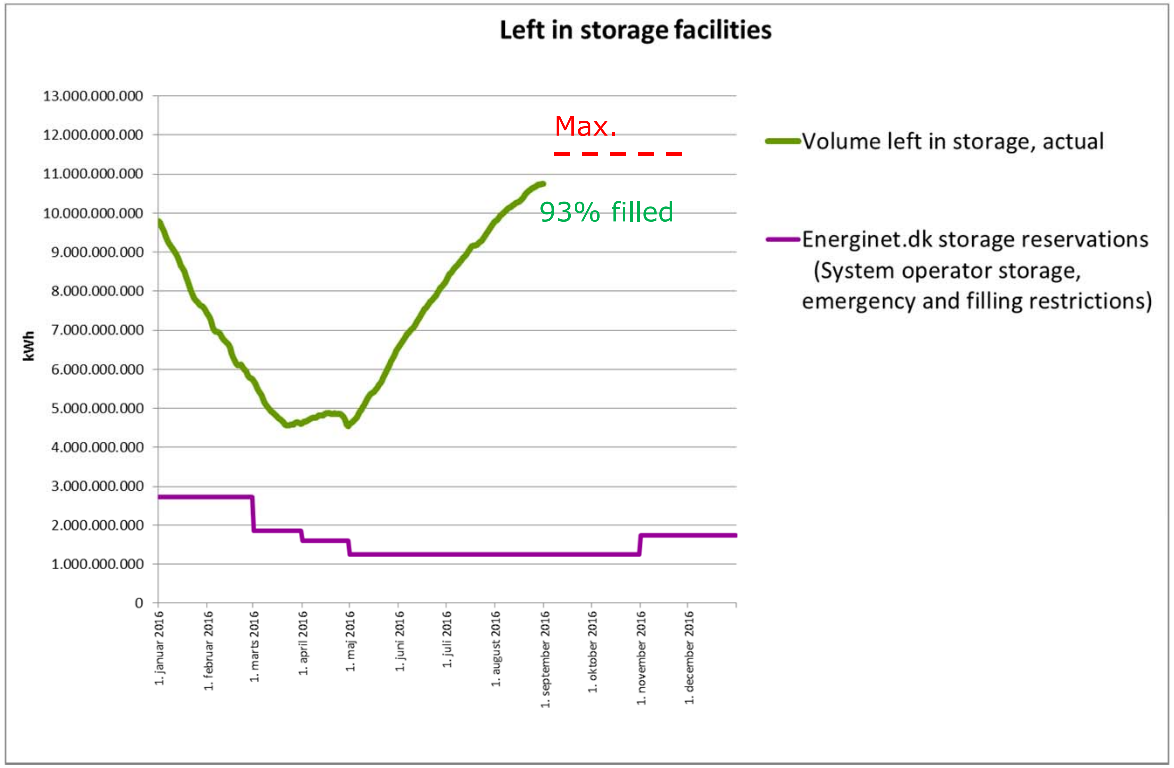
Status on the supply situation

Status 2016 and **forecast 2018-2021 without Tyra**

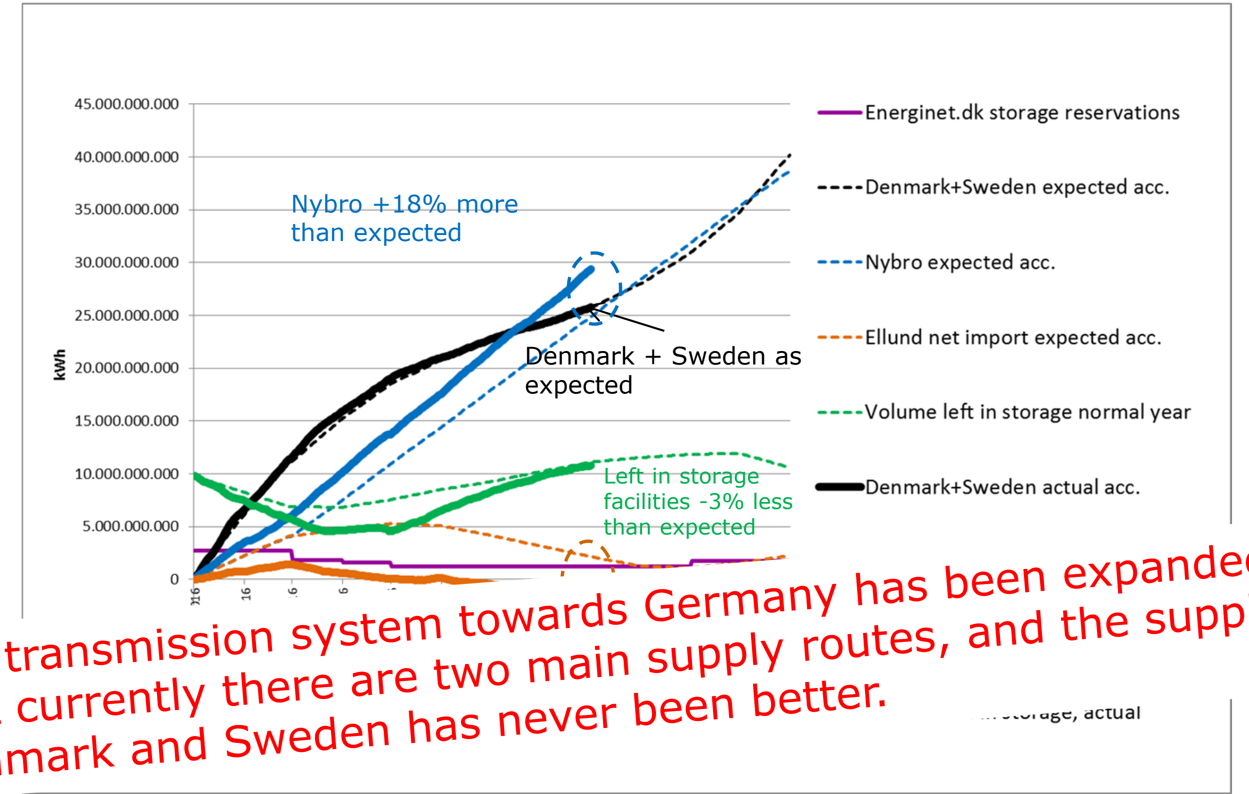
Jess Bernt Jensen, Energinet.dk



Supply and demand 2016 – Storage facilities



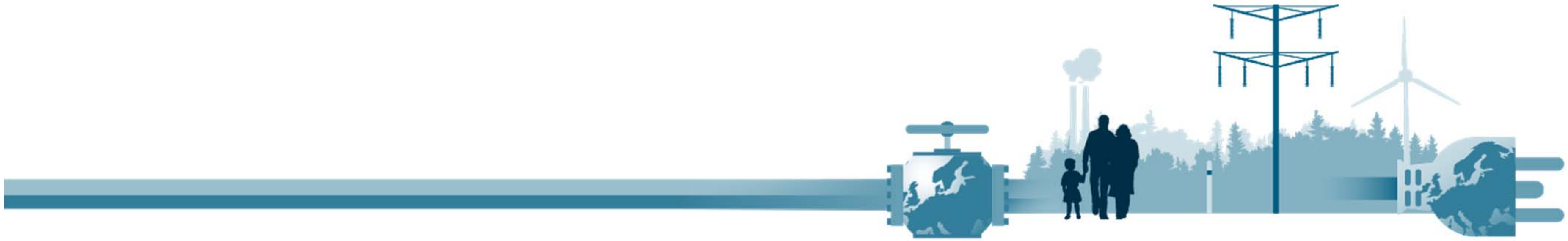
Supply and demand 2016



The transmission system towards Germany has been expanded substantially so that currently there are two main supply routes, and the supply situation for Denmark and Sweden has never been better.

Supply and demand 2018-2021

Forecast without Tyra



How to handle supply without Tyra ?

Homepage

Published on 12 August 2016 13.01

Analysis describes gas supply without Tyra

Energinet.dk will now discuss new calculations with the gas industry to get the best estimate of what will happen if the Tyra platform in the North Sea is closed down.

Memorandum

To: The Danish and the Swedish gas market

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Supply and demand 2018-2021 without Tyra

11 August 2016
JBJ/HOG

Contents

Slide package

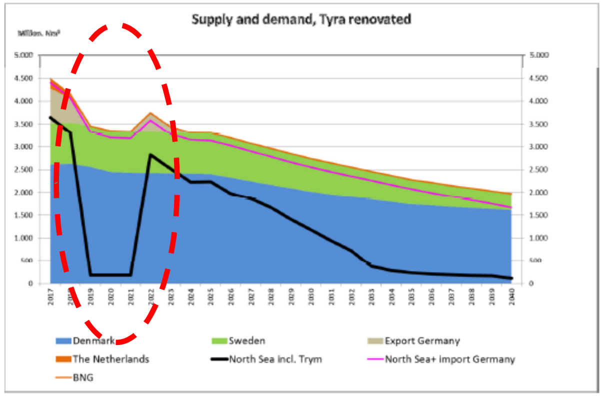
Supply and demand without Tyra

2018-2021

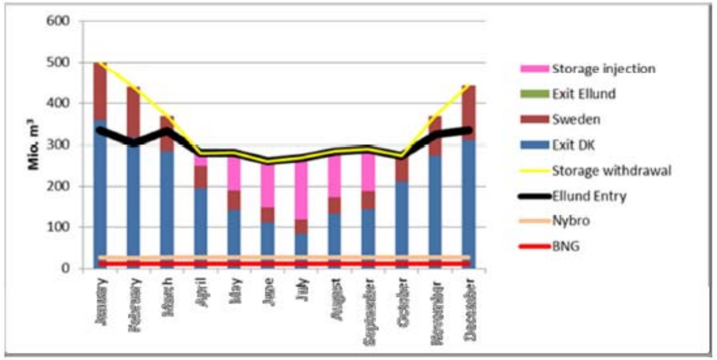
Energinet.dk, 5 August 2016

Supply and demand 2018-2021

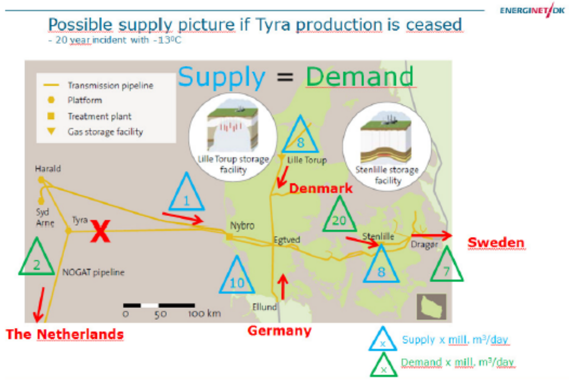
3 years without gas from Tyra-Nybro



Monthly balance



Daily balance



Conclusion

- The main conclusion from the analysis is that **Danish and Swedish consumers will continue to experience a robust supply situation if Tyra shuts down**. If, at the same time, the majority of the Danish production in the North Sea is closed down for a number of years, **the system becomes less flexible and more vulnerable to incidents occurring** compared to today's supply situation.
- Energinet.dk intends to take various measures both in relation to the market and to infrastructure in order to secure maximum infrastructure capacity. **The situation requires preparation and awareness on the part of Energinet.dk, the adjacent systems and the market players** if the gas supply is to be secured.
- **An extremely long and hard winter with disruption of the supply sources will be challenging**. However, careful planning and focusing on the optimal use of the capacity in the system will mitigate the risk of supply failure.

ENERGINET/DK

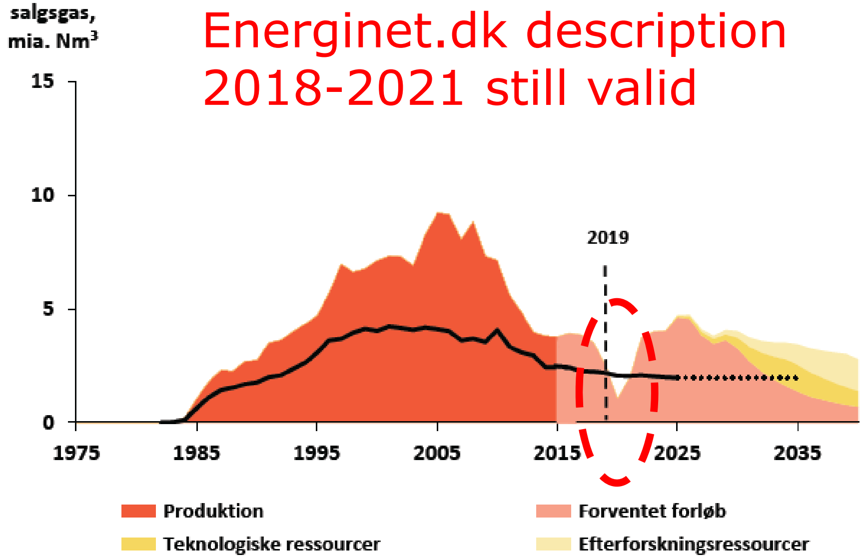
New DEA forecast - North Sea gas production

Energistyrelsen

Nyheder | Billeder & Videoer | Kontaktpersoner | Dokumenter

Energistyrelsen offentliggør nye produktionsprognoser for olie og gas

Nyheder • Aug 30, 2016 11:14 CEST



Figur 3. Produktion og langsigtet prognose for salgsgas

The way forward

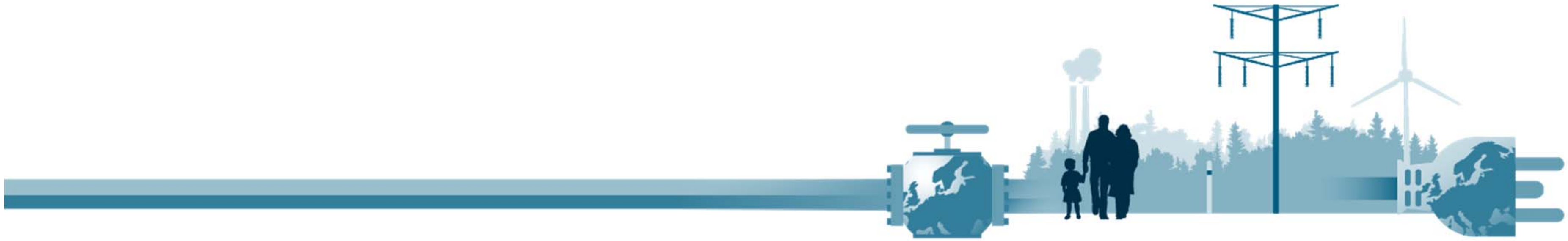
- **Q3 2016**
  - Bilateral meetings with market participants
- **Q4 2016**
  - Gather results from meetings
  - Draft concept paper
- **Q1 2017**
  - Dialogue with market (User Group & STF)
  - Final concept paper
- **Q2 2017**
  - Forward suggestion for method changes to DERA
- **Q4 2017**
  - Approval of method change by DERA
- **1 Oct. 2018**
  - Expected Tyra shutdown

★ = *Possibility for market to involve in solutions*

Ellund

Status on the capacity situation

Jeppe Danø & Christian Rutherford



REMIT 1 July 2016 – Energinet.dk

Message

Dear Christian Rutherford

New message from Gas Market Messages.

This message has been prepared by the undersigned. Energinet.dk acts merely as forwarder of the message, and assumes no responsibility for any errors, omissions or inaccuracies that may occur in the message.

Dear Shipper,

From the gas day 5 July 2016 Energinet.dk will temporarily reduce the yearly capacity towards Germany (Ellund Exit) from 10,000,000 kWh/h to 4,720,000 kWh/h. The reduction of capacity will affect the monthly auctions in August and September 2016 and the daily- and within-day auctions in July and August 2016.

The reason for the capacity reduction is a combination of two factors:

• Injection of biomethane to the Danish gas transmission
• Differences in the specification for oxygen content in the gas specified in the German 'Technische Regel DVGW G260' and in the Danish 'Rules for Gas Transport'.

We expect the temporarily reduction of capacity to last until 31 August 2016.

Kind regards
Energinet.dk

This e-mail was automatically distributed to all market participants registered as users on https://gasmarketmessage.dk.

Kind regards
Energinet.dk

REMIT message

- On 5 July 2016, Energinet.dk reduced the capacity at Ellund exit to approx. half of the original capacity
- New capacity level based on temporary technical solution in Denmark
- Reduction based on risk assessment

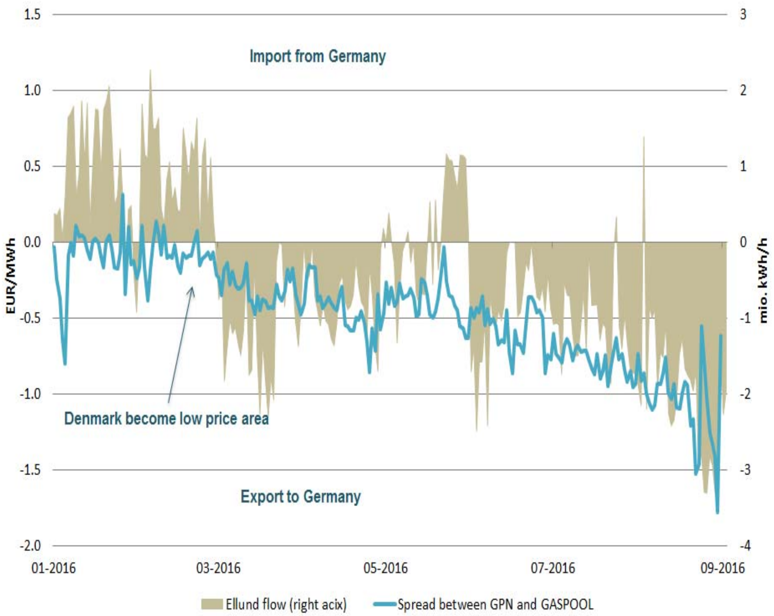
Background for capacity reduction

- Difference in gas quality specifications in Denmark and Germany:
  - Danish specification for oxygen level in transmission grid 5000 ppm
  - German restriction for sensitive assets 10 ppm

- The Bevtoft biomethane facility came direct onto the transmission grid in July 2016

- Risk of reduced flow/capacity on the German side of Ellund border point
- -> Technical solution at Egtved – Ellund pipeline
- -> Temporarily reduced capacity

Ellund – current flow situation



Source: Gaspoint Nordic, EEX og Energinet.dk Online

Flow situation

- Steady production in the North Sea and almost full storage facilities have resulted in low gas prices in Denmark, compared with Germany
- The price spread has reached a level where buying capacity day-ahead from Denmark to Germany can be profitable
- Capacity has been sold out on a few days, but the net flow is still far from the (lower) capacity limit

Status on process

- Energinet.dk has started an ”Oxygen Task Force” to assess all possible sustainable solutions whereby market distortions are avoided, eg:
  - Close dialogue with neighbour-TSO (Gasunie Deutschland) on operational procedures and solutions to the oxygen issue (INT NC)
  - Sustainable technical solutions in the transmission grid
  - Operational procedures in the Danish transmission system
  - Removing oxygen at the source

- As of 1 September 2016, Energinet.dk has repealed the temporary capacity reduction

- Statement to DERA on the capacity reduction – will be published on energinet.dk webpage.

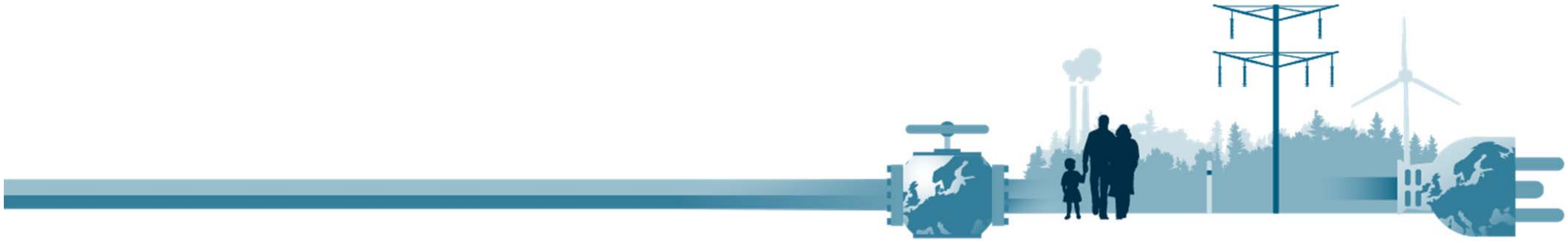
Next steps

- Further dialogue with neighbour-TSO
- Implementation of potential technical solutions
- Implementation of market measures to avoid bottlenecks at Ellund:
  - Within-day interruptible nominations (expected early 2017)
  - Harmonisation towards capacity booking procedure on German side -> Booking of firm and interruptible capacity in order of buyers' preference (analysis and market consultation on method proposal in autumn 2016)

NO-DK-PL project

Open Season - Introduction

Christian Rutherford & Julie Frost Szpilman



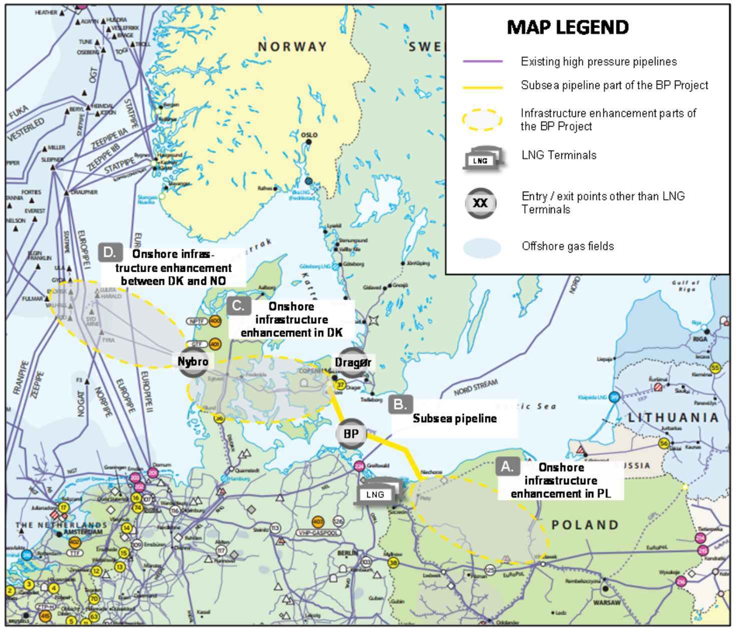
NO-DK-PL project – Brief recap

A. Infrastructure enhancement in Poland

B. Offshore pipeline between Denmark and Poland

C. Infrastructure enhancement in Denmark

D. Connection between the Norwegian offshore system and Danish infrastructure



What is Open Season in this project?

The **Open Season Procedure** is a binding phase of an open season.

For this specific project, an open season is conducted in order to determine the market participants' demand for capacity from Norway to Denmark and to Poland as well as from Poland to Denmark at the Gas Interconnection Poland – Denmark (Baltic Pipe)

The legal base for the OS procedure is:

- Directive No 2009/73/EC of 13 July 2009 of the European Parliament and of the Council concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC,

- The Regulation of the European Parli … July 2009 on conditions for access to the … ng Regulation No 1775/2005/EC,

- The Commission Regulation (EU) No … Network Code on Capacity Allocation … supplementing Regulation (EC) No 7 … Council

- The ERGEG Guidelines for Good Practice on Open Season Procedures (Ref. C06-GWG-29-05c).

The regulation ensures transparency and equal treatment of all participants

To be discussed with NRA's

ENERGINET DK

Expected process

Non-discriminatory

Transparent

Open Season 2017

Phase 1: Preparation

- Market test (done)
- Preparation and market hearing
- Open Season Notice
- Order to Proceed (OTP)

Phase 2: Allocation

- New capacity is offered
- Allocation via auction if over-demand

Exact details and timing are still in process - to be clarified

Details on phase 1: **Preparation**

Consultation with potential users

- Market test shows interest for primarily one route.

Preparation and market hearing

- Energinet.dk and Gaz-System to prepare rules for Open Season and material (the Open Season Notice)
- Rules and material will be subject to market hearing
- Close dialogue with NRA's (and approval in Poland)

Open Season Notice

- Final rules and material for the market

Order-to-proceed

- Binding bid for capacity early in the process

Details on phase 2: **Allocation**

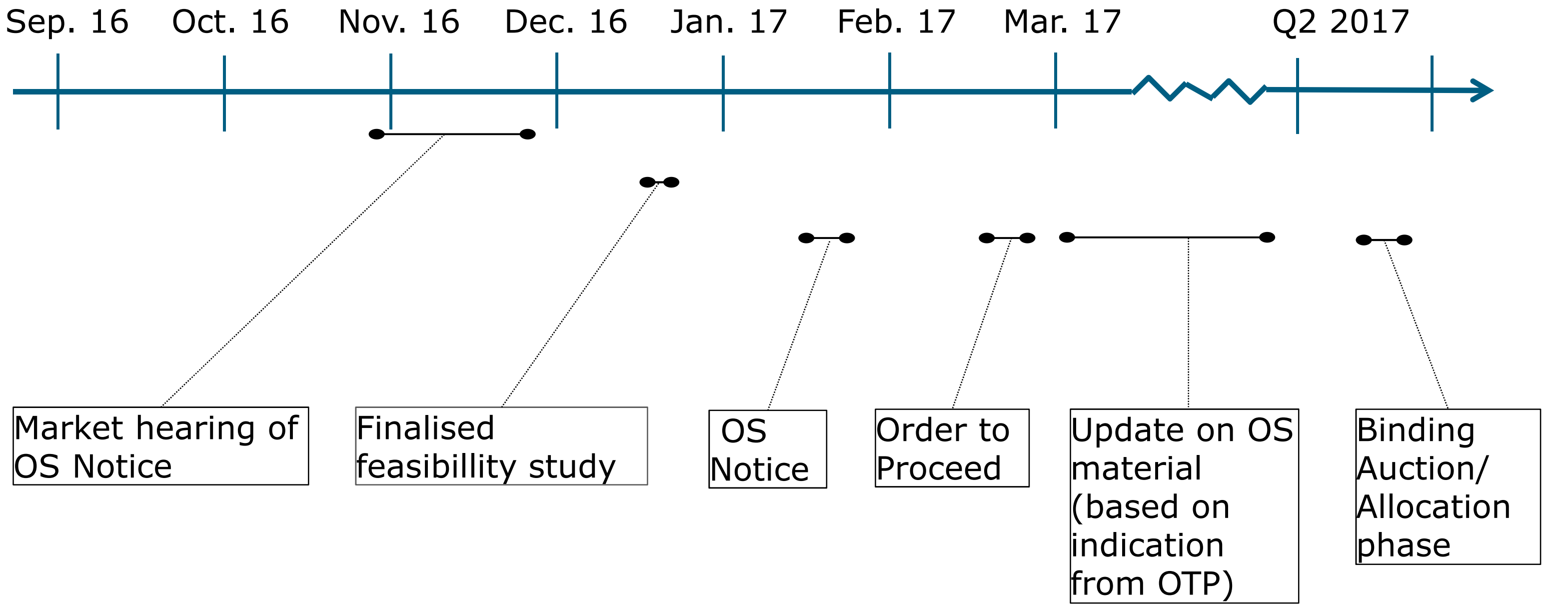
Offer of capacity

- Expected binding phase of Open Season I-II Q 2017
- The new version of CAM NC (including incremental capacity process) is expected to be agreed on in September 2016 and enter into force on 1 April 2017 (the process is not finalised yet)
- The final version may influence the offer and allocation method

Allocation via auction (if over-demand)

- If over-demand, allocation will be performed via auction
- Exact details will follow (dependent of new CAM NC version)
- Platform to be selected by Gaz-System and Energinet.dk

Indicative timeline for Open Season by Gaz-System and Energinet.dk



The shipper's possibility of involvement

- All shippers registered with Energinet.dk who have delivered a positive answer to the Market Test will be invited to a closer dialogue with Energinet.dk

- All other shippers are encouraged to contact us if they are interested in further dialogue

Contact information

Christian Rutherford, cru@energinet.dk
Julie Frost Szpilman, jfs@energinet.dk
Adam Marzecki, adam.marzecki@gaz-system.pl

Next steps

- Energinet.dk and Gaz-System will prepare rules and all other necessary documents for the Open Season 2017 procedure
- Official market consultations in Denmark and Poland on Open Season rules (separate workshop to be considered)
- Dialogue with NRAs in Denmark and Poland regarding the rules of the OS procedure (in Poland rules of allocation must be approved by NRA prior to the publication)
- Publication of the OS 2017

Coffee break and networking

We meet again at 14:45

Transparent and secure Trading | GASPOINT NORDIC

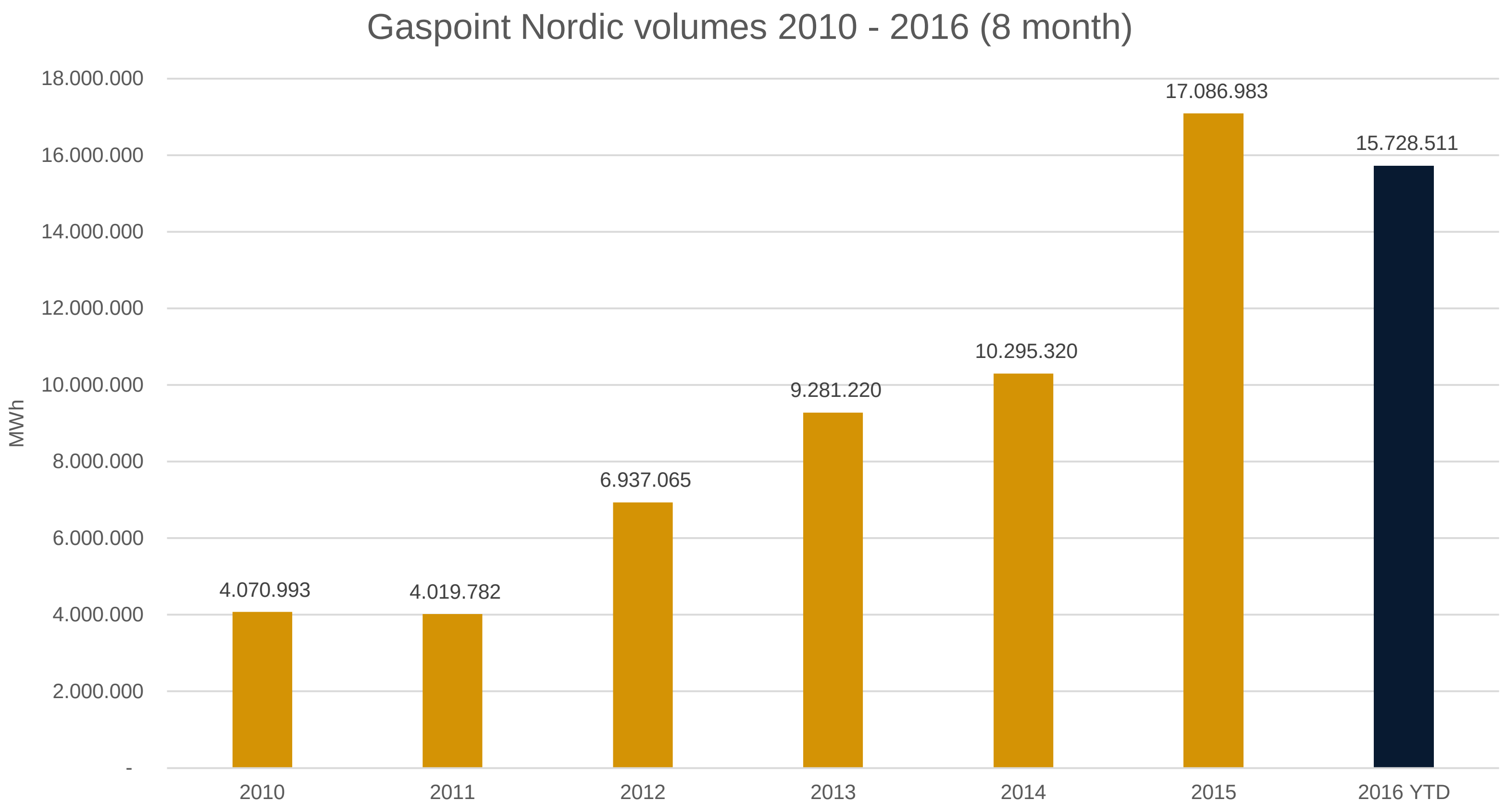
Gaspoint Nordic joins the PEGAS platform

Jacob Pedersen
Gaspoint Nordic

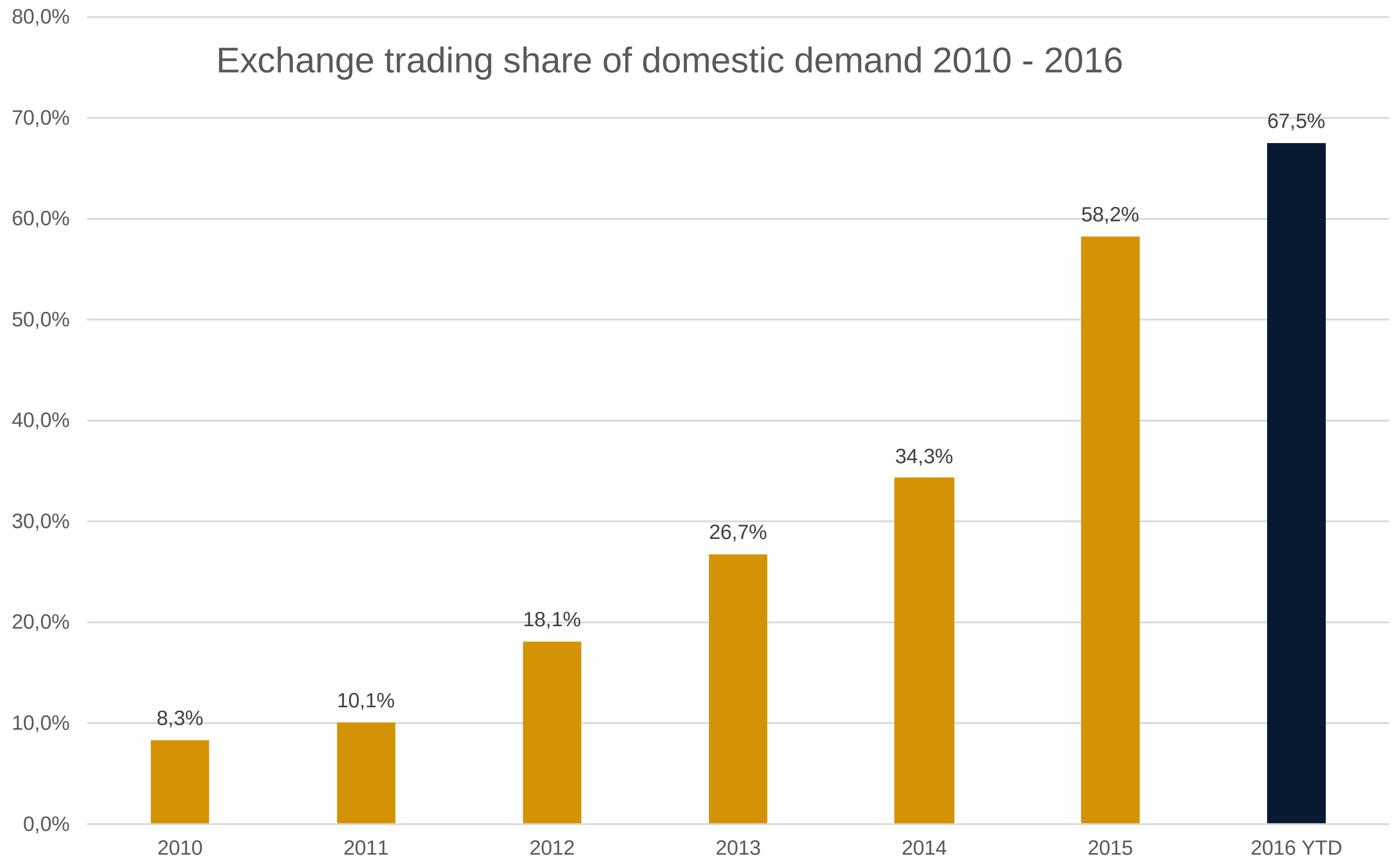
September 8th 2016

Transparent and secure Trading

Traded volume at Gaspoint Nordic

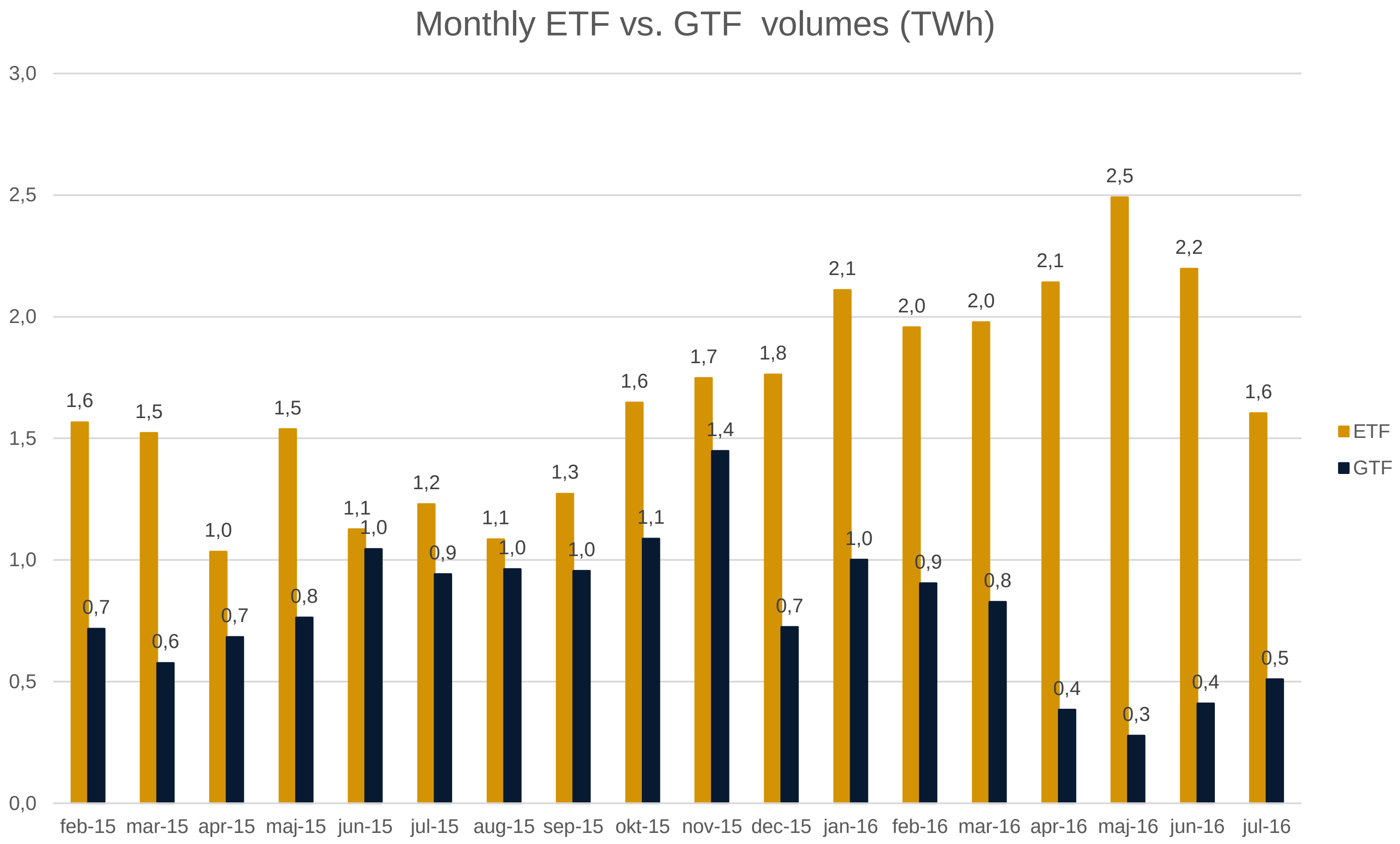


Market share of domestic market



Trading at EFT vs GTF

Volume at the ETF (Exchange Transfer Facility) still exceed the GTF (Gas Transfer Facility)



Transparent and secure Trading

Market Making at Gaspoint Nordic

New Market Making Schemes at the exchange

- Goal: To support more WD liquidity and a solid DAP price reference
- In order to support revised balancing rules based on more exposure towards the WD market
- Means: To establish one/more market making schemes that is likely to ensure daily WD trading through a tight spread. Less focus on presence and volume commitment – Market Making should work as a catalyst

Member	Product	Time	Days	Max spread	Volume bid/ask	Commencement
DONG Energy	Month Ahead	13:00 - 15:00	Exchange days	0.50	30	OCT-12
HMN	Dayahead	11:00 - 12:00	Exchange days	0.50	30	JAN-14
NGF Nature Energy	Within Day	11:00 - 12:00	Exchange days	0.25	30	MAR-16
NGF Nature Energy	Month Ahead	13:00 - 15:00	Exchange days	0.40	30	MAR-16
Danske Commodities	Within Day	11:00 - 12:00	Holidays/weekends	0.25	30	MAY-16

- Today four members act as Market Makers ensure price quotations 365 days per annum

Transparent
and secure
Trading

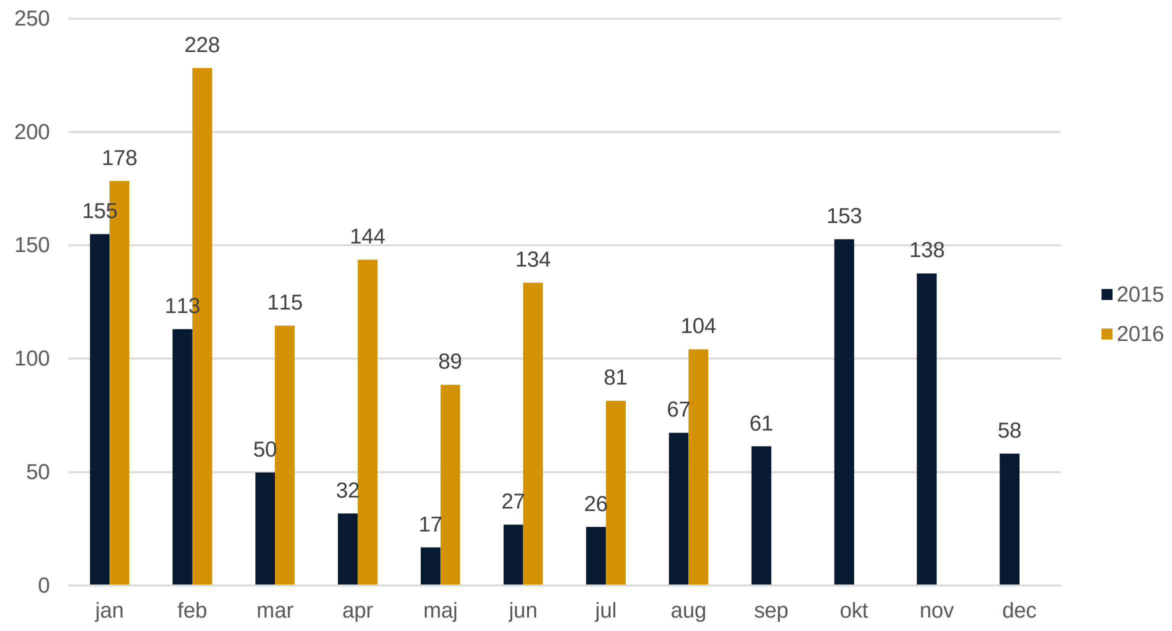
Market Making at Gaspoint Nordic

Within-day trade jumps on Danish exchange in August

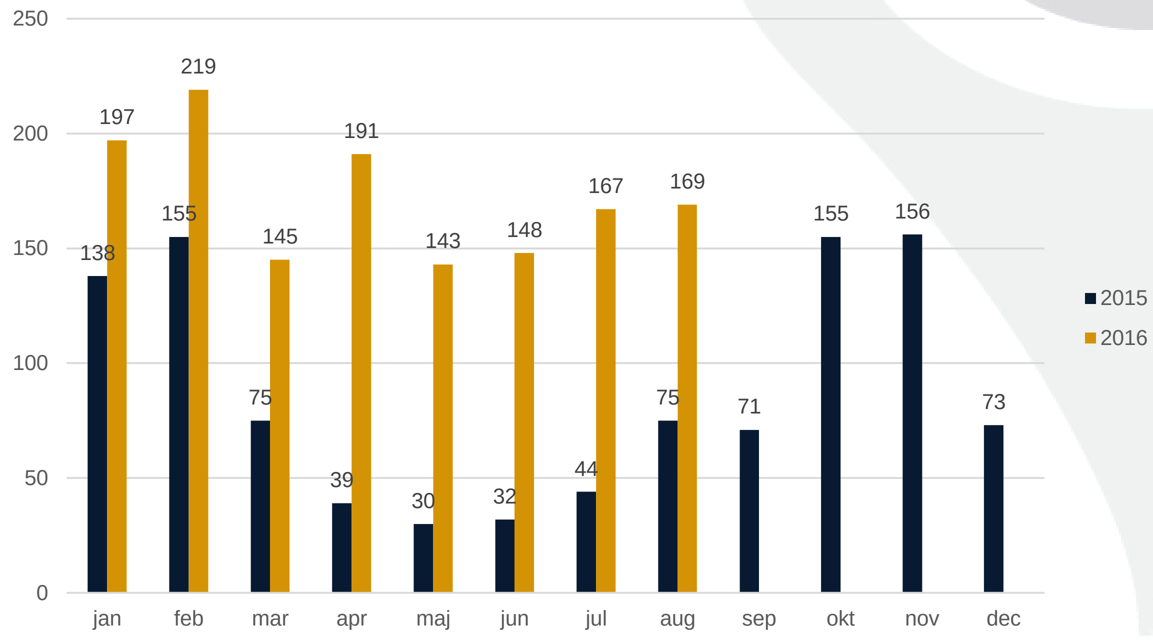
Within-day trade on Danish natural gas exchange Gaspoint Nordic (GPN) increased both month on month and year on year in August, despite month-on-month liquidity declines on all other exchange products.

Withinday trading is the fastest growing contract. 2016 trading already exceed full year 2015

Monthly WD trading 2016 vs 2015 (GWh)



Monthly WD trading 2016 vs 2015 (No. trades)



One rulebook for PEGAS and GPN products

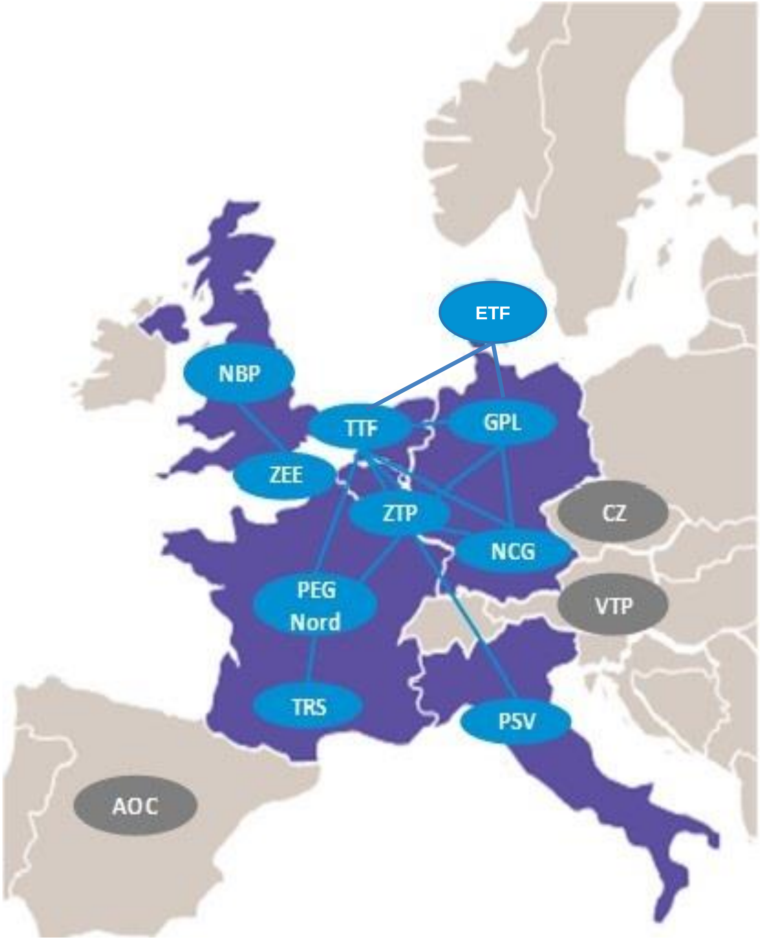
By the end of 2016…

- ETF products will be listed on the PEGAS platform operated by Powernext
- The new ETF Contracts on PEGAS will be very similar the Contracts traded at GPN today. Notably, delivery point of all PEGAS ETF contracts is the Danish ETF virtual trading point. All necessary information will be provided in the coming months.
- ETF M+1 will be listed as a Futures product and regulated by the French “Autorité des Marchés Financiers”. They will be available on both Powernext markets: Regulated and non-MTF.

Benefits for customers

- One rulebook to access GPN and PEGAS products including:
  - All GPN existing products integrated in PEGAS rulebook
  - OTC Clearing services extended to ETF M+1
  - Spreads with TTF, NCG and GASPOOL for all products
- New products: Further down the curve will be offered based on customer feedback
- Reduced technical fees and the possibility to set up shift traders

Detailed products and services offering



Spot markets

- Within-Day
- Day-Ahead
- Weekend
- Saturday
- Sunday
- Individual Days

Futures Regulated Markets

- Month + 1

Non-MTF markets

- Month + 1

Further maturities to be launched depending on customer demand

Spreads trading facility with TTF, GPL and NCG

Trade registration for futures contracts

Bilateral trade clearing at ECC

Combined cash limits

Will be available for ETF Hub for Spot and M+1

Data and indices

All customers will have a free access to PEGAS ftp

GPN Spot Index history will be published in GPN website

Transparent and secure Trading

Thank you

Questions or comments please contact

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Ownership of DONG Gas Distribution A/S changes to Energinet.dk

Presentation for Global Shipper’s Forum

8 September 2016

Agenda

1. Energinet.dk and the ownership of Dansk Gas Distribution A/S by Torben Brabo	10 mins.
2. Introduction to Dansk Gas Distribution A/S by Christian Parbøl	10 mins.
3. Round-off and closing questions by Torben Brabo and Christian Parbøl	5 mins.

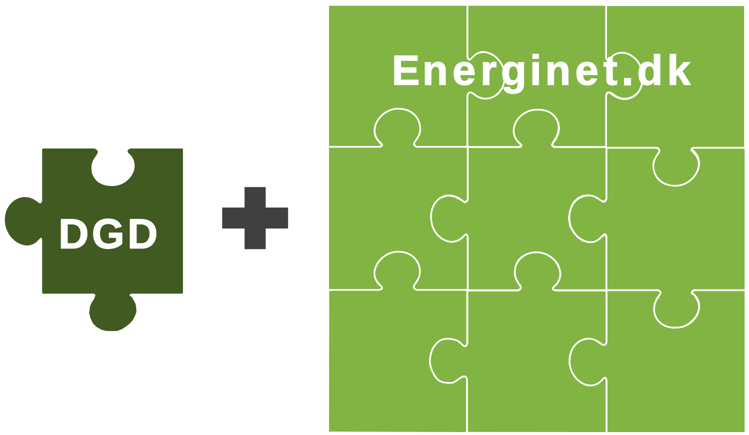
Energinet.dk grows with the acquisition of DONG Gas Distribution A/S

Background

- Energinet.dk will acquire DONG Gas Distribution A/S on 30 September 2016 and will thereby take over the ownership of the gas distribution activities in South Jutland and South and West Zealand.
- The acquisition will entail that DONG Gas Distribution A/S changes name to Dansk Gas Distribution A/S.
- A variety of activities will be conducted to ensure that Energinet.dk is ready for taking over the operation of DONG Gas Distribution A/S as at 30 September 2016. These activities involve preparation related to the organisation, systems, customer relations, suppliers, the new employees from DONG – and a number of other conditions.
- As part of the purchase agreement, Energinet.dk has entered into a transition agreement with DONG. The transition agreement runs until end-2017 and will ensure a smooth ownership transition.

Dansk Gas Distribution A/S will be a company in its own right

Dansk Gas Distribution A/S in Energinet.dk



Dansk Gas Distribution A/S will be established as an independent company in Energinet.dk SOV.

Principles behind the gas distribution ownership

Dansk Gas Distribution A/S is an independent company

- Independent and active board
- Dedicated daily management (directors)

Dansk Gas Distribution A/S is to have its own independent strategy

- Must be operated within its own commercial logic and thus does not support TSO agenda/tasks

Gas distribution remains under the revenue cap regulation

The starting point of the integration with Energinet.dk was to make sure that a new separation could be performed without unnecessary additional costs

- If this should become relevant later

Agenda

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Approximately 122,000 customers will receive gas distributed by Dansk Gas Distribution A/S

Key activities

Core services	• Distribution of gas to customers • Measurement of energy consumption • Surveillance of the distribution network and emergency services • Connection to the distribution network • Energy efficiency measures and obligations
Asset operations	• Establishment of network, meters and related equipment within the distribution area • Asset strategy and planning • Operation and ongoing maintenance of the assets
Regulatory activities	• Setting tariffs and conditions for access to the network • Regulatory compliance • Stakeholder management • Influence on the regulation of gas distribution activities in Denmark • Markets analysis

Key facts

Number of customers:	**121,836**
Pipeline system (kilometres):	**6,584**
Number of M/R and DR stations:	**456**
Distributed gas (million Nm³)	**668**
Distributed energy (GWh):	**8,122**

Dansk Gas Distribution A/S after change of ownership

- Staff transferred from DONG Energy – empty seats being recruited.
- Continue to be a critical infrastructure in a regulated environment.
- Focus on separation from TSO instead of separation from sales activities.
- Basic values are similar in Energinet.dk group – safety/reliability/professionalism

Impact of the change of ownership – externally

Business as usual

- Only a number of modifications of a practical nature – contact information and CVR number.
- Core operational team transferred from DONG Energy.
- Agreements with DONG Energy Services in a transitional period until end-2017 – invoicing, customer service and monitoring of the gas distribution network.

Contracts and invoicing

- Supplier agreements are transferred with the existing rights and obligations.
- Settlement and invoicing will continue unchanged until end-2017.

No changes in IT processes for gas suppliers

- All processes in relation to meter readings, meter data and invoicing between gas suppliers and Dansk Gas Distribution A/S will continue unchanged.

No changes for customers

- There will be no changes in prices and gas distribution terms.

The new logo for Dansk Gas Distribution A/S

Focus areas for Dansk Gas Distribution A/S

Establish an independent gas distribution company with:

- Business as usual
- Own strategy with a clear focus on gas infrastructure
- Less bureaucracy, more agility and flexibility
- An open approach where the market and stakeholders are invited to a continuous dialogue
  - Customers – consumers and producers
  - Gas suppliers
  - Municipalities and authorities
  - Etc

Examples of possible focus areas for Dansk Gas Distribution A/S:

- Effectiveness in planning, construction, operations and maintenance
- Competitiveness towards other types of energy – in the green transition
- Biogas – effective connections and stable operations
- Development in the structure of the gas distribution sector and in the market model in the gas retail market

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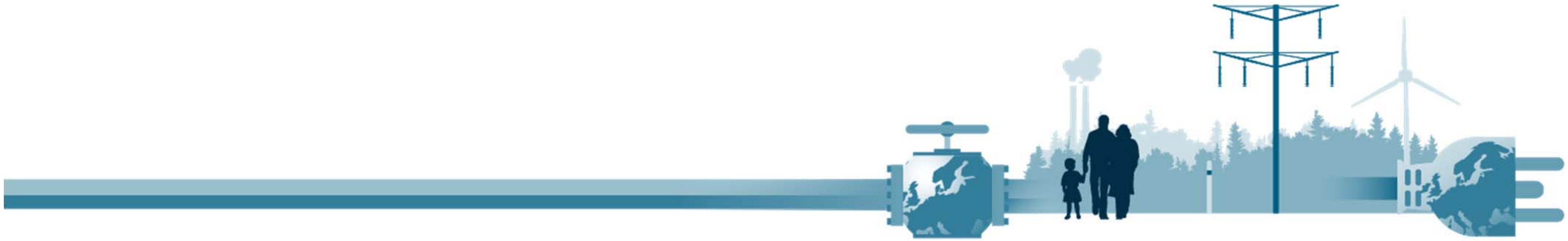
?

Energinet.dk Gas Storage

Shippers' Forum 8 September 2016



A stop in the maintenance project

- Energinet.dk Gas Storage initiated a year ago a preventive renovation project of the cavern TO-6 at Lille Torup
- In spring, TO-6 volume capacity was not offered to the market for SY16
- The renovation project is in its final phase, where cavern TO-6 is filled with brine
- However, the Environmental Board of Appeal (Natur- og Miljøklagenævnet) has stopped the project
- We await the final decision from the Environmental Board of Appeal in order to remove brine from TO-6
- Alternatively, we may have to find another solution in order to empty brine out of TO-6
- Conclusion:
  - TO-6 volume capacity will not be offered in SY16
  - In any case, no customers will be affected since no gas or capacity from TO-6 is in play

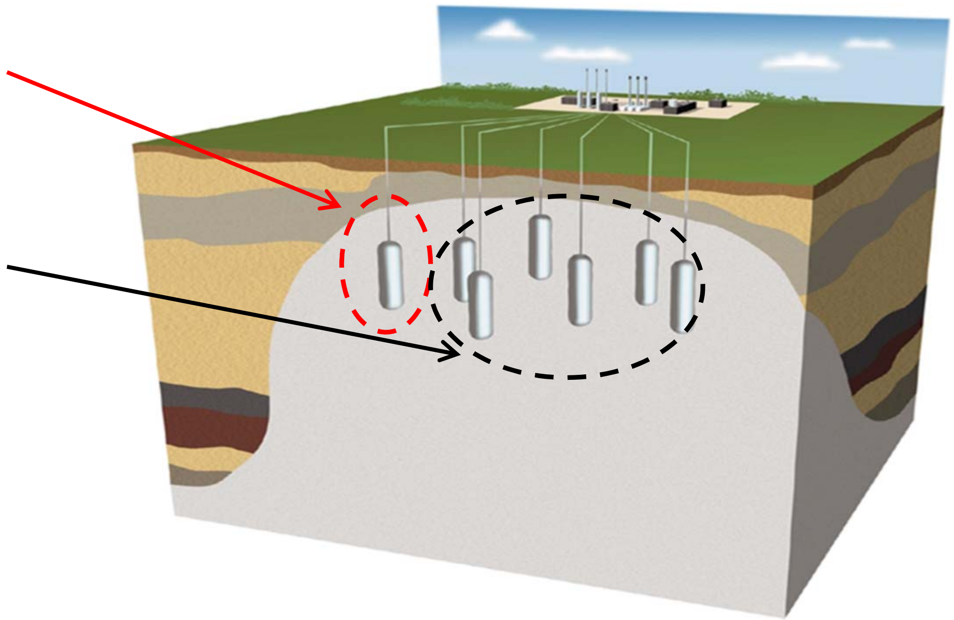
Overview of the total Danish gas storage and TO-6 capacity

TO-6: The cavern is filled with brine. The capacity is approx. 65 million Nm^3 or 786 GWh. This capacity is not part of the commercial volume in 2016.

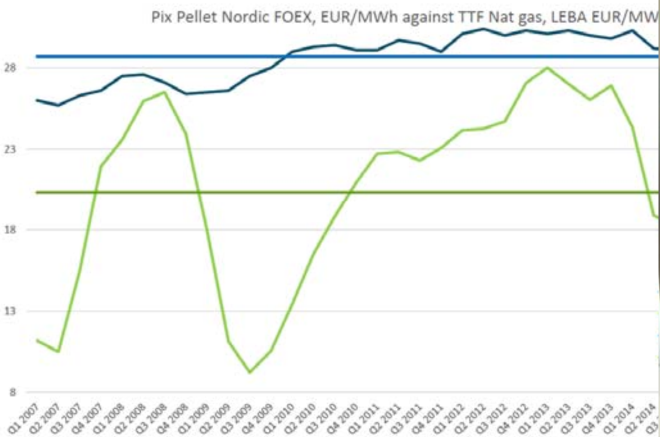
The remaining 6 caverns at Lille Torup are fully functional and hold 386 million Nm3 or 4.6 TWh.

The total Danish gas storage capacity is approx. 1 billion Nm3 or 12 TWh. TO-6 holds around 6% of the total Danish gas storage capacity.

The commercial capacity for SY17 will be approx. 11.2 TWh without the capacity of TO-6.



Gas competitiveness



ENERGINET.DK

Value of Assets

- Are infrastructure assets worth book value?
  - Distribution assets?
  - Offshore pipeline?
  - Transmission assets, how do we make sur
    available when we as a society needs the
    - For balancing intermittent Renewabl
    - For transporting Renewable Energy a
      electrolysis
- Cost plus regulation on book values may kill what consumption is left before the assets realise their potential in a renweable energy system
  - New Consumption
  - Level playing field against competition

Energinet.dk køber gasdistributionsnet af DONG Energy A/S

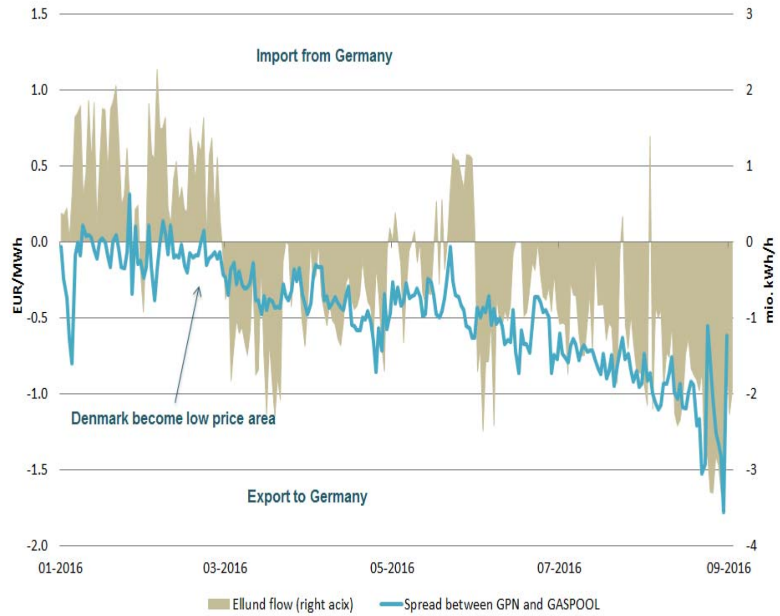
Energinet.dk har i dag, tirsdag, skrevet under på at købe DONG Energys gasdistributionsnet for 2,325 mia. kr.

And Finally

- ***Ceterum censeo Carthaginem esse delendam,***
  - ***Cato the Elder, (234 – 149 BC)***

- Furthermore, I consider that Carthage must be destro

- From DERA report December 2015 / January 2016
- **Chapter 5: Analysis of gas prices and gas flows at Ellu**
  - DERA has observed gas flows contrary to price sig period 1 January 2014 to 30 June 2015.
  - DERA considers that, for a period, it will be necess prices in the Danish, German and Dutch markets. I will ask market players to account for their comme on flow direction.



Source: Gaspoint Nordic, EEX og Energinet.dk Online

IF I WERE ENERGINET

Shippers' Forum 8 September 2016

Peter Biltoft-Jensen

DONG Energy is one of the leading energy groups in Northern Europe

DONG Energy is engaged in developing, constructing and operating offshore wind farms, generating electricity and heat from our power stations, providing energy to residential and business customers and oil and gas production.

DONG Energy has 6,700 employees and is headquartered in Denmark.

- Wind Power
- Bioenergy & Thermal Power
- Distribution & Customer Solutions
- Oil & Gas

If I were Energinet

Main task (shipper view): *Secure, transparent, effective and interconnected market.*

- Is it transparent ? ✓
- Is it open ? ✓
- Actively engage in dialogue on specific issues ? ✓
- Is it cost-efficient ? ✓ Awaits BM

Is there reason to be concerned ?

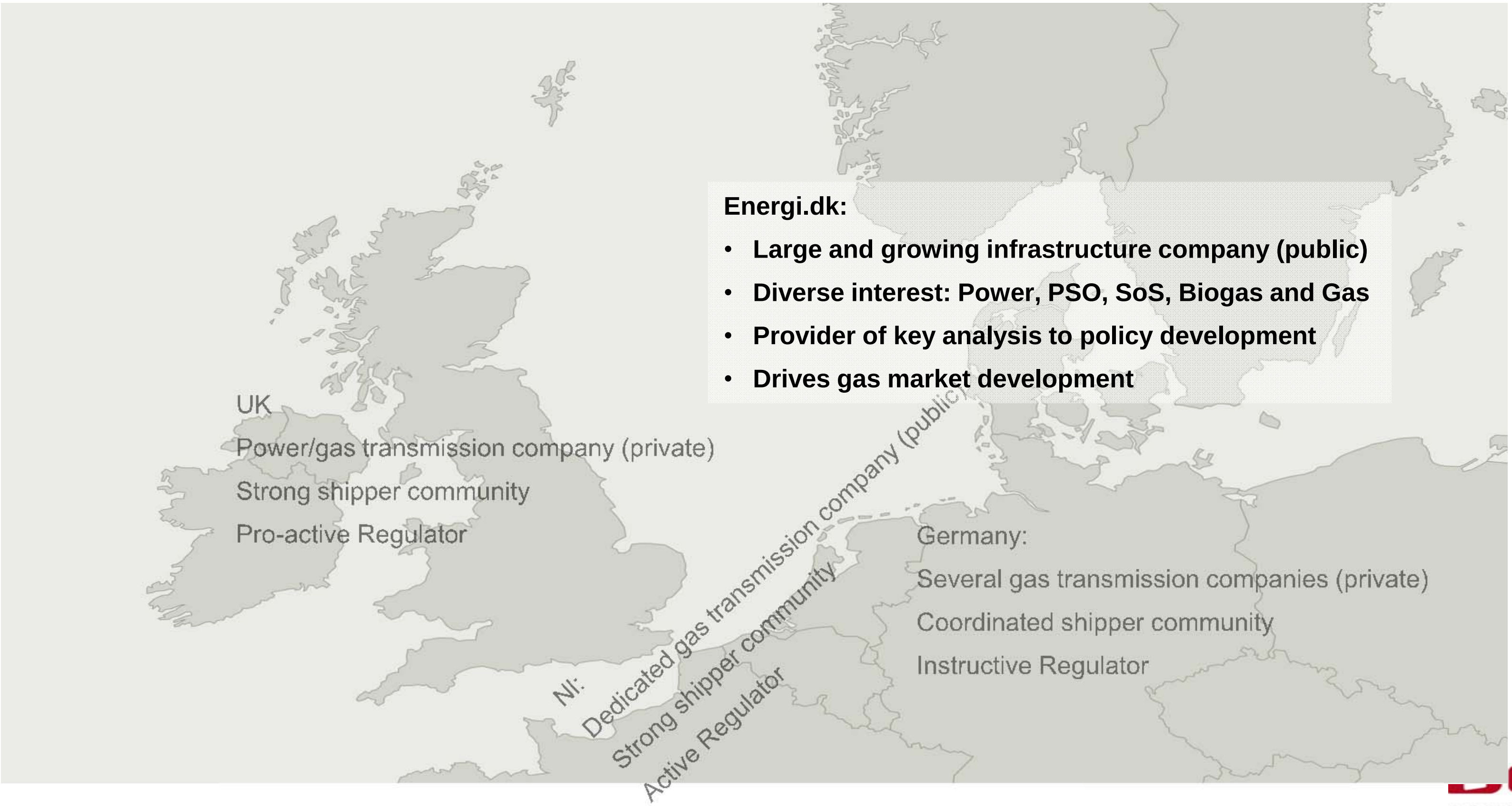
DONG energy

Gas Market Set-up & Governance

The step back. Development of Energinet (gas) from 2003 - 2016

- Gastra (03)
- Energinet - Law on ENDK (05)
- Ll. Torup storage facility (06)
- Open Season (09)
- First DK biogas (11)
- 3rd package - ENTSOG (13)
- Ellund expansion (13)
- Stenlille storage facility (15)
- DONG Gas Distribution (16)
- Offshore system ?

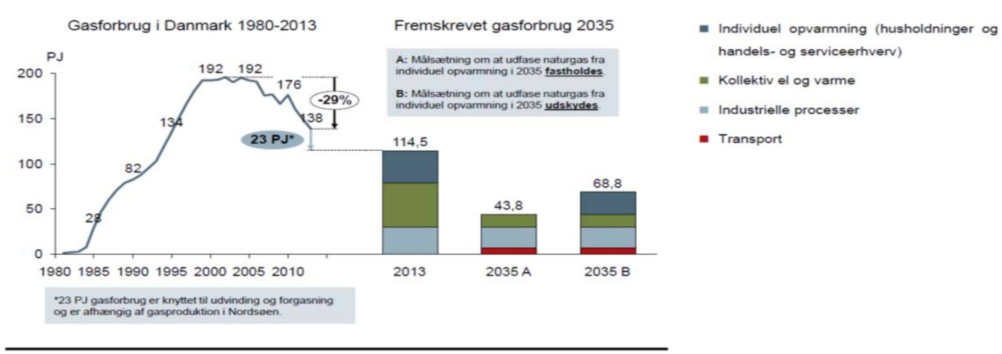
Gas Market Set-up & Governance



Gas Market Structure in Denmark

Large and growing power and gas infrastructure company, policy developer and executer

Figur 1 Gasforbrug i Danmark i dag og i 2035.



Kilde: 1980-2013: Energistatistik 2013 (Energistyrelsen). 2035: Egne beregninger.

in a diminishing market

– is the balance right ?

Issue

➔ ***Issue for Gas Market Governance for a secure, transparent, effective and interconnected market***

- ➔ *Example in case is the current “Gas Quality Issue”.*
- ➔ *Disproportionate expansion in DK and Germany*
- ➔ *Harmonised approach on implementation, eg CAM/interruptible capacity implementation*

- ➔ *Gas’ champion ?*

Answers….

- Enlarge the market / Join Gaspool
- Energinet focus on core gas market issues

- Regulatory supervision
- Stronger shipper community

THANK YOU

Shippers' Forum 8 September 2016

DONG energy

Thank you for your attention ☺

See you at the next Shippers’ Forum on

8 December 2016