



HOST



EMERGENCY
EXIT



DEFIBILLATOR
(AED)



MEETING POINT



SHIPPERS' FORUM

15 March 2018

PROGRAMME

12.00	<i>Lunch and networking</i>
13.00	Welcome <i>Clement Johan Ulrichsen, Energinet</i>
13.10	Early warning in Denmark <i>Christian Meiniche Andersen, Energinet</i>
13.30	Security of supply situation in 2018 <i>Christian Meiniche Andersen, Energinet</i>
13.40	Tyra Shutdown 2019-2022 <i>Claus Møller Petersen & Christian Rutherford, Energinet</i>
13.55	Status and time schedule on the Baltic Pipe project <i>Christian Rutherford & Johnny T. Holst, Energinet</i>
14.10	Financial Status on balancing <i>Christian Rutherford, Energinet</i>

14.20 Coffee break and networking

14.50	Joint Balancing Zone DK-SE <i>Poul Johannes Jacobsen & Signe L. Rasmussen, Energinet</i>
15.00	International – EU commission analysis <i>Nicolai Sørensen, Energinet</i>
15.10	View from a new shipper <i>Henrik Iversen, SEAS-NVE Strømmen A/S</i>
15.35	Capacities – Storage Year 2019 <i>Hans-Åge Nielsen, Gas Storage Denmark</i>
16.00	<i>End of programme</i>

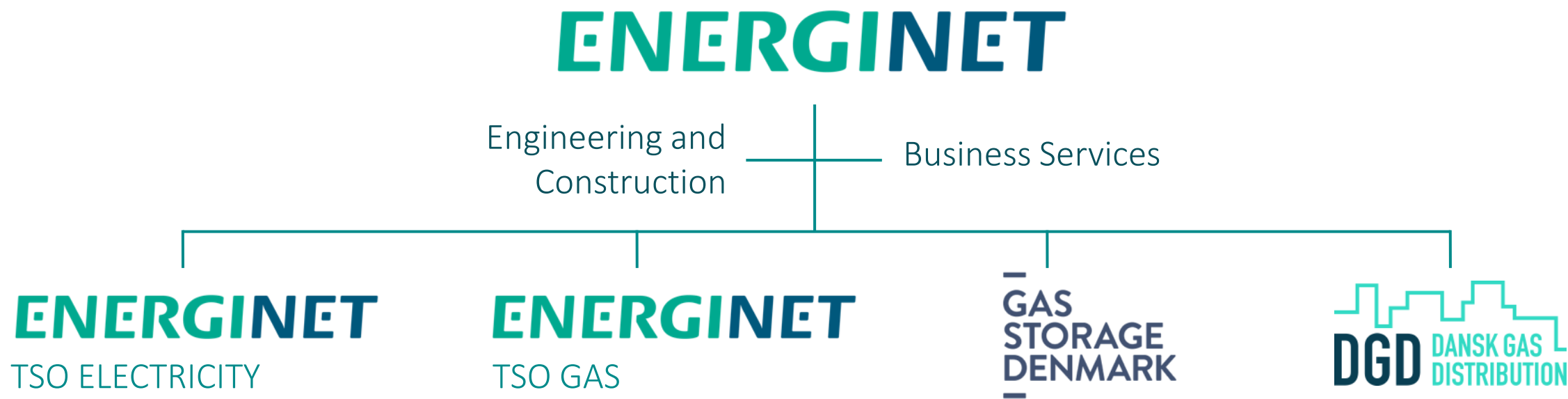
THOMAS EGEBO TO BE NEW CEO

Permanent Secretary of the Ministry of Energy, Utilities and Climate to become Energinet's CEO on 1 May 2018 at the latest.



TSO GAS TO BE SEPARATE LEGAL ENTITY

- 1) TSO GAS will become a separate legal entity with a new company identification number
- 2) Bank information has changed. Shippers have been notified via letter.



ENTSOE AUCTION CALENDAR FOR 2018/19

Changes to start dates of years and quarters published

Yearly auction start date

1st Monday in July (instead of March)

Quarterly auctions start dates

1st Monday in August, November, February and May

[Click here to find press release](#)

Auction times



Product	Frequency of auctions	Number of products per auction	Publication of available capacity	Start of the auction	Bidding rounds	Notification of allocation results to participants	Auction type
Auction calendar for firm capacity types							
Year	annual	min Y5 to max. Y15	1 month before the start of the auction *	1st Monday of July	First round 3h: 09:00 - 12:00	No later than the next business day ***	Ascending clock auction
Quarter	quarterly	Q1 to Q4 Q2 to Q4 Q3 to Q4 Q4	2 weeks before the start of the auction *	1st Monday of August 1st Monday of November 1st Monday of February 1st Monday of May	Following rounds: 13:00 - 14:00 15:00 - 16:00 17:00 - 18:00		
Month	monthly	M1	1 week before the start of the auction *	3rd Monday of the month			
Day	daily	D1	With the start of the auction	16:30	30 minutes		
Within day	hourly	h+4	With the start of the auction	every hour	30 minutes	No later than 30 minutes ****	Uniform price auction
Auction calendar for interruptible capacity types							
Year	annual	min. Y5 to max. Y15	One week before the auction starts **	1st Monday of August (to be confirmed)	First round 3h: 09:00 - 12:00	No later than the next business day ***	Ascending clock auction
Quarter	quarterly	Q1 to Q4 Q2 to Q4 Q3 to Q4 Q4		1st Monday of September 1st Monday of December 1st Monday of March 1st Monday of June	Following rounds: 13:00 - 14:00 15:00 - 16:00 17:00 - 18:00		
Month	monthly	M1		4th Monday of the month			
Day	daily	D1		With the start of the auction	17:30		
<p>Note: - time zone is Central European (Summer) Time - In some cases different auction times may apply</p>							

* 9:00
** 7:00

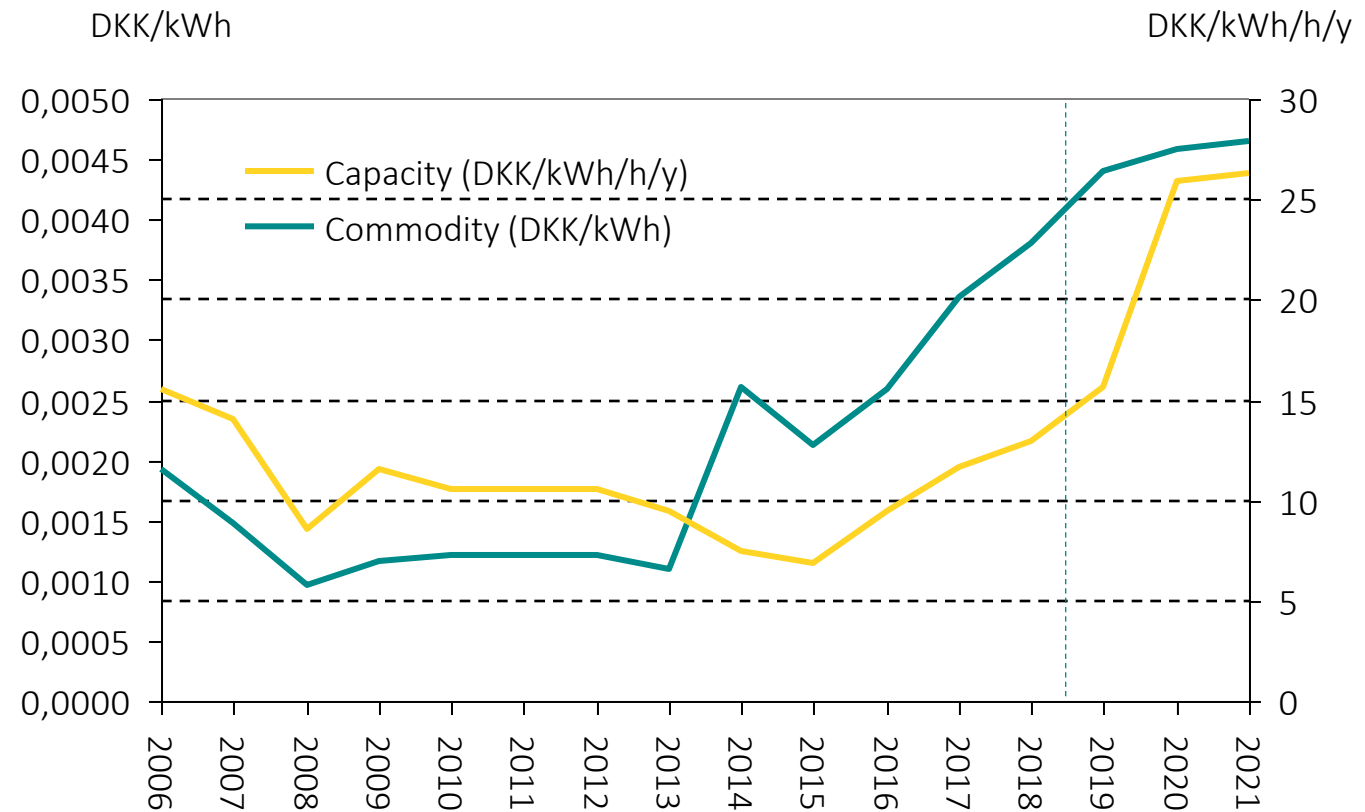
*** after the end of the bidding round



FORECAST OF TRANSMISSION TARIFFS

The tariff will increase under the Tyra shutdown due to decrease in capacity bookings and flow and increase in costs (mainly OPEX)

- Uniform tariff methodology expected from October 2019
- Based on a 60/40 capacity-/commodity-split in 2020-2021
- The tariffs for the coming gas year 2018/2019 based on the current differentiated tariff methodology
- The tariff for the gas year 2018/2019 to be published at the latest primo June 2018



NOTE: All information in are indicative and subject to approval by DERA and Energinet board.

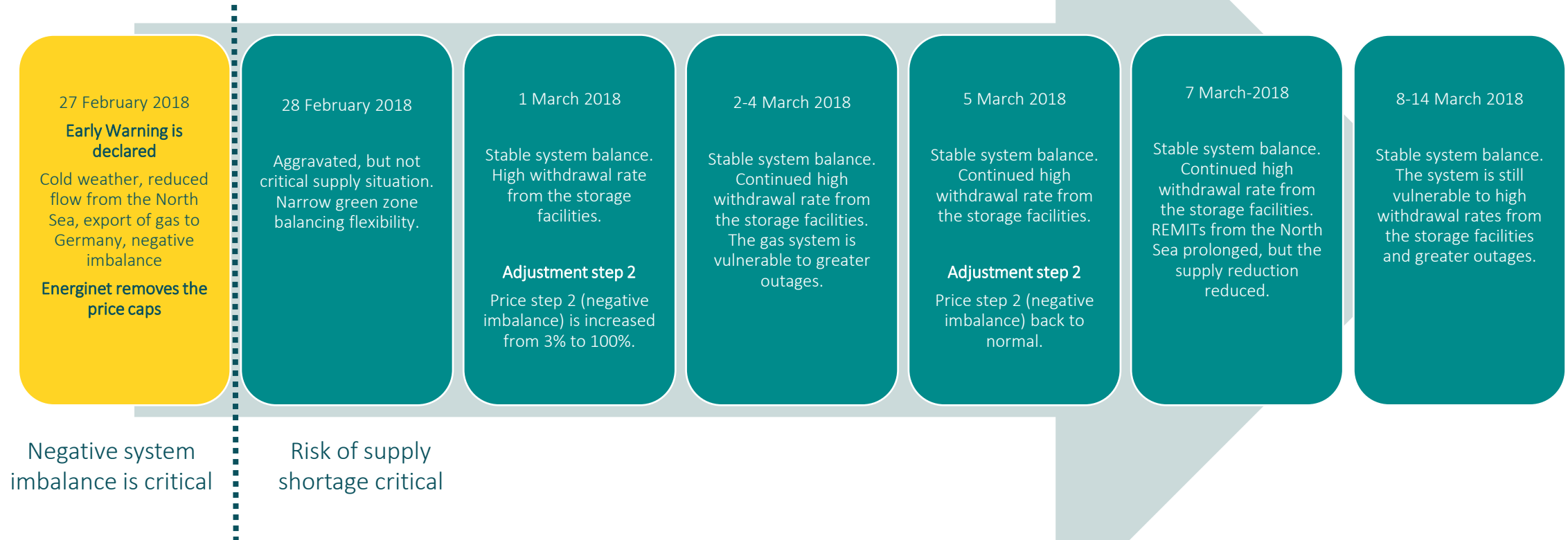
EARLY WARNING IN DENMARK

A walkthrough of the situation

Christian Meiniche Andersen

EARLY WARNING

Development of the supply situation from declaration of Early Warning Tuesday 27 February 2018.

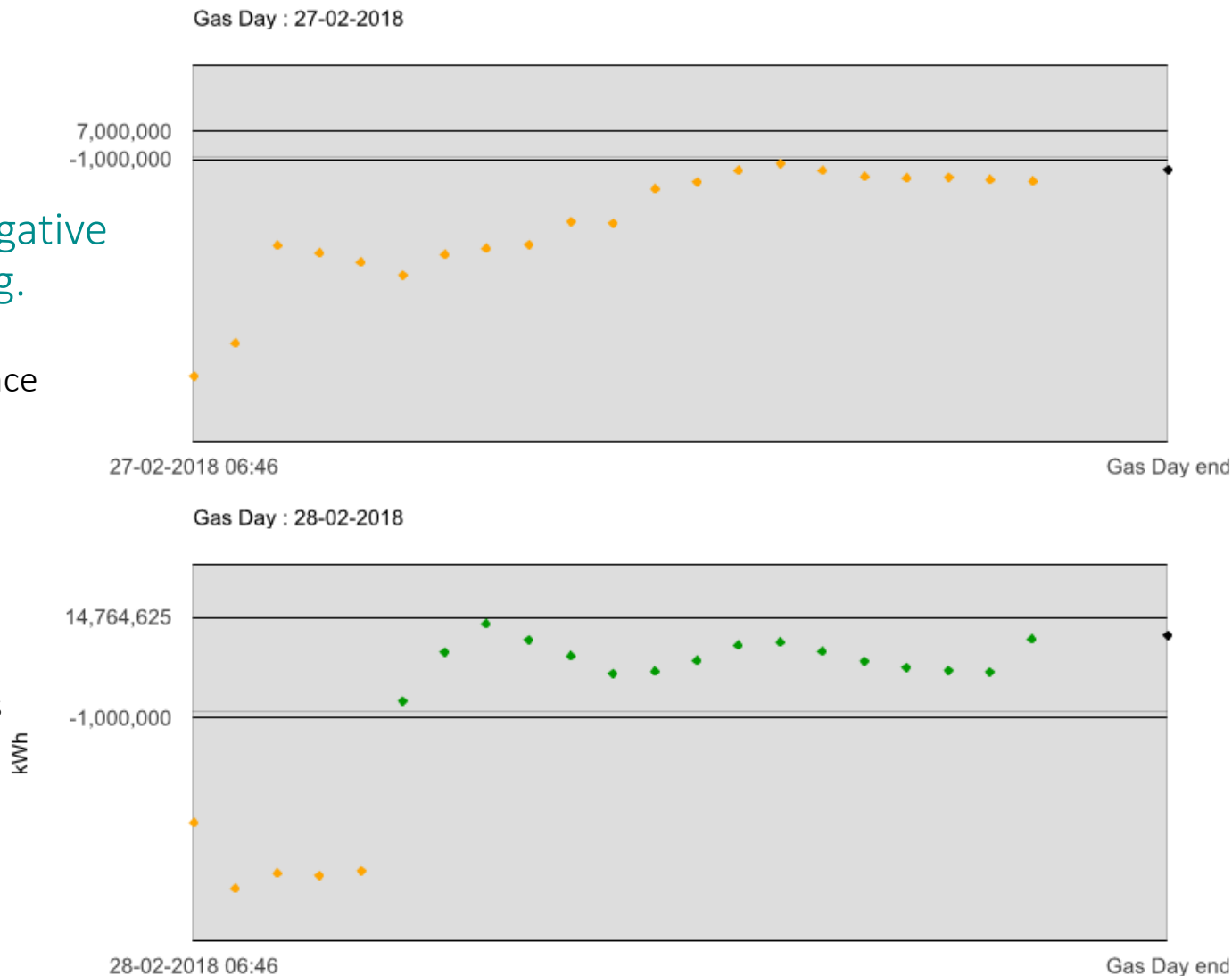


EARLY WARNING

The supply situation and a continuous negative system imbalance triggered Early Warning.

27 February 2018
Early Warning is declared
 Cold weather, reduced flow from the North Sea, export of gas to Germany, negative imbalance
Energinet removes the price caps

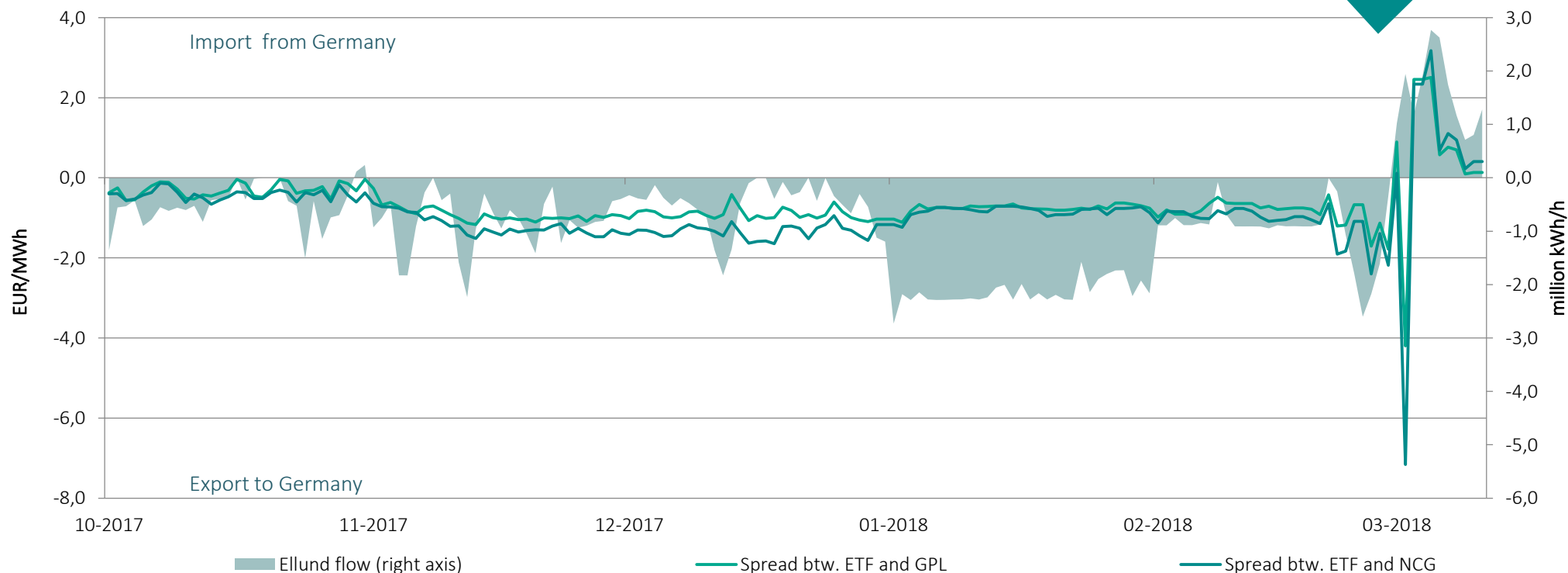
- The price cap on the imbalance price made it attractive to export gas to Germany.
- Together with declaration of Early Warning the price caps were removed.
- The day after declaration of Early Warning the Danish gas system was balanced.



EARLY WARNING

Price spreads towards Germany determines the flow at Ellund.

1 March the flow at Ellund turns



Source: Gaspoint Nordic, EEX and Energinet.dk Online

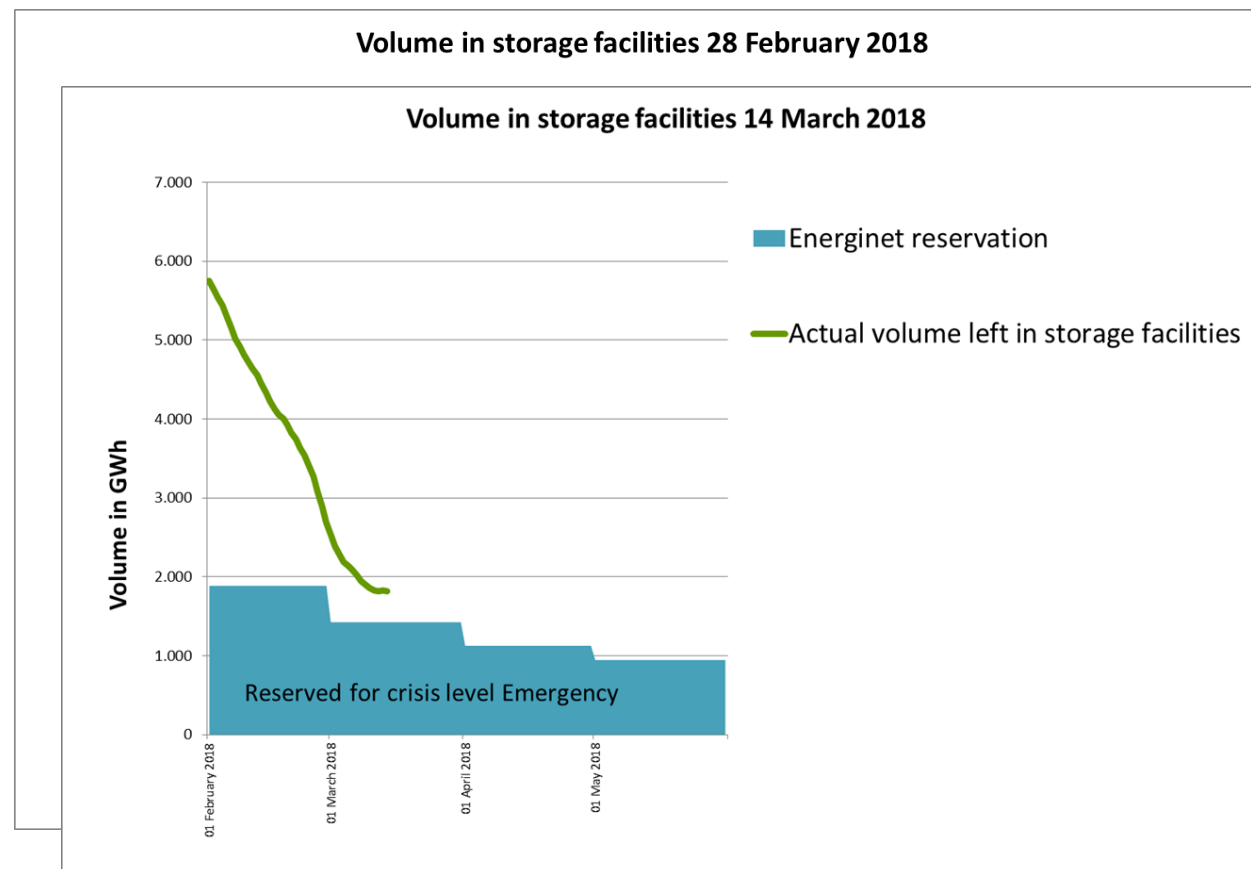
EARLY WARNING

Aggravated situation and risk of shortage of supply maintains the declaration of Early Warning.

1-14 March 2018

Aggravated situation.
Stable system balance.
High withdrawal rate
from storage, but
declining as the storage
filling is lowered.

- Focus on the withdrawal rate from the storage facilities.
- The lower the storage filling, the more vulnerable the system is to greater outages.
- High withdrawal nominations may lead to an escalation of the crisis level.



EARLY WARNING

STATUS

- The supply situation is currently stable.
- Prices in EU are increasing due to expected cold weather.
- The weather forecast reports colder temperatures again.
- No unexpected supply reductions from The North Sea.
- Unused capacity at Ellund.
- The system is vulnerable to outages.
- Supply of all customers is first priority.

RISKS

- Significant outages of the production from the North Sea.
- Higher spot gas prices in EU than in Denmark reversing the flow at Ellund.
- Temperatures below normal for the season.
- Continuously low inventory level in the Danish gas storage facilities.

HOW TO SUPPORT?

- Close attention to REMIT's from the North Sea
- Inject gas into the storage facilities.
- Import gas from Germany.
- Make quick readjustments if the situation changes.

QUESTIONS

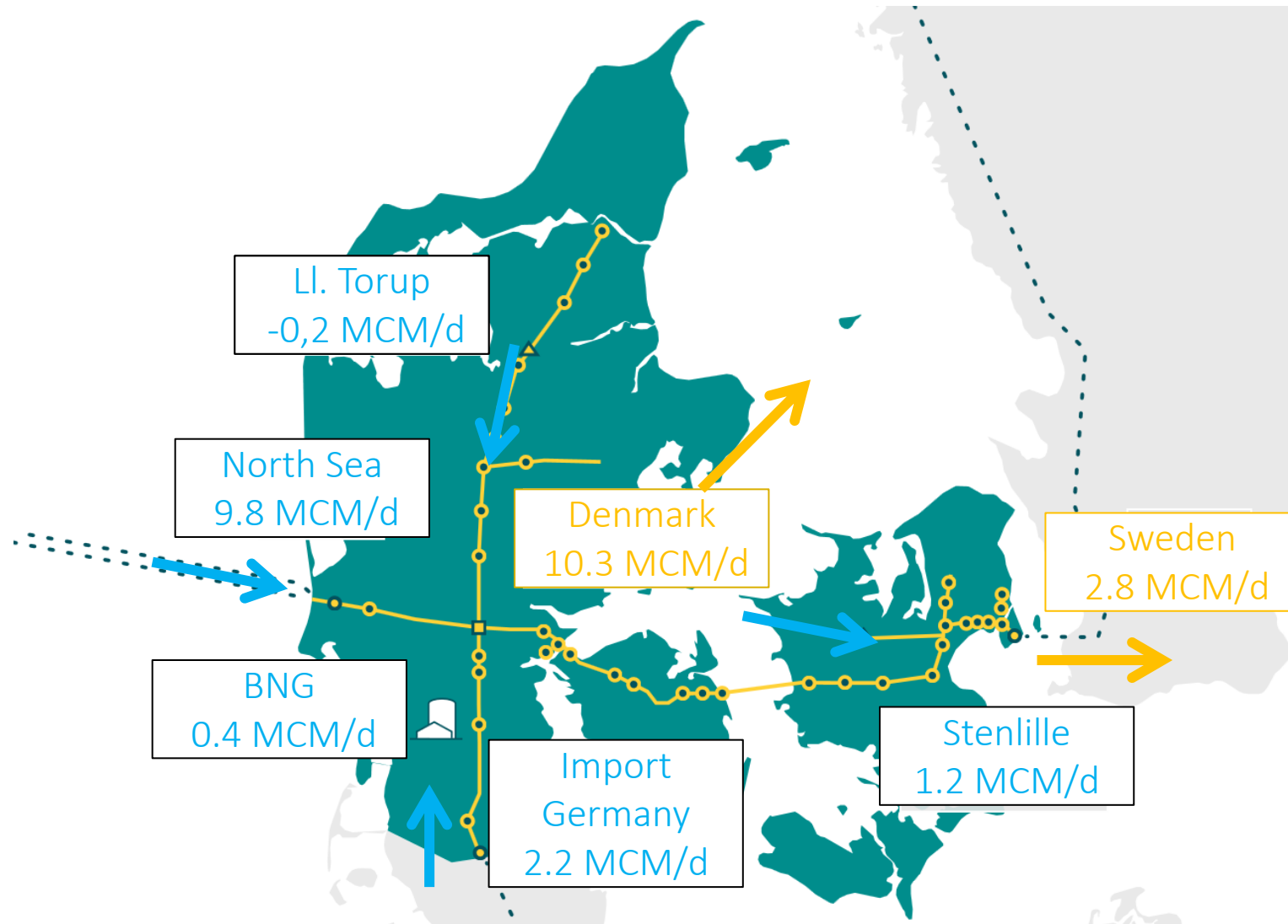




SECURITY OF SUPPLY SITUATION IN 2018

Christian Meiniche Andersen

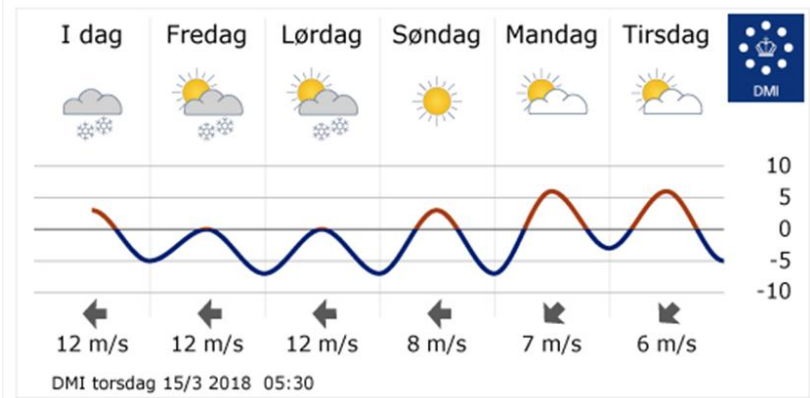
SUPPLY AND DEMAND 14 MARCH 2018



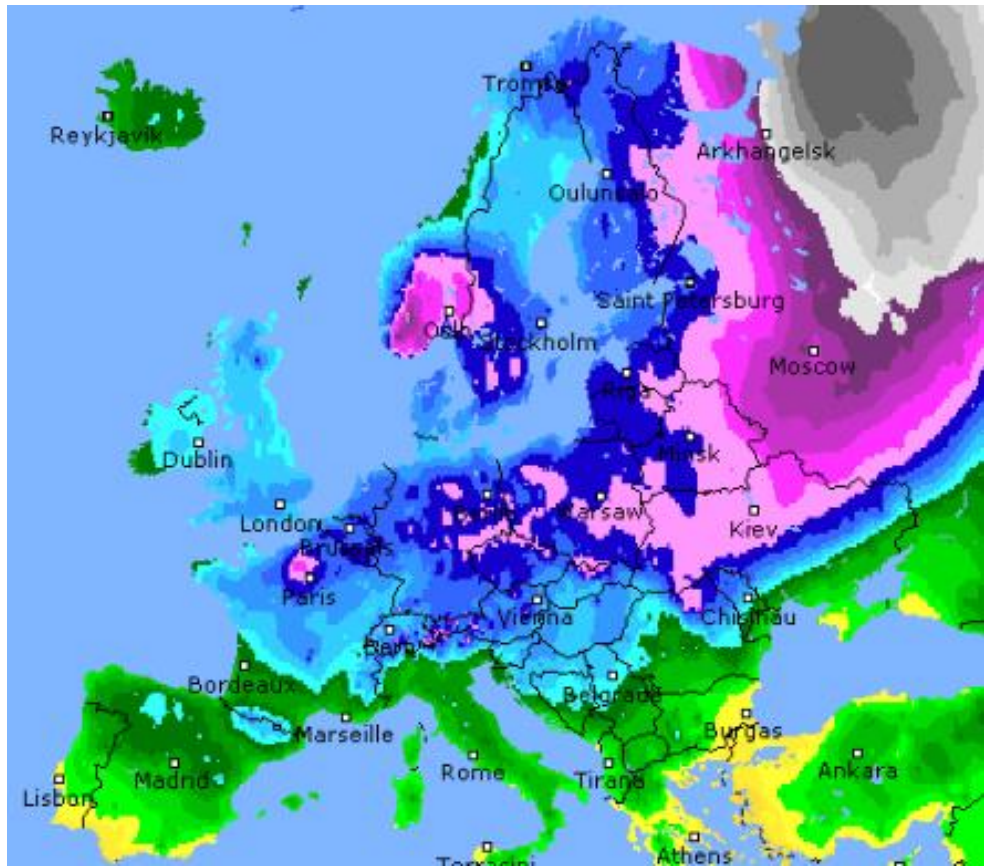
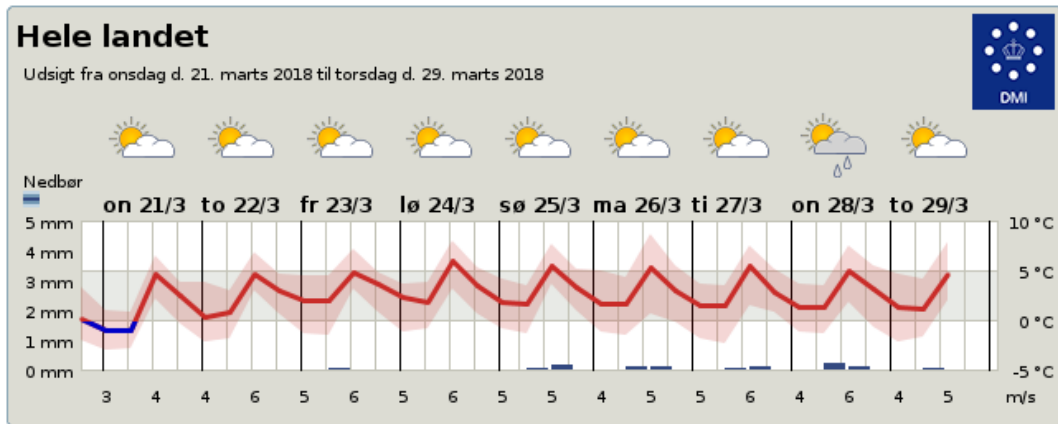
Point	MCM/day
Denmark	10.3
Sweden	2.8
Export Germany	0
Demand	13.1
North Sea	9.8
Storage withdrawal	1.0
Import Germany	2.2
BNG	0.4
Supply	13.4

WEATHER FORECAST DMI

Forecast this week



7 - 15 days ahead

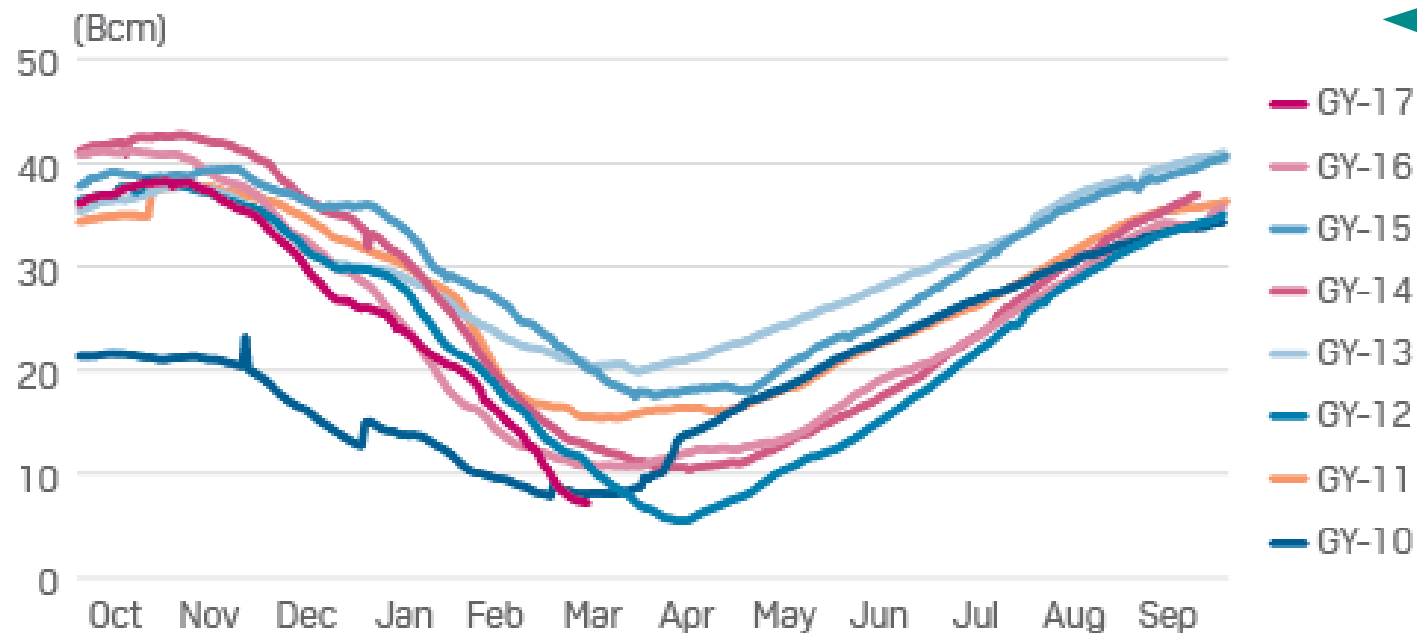


<http://www.dmi.dk/vejr/>

STORAGE FILLING IN EUROPE

The filling level in the European storage facilities is overall low.

NW EUROPEAN GAS STORAGE AT SEVEN-YEAR LOW



European storage facilities is roughly 23 % full

Source: S&P Global Platts Analytics

QUESTIONS



TENDER - SALE OF EMERGENCY GAS

The auction took place 27th of February 2018

- Bids were due at 12.00

In store title transfer

- The gas is delivered at the storage point and the transfer is nominated at the 1th of May in the first hour of the gas day.
- The Shipper do not have to pay injection fee to the storage.
- After the auction the Shippers receive an email that confirm their purchase or reject their bids

RESULT PUBLISHED AT OUT WEBSITE

The result of the auction

- Amount 150.000.000 kWh at a total price of 18.533.551 DKK
- Unit price =16,58 €/MWh

The screenshot shows the Energinet website's 'MARKET-BASED ACTIVITIES' page. The header includes the Energinet logo and navigation links for ELECTRICITY, GAS, INFRASTRUCTURE, and MORE. A breadcrumb trail reads: FRONTPAGE > GAS > TRANSPARENCY > MARKET-BASED ACTIVITIES. The main heading is 'MARKET-BASED ACTIVITIES' with a sub-heading: 'Sometimes Energinet enters the market in order to fulfill its duty to protect Denmark's supply of gas.' Below this, there are two columns. The left column is titled 'MOST RECENT MARKET-BASED ACTIVITIES' and contains a link 'This list shows our most recent market-based activities.' which is highlighted with a red box. Below this is the section 'DUTY TO PROTECT' with a paragraph: 'Energinet's primary role is to protect Denmark's supply of gas and sometimes we have to enter the market in order to fulfill this important task.' The right column is titled 'HISTORIC DOCUMENTS' and lists two documents: 'MARKET BASED ACTIVITIES 2016 >' and 'MARKET BASED ACTIVITIES 2015 >'.

[Link to the result on energinet.dk](https://www.energinet.dk)

An abstract geometric pattern of thin teal lines forming a complex, interconnected network of triangles and polygons, located on the left side of the slide.

TYRA SHUTDOWN 2019-2022

The Big Picture

Clement Johan Ulrichsen

TYRA SHUTDOWN: THE BIG PICTURE

Shippers must secure supply. Energinet provides the framework.

TSO planned measures

- Clear & adequate balancing pricing in Emergency
- Other market rules, information & surveillance
- More emergency gas in storage & commercial interruptibility
- More withdrawal capacity at Ll. Torup storage

TSO dialogue with GSD

- Lesson from current Early Warning:
- Measures to encourage sufficient storage filling before Emergency
 - E.g. filling requirements bundled with storage

Shippers' job!

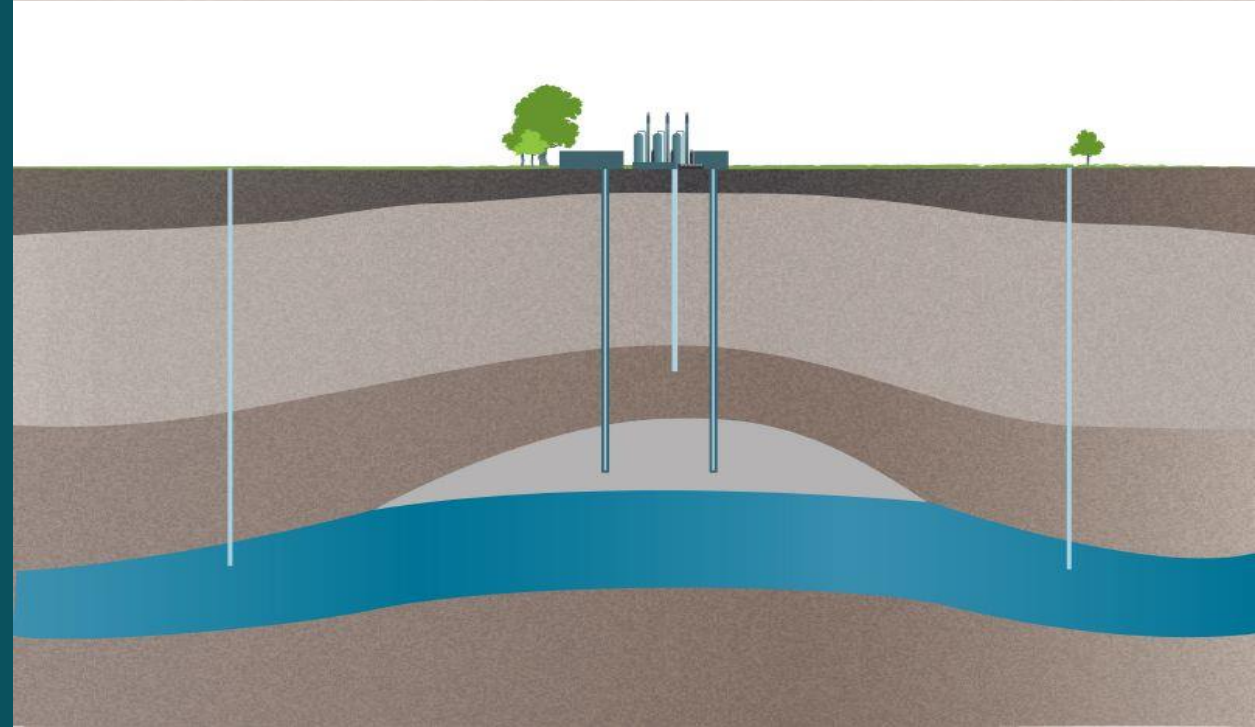
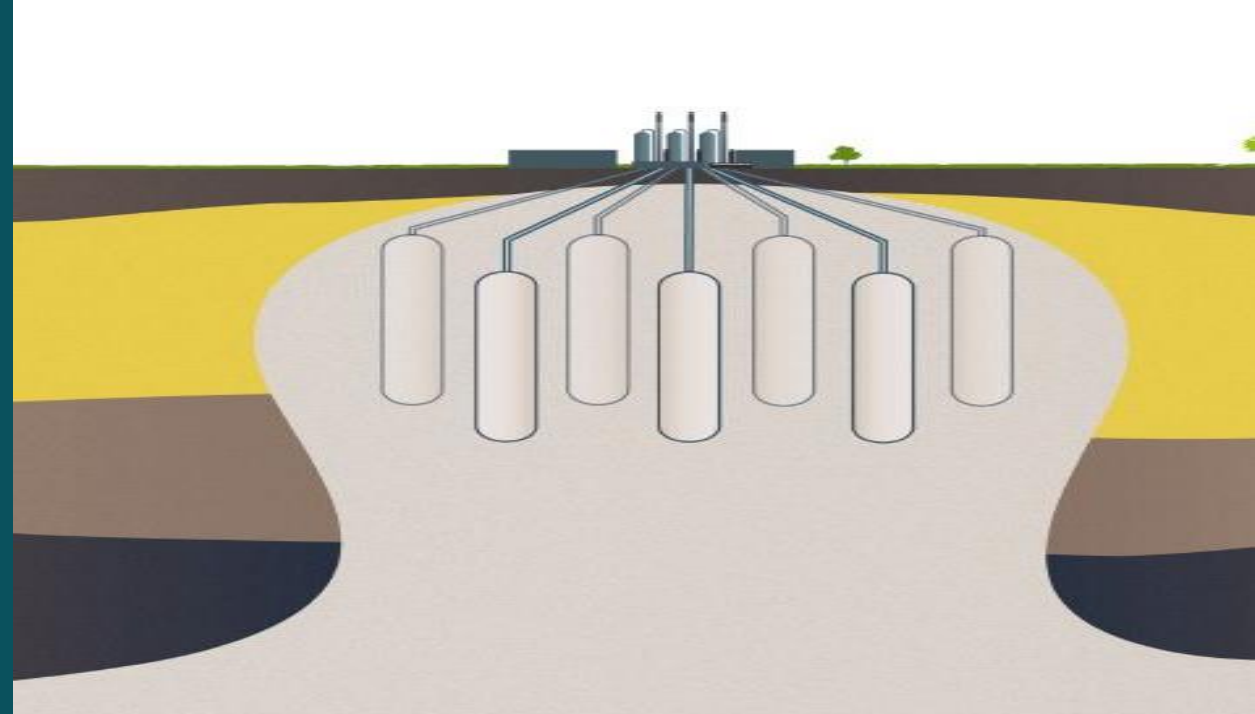
- Book Ellund capacity for 2019-2022
 - Additional capacity auctioned by GUD at the PRISMA platform on 2 July 2018
- Book storage capacity in Denmark for 2019-2022

TYRA SHUTDOWN 2019-2022

Energinets physical initiatives

Claus Møller Petersen

BUY MORE
EMERGENCY
STORAGE CAPACITY
AND EMERGENCY
GAS



LILLE TORUP GAS STORAGE – INCREASED WITHDRAWAL CAPACITY



ACCELERATED MAINTENANCE OF THE TRANSMISSION SYSTEM



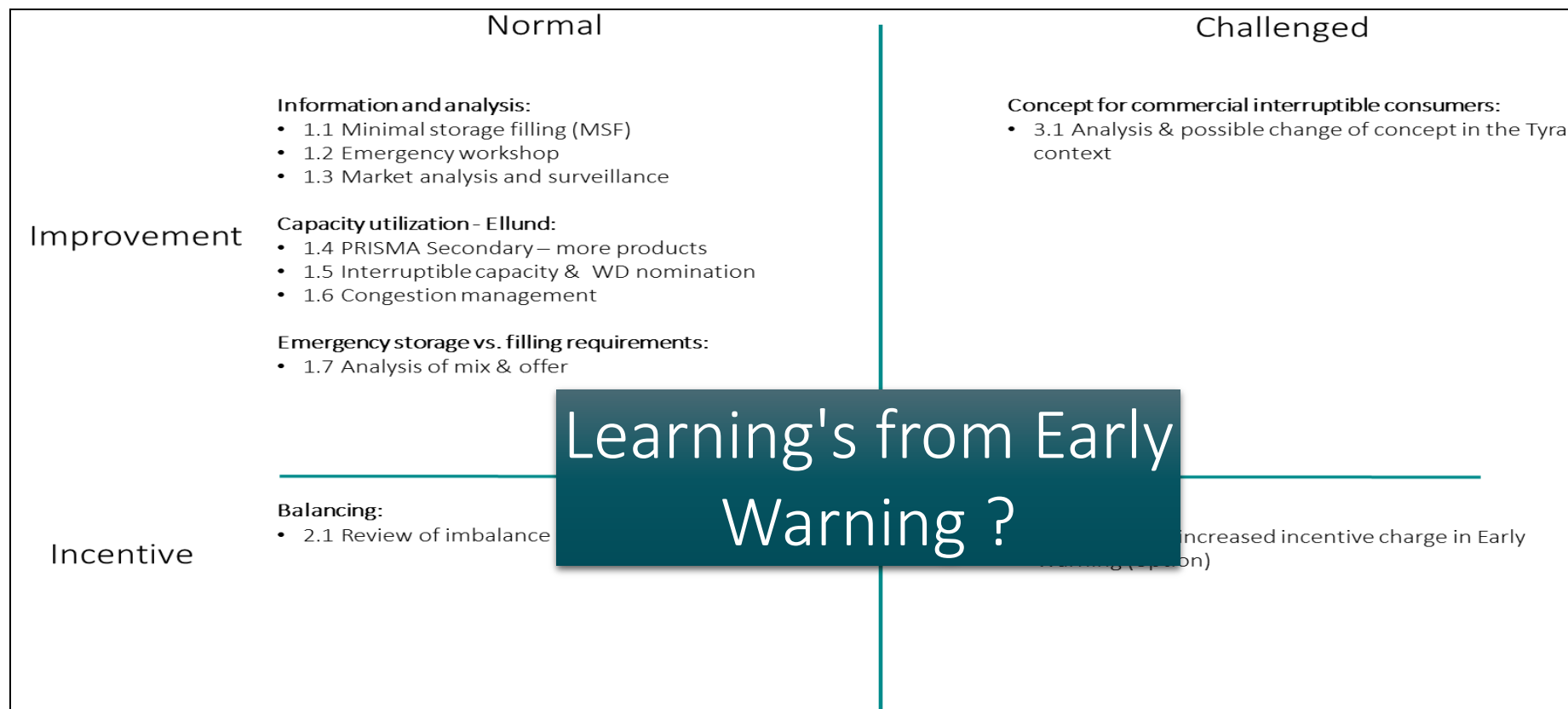
TYRA SHUTDOWN 2019-2022

- Market initiatives

Christian Rutherford

OVERVIEW OF EXPECTED MEASURES

Status 15 March 2018 (same as in December 2017)



FOCUS ON CHANGES TO MARKET RULES

Expected changes to Rules for Gas Transport (towards October 2019):

Optimizing capacity utilization

- Interruptible capacity (re)introduced at Ellund entry
- Full selection of secondary products at PRISMA
- Interruptible within-day nomination at Ellund

Firmer balancing rules

- Removal of 10 per cent price cap for the Neutral Gas Price (between within-day and day-ahead price)
- Change (or removal) of 35 per cent price cap between Neutral Gas Price and the marginal balancing price
- Increase of Adjustment Step 2 price



1.2 EMERGENCY WORKSHOP 25 JANUARY 2018

Market need for more detailed information on prices in Emergency

Possible learning's from current Early Warning will be taken into account

Based on the minutes of the workshop, Energinet has identified the following key findings and actions:

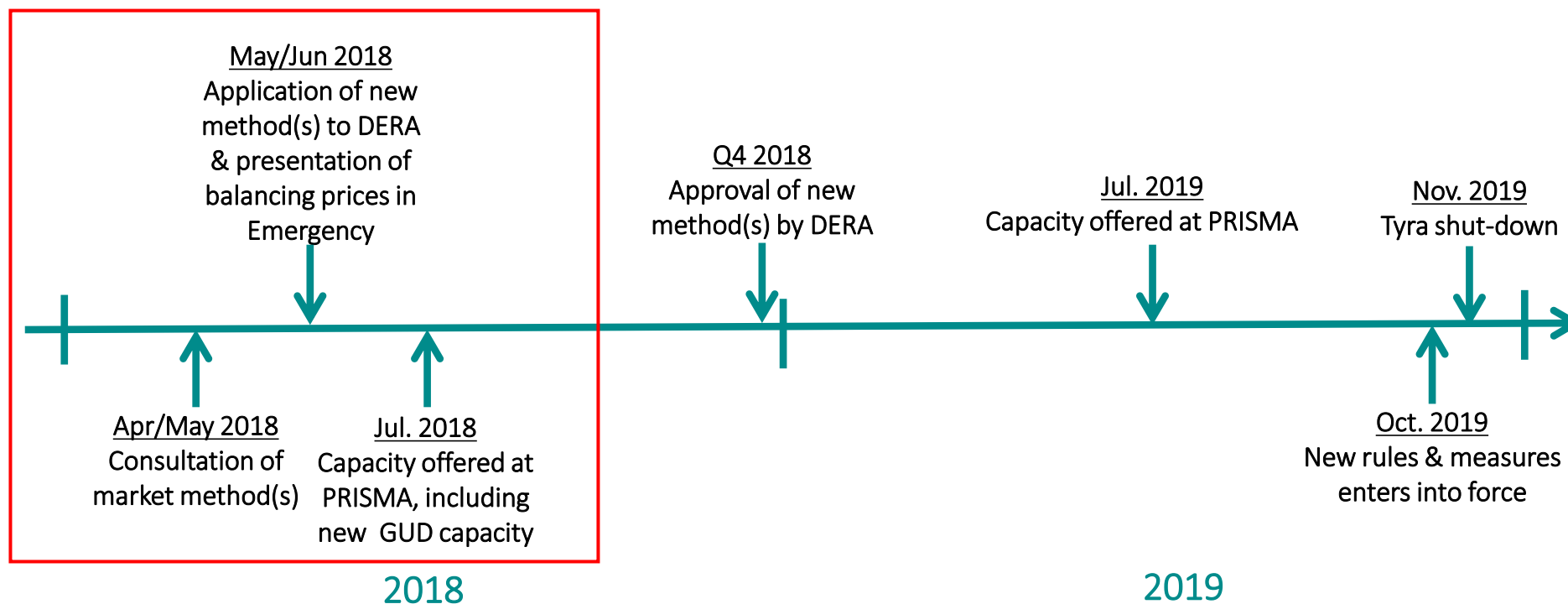
Energinet need to be very clear and specific on how the balancing price regime will work during Emergency, also taking into account situations with no trades and prices at Gaspoint Nordic (e.g. because of empty supply side)

- **Action:** Energinet will develop detailed material on pricing regime in Emergency
- **Action:** in the process of developing the material, Energinet will investigate if any amendments of the current regime are required
- **Action:** Energinet will communicate price regime and possible amendments via Shippers' Forum, User Group and/or possible later Emergency Workshop

Energinet must be clear on which commercial tools and measures there is in the toolbox for each crisis situation, and how they are expected to come into play

- **Action:** a extensive description of all market tools will be included in the method document, which will be subject to market consultation during spring 2018, and afterwards issued to DERA for approval
- **Action:** final toolbox will be communicated at Shippers' Forum and User Group.

EXPECTED TIMELINE FOR MARKET INITIATIVES





BALTIC PIPE PROJECT

- on track

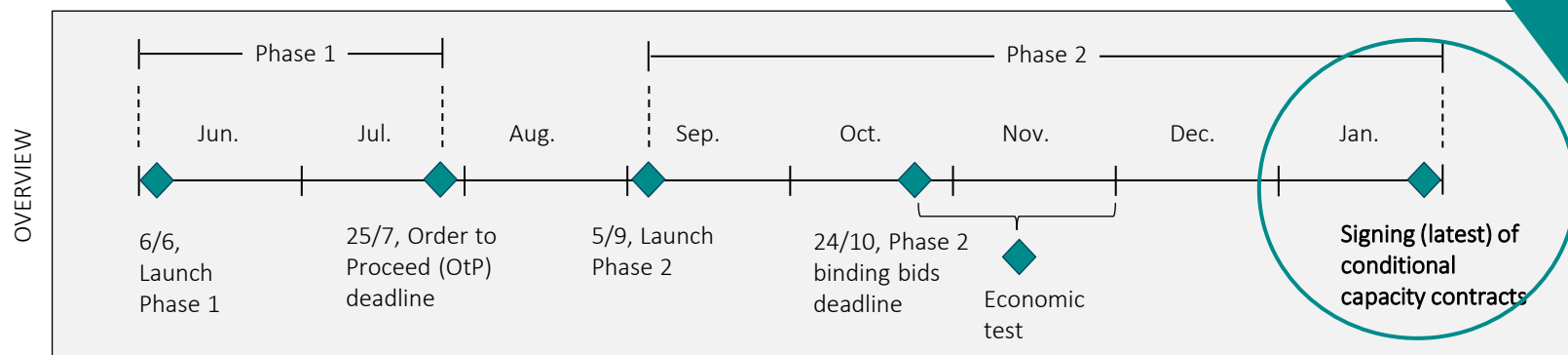
Christian Rutherford & Johnny Holst

THE OPEN SEASON 2017

Phase 1, Phase 2 and Economic Test are finalised
Last step is the contract signing

Open Season Phase 1

Open Season Phase 2



OPEN SEASON – OFFICIALLY FINALIZED

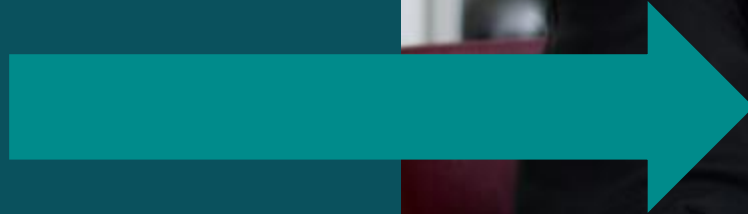
- The OS2017 capacity contracts were signed by shippers, Energinet and Gas-System by 31 January 2018 – as informed to the market on 30 January
- Thereby, the Open Season 2017 has officially ended



THE BASIS

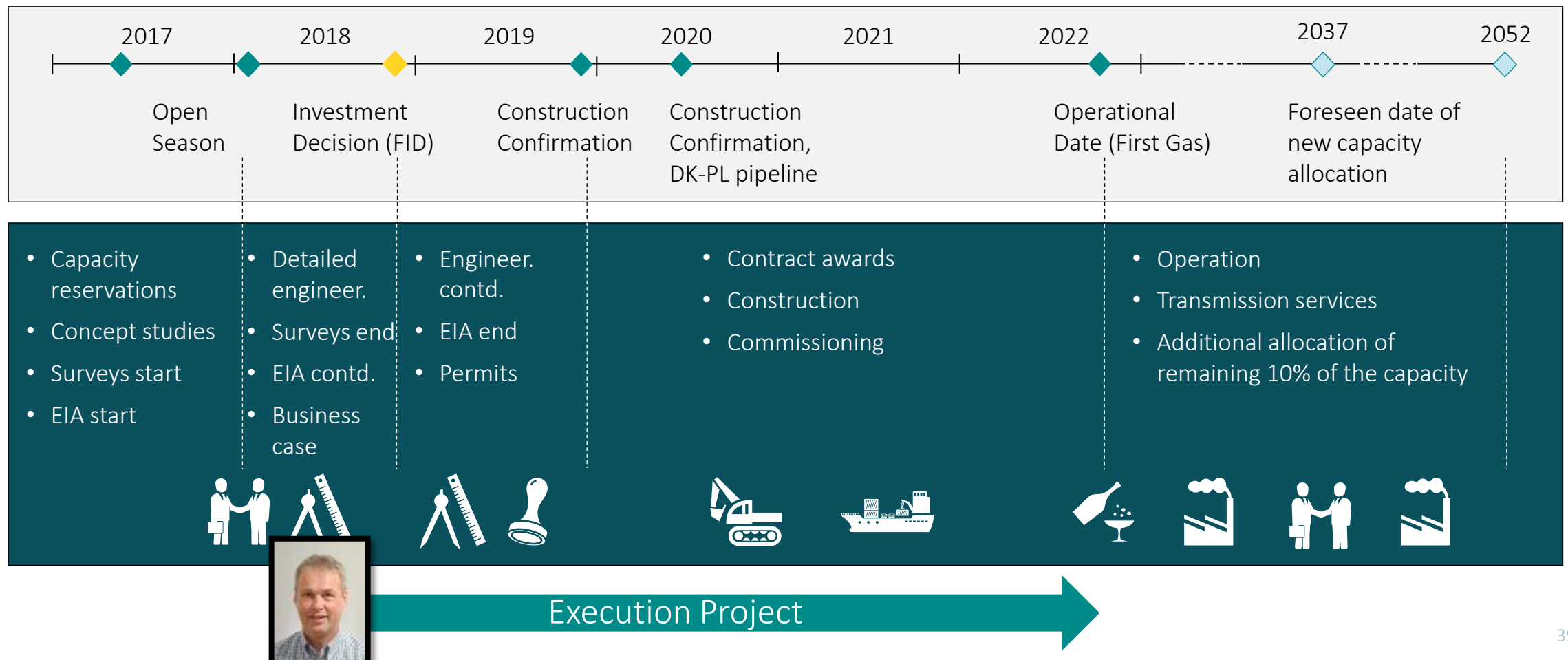


DANISH BUSINESS
CASE APPROVED BY
THE SUPERVISORY
BOARD OF
ENERGINET



STILL A NUMBER OF STEPS TO TAKE

Final Investment Decision no later than December 2018. First Gas in 2022



NEXT STEPS TOWARDS FID

- Continue Environmental Impact Assessment (EIA) according to time schedule
- Continue engineering and design for all main components (tendering expected soon)
- Obtain necessary permits from authorities (e.g. §4-approval from Danish Minister of Energy, Utilities and Climate)
- Finalisation of necessary agreements with Gaz-System, Gassco and others

DANISH EIA 1ST PUBLIC HEARING

- Local concerns and debate
- Impact from other projects
- Media interest



STAY INFORMED

The screenshot shows the website for the Baltic Pipe Project. At the top left is the logo for the project, and at the top right are flags for Denmark (DK), Poland (PL), Germany (DE), and Sweden (SE). Below the logo is the ENERGINET logo and the GAZ-SYSTEM logo. A navigation menu includes links for 'About', 'The project', 'Environment and consultations', 'Your questions', 'News', and 'Contact us'. A search icon is also present. The main banner features a photograph of two workers in high-visibility yellow jackets and hard hats working on large yellow industrial equipment. A red overlay on the banner contains the text 'Improved energy security'. Below the banner, there is a section titled 'Crossing borders for secure, affordable and sustainable energy' with a sub-headline 'The Baltic Pipe Project is a strategic gas infrastructure project with the goal of creating a new gas supply corridor in the European market.' followed by two paragraphs of text. To the right, there is a 'News' section with a date '12/03/2018' and a link 'GAZ-SYSTEM: Public hearing in Szczecin'. Below the news section is a link 'MORE NEWS >>'.

www.baltic-pipe.eu



FINANCIAL STATUS ON BALANCING

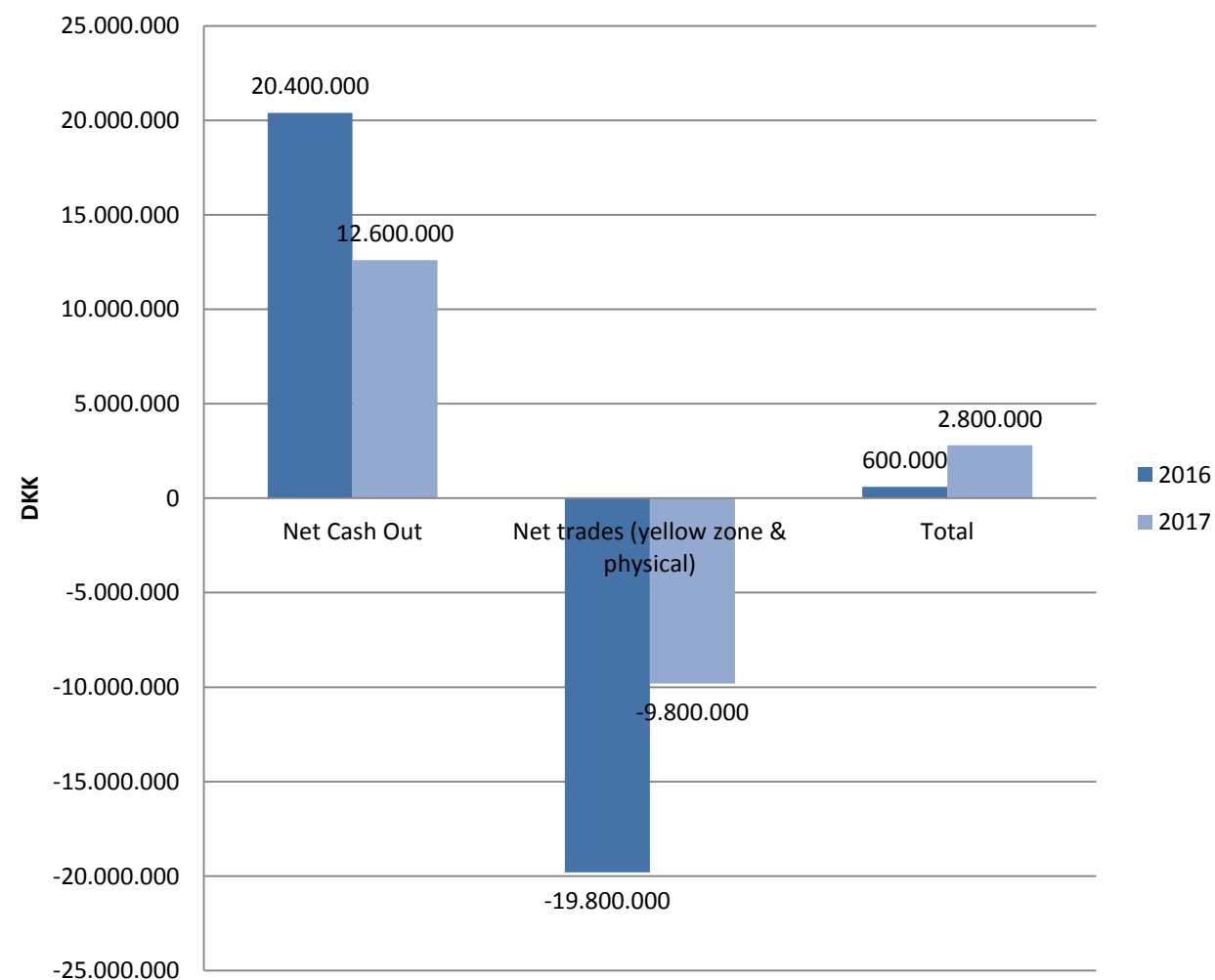
Christian Rutherford

FINANCIAL STATUS ON BALANCING

Status for the past 2 calendar years

- The status shows a small net income on balancing activities in both calendar years
- The status does not take any administrative costs into account
 - Costs for IT systems
 - Costs for membership at GPN
 - Personnel costs
- Also, any possible change in line pack value (more or less gas in the system, change in value of gas) is not part of the status

Net cash-out & trades 2016 & 2017



JOINT BALANCING ZONE (JBZ)

Between Sweden and Denmark

Signe Louise Rasmussen and Poul Johannes Jacobsen

AGENDA

- Background to JBZ
- New project plan for JBZ
- Keep updated via Energinet's webpage



JOINT BALANCING ZONE BACKGROUND

EU network code on balancing defines the standard

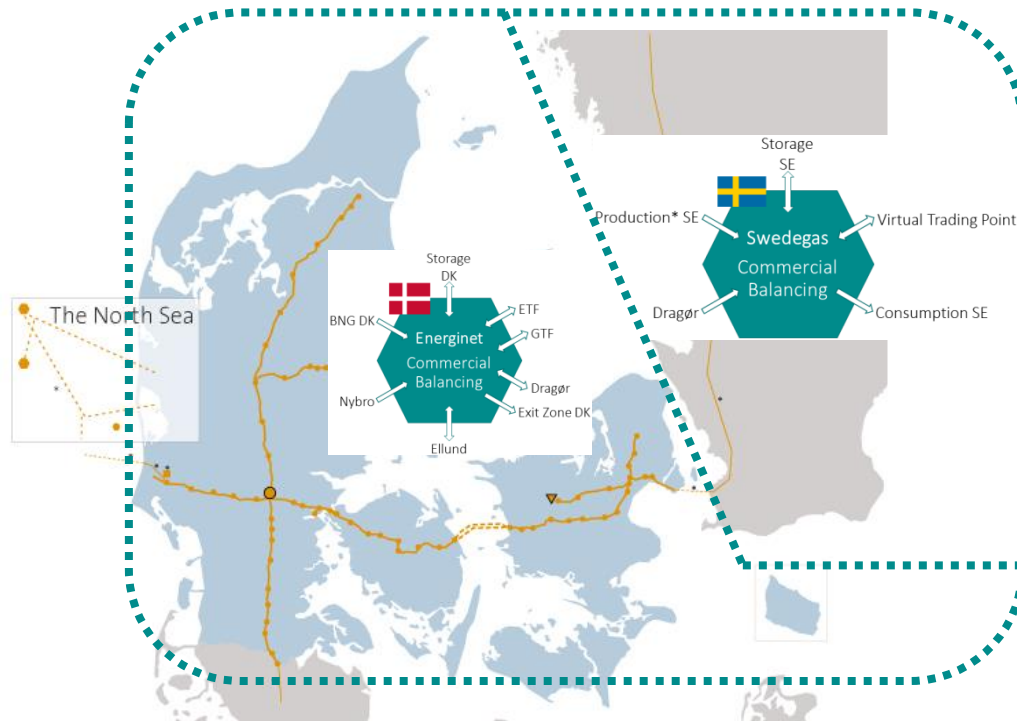
Therefore is a need to make changes to the current Swedish balancing model

- Energinet has already implemented the NC BAL. Many of the changes that the Swedish market will experience, have already been implemented in Denmark. (Examples of this is the removal of the free balancing band...)
- A JBZ is a cost efficient way to fulfil NC BAL
- By opening the valve at Dragør will the pressure level in Sweden increase and lead to an Increased security of supply in Sweden
- More gas traders on the market means increased competition to end customers in Sweden.
- In line with Gas Target Model and EU harmonization

THE PURPOSE OF THE JOINT BALANCING ZONE

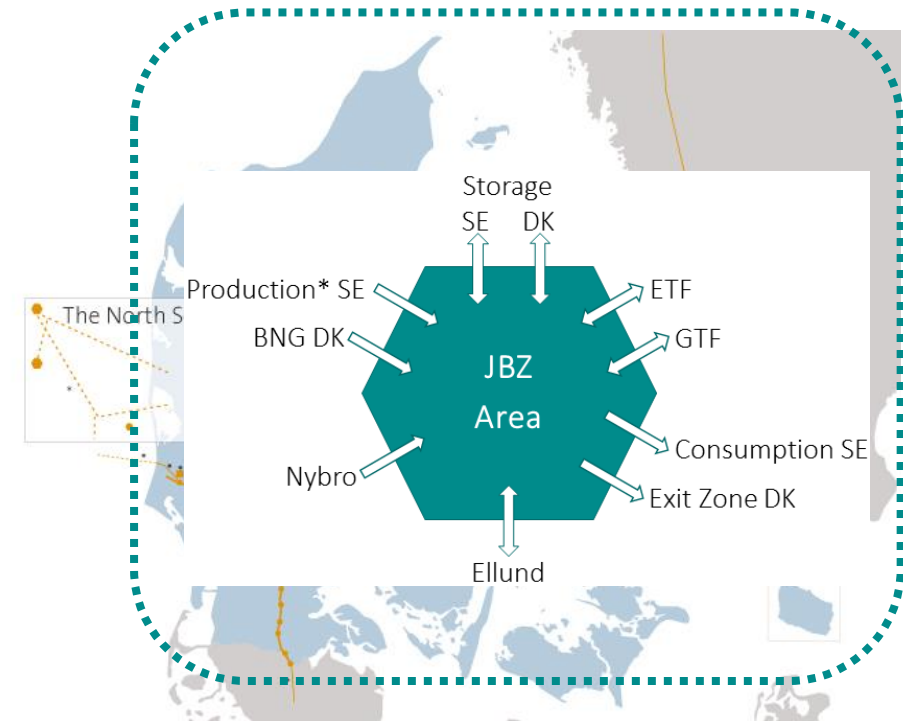
Today

Two separate balancing zones



JBZ

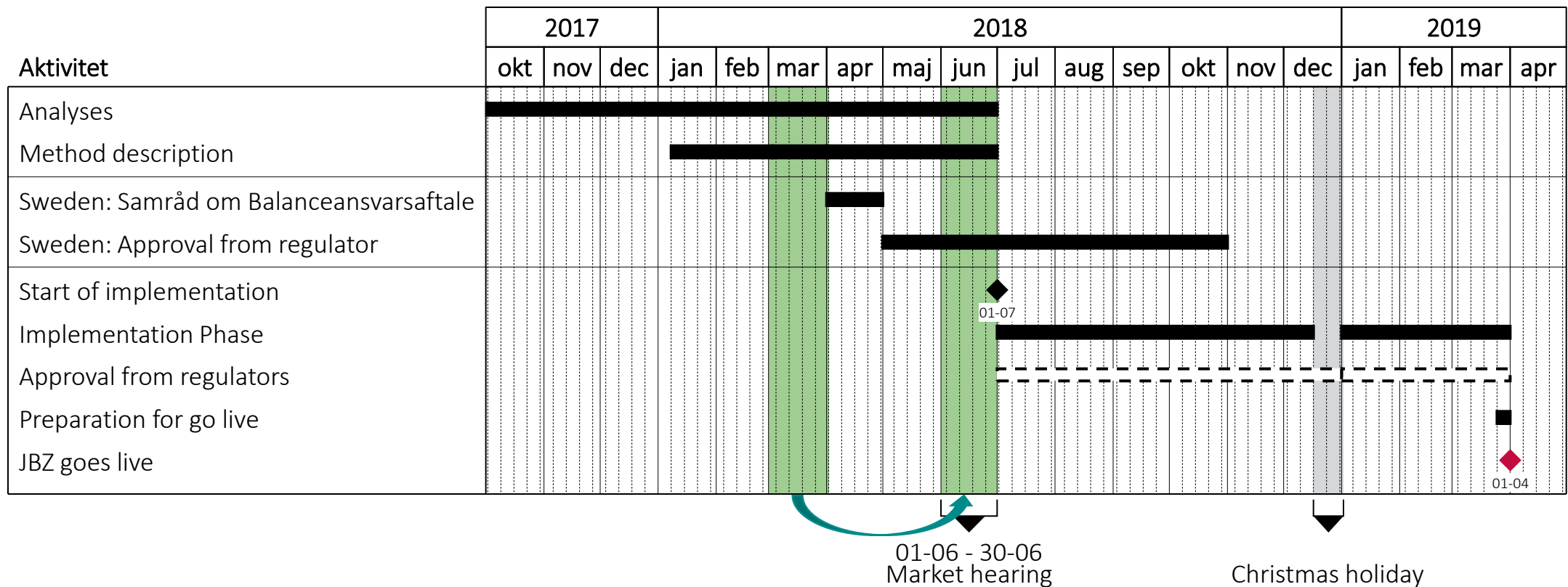
One Joint Balancing Zone



PROJECT PLAN - POSTPONEMENT

Samråd in Sweden intended to be in April

Market hearing in Denmark will move from March to Jun



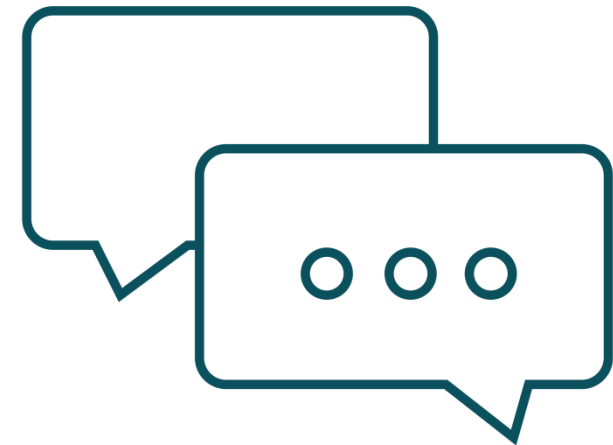
STAY UPDATED ABOUT THE JBZ

Medio April 2018 a new site on Energinet's webpage

[Click on link to webpage](#)

Learn more about:

- Timeline
- Current status
- Q&A
- Other documents
- Examples of how to use the Danish capacity model and how to balance in JBZ
- Contact details if any questions or comments



QUESTIONS

Energinet

Signe Louise Rasmussen

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mail: slr@energinet.dk

Poul Johannes Jacobsen

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mail: pjj@energinet.dk

Swedegas

Geir Sjöholm

Tlf.: +46 3143 9362

mail: geir.sjoholm@swedegas.se

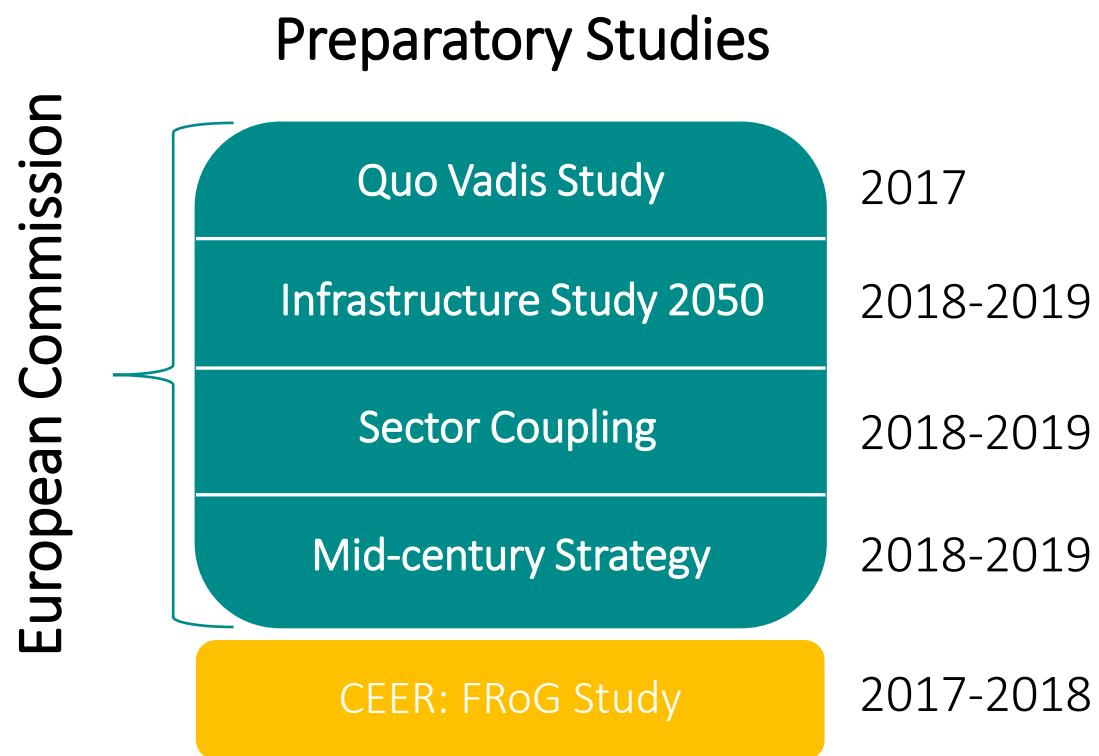


EU COMMISSION ANALYSIS

Gas Sector Reform 2020

Nicolai Sørensen, Energinet

GAS SECTOR REFORM 2020



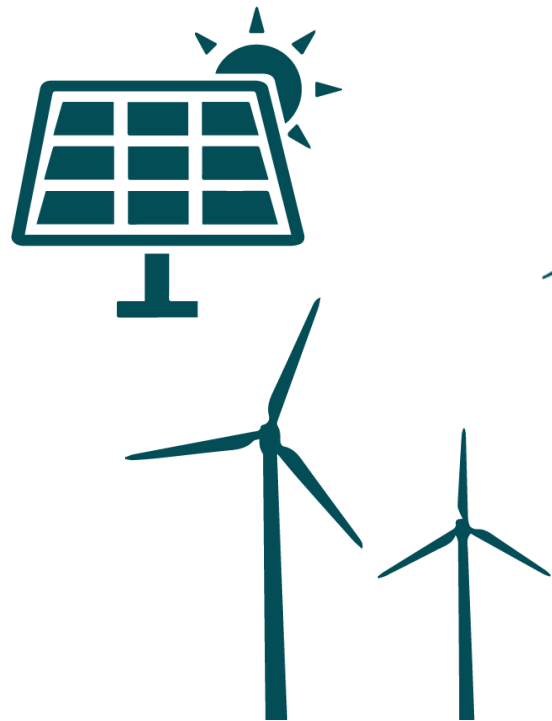
Gas package 2020

Gas directive

Gas regulation

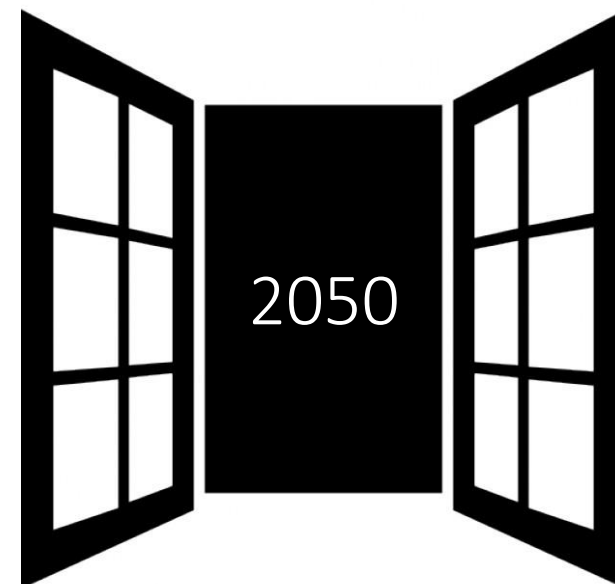
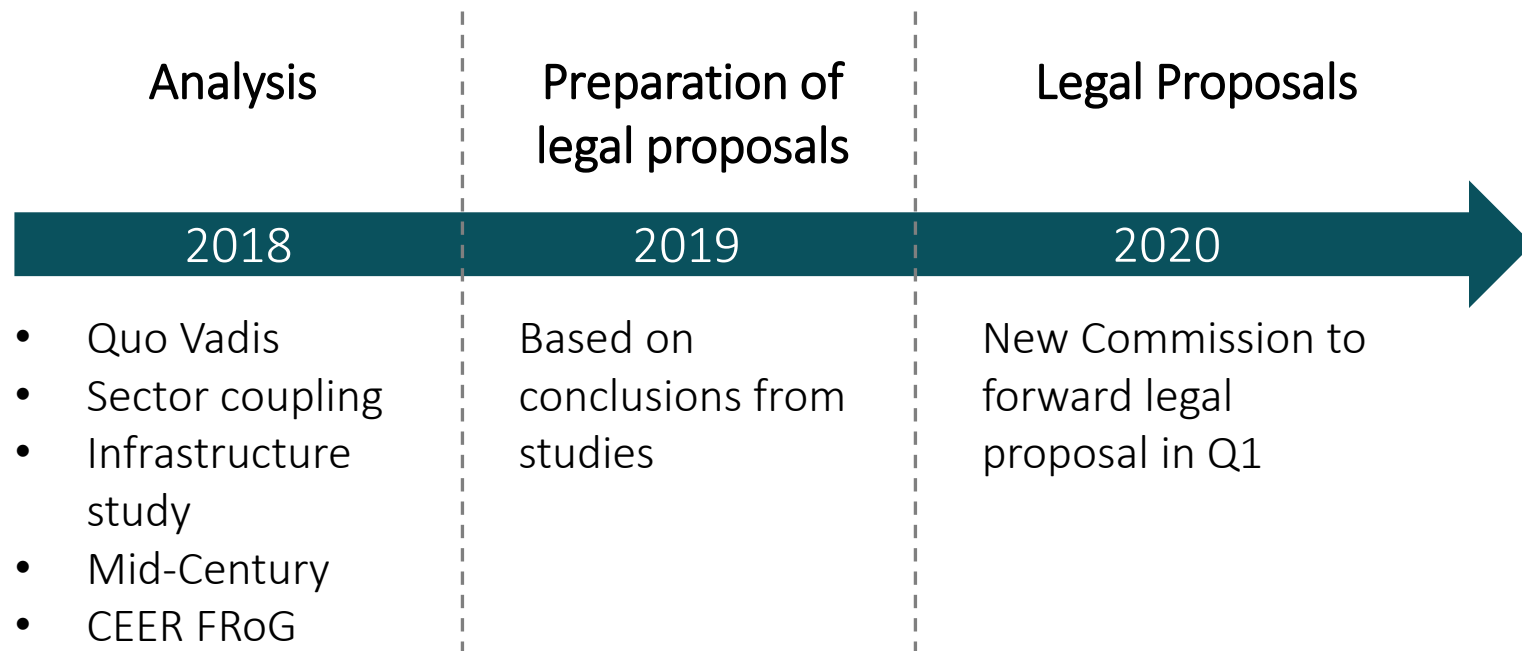
(GREEN) GAS HAS A ROLE BEYOND 2050

"..But forget about the bridge"



2050

BRINGING GAS INTO THE FUTURE



SEAS-NVE

View from a new shipper

Henrik Iversen
Shippers' Forum 15. March 2018

In 2016 ...

15.7

billion in
equity (DKK)

5.2 bn

profit before tax (DKK)

3.5 bn

in turnover (DKK)

27.6

billion in total
assets (DKK)

888

employees incl. Fibia

SEAS-NVE – Acquisition of HMN Naturgas A/S

New shipper

or

old shipper

with new name, new strategy, new possibilities

SEAS-NVE – old shipper with new name

New name, new company, new company registration number means new setup

- Novation of existing contracts
- Agreements with exchanges
- New credit setup
- Broker access
- KYC

Long and heavy process even though the process was known



—

GAS STORAGE DENMARK

—

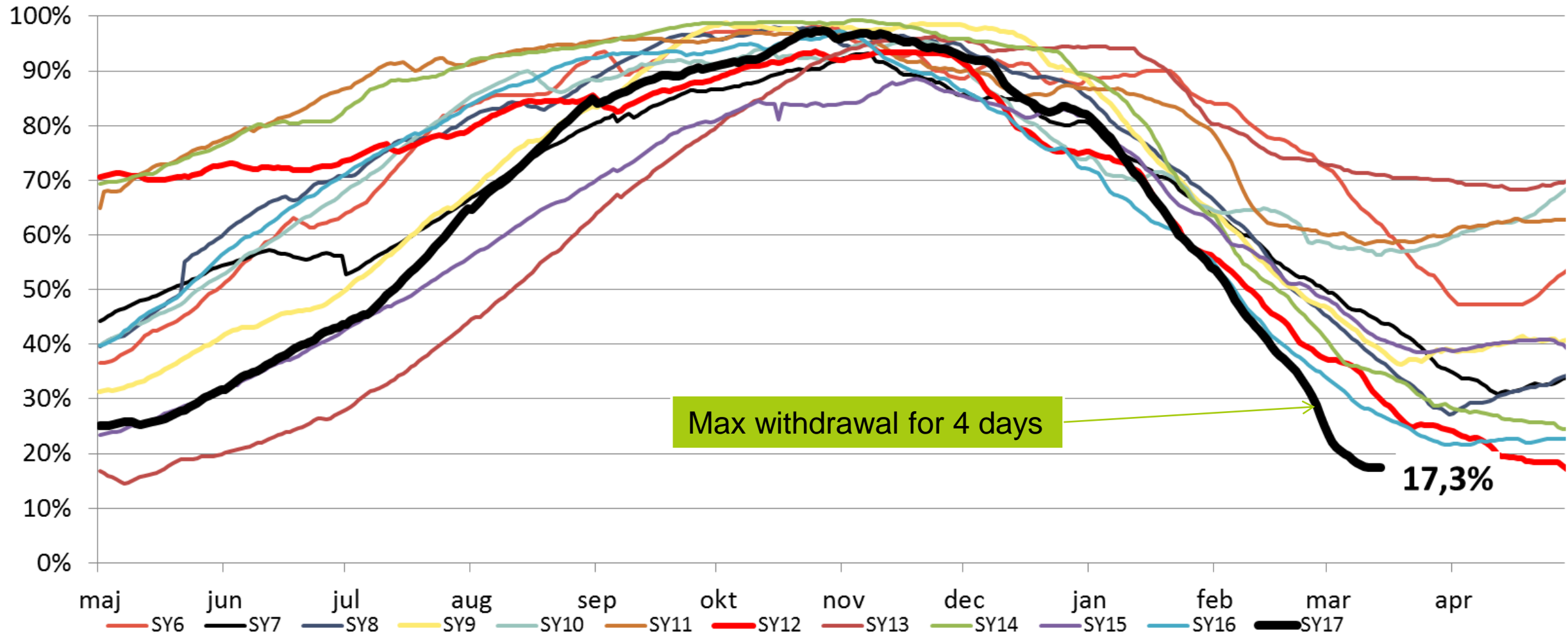


SHIPPERS FORUM

• MARCH 15 2018

Hans-Åge Nielsen hni@gasstorage.dk

STATUS SY17 – AN EXTREME YEAR



SY18 – STATUS

- **Auction on 700 GWh on March 22nd 2018**
- Season product 175/85
- Additional flex up to 120/60
- Injection 650 €/MW
- Withdrawal 650 €/MW
- Pay as Bid

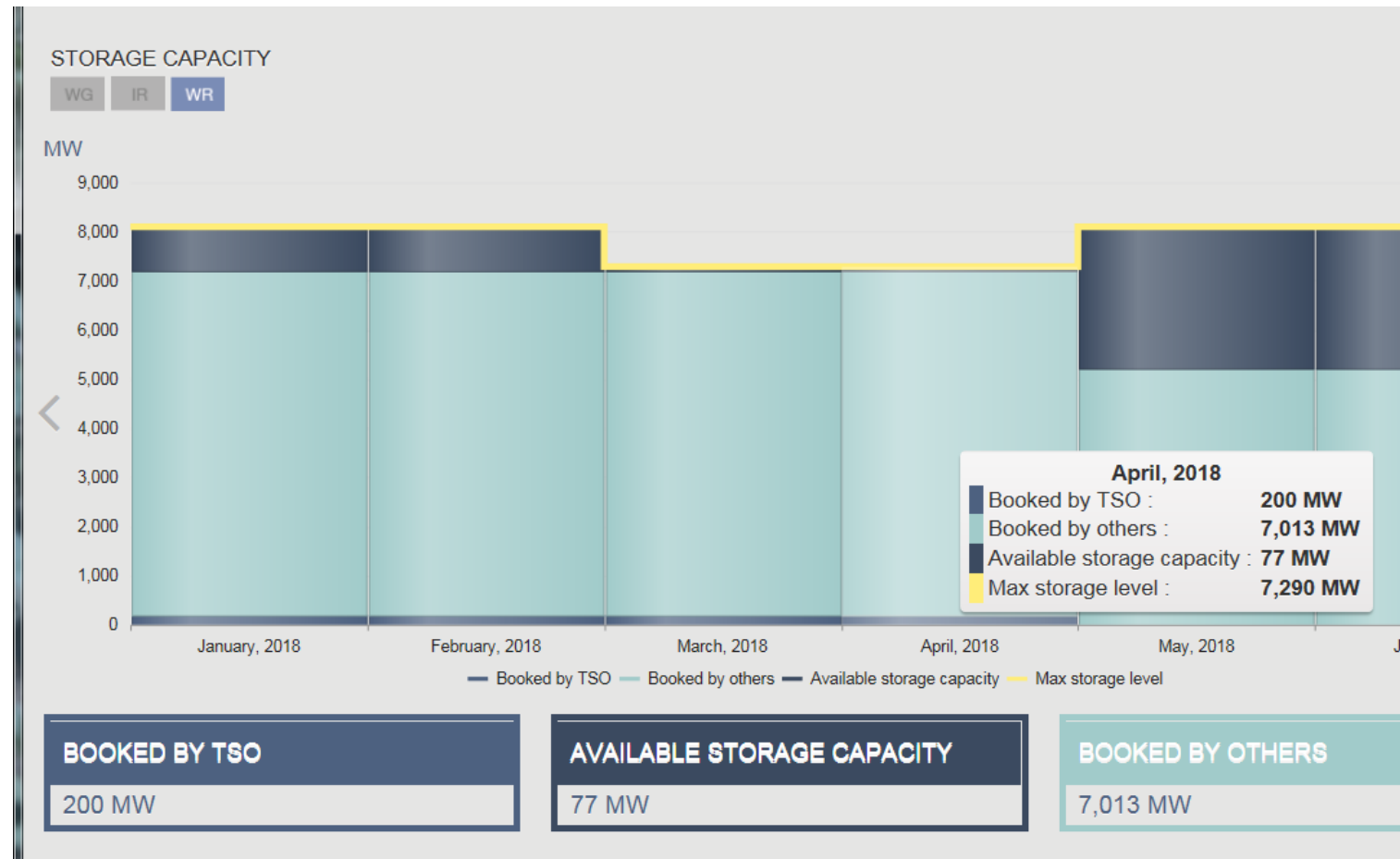
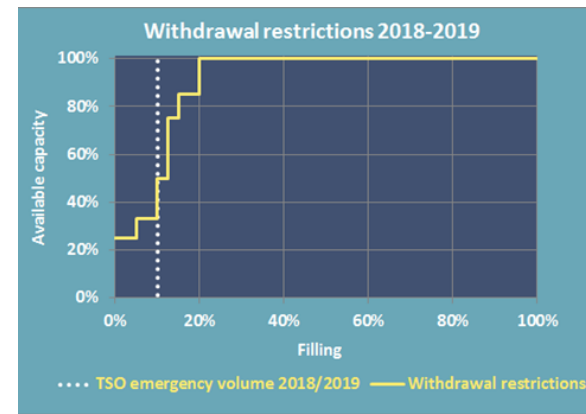
- 1400 GWh reserved to final emergency storage agreement.

- The remaining capacity is not technical available at the moment due to maintenance and reservoir management.
- **Expected to be put to market in April**

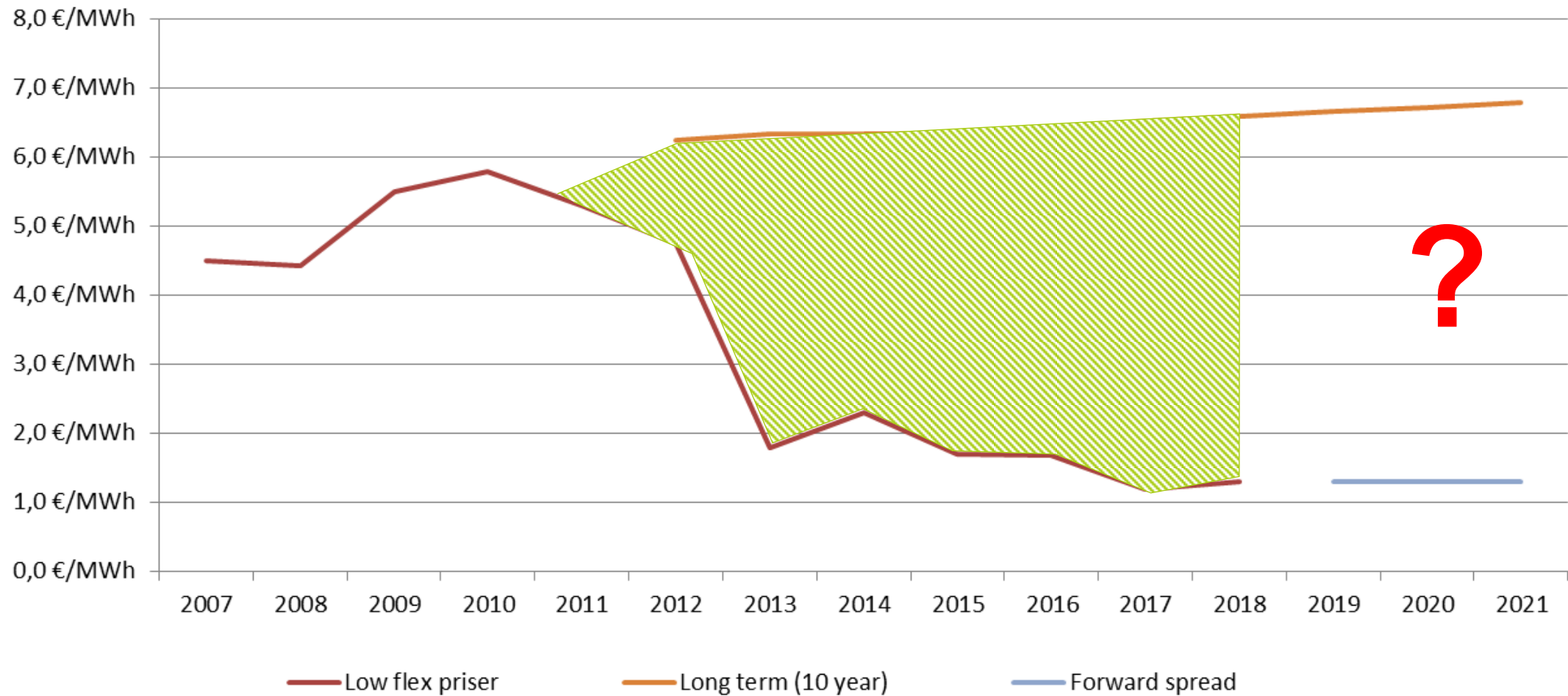
The screenshot shows the GSD website banner for the March 22nd 2018 auction. The banner features the GSD logo in the top left corner, the text 'GAS STORAGE DENMARK' in the top right, and navigation links for 'PRODUCT' and 'TRANSPARENC'. The main headline reads 'AUCTION ON 22 MARCH 2018' in large yellow and white letters. Below the headline is a 'READ MORE >>' link and three small square icons. The background image shows a worker in a dark jacket and cap working on industrial equipment, including large pipes and valves, at a gas storage facility. At the bottom of the banner, there are three navigation buttons: 'PRODUCT >' with a gear icon, 'CUSTOMER >' with a person icon, and a partially visible 'OF' button.

WITHDRAWAL CAPACITY

- **Learning from withdrawal test 2017:**
- Less volume than expected
- Large relative part of the volume affected by restriction
- GSD have decided to:
- Keep the commercial withdrawal curve
- Keep the maximum firm withdrawal capacity
- Market part of the withdrawal capacity as monthly capacity

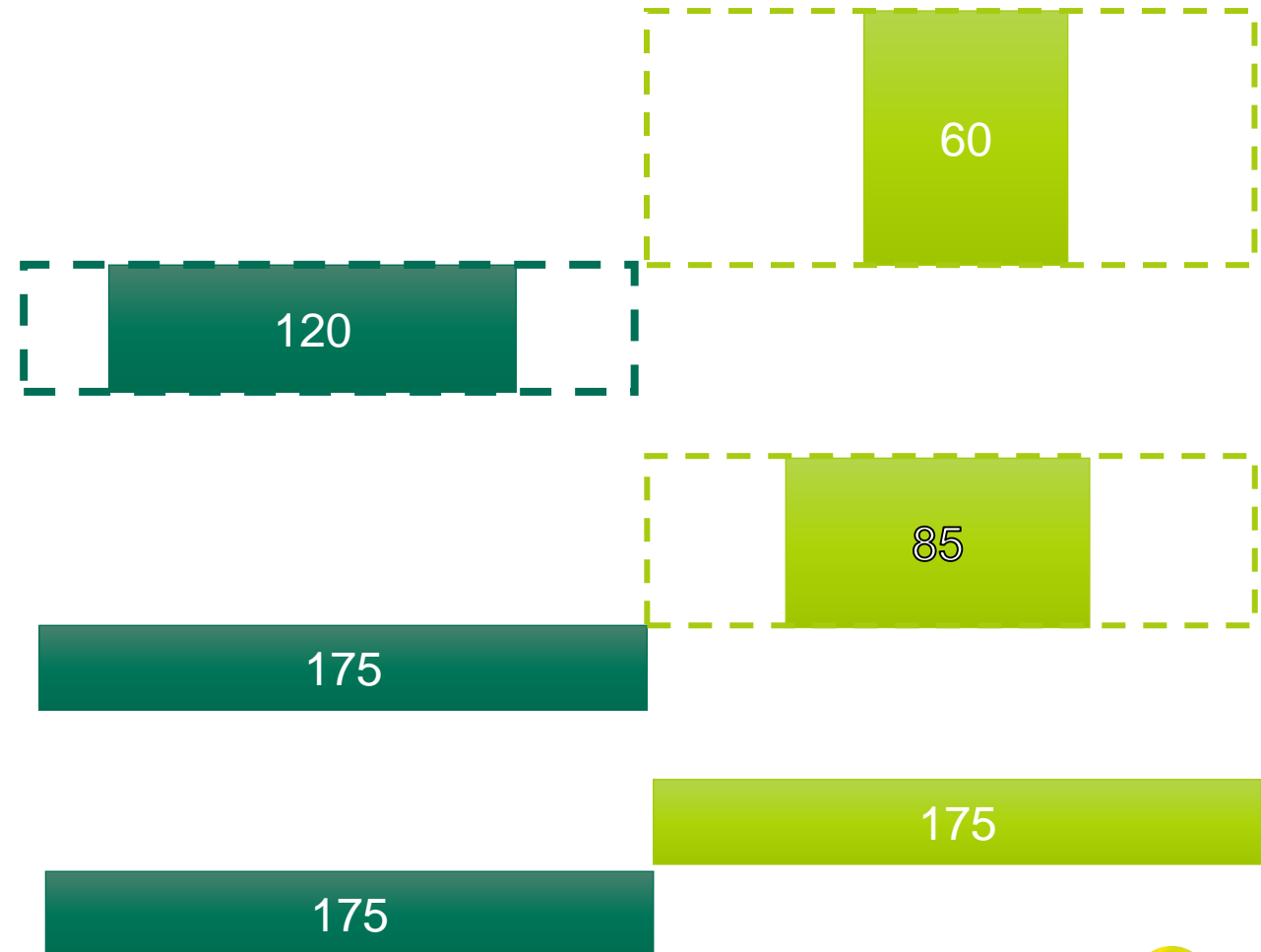


STORAGE PRICE SY19-21- THE TYRA PERIOD

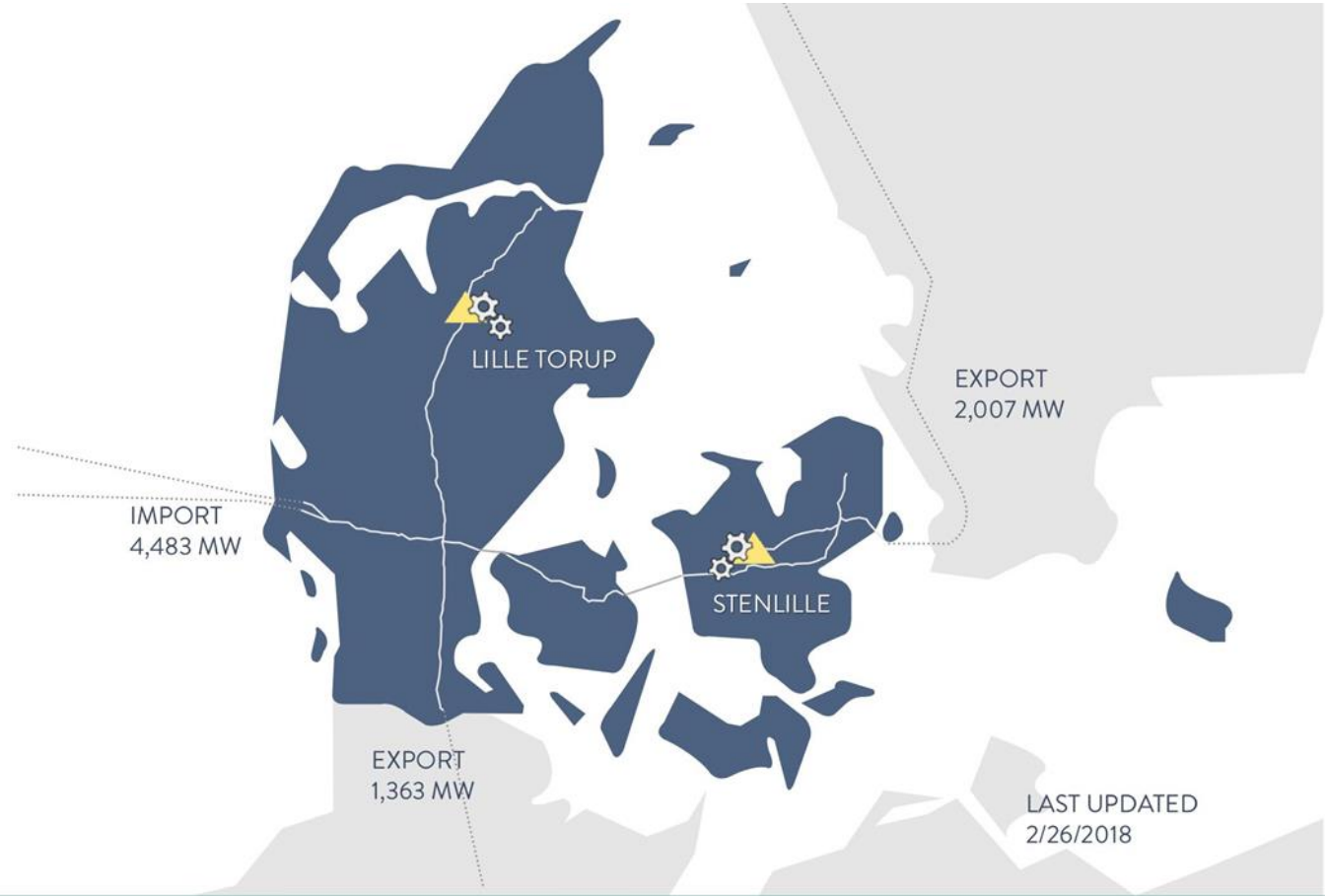


AUCTION ON CALL OPTIONS FOR CAPACITY

- Date: May 2nd 2018
- Bids on price for option (premium)
- Expire date : July 13th 2018
- Strike price
 - 120/60 4,0 €/MWh/SY
 - 175/85 3,3 €/MWh/SY
 - 175/175 2,6 €/MWh/SY
- Product duration 1 or 2 or 3 year(s) start SY19
- Total volume 2 TWh
- **Auction rules will be published in due time**



QUESTIONS ?



 GASSTORAGE WITHDRAWAL 8,182 MW	BIOGAS PRODUCTION 190 MW	CONSUMPTION IN DENMARK 7,616 MW
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END OF PROGRAMME

Thank you for participating.

We look forward to welcoming you to our next
[Shippers' Forum 13 June 2018](#)

