ENERGINET

SHIPPERS' FORUM

5 December 2019

WELCOME

Clement Johan Ulrichsen, Energinet Gas TSO

HOST

EMERGENCY EXIT

DEFIBRILLATOR (AED)

MEETING POINT

PROGRAMME

12.00 *Lunch and networking*

13.00 **Welcome**
Clement Johan Ulrichsen, Energinet Gas TSO

13.15 **Incremental Capacity**

- Overall process status
  Christian Rutherford, Energinet Gas TSO
- Green gas Lolland-Falster
  Steen Brostrup Knudsen, Energinet Gas TSO
- Open Season 2020
  Cathrine Søegaard & Christian Rutherford, Energinet Gas TSO

13.35 **German Market Merger**
Sirko Beidatsch, European Energy Exchange

14.00 **Tyra redevelopment**

- Seasonal factors
  Lasse Trøjborg Krogh, Energinet Gas TSO

14.15 Coffee break and networking

14.50 **Gas Storage Denmark**
Mads Vejlby Boesen, Gas Storage Denmark

15.10 **Baltic Pipe**

- Project status – *Christian Rutherford, Energinet Gas TSO*
- Balancing model 2022 – *Julie Frost Szpilman, Energinet Gas TSO*
- Follow up: User group 'Future Capacity Platform' – *Christian Rutherford, Energinet Gas TSO*

15.35 **Economic regulation of Energinet Gas TSO**
Lasse Trøjborg Krogh, Energinet Gas TSO

15.50 **Final remarks**
Clement Johan Ulrichsen, Energinet Gas TSO

EVIDA: THE MERGED GAS DSO IN DENMARK

On 1 October 2019 HMN Gasnet and Dansk Gas Distribution merged

Still owned by the Energinet Group

TOWARDS TARIFF METHODOLOGY OCTOBER 2022

DUR approval of the current methodology until 30 September 2022.

Energinet in early 2020 to kick-off the process towards an updated tariff methodology.

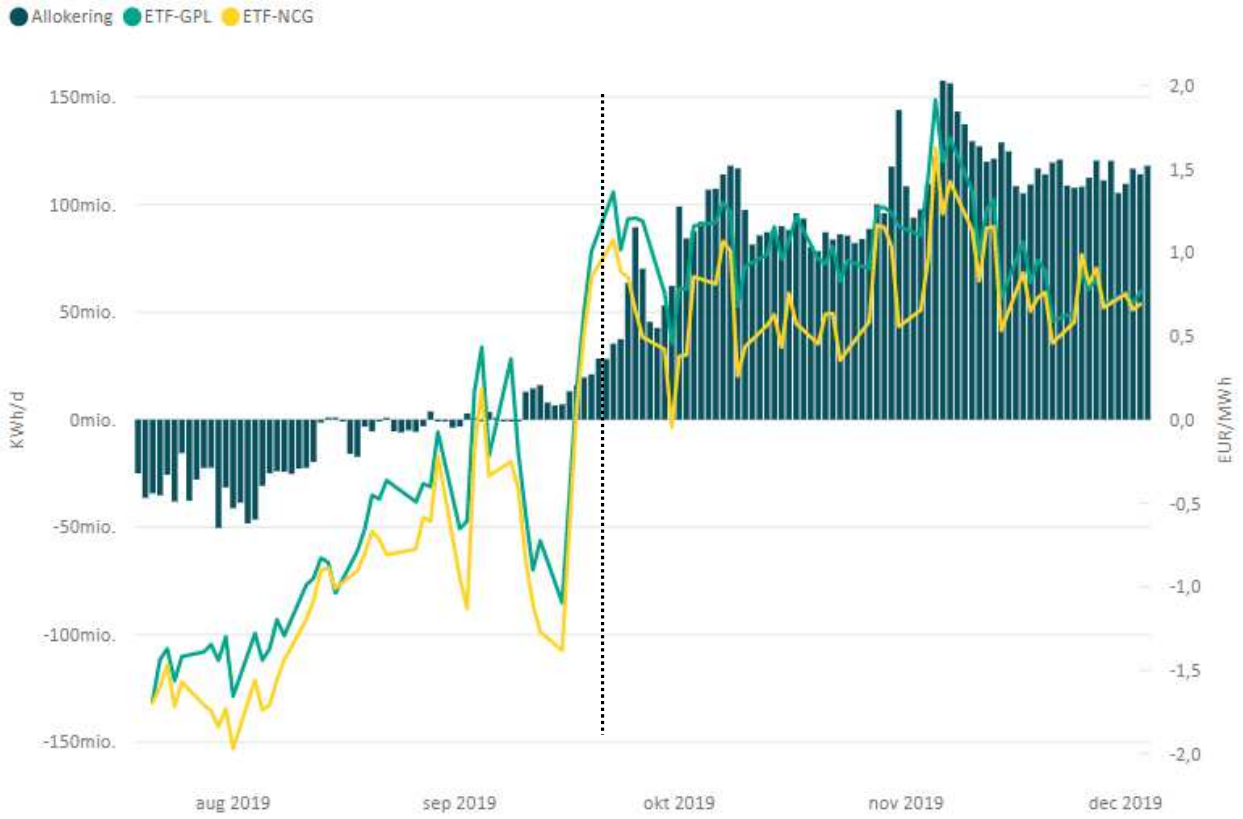
Join the Shipper Taskforce:

Send an e-mail to gastariffs@energinet.dk no later than 10 January 2020

Main topics of the shipper taskforce:

- Capacity-/commodity-split
- Long-term multiplier

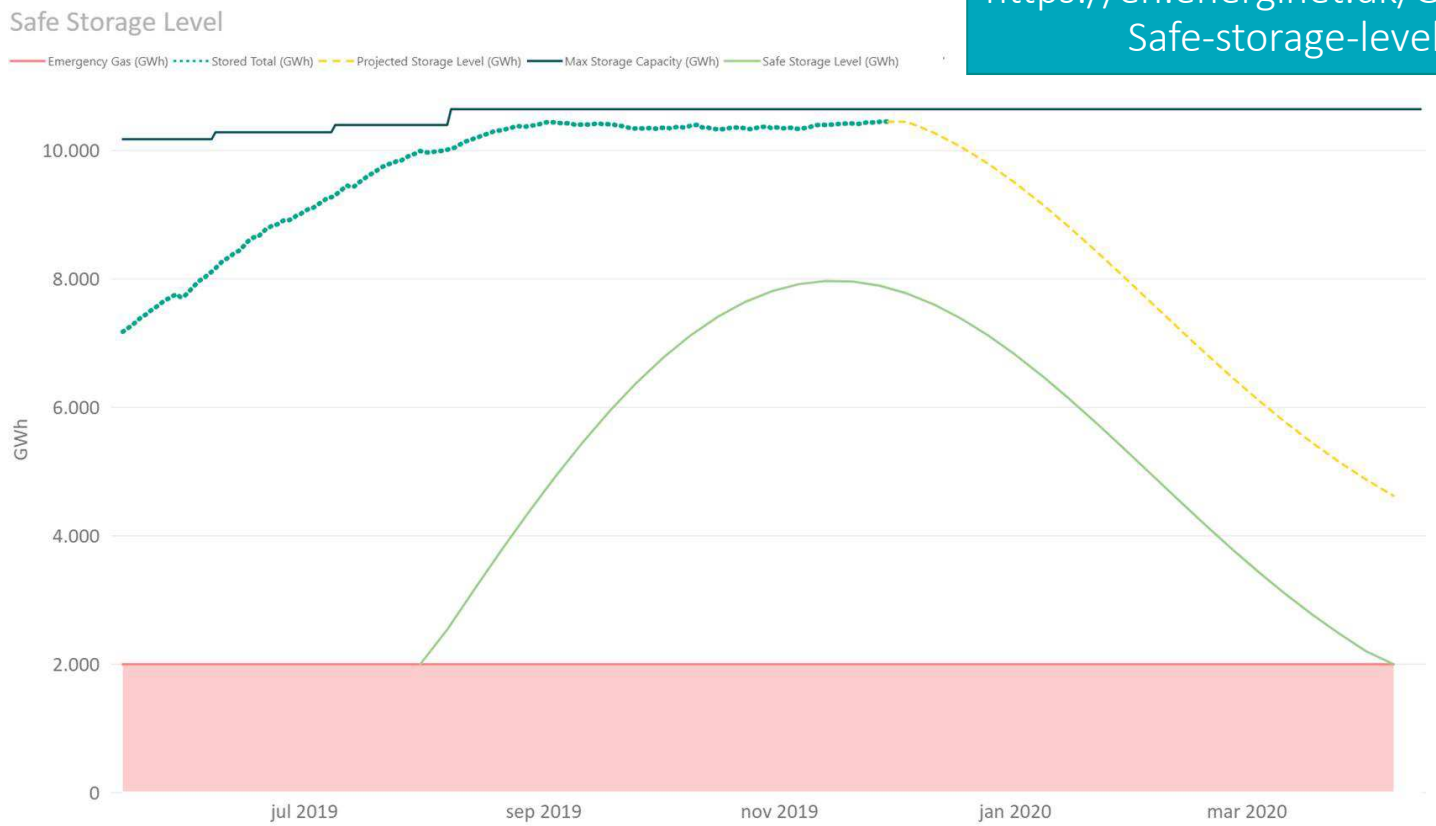
ELLUND FLOW VERSUS DAY AHEAD PRICE SPREAD



SAFE STORAGE LEVEL

Daily update on:

https://en.energinet.dk/Gas/Tyra/Safe-storage-level



GUD OFFERS MORE CAPACITY UNTIL END OF 2020

In the previous annual auctions, 4.2 GWh/h were offered; the number has now increased for the shorter products

From	To	Ellund max. marketable capacity (firm) Exit (kWh/h)	Ellund booked capacity (firm) Exit (kWh/h)	Ellund free capacity (firm) Exit (kWh/h)
12/04/2019 06:00	12/04/2019 08:00	5,215,200	4,215,200	1,000,000
12/04/2019 08:00	12/05/2019 06:00	5,215,200	4,315,200	900,000
12/05/2019 06:00	01/01/2020 06:00	5,215,200	4,215,200	1,000,000
01/01/2020 06:00	04/01/2020 06:00	4,735,200	4,215,200	520,000
04/01/2020 06:00	10/01/2020 06:00	4,735,200	3,910,501	824,699
10/01/2020 06:00	12/04/2020 06:00	4,735,200	3,910,000	825,200
12/04/2020 06:00	01/01/2021 06:00	4,735,200	3,910,000	825,200
01/01/2021 06:00	09/30/2021 06:00	4,215,200	3,910,000	305,200

SECURITY OF GAS SUPPLY 2019

Look out for the new gas report

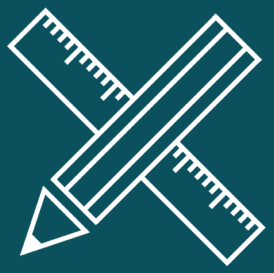
2019 characterised by:

- Preparations for the temporary shutdown of the supply from the Tyra field in September
- Increasing share of biogas in the grid.

Launch:

Early present on Energinet's website before Christmas

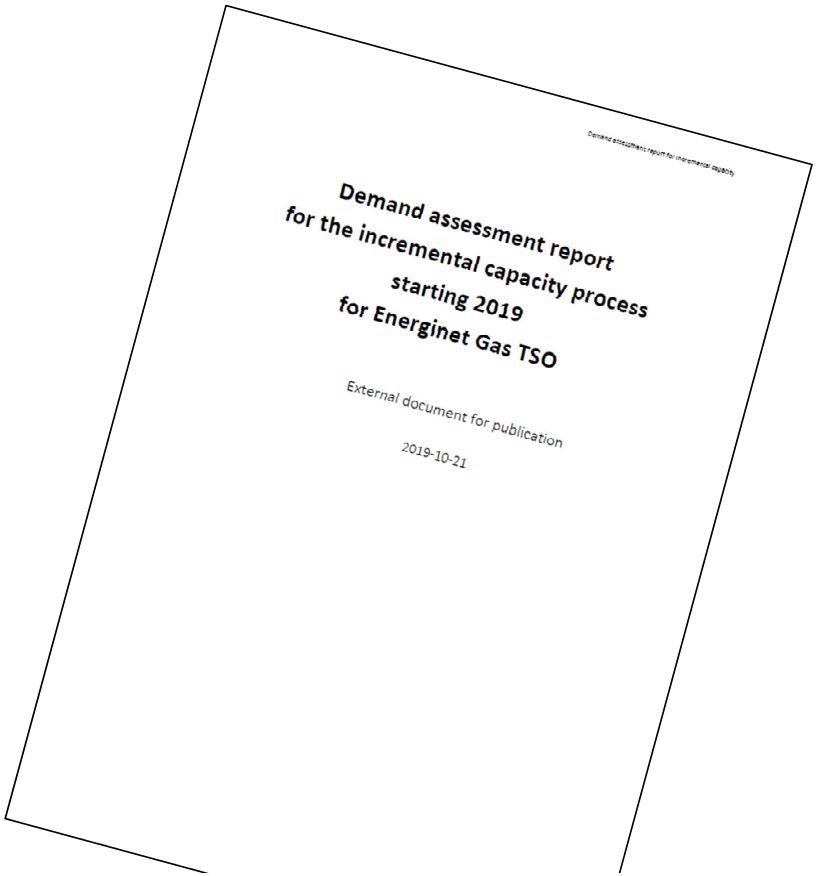

VISION
GREEN ENERGY
FOR A BETTER
WORLD



INCREMENTAL CAPACITY

Christian Rutherford, Energinet Gas TSO

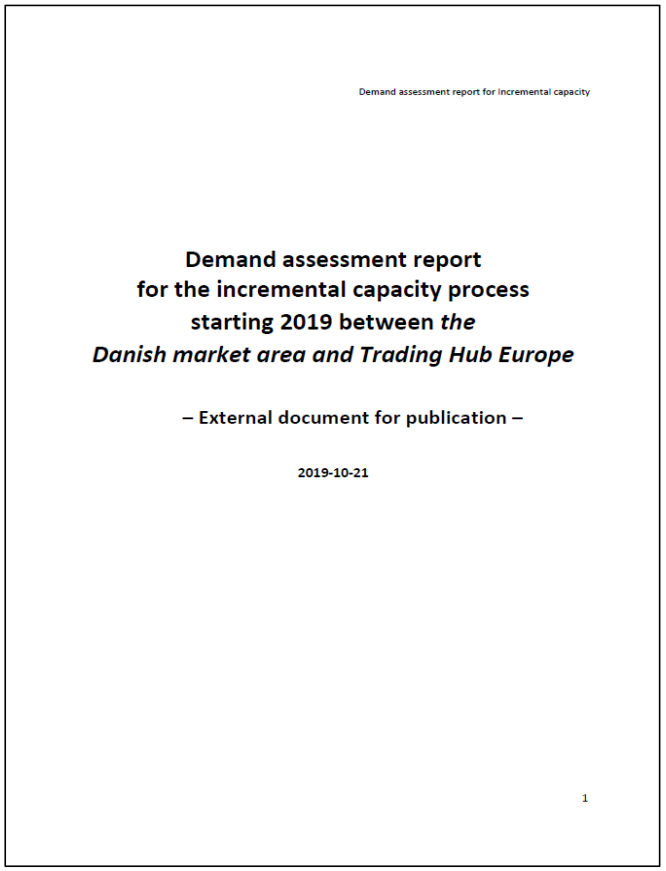
DEMAND ASSESSMENT REPORTS PUBLISHED



DEMAND ASSESSMENT REPORT FOR ELLUND

Official report based on obligations in NC CAM

- Joint report for Energinet, Gasunie Deutschland and Open Grid Europe
- Non-binding demand indications received on German side of Ellund (southbound)
  - And firm capacity is reduced to zero from 1 January 2020
- German TSO's must start up incremental project
  - However, first consultation later than expected, as demand indications have been received at a number of German border points



Demand assessment report for incremental capacity

Demand assessment report
for the incremental capacity process
starting 2019 between *the*
Danish market area and Trading Hub Europe

– External document for publication –

2019-10-21

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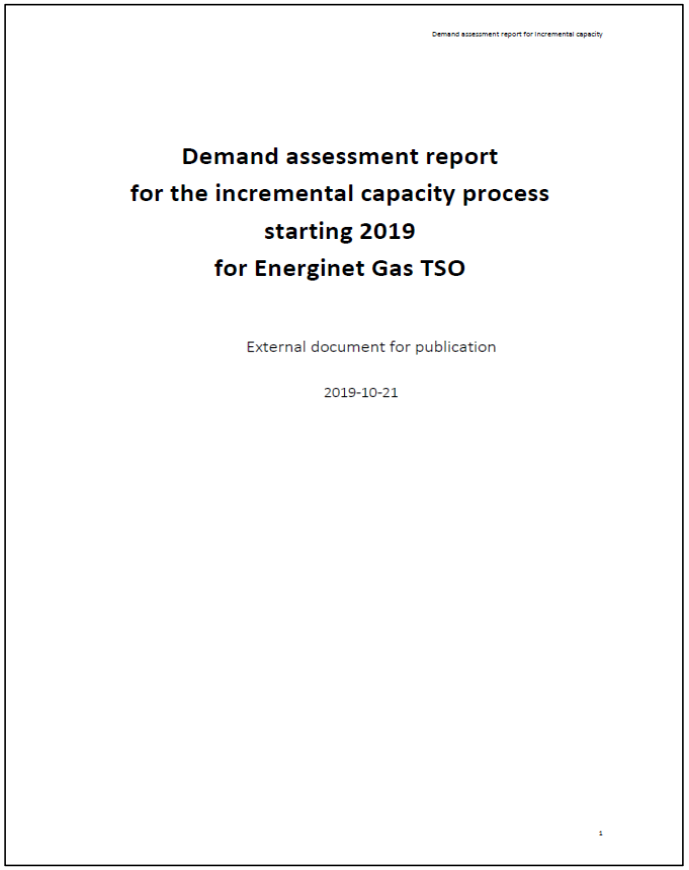
DEMAND ASSESSMENT REPORT FOR DENMARK

Voluntary report for DK entry/exit points, following the NC CAM procedure

Energinet received non-binding demand indications for 3 points:

- One indication regarding a possible project for connecting LNG to the Danish grid – no new information at this stage
- Two indications for expanding the Danish gas network to the Islands of Lolland and Falster
  - RES entry for biomethane and JEZ exit for demand
  - Presented further in the next session



Demand assessment report for incremental capacity

Demand assessment report
for the incremental capacity process
starting 2019
for Energinet Gas TSO

External document for publication

2019-10-21

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QUESTIONS

Contact: cru@energinet.dk

GREEN GAS LOLLAND-FALSTER

Steen Brostrup Knudsen, Energinet Gas TSO

GREEN GAS LOLLAND-FALSTER

New development project based on indications in the 2019 Incremental Capacity process

Demand – Joint Exit Zone "New Denmark"

- Large consumers (industries/business, for processing purposes)

Supply – RES Entry "New Denmark"

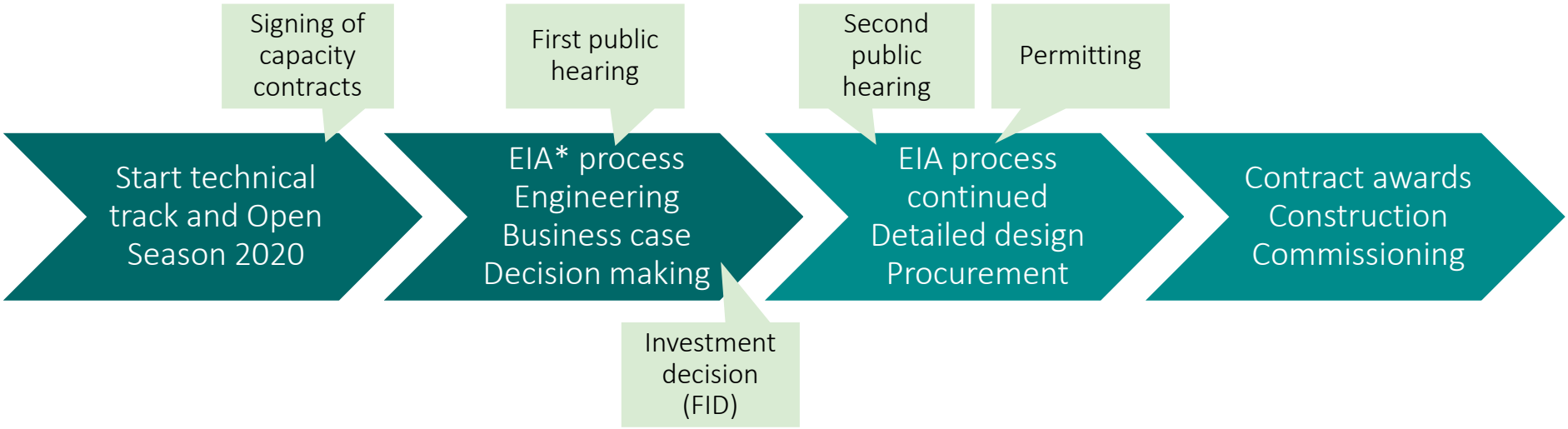
- New biomethane production (significant potential in the area from local farming and local waste)

Purpose of the Development Project

- Explore and mature opportunities to develop a green gas grid on-Lolland-Falster (distribution)
- Expected to be connected to the existing gas grid to balance demand and supply (transmission)

PROCESS AND MILESTONES

The development project and the potential construction project



* Environmental Impact Assessment

QUESTIONS

Contact: sku@energinet.dk

OPEN SEASON 2020

Cathrine Søegaard & Christian Rutherford,
Energinet Gas TSO

OPEN SEASON 2020

Introduction and purpose

Why an Open Season?

- To get a clear and binding investment signal from the market
- To decide whether or not to move forward into a construction project (FID)

Expected to be launched no later than January 2020

OS2020 VS. OS2017

Similarities and differences

Open Season 2020 will build on the Open Season 2017 rules

However, some differences;

- This is a regional project within Denmark
- We need to ensure that the capacity is incremental
- Significant financial investment contribution is needed

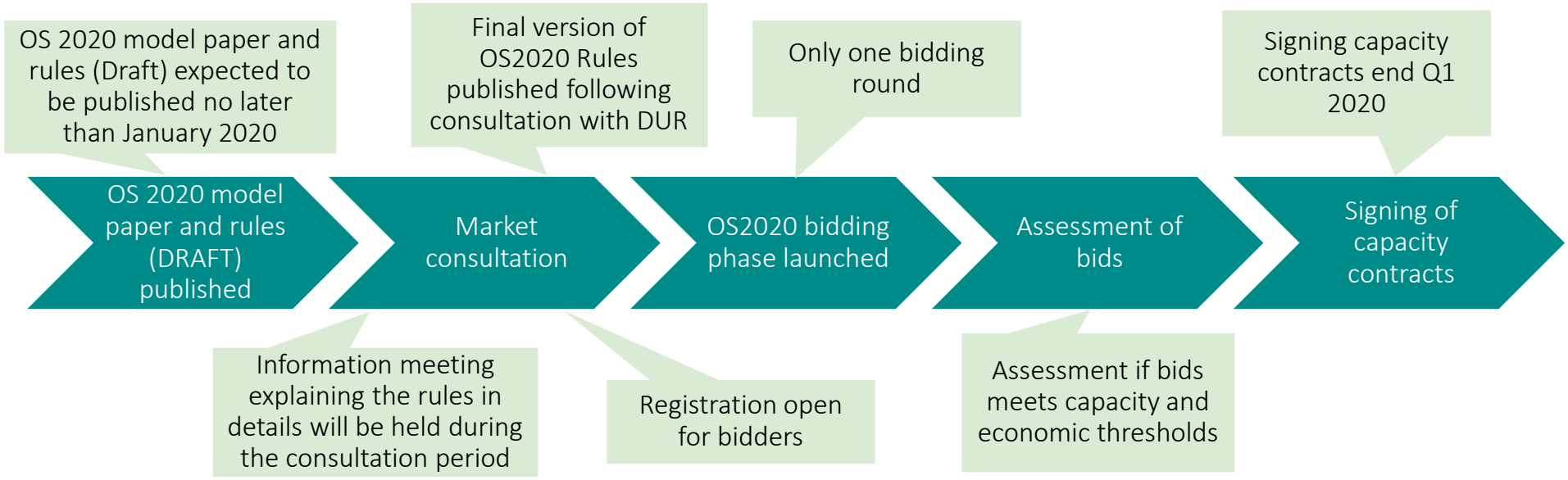
OPEN SEASON 2020

Conditions Precedent, CP

- As in previous Open Seasons, the final capacity contract will rely on different approvals after contract signing
- The following possible CP's are anticipated:
  - Business case approval by Energinet board
  - Business case approval by Minister of Climate and Energy
  - Positive FID by Evida

Further CP's might be relevant

PROCESS AND MILESTONES



QUESTIONS

Contact: cso@energinet.dk

German gas market merger - THE

Background, timeline, challenges and preliminary proposals to the gas market merger – project “Marco”

Shippers forum Energinet.dk, Ballerup, 5 December 2019

Sirko Beidatsch, Natural Gas Markets, EEX AG

pegas is the gas trading platform of eex group, operated by powernext

Political background and envisaged timeline

07.07.2017 – renewed German gas grid access was approved by parliament

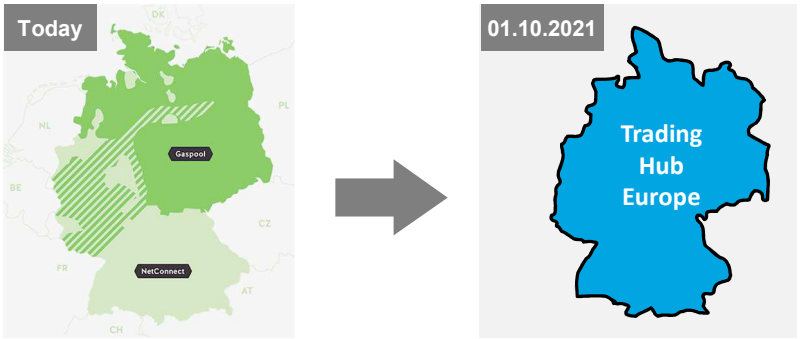
- Merger of German gas markets /GPL and NCG) latest on 1 April 2022
  - One German reference price avoid regional price discrimination for customer
  - Increase liquidity in the German gas market, security of supply & competitiveness
  - Enable pan-European market mergers thereafter (The Netherlands, Belgium,…)
- No cost-benefit analysis was made; very strong political driven decision process

28.06.2018 – press release by all German TSO's and MAM

- Preponing of German market merger to the 1 October 2021- agreed with BNetzA

13.09.2019 – press release by all German TSO's and MAM

- Nationwide German Market Area Manager is named "Trading Hub Europe" (THE)
  - Name was born in an internal "beauty contest" amongst GPL and NCG employees



Get the ball rolling – how to start a market dialogue?

Change of mindset inside regulator and infrastructure provider

- Initially regulator was not happy with and TSO's not keen on market merger
  - After one year of less communication & market integration, EFET GTFG intervened and invited market participants, regulator and TSO's to a workshop (Nov. 2018)
    - Positive example of market merger in France was mentioned especially in relation to market integration, leading role of regulator but also use of market based CMP's
    - Shipper claimed more transparency and market integration inside the merger process
- Finally, TSO's started officially the market dialogue at E-world 2019
  - More information regarding zone merger were shared with shipper
  - Several issue-related subgroups were established across associations
  - Involvement of stakeholder and regulator is now ensured
  - In November 2019, already third market dialogue organized by German TSO's
- German regulator (BNetzA) also started in 2019 official market consultation
  - May: procedure for additional capacities into the single German market (KAP+/1)
  - October: procedure for an oversubscription and buy-back scheme to enable additional capacities into the single German market (KAP+/2)

Issues in discussion regarding market merger 1/5

Trading

- No firm date of market merger
  - Merger of GPL and NCG to THE eventually on 1 October 2021, latest 1 April 2021
  - No guarantee to stick on any launch date, neither by MAM/TSO's nor BNetzA
- Order books for trading
  - How/when to trade THE in an order book offered by exchanges/broker?
  - In addition or as substitute of one of the existing order books of GPL and NCG?
  - How to setup without taking the delivery area risks in case of a market merger delay?
- Balancing trading by MAM/TSO's
  - What happens with existing balancing products?
  - What happens with bilateral balancing agreements between MAM and shipper?
  - Are new/amended balancing products needed?
  - How and when is the market intervention by MAM/TSO's planned – transparency?
- Congestion management trading by MAM/TSO's
  - Which kind of CMP's (location-spreads, VIP wheeling, third party network use) are planned to use, in which order and on what costs?
  - Is the support of adjacent TSO's (e.g. GTS NL, Fluxys) for VIP wheeling ensured?
  - How will planned congestions zones look like (are they simply the old GPL/NCG markets)?
  - How and when is the market intervention by MAM/TSO's planned?

Issues in discussion regarding market merger 2/5

Capacity allocation and transportation

- Expected level of transport capacities due to market merger
  - German TSO's expect a reduction of 78% (around -200 GW) inside free allocable firm gas entry capacities into the German gas market compared to now
  - German TSO's expect a reduction up to 49% inside existing long-term bookings
  - German TSO's expect no reduction for gas exit capacities
- Proposed measures to avoid cut inside gas entry capacities post market merger
  - Construction of new pipelines – 5-7 years; < 10 Mrd. € – to late for 2021→ Rejected
  - TSO's: Market based measures (location-spreads, VIP-wheeling, third party network use) – timely available; up to 30 Mio. €/a → favored by TSO's if regulator accept costs ex-ante
  - Regulator: Introduction of an oversell and buy-back (OSBB) scheme with backing by market based measures (as above) on request → ex-ante acceptance of costs as trial
  - Anyway, both latter measures are suited to avoid capacity cut post market merger
- Configuration of overselling and buy-back scheme, proposed by TSO's
  - Trial period OSBB: 2020-2024; extra firm entry capacities should close the capacity gap
  - TSO's plan to determine entry capacities according gas consumption
  - In addition to free allocable firm entry capacity, also temperature related firm capacity should be marketed → individual and point-to-point decision by German TSO's, where to market and in which extension free allocable and temperature related firm entry capacity

Issues in discussion regarding market merger 3/5

Capacity allocation and transportation

- Configuration of market based instruments (MBI) and buy-back, proposed by TSO's
  - Location-spreads: sell and buy gas before and beyond the bottleneck, trading via EEX in transparent & competitive order books; need for physical fulfillment; lead-time 3 hours;
  - VIP-wheeling: short-tariffed transport via IP with adjacent TSO's; costs on demand; adjustment of initial VIP flow allocation with adjacent TSO's; lead time ≤ 2 hours
  - Third party network use: tariffed transport via adjacent gas transport systems of neighboring TSO's; costs are transport tariffs; lead-time ≥ 3 hours
  - Buy-back of capacities: only last resort; buy-back of already nominated entry capacity in upstream (oversupplied) zone on bookable points (VIP, CBP, entry storage); costs according outcome of reverse auction; lead time 2…4 hours
  - Ongoing discussions about configuration of MBI's and Buy-back, Merritt-Order-List of usage of MBI's, use of price caps and impact on traders business
- Auction of extra free allocable firm gas entry capacities around market merger
  - 2019 - no auction of extra capacities beyond market merger, due to legal uncertainty
  - 2020 - no extra capacity based on OSBB for GY 2020 but for GY 2021 and GY 2022
  - 2021 - extra capacity based on OSBB for GY 2021 and GY 2022 → proposal by BNetzA
  - 2022 - extra capacity based on OSBB for GY 2022 and GY 2023 → proposal by BNetzA
  - 2023 - extra capacity based on OSBB only for GY 2023, because OSBB trial period should end in Sep. 24 → proposal by BNetzA

Issues in discussion regarding market merger 4/5

Capacity allocation and transportation

- Shipper code/balancing group transition from NCG and GPL to THE
  - From 1 Oct. 2021 all network operator network accounts will be managed in the THE
  - Mandatory 1:1 mapping or/and consolidation possible (on shippers request)?
- How to deal with current neutrality charges, levies and neutrality accounts?
  - NCG and GPL will independently plan their neutrality charges and fees up to and including GY 2020/2021 according to Gabi and Konni Gas
  - Neutrality charges and fees of the new MAM continue to be calculated in accordance with Gabi-Gas and Konni-Gas requirements
  - Planning uncertainties regarding initial estimate of common costs and revenues, common liquidity buffer (risk assessment) and definition and negotiation of a joint credit line

Neutrality charges / fees [GY 2019/20]		
in €/MWh	NCG	GPL
SLP neutrality charge	0.10	0.29
RLM neutrality charge	0.10	0.015
Conv. neutrality charge	0.00	0.005
Conv. fee (H→L)	0.45	0.42
VTP fee	0.0014	0.00116

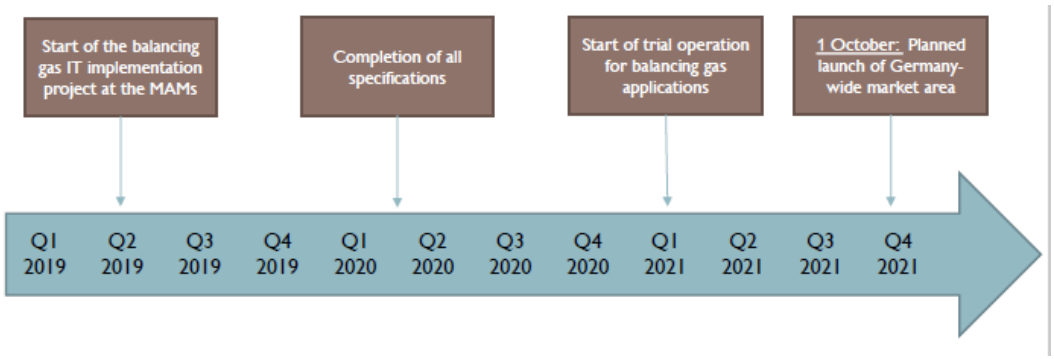
Neutrality accounts [As at 06/2019]		
in €m	NCG	GPL
SLP	303	344
RLM	112	106
Konni	151	47

Source: 3rd market dialogue of German TSO's; 5 November 2019; www.marktgebietszusammenlegung.de/wp-content/uploads/Market_Dialogue_051119.pdf

Issues in discussion regarding market merger 5/5

IT implementation

- Determination of upcoming IT processes
- Implementation of amendments in IT systems → consideration of market feedback
  - Selection of preferred IT systems
  - Data migration → two become one
  - Test environment and tests
  - Backup systems for Go-Live
- Timely communication intended



Source: 3rd market dialogue of German TSO's; 5 November 2019; www.marktgebietszusammenlegung.de/wp-content/uploads/Market_Dialogue_051119.pdf

Planned communication to the market 1/2

General aim

- 1,500 market partner have to be connected to THE
  - Provide a platform where the market partners can deposit their communication parameters for establishing market communication links before the market area merger
  - Set up and test the communication links before the Go Live, so that links tested prior to the changeover day can start to be used.
  - Provide additional possibility for submitting declarations and allocations via a portal
  - Implement all specifications in accordance with the currently valid publications of BNetzA, BDEW and DVGW

VTP nomination regime

- The nomination process will be handled using the AS2 protocol + via a portal
- Two format variants are offered for the nomination process:
  - NOMINT / NOMRES according to the EDIFACT formats published by DVGW and
  - NOMINT / NOMRES in a bilaterally agreed EU XML format

Targeted issues for clarification soon

- Timely provision of certificates for THE
- Determination of DVGW codes, nomenclature for network accounts, balancing groups and VTP identifier for THE

Source: 3rd market dialogue of German TSO's; 5 November 2019; www.marktgebietszusammenlegung.de/wp-content/uploads/Market_Dialogue_051119.pdf

Planned communication to the market 2/2

Website

- Will contain information which are required for regulatory and legal reasons but also further voluntary publications
  - Market players should be provided with at least the information of today

Portals

- One comprehensive portal for Trading Hub Europe, which includes
  - A customer portal for network operators and BGMs
  - A VTP portal
- In addition, there will be a tendering platform for MOL 4 balancing products
- The portals / the tendering platform are based on today's NCG solutions
- Customers already registered with NCG and/or GASPOOL today will most probably not have to re-register

Source: 3rd market dialogue of German TSO's; 5 November 2019; www.marktgebietszusammenlegung.de/wp-content/uploads/Market_Dialogue_051119.pdf

Where to get further information?

Website for the project “Marco” – www.marktgebietszusammenlegung.de

- Relevant information such as press releases, invitations to events, published "statements", information on the "KAP+" model
- All information is made available in German and English

Market Dialogue events

- Information on progress and important milestones presented by process owners
- Platform for discussion with the market
  - Panel discussions with market participants/stakeholder under involvement e.g. associations, BNetzA, etc.
  - Market Dialogue in February and June 2019 with approx. 400 participants
- Save the date: next Market Dialogue on 12 February 2020 (Day 2 of E-world)

Associations

- MAMs are involved in associations' bodies (BDEW, EFET…) at an early stage
  - to jointly develop solutions, create transparency and facilitate preparations for the implementation (e.g. dealing with network accounts and balancing groups)

New – customer events starting in 2021

- In spring 2021 MAM will present details of Marco in a series of customer events

Source: 3rd market dialogue of German TSO’s; 5 November 2019; www.marktgebietszusammenlegung.de/wp-content/uploads/Market_Dialogue_051119.pdf

Thank you

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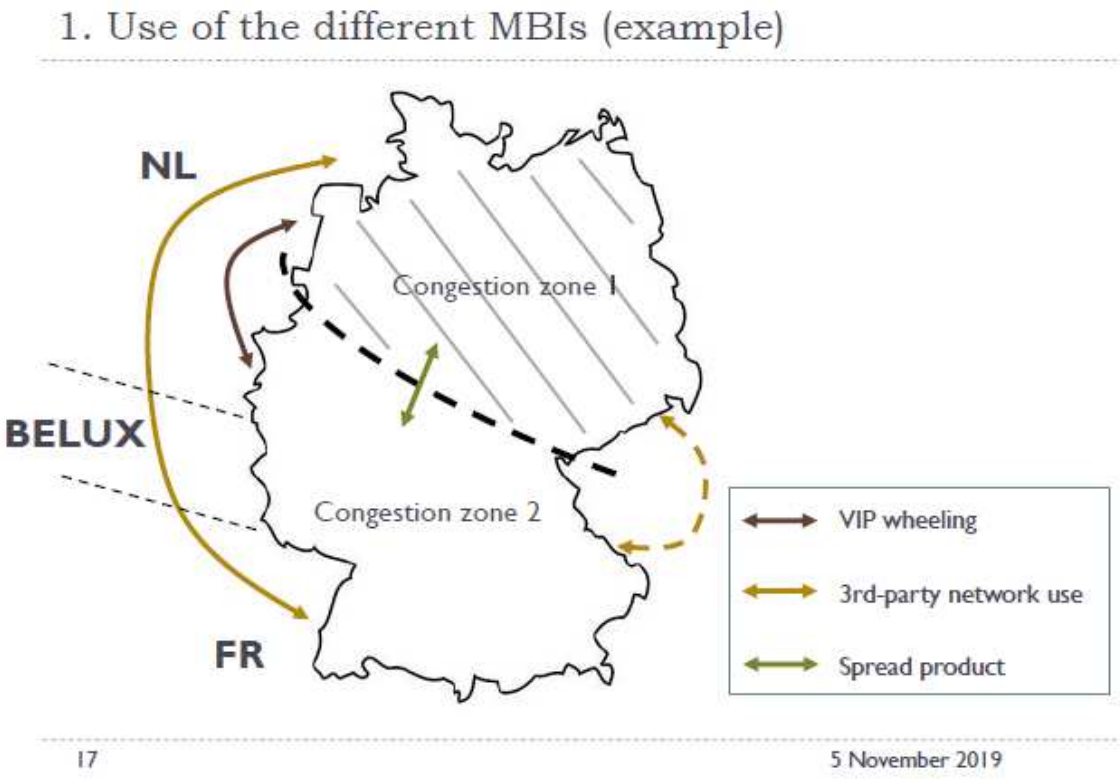
pegas is the gas trading platform of eex group, operated by powernext

Overview: Illustration of different MBI's

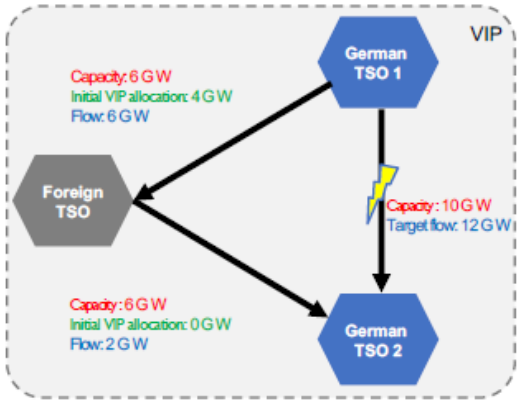


Source: 3rd market dialogue of German TSO's; 5 November 2019; www.marktgebietszusammenlegung.de/wp-content/uploads/Market_Dialogue_051119.pdf

VIP wheeling: proposed design by German TSO's

2. "VIP wheeling" design

- Chargeable (short-distance) transmission within a VIP via a foreign TSO
- Planned process:
  - THE informs VIP TSO
  - VIP TSO "nominates" wheeling (possibly on behalf of THE) with foreign TSO
  - Implemented by adjusting the initial VIP flow split
- Lead time: ≤ 2 hours
- Costs: Commodity charge when MBI is used



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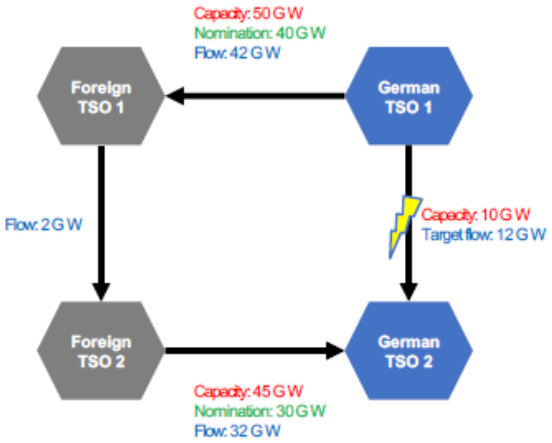
Source: 3rd market dialogue of German TSO's; 5 November 2019; www.marktgebietszusammenlegung.de/wp-content/uploads/Market_Dialogue_051119.pdf

3rd party network use: proposal by German TSO's

3. "3rd-party network use" design

- Fee-based transmission via adjacent neighbouring transmission systems
- Planned process:
  - THE books required short-term capacities with German TSOs / foreign TSOs involved
  - Implemented by nominating the relevant flows at booked points
- Lead time: ≥ 3.5 hours
- Costs: capacity fees



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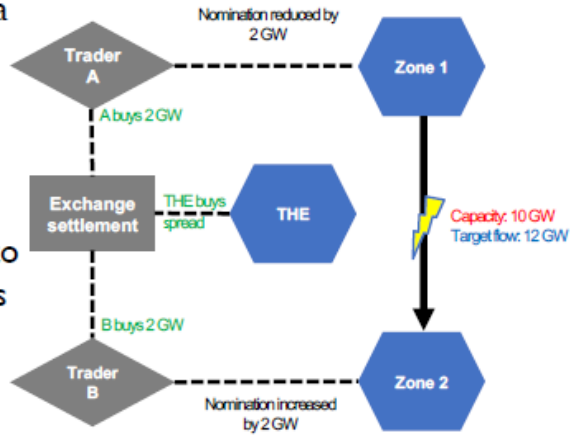
Source: 3rd market dialogue of German TSO's; 5 November 2019; www.marktgebietszusammenlegung.de/wp-content/uploads/Market_Dialogue_051119.pdf

Location-spreads: proposal by German TSO's

4. "Exchange-based spread product" design

- Sale and purchase of gas upstream and downstream of congestion via order book on the exchange
- Planned process:
  - THE trades on the exchange
  - Trading participants are subject to physical performance restrictions
  - Penalty in case of breach of performance obligations
- Lead time: ≥ 3 hours.
- Costs: Exchange settlement price



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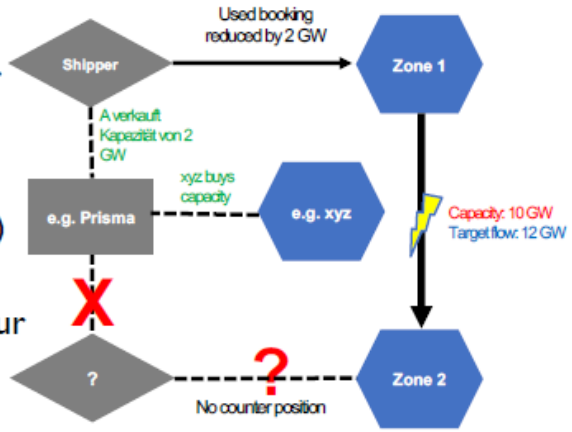
Source: 3rd market dialogue of German TSO's; 5 November 2019; www.marktgebietszusammenlegung.de/wp-content/uploads/Market_Dialogue_051119.pdf

Buy-back: proposed design by German TSO's

5. "Capacity buy-back" design

- Buy-back only last resort
- Buy-back of nominated firm entry capacity in upstream zone at bookable points (VIP, cross-border IP, SAP)
- Planned process:
  - To be agreed (Who, How, Where)
- Effect on both congestion zones depends on BGM/Shipper behaviour
- Lead time: 2 to 4 hours
- Costs: Capacity costs as part of reverse auction



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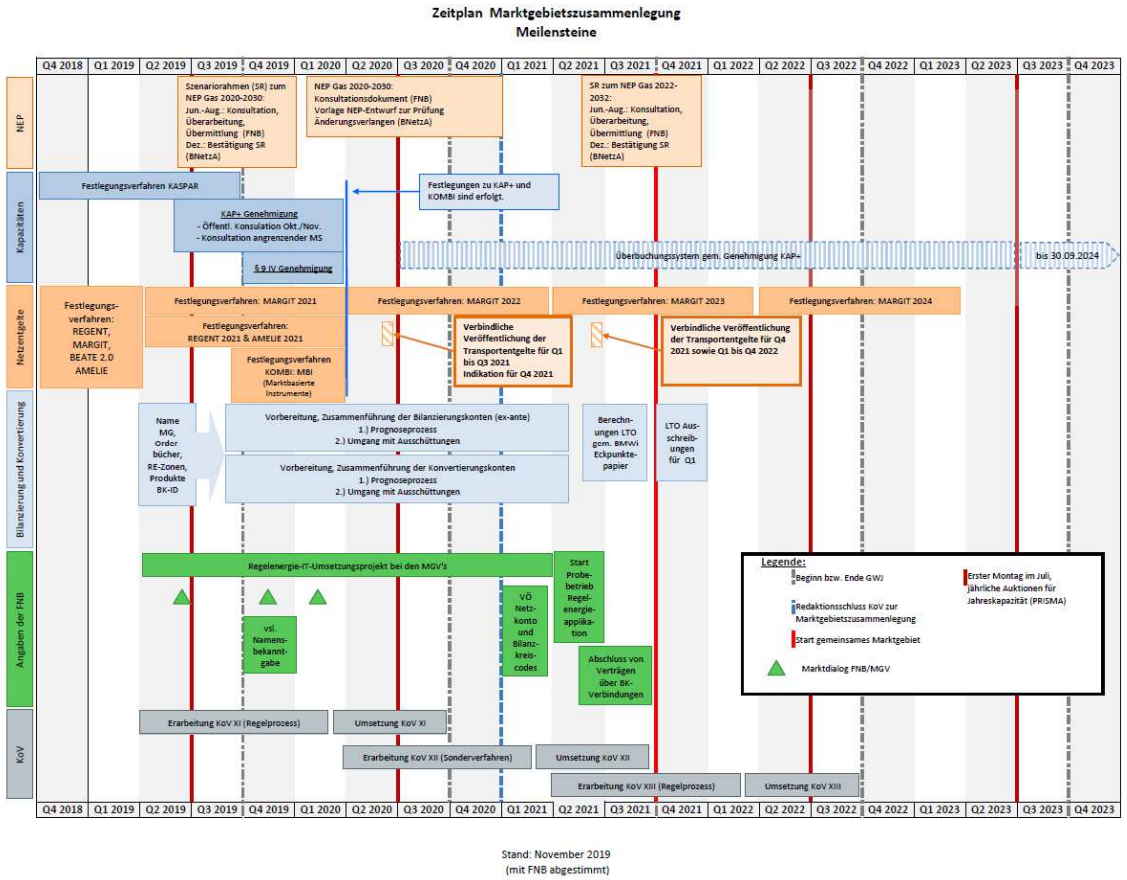
Source: 3rd market dialogue of German TSO's; 5 November 2019; www.marktgebietszusammenlegung.de/wp-content/uploads/Market_Dialogue_051119.pdf

Timeline for German market merger - milestones



Source: https://www.bundesnetzagentur.de/DE/Service-Funktionen/Beschlusskammern/BK07/BK7_01_Aktuell/Zeitplan_Marktgebietszusammenlegung/Zeitplan_Marktgbietszusammenlegung_download.pdf?__blob=publicationFile&v=2

TYRA REDEVELOPMENT

Lasse Trøjborg Krogh, Energinet Gas TSO

DUR DRAFT APPROVAL OF SEASONAL FACTORS

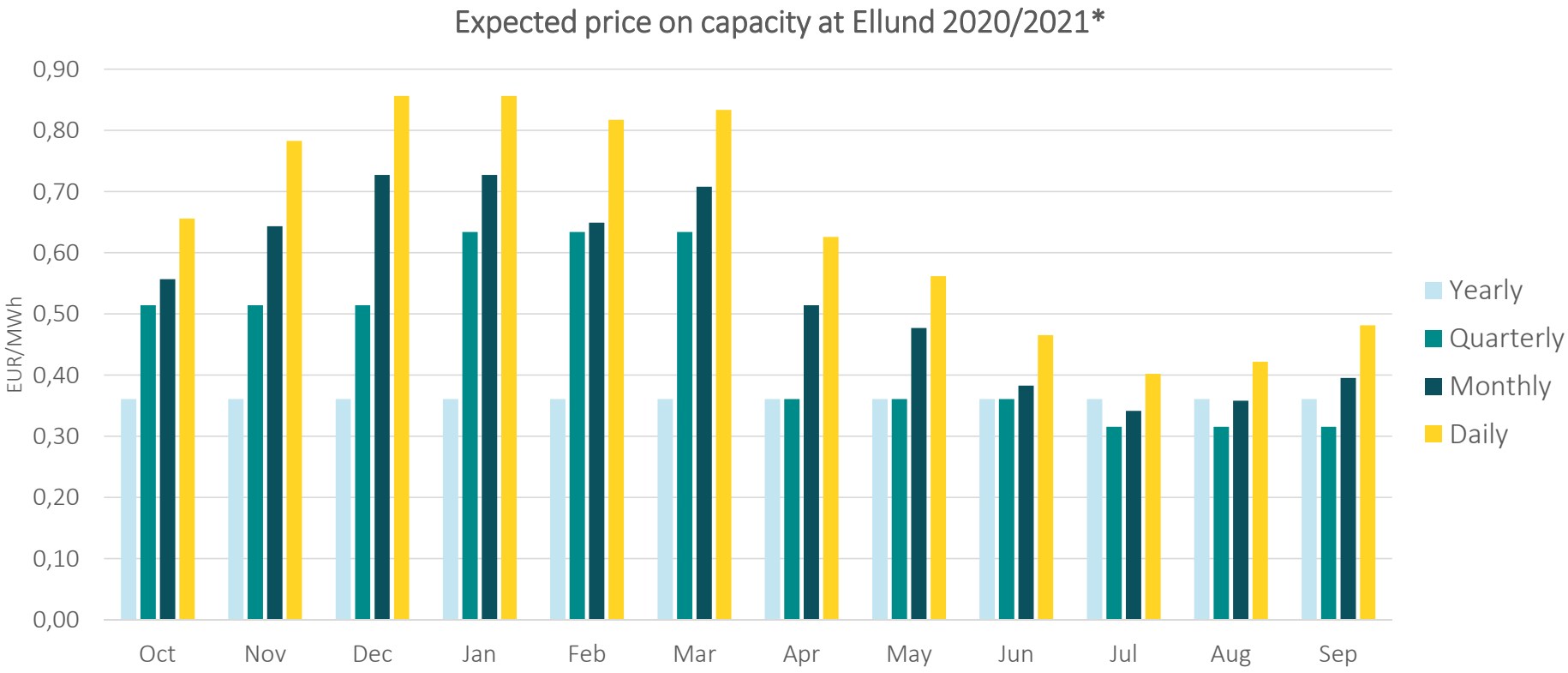
- From 1. October 2020 – 1. October 2022
- Only at Ellund (entry and exit)

SEASONAL FACTORS AND MULTIPLIERS

From Energinet's method application in March 2019

Firm capacity charge/reservation prices (short term) at Ellund												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
	Price in % of the annual capacity charge/reservation price											
Quarterly	35,2%	35,2%	35,2%	43,3%	43,3%	43,3%	24,7%	24,7%	24,7%	21,6%	21,6%	21,6%
Monthly	12,7%	14,7%	16,6%	16,6%	14,8%	16,1%	11,7%	10,9%	8,7%	7,8%	8,2%	9,0%
Daily	0,49%	0,59%	0,64%	0,64%	0,61%	0,62%	0,47%	0,42%	0,35%	0,30%	0,32%	0,36%
	Factor multiplied on the reservation price (Multiplier)											
Quarterly	1,41	1,41	1,41	1,73	1,73	1,73	0,99	0,99	0,99	0,86	0,86	0,86
Monthly	1,52	1,76	1,99	1,99	1,78	1,94	1,41	1,30	1,05	0,93	0,98	1,08
Daily	1,79	2,14	2,34	2,34	2,23	2,28	1,71	1,54	1,27	1,10	1,15	1,32

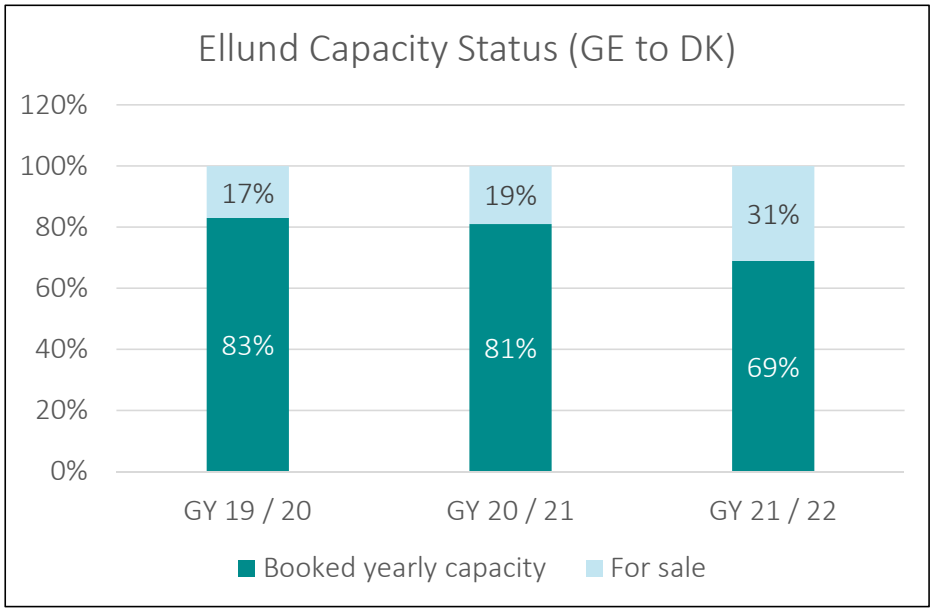
EXPECTED TARIFFS

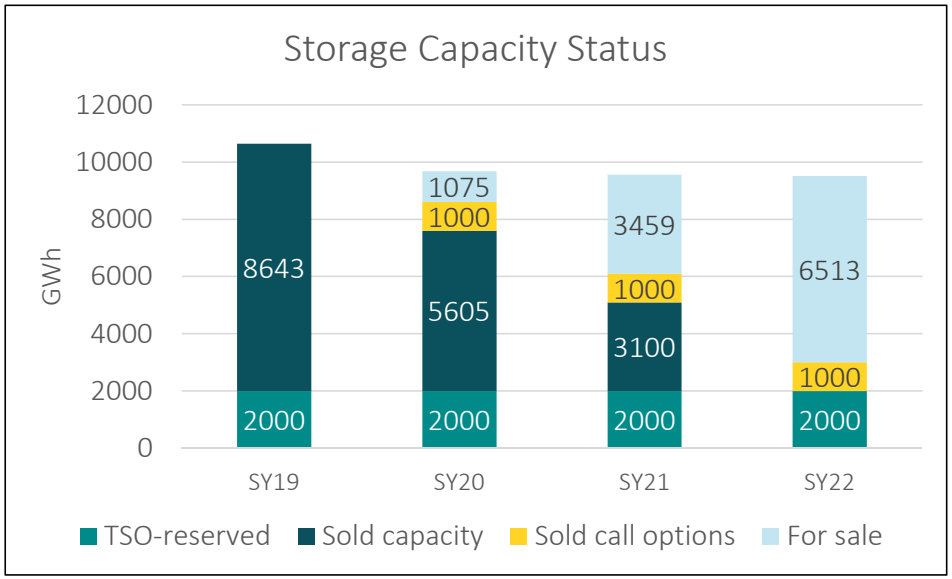


* Based on current tariffs

STATUS ON CAPACITY

Ellund and Storage





STILL A NECESSITY FOR SEASONAL FACTORS

Entry capacity to Danish gas market is a scarce resource!

Efficient usage of the gas system:

- In the summer
- During the winter

We want you to buy yearly capacity!

CONSULTATION RESPONSE

The draft decision by DUR is in external consultation until 10 December 2019

Please send your comments to:

post@forsyningstilsynet.dk copy to Henrik Nygaard Jensen (hnj@forsyningstilsynet.dk)

https://forsyningstilsynet.dk/lovgivning/hoeringer/hoering-over-udkast-til-afgoerelse-vedroerende-metodeforslag-om-indfoerelse-af-saesonfaktorer-i-ellund-punktet-under-tyra-nedlukningen

QUESTIONS

Contact: ltk@energinet.dk

BREAK

GAS STORAGE DENMARK

SHIPPERS FORUM

MADS VEJLBY BOESEN

5. december 2019

AGENDA

- STATUS ON CAPACITY
- MARKET CONCENTRATION
- RGS 14.0 IN MARKET CONSULTATION UNTIL 17 DECEMBER
- ORGANISATIONAL CHANGE 1 DECEMBER
- E-WORLD 2020
- INFORMATION SY2020
- MERGER
- ISO 55001 CERTIFICATION

CAPACITY STATUS

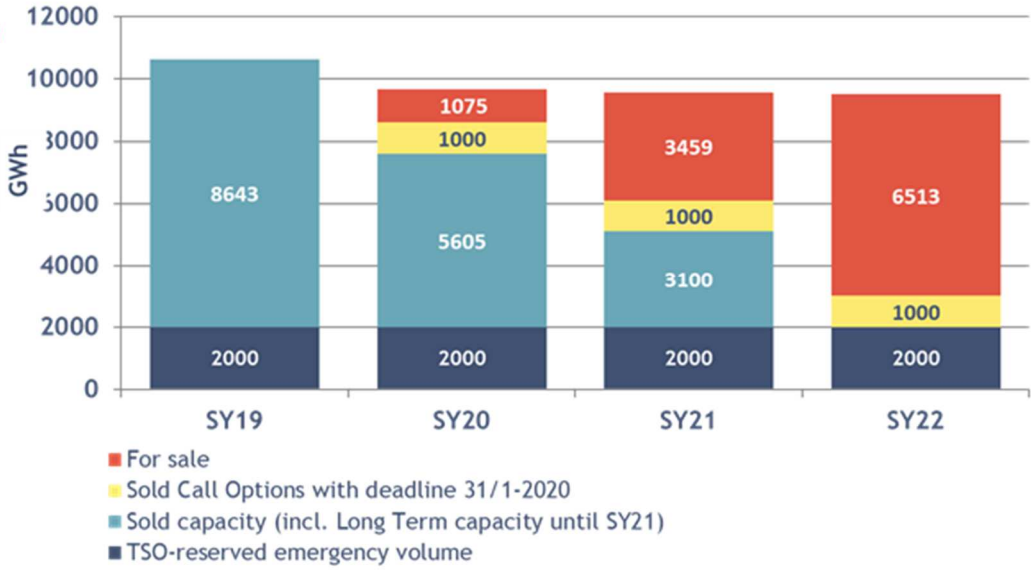
SY 2020

- 1,900 GWh sold on bilateral deals ultimo Oct.

- App. 1,000 GWh still for sale
  - ongoing assesment of the final volume
  - an auction will take place in Q1 2020
  - annoncement in due time

SY 2021

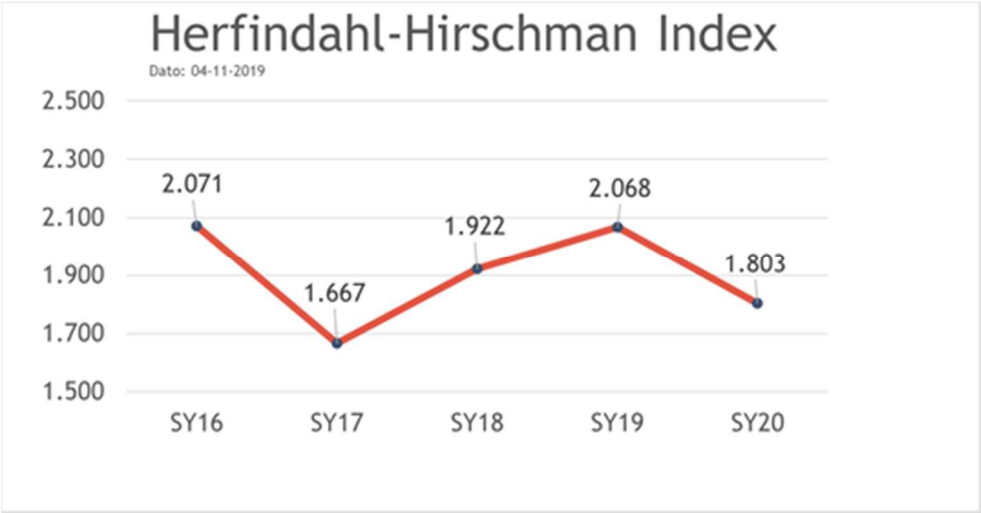
- Open for bilateral deals



MARKET CONCENTRATION – HH-INDEX

- Improved allocation of storage capacity among storage customers in SY2020

- Presumptions
  - the 1 TWh option is exercised
  - another 1 TWh is still for sale



- HHI < 1,500 → competitive market
- 1,500 < HHI < 2,500 → moderately concentrated market
- HHI > 2,500 → highly concentrated market

RULES FOR GAS STORAGE - MARKET CONSULTATION

- **The market consultation started 2 December**
- **Deadline for respons is 17 December**
- **Send your response to contact@gasstorage.dk**

Proposed changes:

- ✓improved readability by language changes
- ✓communication optionality
  - Edig@s XML 4 or Edig@s XML 5.1 with AS2 or AS4 protokol for transfer and security
- ✓updated definitions

Rules for Gas Storage

Version ~~13.0~~ 14.0

1 May 20~~19~~20

Read more on → https://gasstorage.dk/News/2019/12/02/RGS-ver14-marked-consultation-DEC19

ORGANISATIONAL CHANGE -1 DECEMBER 2019

- GSD increases strategy focus on GREEN GAS STORAGE
- Hans-Åge Nielsen will be 100% dedicated to the development of the GREEN GAS STORAGE
- Rune Gjermundbo will take over the leadership of the SALES and PLANNING department

E-WORLD 2020

- GSD will attend E-World 2020 without own booth
- We will contact our customers for booking of meetings
- You are also welcome to contact us if you want to set up a meeting
- In 2021 we expect to be present again with own booth

INFORMATION FOR SY2020

GSD GAS STORAGE DENMARK

❑ RESTRICTIONS

– No changes for SY 20 in the injection and withdrawal restrictions. Be aware that the injection restriction again will be active from the 95% filling level instead of 98%.

❑ MAINTENANCE

– No interruptions scheduled

❑ VARIABLE INJECTION

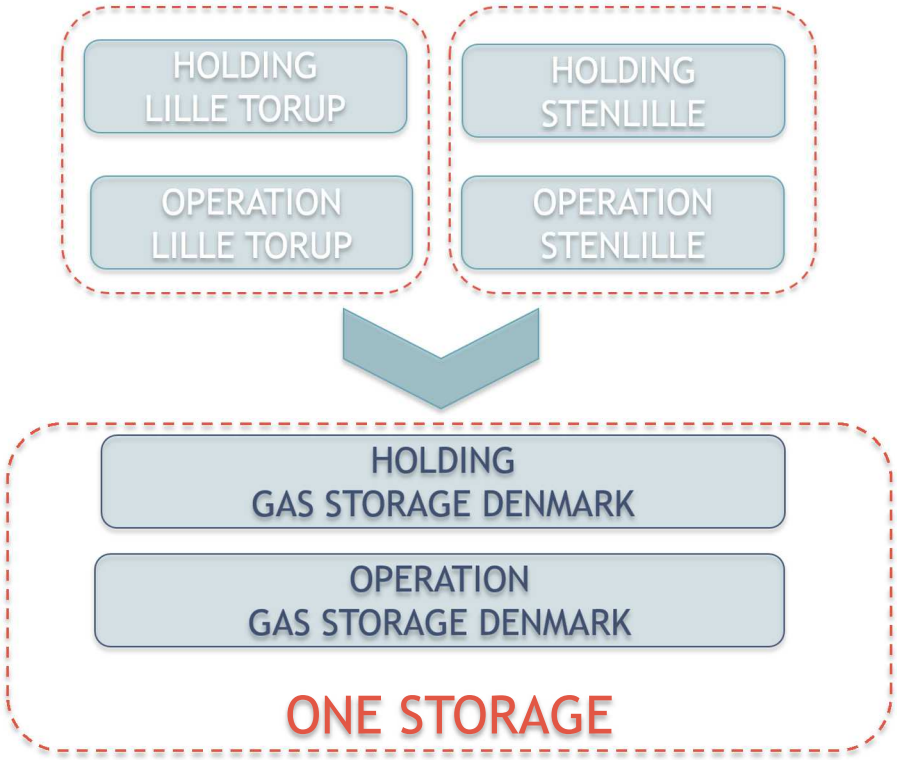
– No changes compare to SY 19 (0.00223 DKK/kWh, approx. 0.30 €/MWh)

❑ Edig@s COMMUNICATION

– XML 4 or XML 5.1 format with either AS2 or AS4 protocol for transfer and security

MERGER

- Two holding companies and two operating companies merged into one holding company and one operating company
- No changes for the STORAGE CUSTOMERS



Read more on → https://gasstorage.dk/News/2019/10/21/Merger-announcement

ISO 55001 CERTIFICATION OF GSD

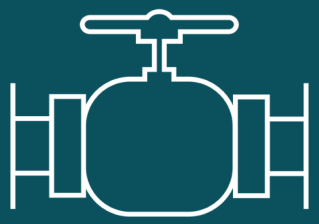
We are happy to announce that GSD has been certified as an independent subsidiary in the Energinet group

Read more on → https://gasstorage.dk/News/2019/11/27/ISO-55001-CERTIFICATION

GAS
STORAGE
DENMARK

GLÆDELIG JUL

MERRY CHRISTMAS



BALTIC PIPE

Christian Rutherford, Energinet Gas TSO

BALTIC PIPE PROJECT

Project overview - DK

2017	2018	2019	2020	2021	2022	2037	2052
Open Season	Investment Decision (FID)	Construction Confirmation	Construction Confirmation, DK-PL pipeline		Operational Date (First Gas)	Foreseen date of New capacity allocation	

- Capacity reservations
- Concept studies
- Surveys start
- EIA start

- Detailed engineer.
- Surveys end
- EIA contd.
- Business case

- Engineer. contd.
- EIA end
- Permits

- Contract awards
- Construction
- Commissioning

- Operation
- Transmission services
- Additional allocation of remaining 10% of the capacity

QUESTIONS

Contact: cru@energinet.dk

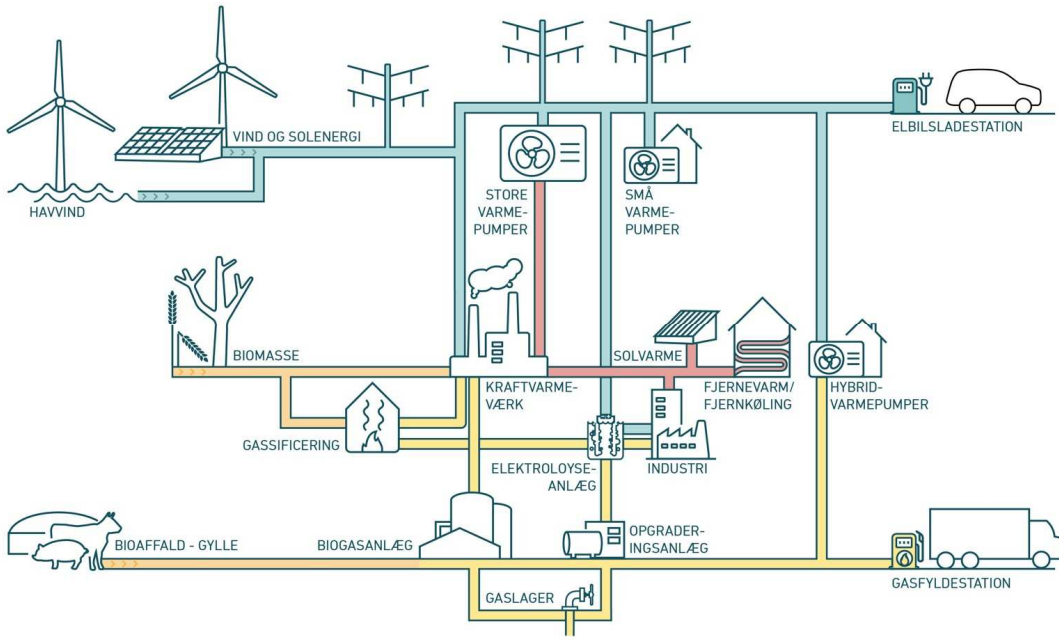
BALANCING MODEL 2022

Julie Frost Szpilman

ALBERT EINSTEIN ONCE SAID:

“LIFE IS LIKE RIDING A BICYCLE. TO KEEP YOUR BALANCE, YOU MUST KEEP MOVING ”


NO-DK tie-in
Onshore infrastructure enhancement in DK
Baltic Pipe subsea pipeline
Compressor station Zealand
Onshore infrastructure enhancement in PL
Oslo
Stockholm
Uppsala
Gothenburg
Malmö
Hamburg
Rostock
Lübeck
Kiel
Bremerhaven
Bremen
Hannover
Magdeburg
Potsdam
Poznan
Bydgoszcz
Gdynia
Gdansk
Szczecin


VIND OG SOLENERGI
HAVVIND
STORE VARME-PUMPER
SMÅ VARME-PUMPER
ELBILSLADESTATION
BIOMASSE
SOLVARME
KRAFTVARME-VÆRK
FJERNEVARM/ FJERNKØLING
HYBRID-VARMEPUMPER
GASSIFICERING
ELEKTROLOYSE-ANLÆG
INDUSTRI
BIOAFFALD - GYLLE
BIOGASANLÆG
OPGRADER-INGSANLÆG
GASLAGER
GASFYLDESTATION

WHY DO WE NEED A NEW BALANCING MODEL?

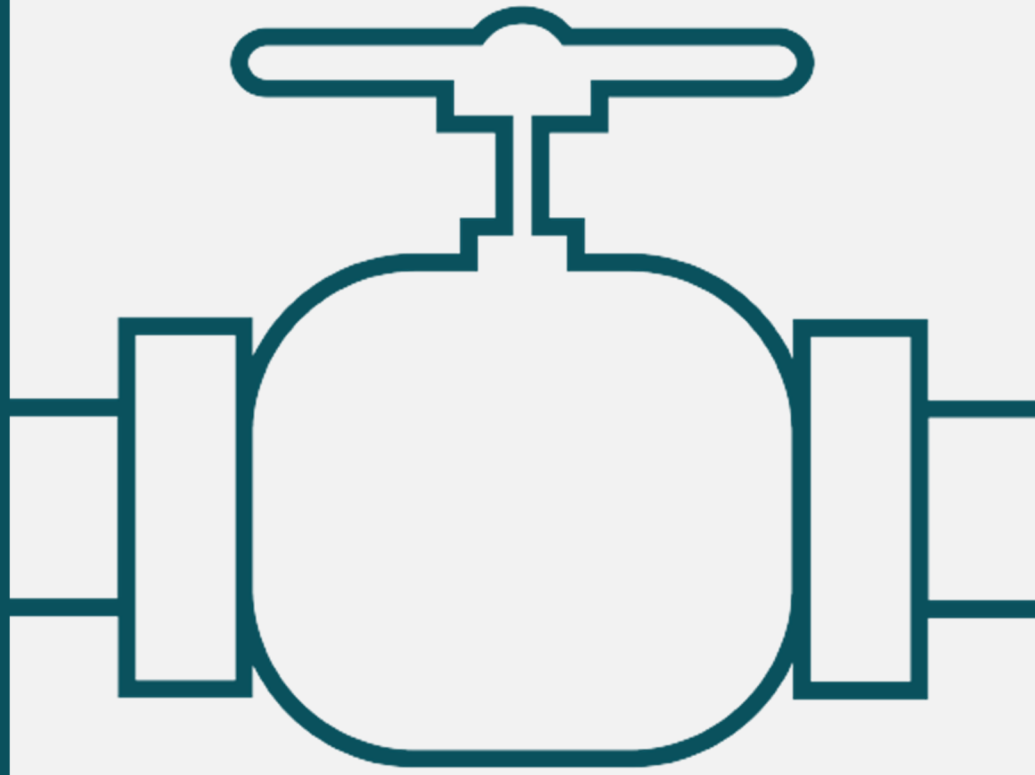
- In the current system, shippers are only required to be in balance at the end of the day
- With Baltic Pipe, Energinet needs shippers' help to balance the system during the day

- In the current system, volumes are small and there are only few entrances to larger markets
- With Baltic Pipe, Denmark can be an energy hub with possibilities to attract large volumes of gas to profit the existing market

- Today, the green transition of the Danish gas system is still in the early stage
- Energinet has to support the further development of this transition

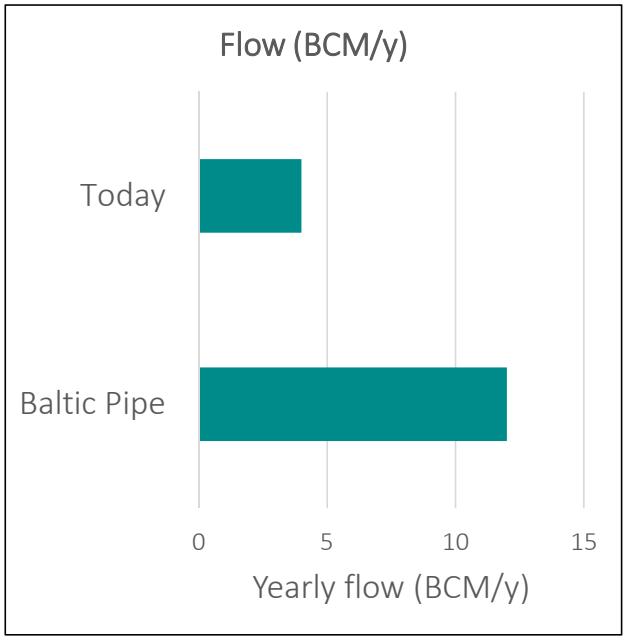
WHY A NEW BALANCING MODEL WITH BALTIC PIPE?

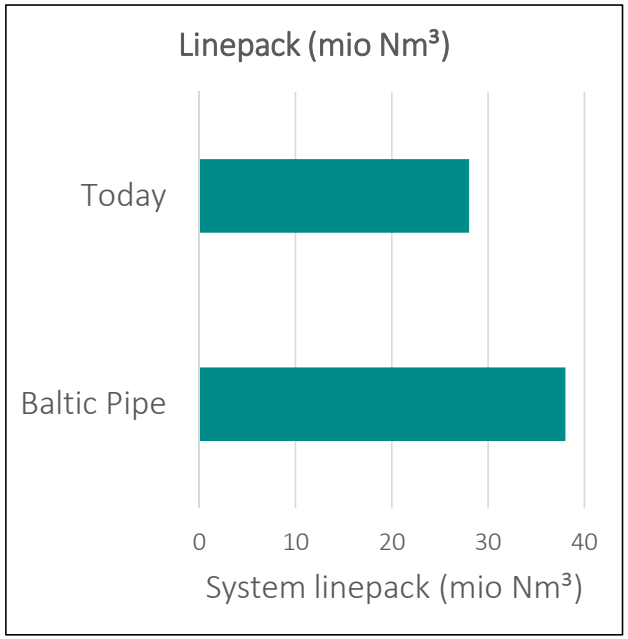
The Danish gas system and market will go through some fundamental changes with Baltic Pipe, at the same time as the system goes through a green transition

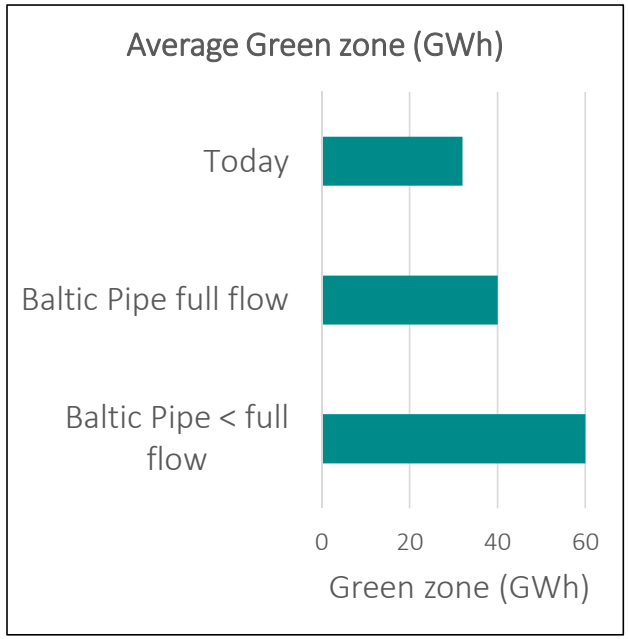


HOW WILL THE PHYSICAL CHARACTERISTICS BE?

With Baltic Pipe in operation, we will see….







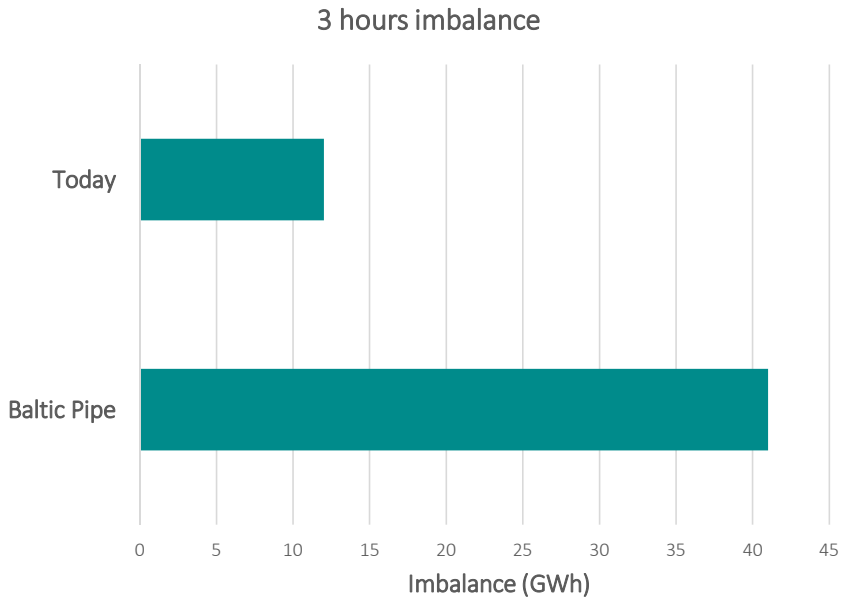
THE CHALLENGES!

The challenges with Baltic Pipe in operation are:

- the flow uncertainty, and
- the risk of large changes in the nominations during a gas day

This can potentially mean a drastic change in flexibility

We therefore need to be able to follow the accumulated commercial imbalance within the day and have the possibility for a faster reaction from the market within the day when the system is too much out of balance



DENMARK AS A GAS HUB

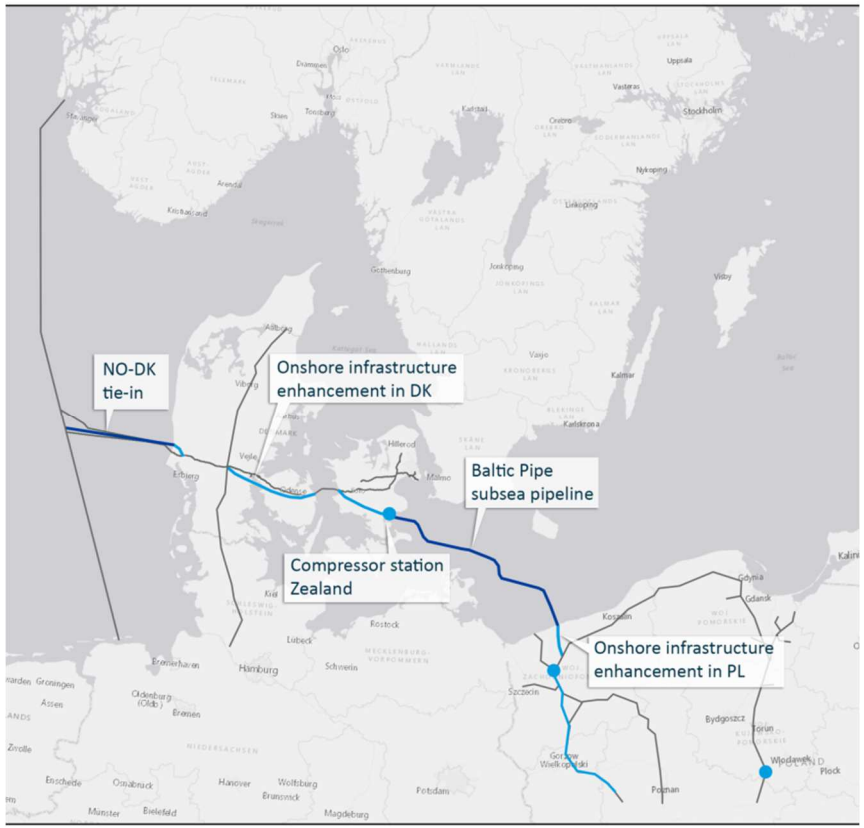
Two new sources of gas:

- Norway
- Poland – also with LNG

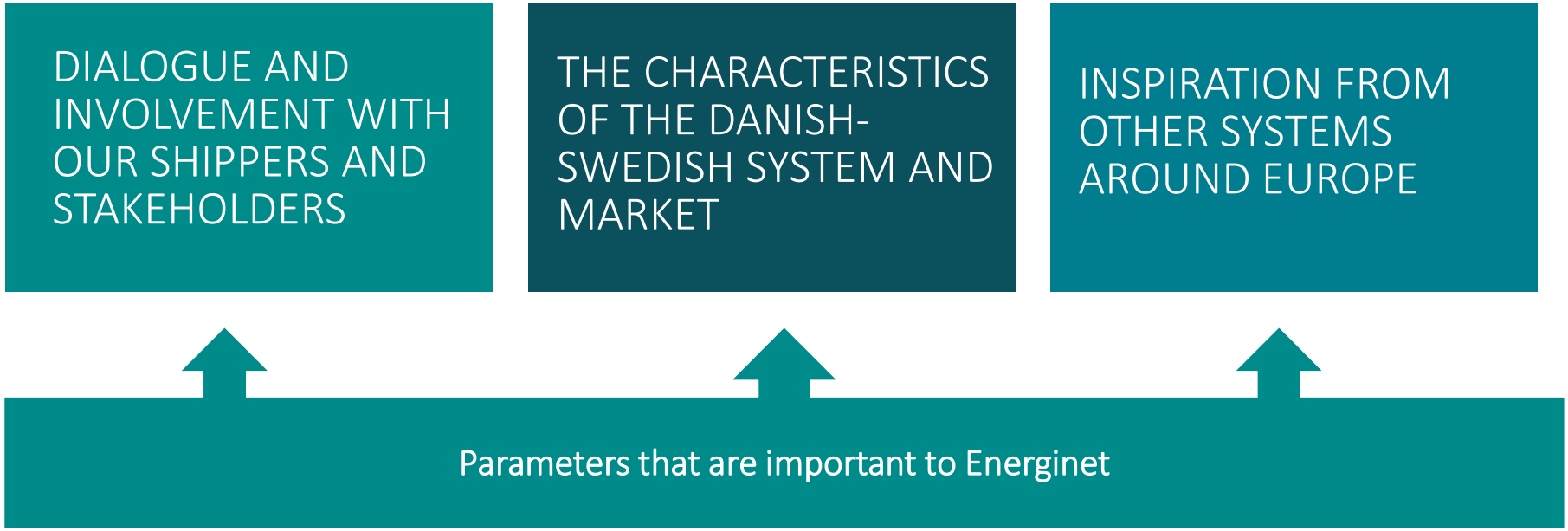
Access to new (growing) markets:

- Poland
- Eastern Europe and Ukraine

=> a better usage of the Danish gas system



HOW DO WE DEVELOP A NEW MODEL?



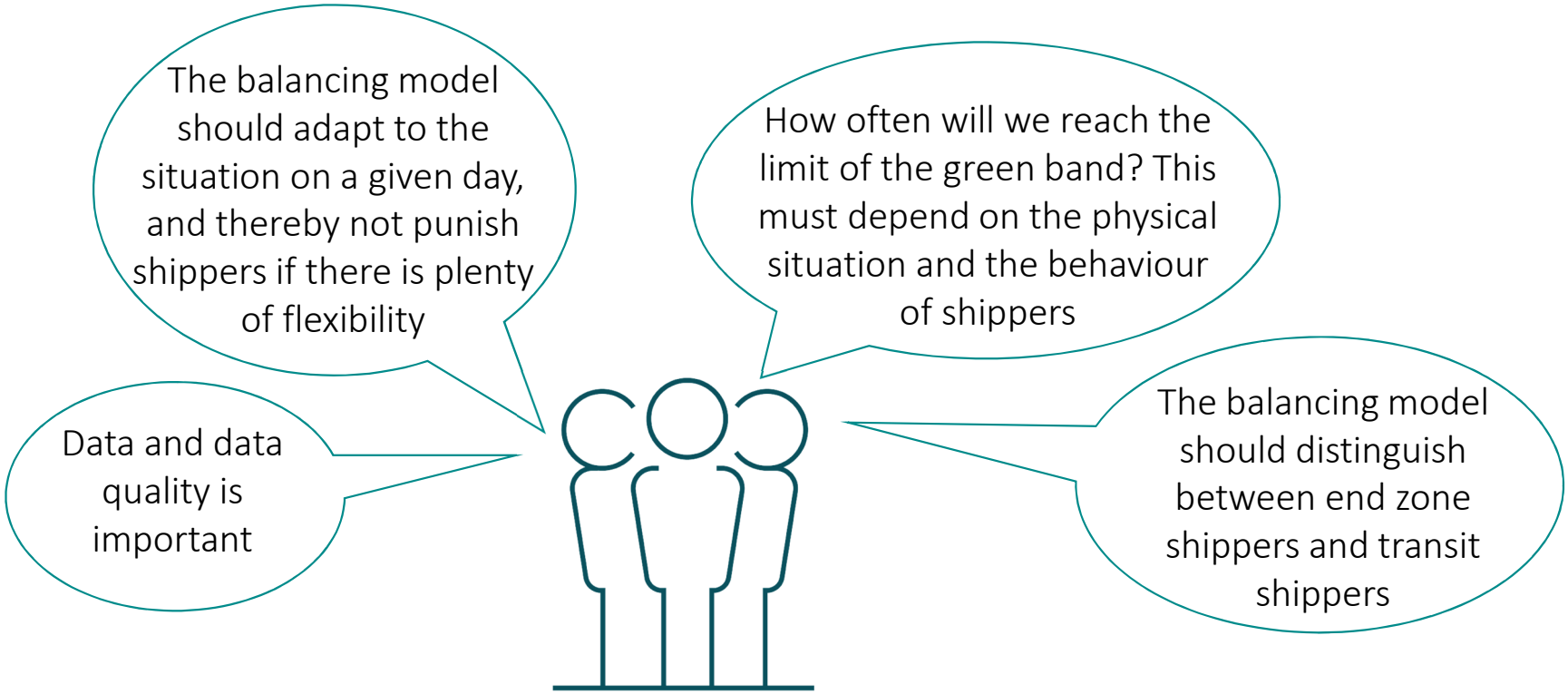
WE HAVE ALREADY TAKEN THE FIRST STEPS

- Analysed the physical and market characteristics
- Dialogue with regulator
- Gathered inspiration from other TSO's around Europe
- Had our first user group with an introduction to the topic and an evaluation of the future balancing needs

THE MAIN QUESTION TO THE USER GROUP

How can we create a balancing model with strong enough economic incentives for shippers to stay within the green band each hour during the day?

STATEMENTS FROM THE USER GROUP



NEXT STEPS

NOVEMBER-FEBRUARY

- Dialogue with shippers and stakeholders
- Dialogue with the DUR and the Swedish regulator
- Inspirations from other TSO's
- Further internal development

MARCH

- Further dialogue
- Shippers Forum
- Test of possible solutions - final internal development

APRIL-MAY

- User group

WE ARE ALWAYS READY TO LISTEN

Please book a meeting

QUESTIONS

Contact: jfs@energinet.dk

FUTURE CAPACITY PLATFORM

Christian Rutherford, Energinet Gas TSO

QUESTIONS

Contact: cru@energinet.dk

ECONOMIC REGULATION OF ENERGINET GAS TSO

Lasse Trøjborg Krogh, Energinet Gas TSO

NEW ECONOMIC REGULATION

Why impose a new regulation to Energinet Gas TSO?

1. Political agreement from 8 May 2018
2. It aligns us with the regulation of other European Gas TSO's
3. Give stronger incentives to efficiency
4. More transparency in cost development

USER GROUP ON ECONOMIC REGULATION

On 15. November 2019

- Danish Energy Agency gave a presentation on the new regulation
- Discussion on the effects of the economic regulation
  - Design of the regulation
  - Effects on tariffs
  - The role of the Danish Utility Regulator
- It was a good meeting between shippers and the authorities

TWO MAIN SIDES OF THE LEGISLATION

Introduction of revenue caps

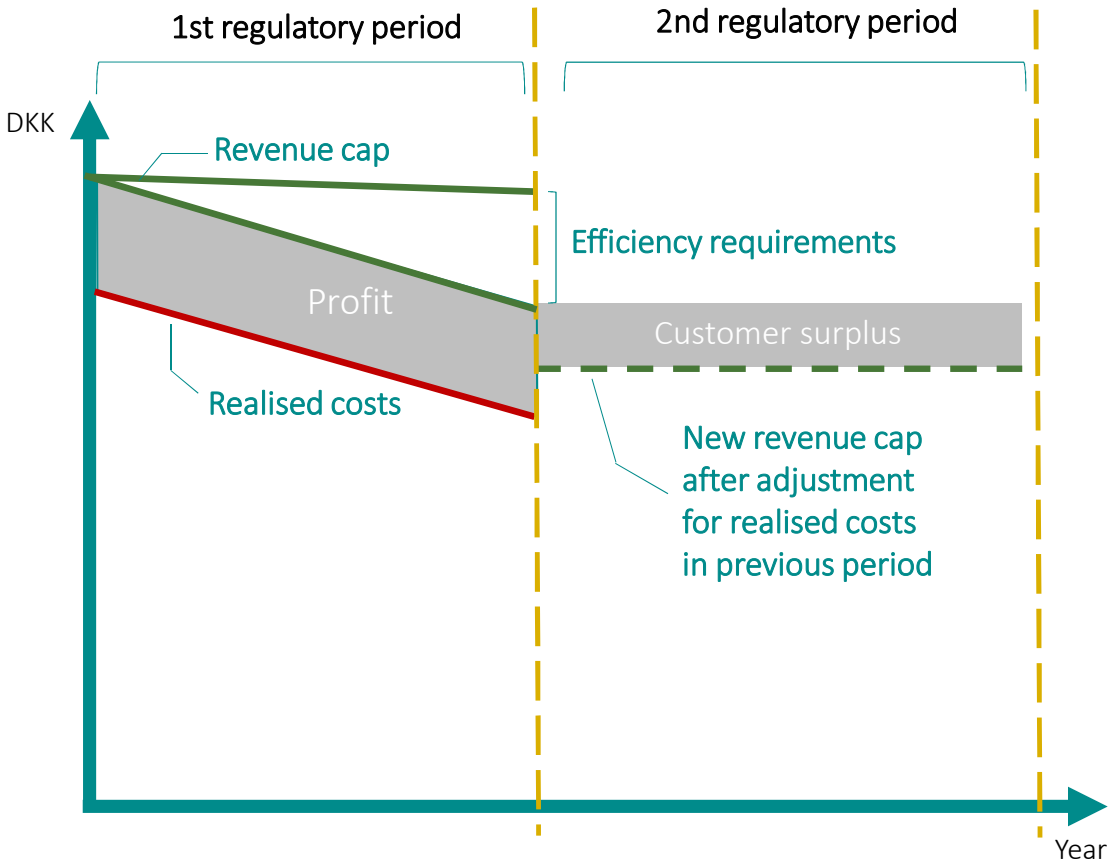
- Incentives for efficient operations
- Transparency in cost development
- Strong stakeholder involvement regarding the future development of Energinet
- Introduction of return on investments (WACC)

New planning and investment approval process

- Ensure early political and stakeholder involvement regarding future investments
- External evaluation of specific investments
- Improved transparency in grid and system development
- Balance between investments and market-based solutions

REVENUE CAP AND REGULATORY PERIODS

1. Revenue cap
2. Efficiency requirements
3. Realised cost below revenue cap
4. Profits to consolidate Energinet Gas TSO or pay-back over tariffs
5. Regulatory periods (2-4 years)
6. Revenue cap for 2nd regulatory period is adjusted for realised costs
7. Customer surplus

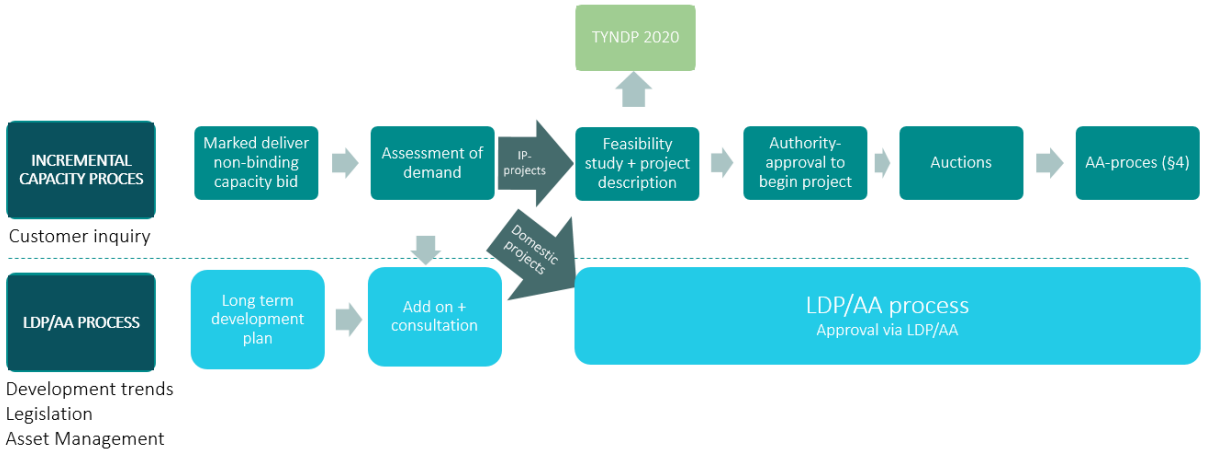


NEW PLANNING AND INVESTMENT APPROVAL PROCESS

- All investments needs to be approved by DEA and/or DUR
- New formal and closer stakeholder involvement regarding investments
- Incremental capacity process continues as described in network code

- Invitation to workshop on long-term perspectives in development of Power- and Gas transmission system 12. December 19

Process for planning and investment approval



ENERGINET

WHAT DOES IT MEAN FOR YOU?

Effects of the regulation

Legislation is only a broad framework

Implementation of legislation is ongoing with DUR

Incentives to efficiency

Predictability in cost development

Strong stakeholder involvement regarding cost development

Energinet faces new risks of deficits

Consolidation or payback through tariffs

WHEN DO WE KNOW MORE?

Implementation process with DUR starts in beginning of 2020

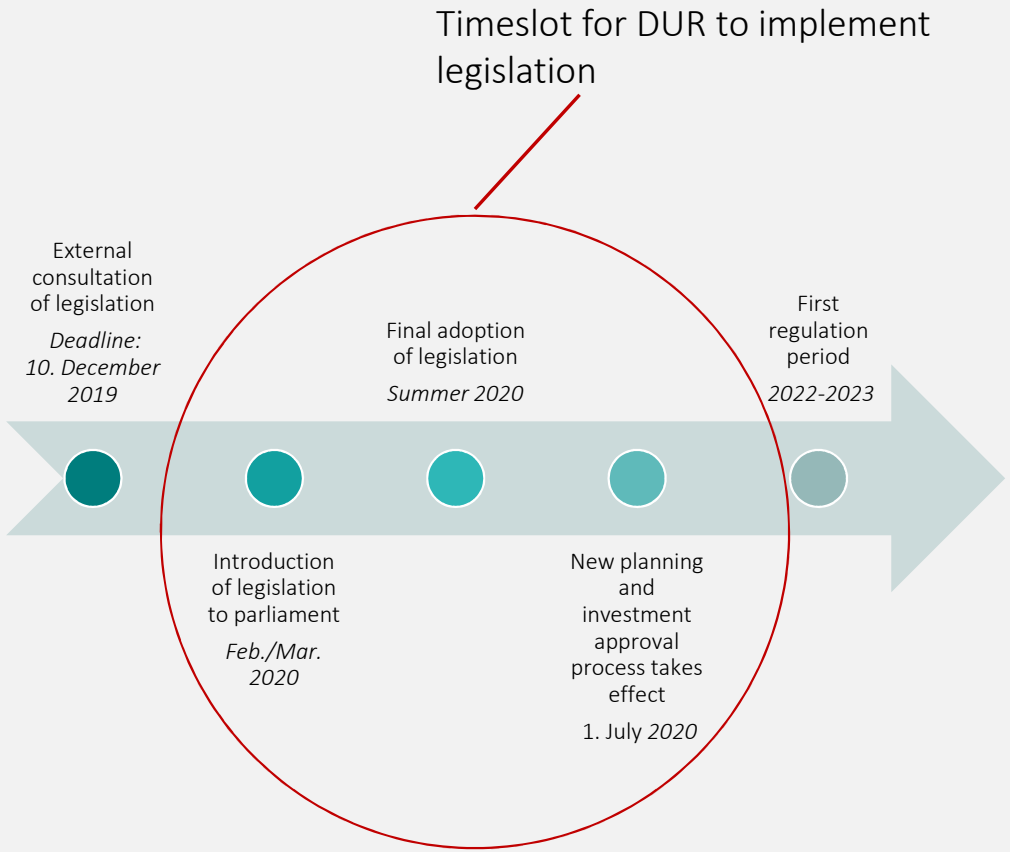
We will have a close dialogue with DUR

We will continuously inform you on the development

We encourage you to let your voice be heard in the external consultation!

https://hoeringsportalen.dk/Hearing/Details/63451

Consultation response: ens@ens.dk with copy to msg@ens.dk and note of journal number 2019-95910



QUESTIONS

Contact: ltk@energinet.dk

FINAL REMARKS

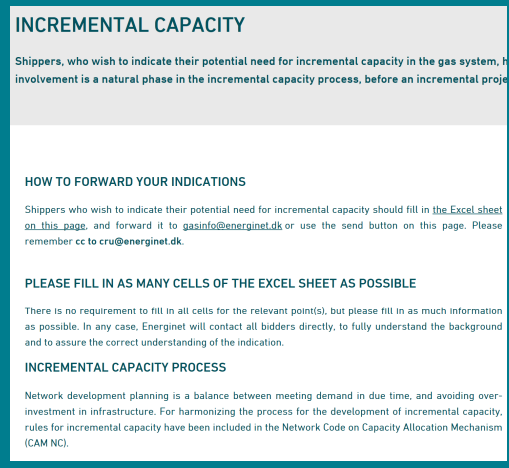
Clement Johan Ulrichsen, Energinet Gas TSO

2019 LOOK BACK

TYRA OUT FOR REDEVELOPMENT

MERGER OF DANISH & SWEDISH BALANCING ZONES

SHIPPER INPUT FOR NEW CAPACITY



INCREMENTAL CAPACITY

Shippers, who wish to indicate their potential need for incremental capacity in the gas system, h involvement is a natural phase in the incremental capacity process, before an incremental proje

HOW TO FORWARD YOUR INDICATIONS

Shippers who wish to indicate their potential need for incremental capacity should fill in the Excel sheet on this page, and forward it to gasinfo@energinet.dk or use the send button on this page. Please remember **cc to cru@energinet.dk**.

PLEASE FILL IN AS MANY CELLS OF THE EXCEL SHEET AS POSSIBLE

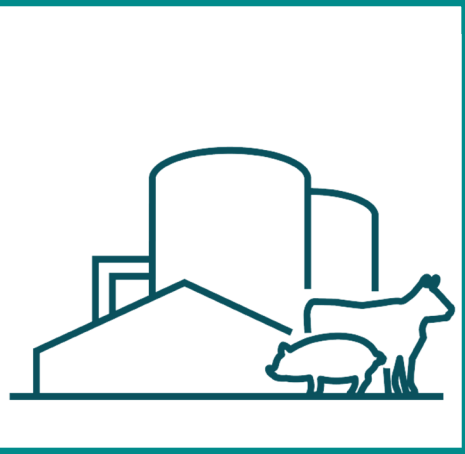
There is no requirement to fill in all cells for the relevant point(s), but please fill in as much information as possible. In any case, Energinet will contact all bidders directly, to fully understand the background and to assure the correct understanding of the indication.

INCREMENTAL CAPACITY PROCESS

Network development planning is a balance between meeting demand in due time, and avoiding over-investment in infrastructure. For harmonizing the process for the development of incremental capacity, rules for incremental capacity have been included in the Network Code on Capacity Allocation Mechanism (CAM NC).

2020 LOOK AHEAD

INCREASING BIOGAS PRODUCTION IN DK



BALTIC PIPE MARKET PREPARATIONS

PREPARING FOR PTX

SHIPPERS' FORUM IN 2020

12 March 2020

4 June 2020

17 September 2020

10 December 2020

For more information go to:
https://en.energinet.dk/Gas/Forums

QUESTIONS

Contact: cju@energinet.dk