



SHIPPERS' FORUM

9 March 2023



Safety Guide



Emergency Exits



Defibrillator



Gathering Point

PROGRAMME

- 13:00 **Welcome** – *Clement Johan Ulrichsen, Energinet*
- 13:05 **Danish Energy Agency** – *Jane Glindvad Kristensen, Danish Energy Agency*
- 13:25 **Security of Supply** – *Birgitte Troelsen, Energinet*
- 13:35 **Gas Storage Denmark** – *Iliana Nygaard, Gas Storage Denmark*
- 13:55 **BREAK**
- 14:25 **Current Cases and Pipeline** – *Peter Lyk-Jensen, Danish Utility Regulator*
- 14:40 **Revenue cap regulation on Gas-TO** – *Tomas Skov Lauridsen, Danish Utility Regulator*
- 15:00 **Capacity** – *Lasse Ellebæk Krogh, Energinet*
- 15:20 **Balancing** – *Christian Rutherford, Energinet*
- 15:40 **Final Remarks** – *Clement Johan Ulrichsen, Energinet*

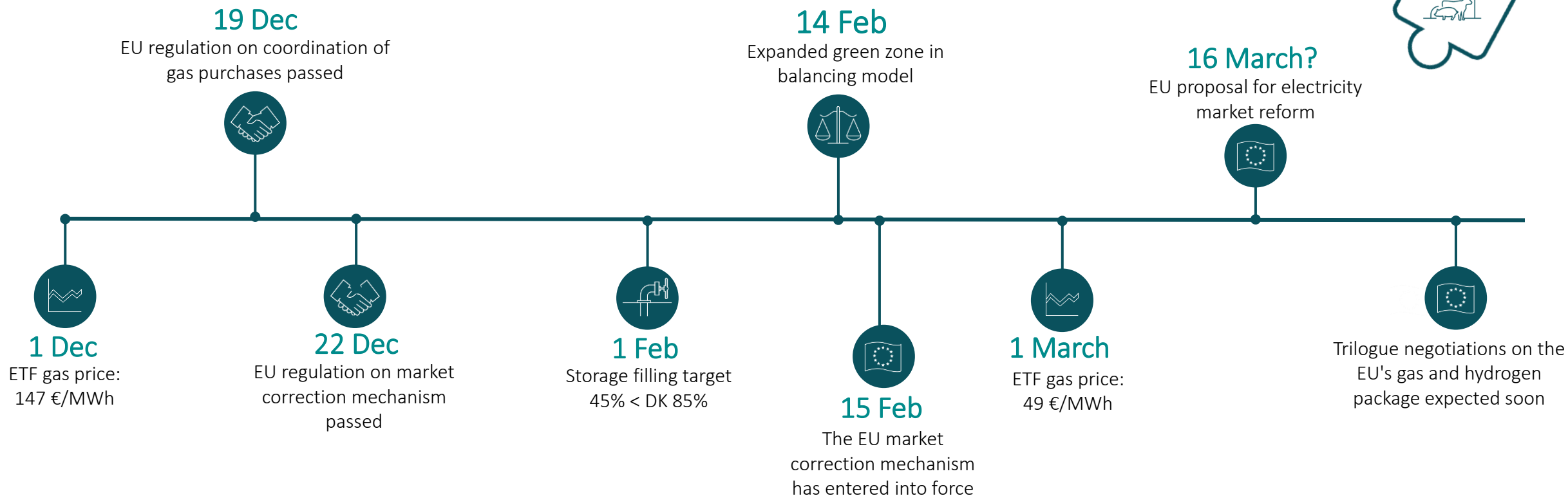


WELCOME

Clement Johan Ulrichsen, Energinet



DEVELOPMENTS IN THE GAS MARKET



NEW ENERGINET PUBLICATIONS

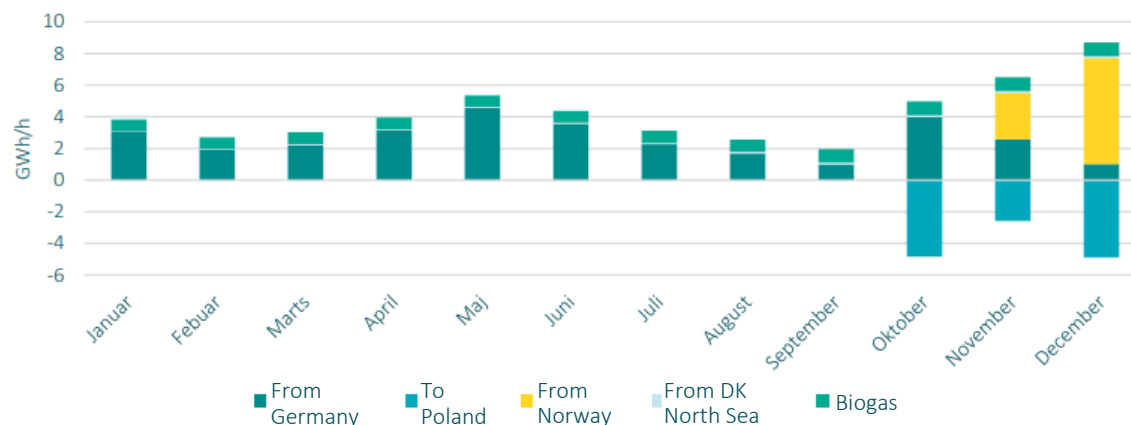
Year 2022 in Power- and Gas systems
 'Gasforsyningssikkerhed 2022'



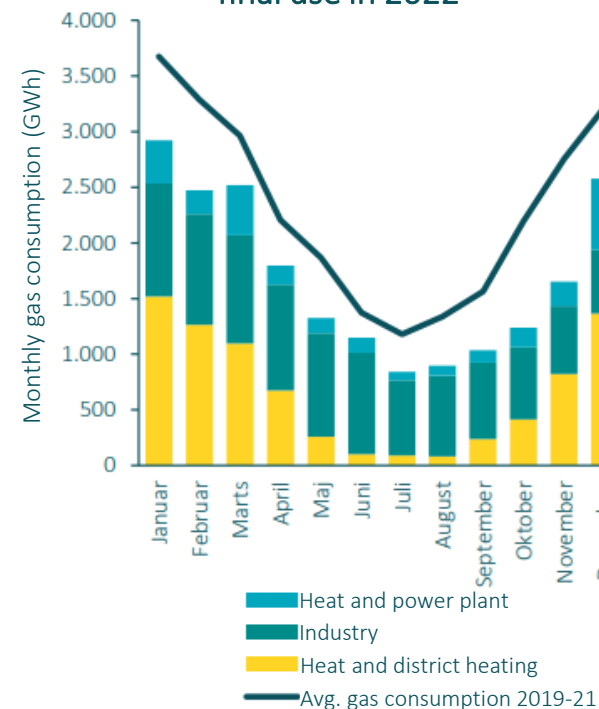
Denmark has become a gas transit country due to Baltic pipe

Danish gas consumption has fallen by 25 % in 2022 compared with the average for 2019-2021

Average import (+) and export (-) per month 2022



Gas consumption divided between final use in 2022



QUESTIONS



Contact: cju@energinet.dk

Status on Security of Supply

9th March 2023

Head of Division, Jane Glindvad Kristensen

General status on supply

Energy systems are connected and affect each other



Supply situation

	THIS WINTER (22/23)	NEXT WINTER (23/24)
GAS	Expected stable. Volatile, high prices. Reduced gas from Russia. Increased LNG. Reduced use.	Challenging. Reduced possibilities for storage filling.
ELEC.	Expected stable. Volatile, high prices. Low production. Slightly reduced consumption.	Challenging. Low production in Europe.
OIL	Stable supply. High prices.	Expected stable. Focus on consequences of EU sanctions.
HEAT & BIOMASS	Stable supply. Higher prices.	Stable supply.

Gas Supply

Status and coming months

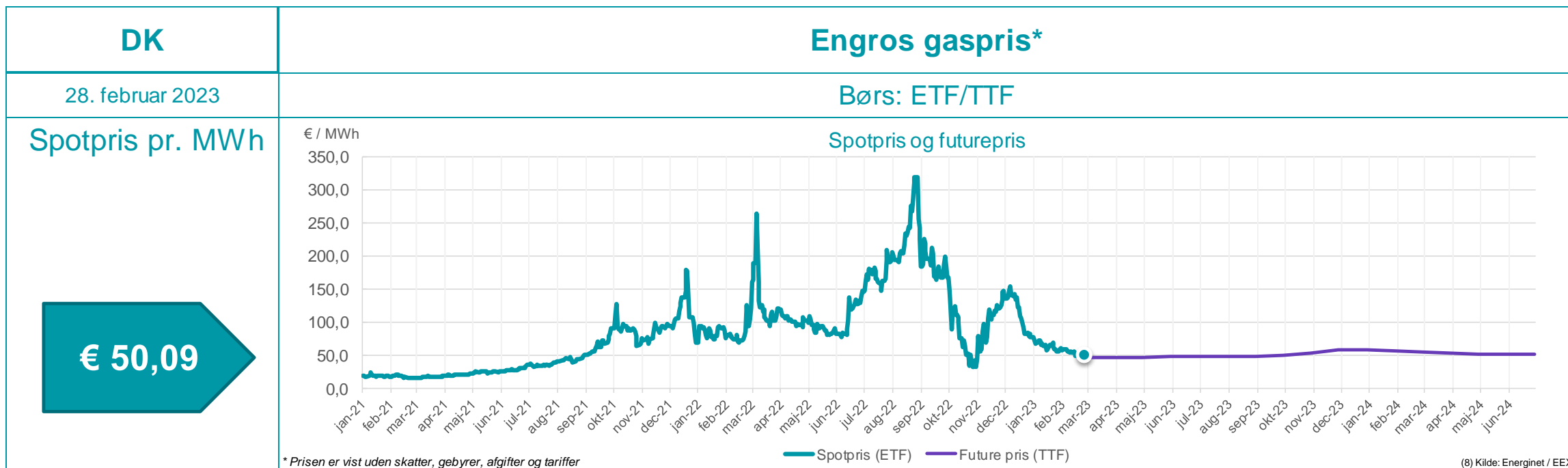


Stable gas supply

- ▶ Danish gas storage is just about 75% full
- ▶ 34% bio gas in the Danish gas system in 2022
- ▶ Gas field Tyra reopens in winter 23/24
- ▶ Prices has been high and varies a lot. Currently moderate.
- ▶ Ørsted has contracted 8 TWh and Andel 2.6 TWh Norwegian gas via Baltic Pipe
- ▶ Less Russian gas, but much more LNG in Europe



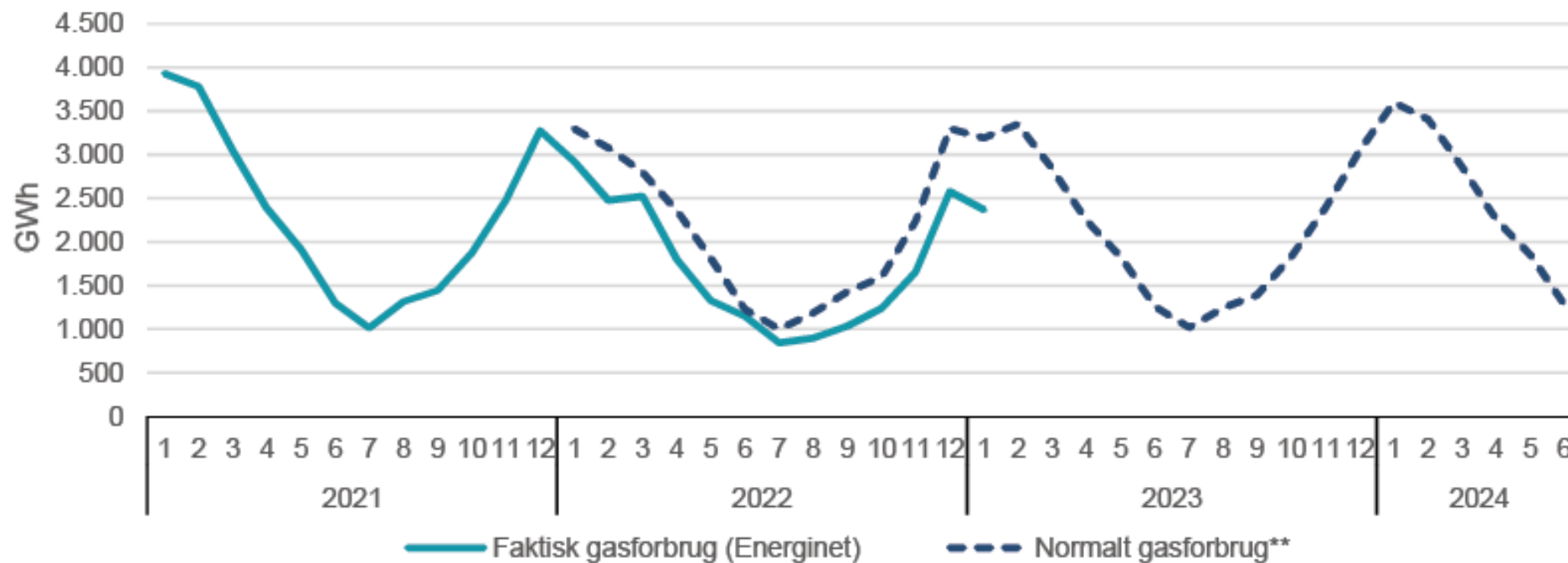
Forward market for gas



- Current situation of expectations in the market
- The market does currently not expect significant increase in prices the coming months and years.



Gas savings



Reduction in gas consumption*

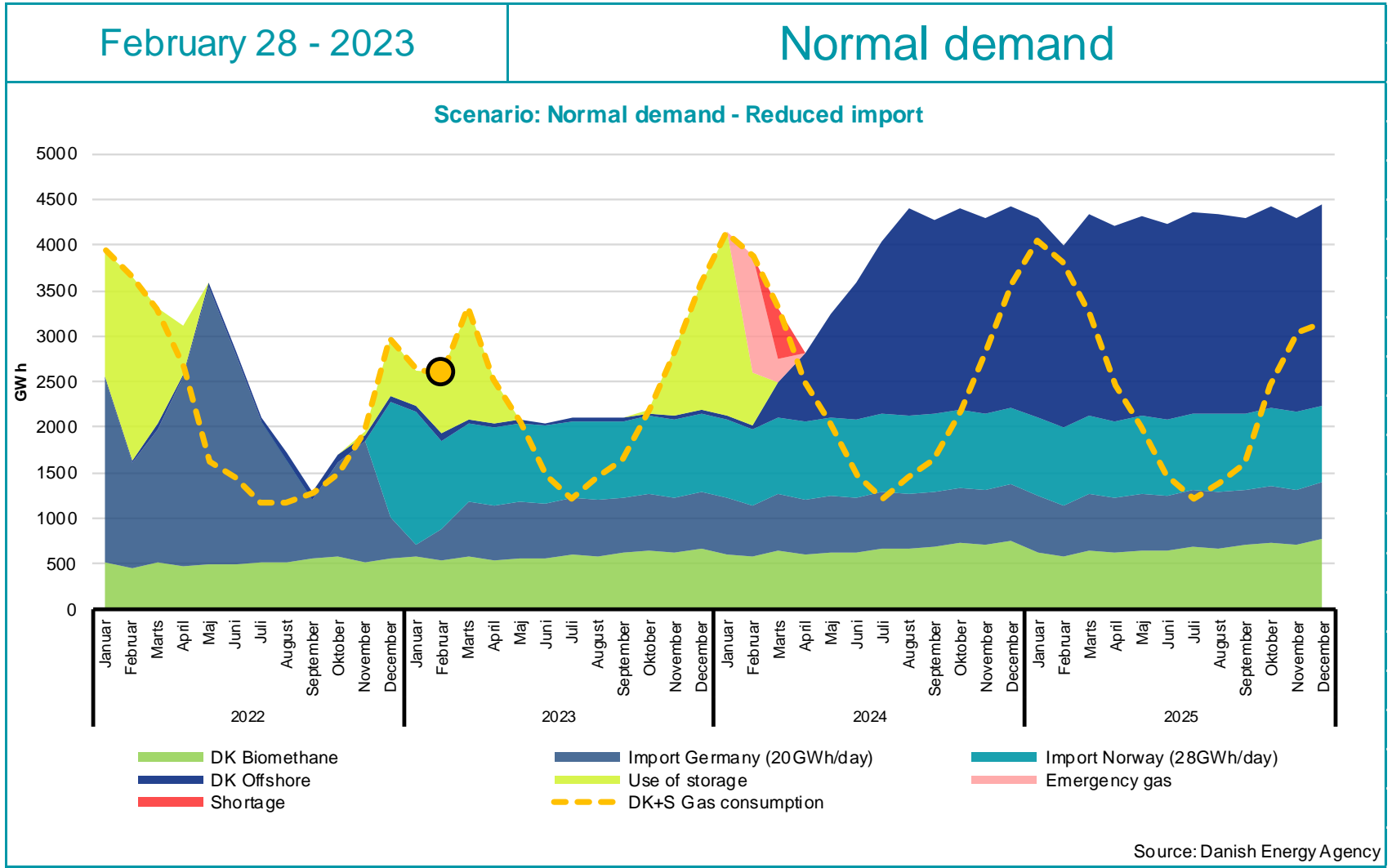
Last 12 months: 21 pct.

January + February 2023: 26 pct.

Note: Pipeline gas, being natural gas + upgraded bio gas

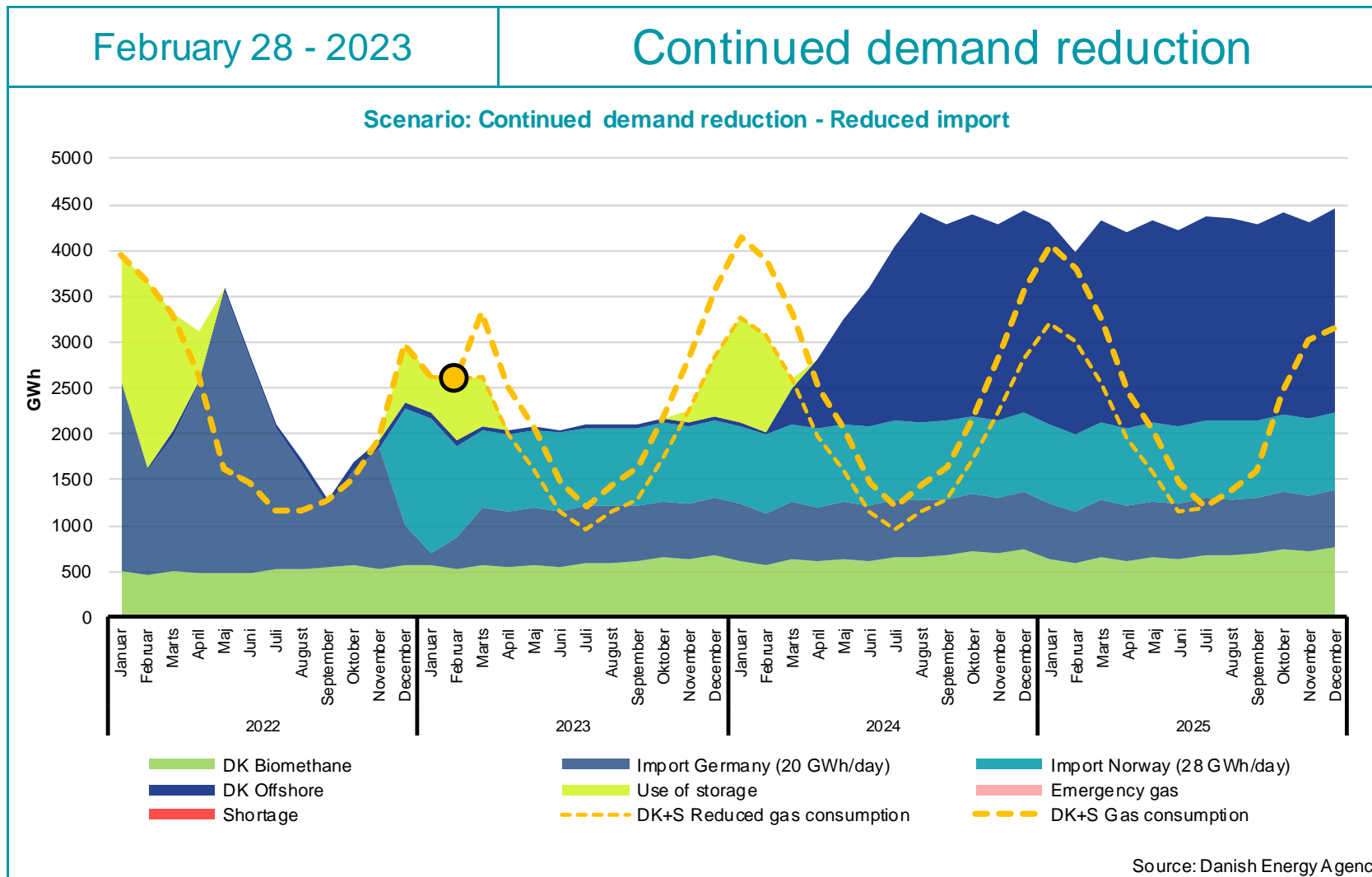


"Main scenario" for gas supply





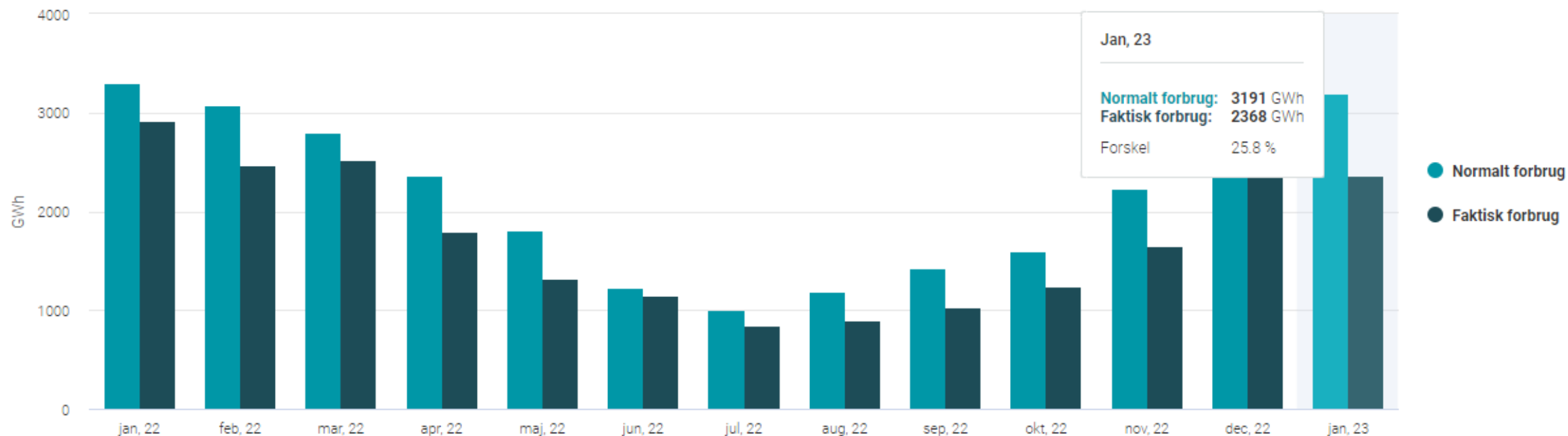
“Energy savings-scenario” for gas supply





New DEA supply website updated monthly

Samlet gasforbrug
Energistyrelsen



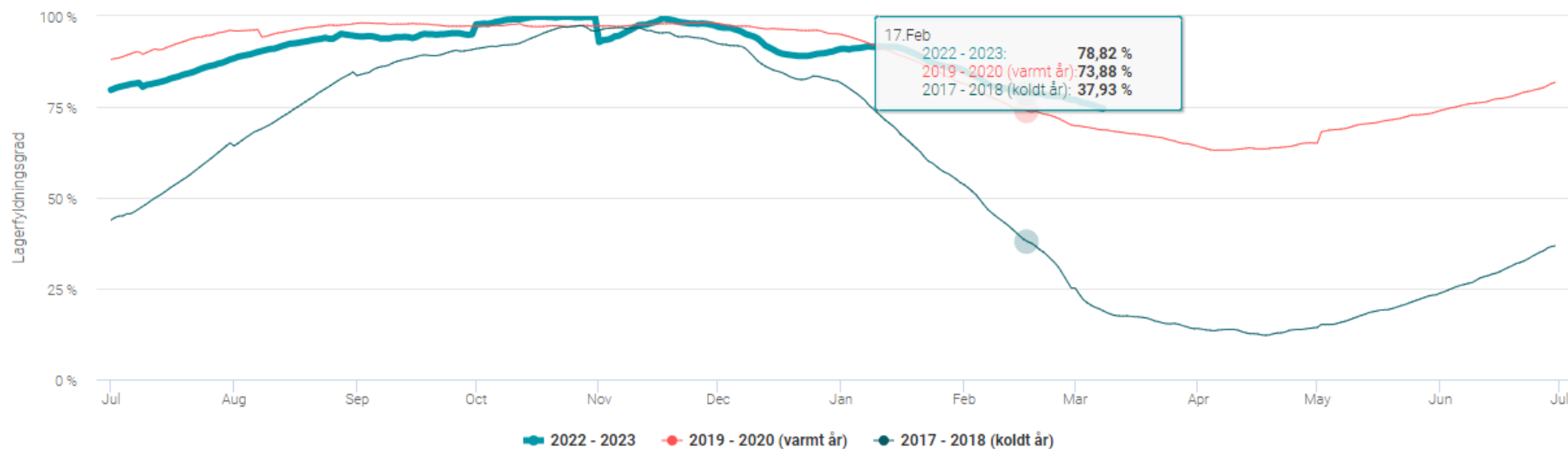
Gasforbruget blev i januar reduceret med 26 procent i forhold til det normale*. Det er en af de største reduktioner set for en enkelt måned. Reduktionen er opnået på tværs af sektorer.

**Forbrugsforventning ved indgangen til 2022 (baseret på Klimastatus og –fremskrivning 2022), dvs. før energikrisen.*

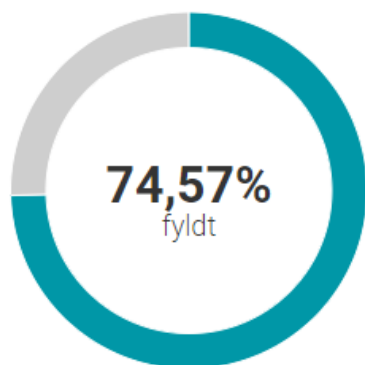


New DEA website, part 2

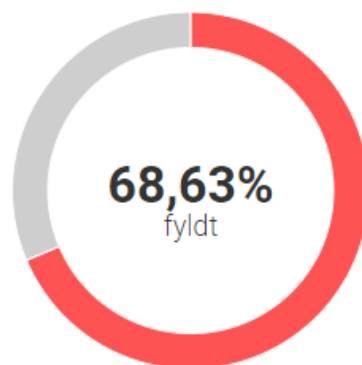
Lagerfyldningsgrad på gas i forhold til den tekniske lagerkapacitet



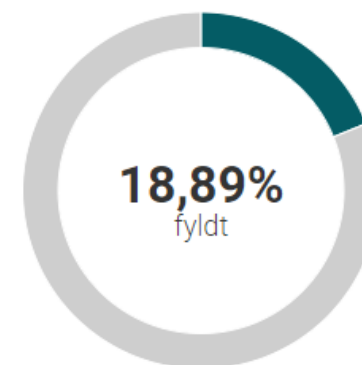
Kilde: Energi Data service



07. Mar 2023



07. Mar 2020 (varmt år)



07. Mar 2018 (koldt år)

EU perspective

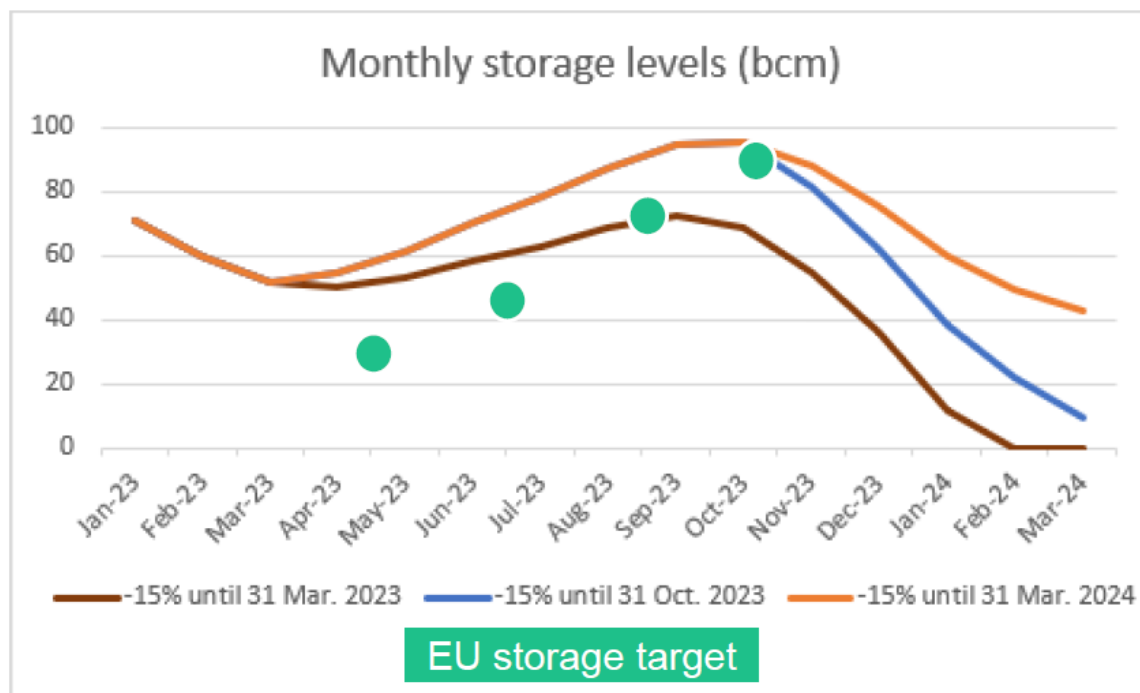
Status



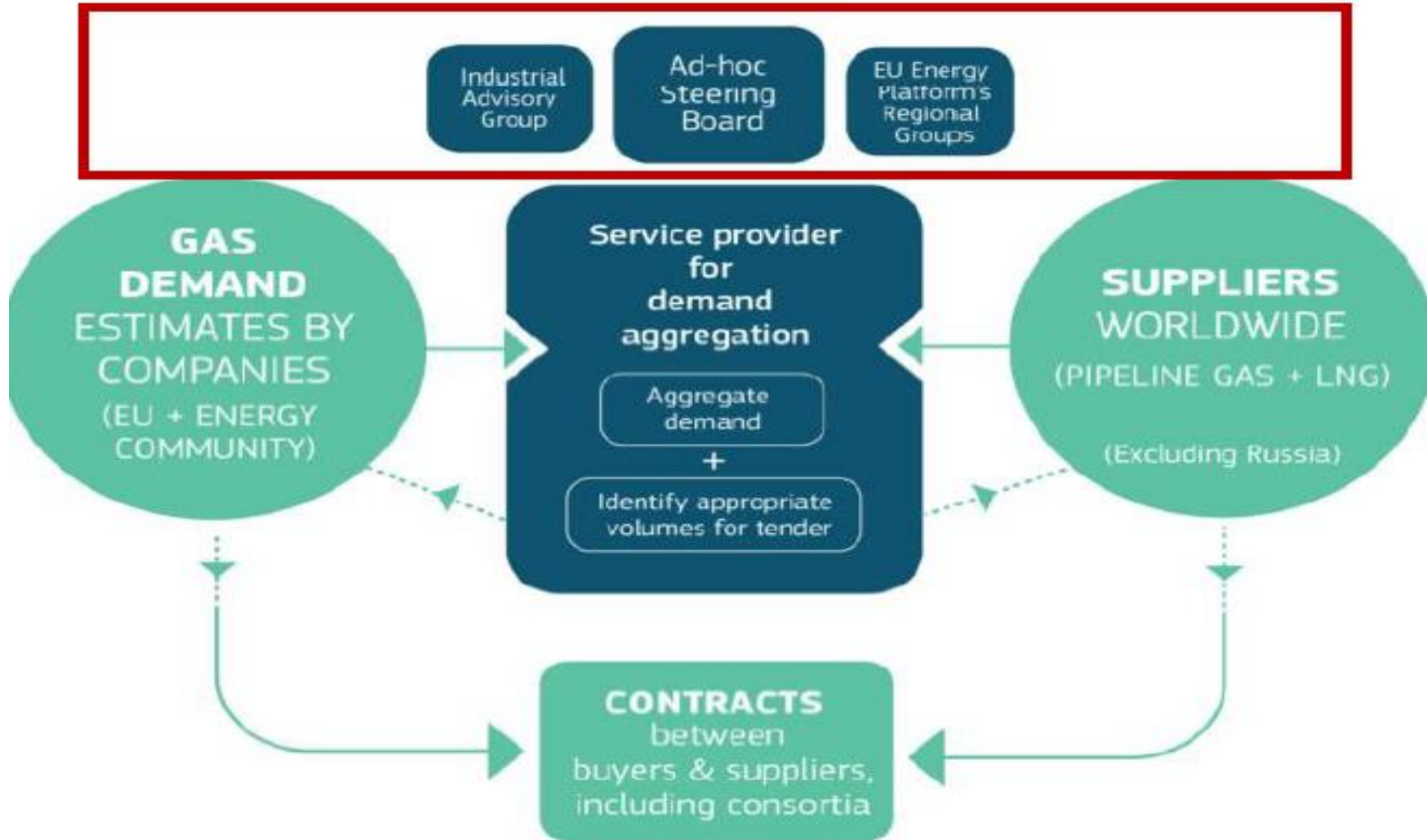
EU Commission likely to extent reduction regulation

Storage projection without Russian imports

Prolonging demand reduction for one year would allow the EU to reach the 90% storage target by 31 October 2023 and be safe next winter



EU ENERGY PLATFORM



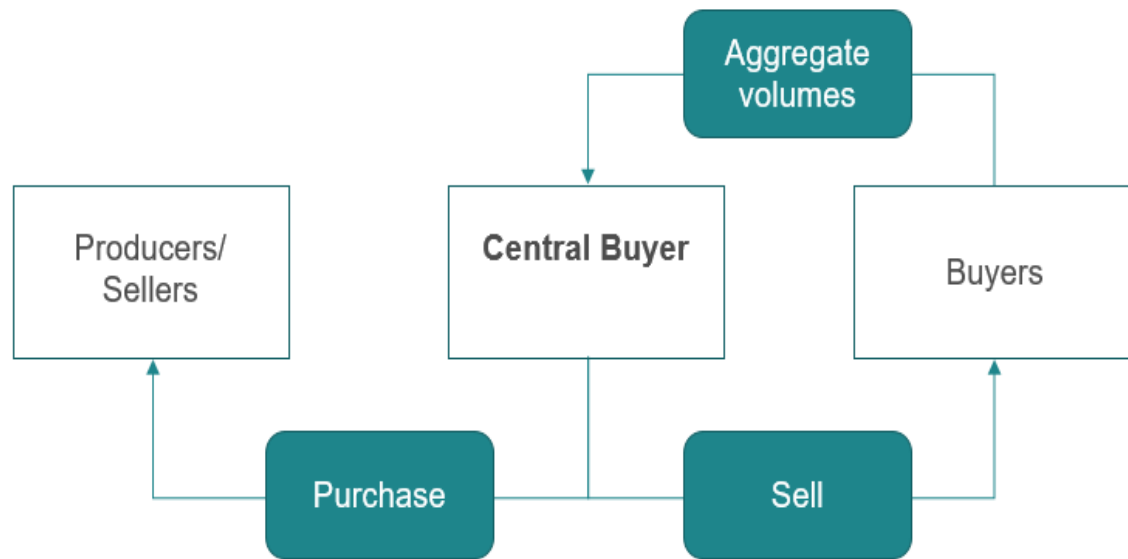
Joint purchasing of gas across EU

The regulation of solidarity, coordination of gas purchases, exchanges of gas and reliable price benchmarks set a legal framework for joint purchasing of gas and holds the following items:

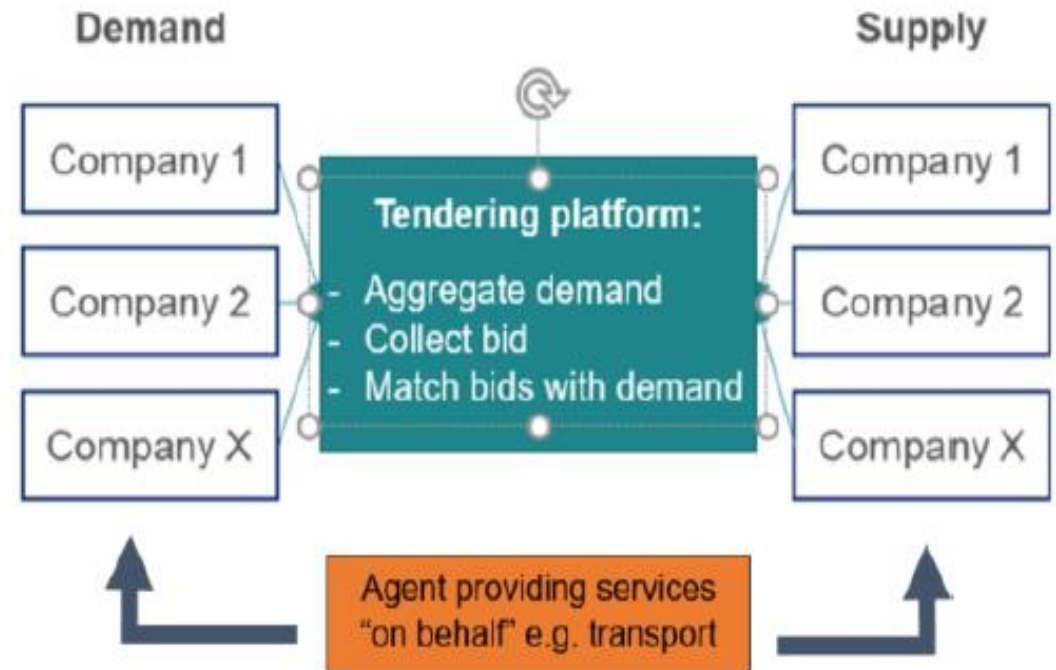
- ▶ Transparency and information exchange on tender to purchase gas with a volume above 5 TWh/year
- ▶ Demand aggregation and joint purchasing through a service provider
- ▶ Participating in demand aggregation and joint purchasing shall be open and transparent for all natural gas undertakings and undertakings consuming gas
- ▶ Mandatory use of the service provider with volume of 15 % of the total volume to meet the filling targets.
- ▶ Gas Purchasing Consortium

Company Cooperation

Central buyer model



Agent on-behalf model



NEXT STEP



- The Commission with Prisma held a workshop on 7th March, where the AggregateEU platform presented.
- In March and start April companies can register on platform and put the first volume to demand aggregation on the platform.
- First tender will be held mid-April 2023
- The Danish Energy Agency encourage Danish companies to take part in demand aggregation and joint purchasing via AggregateEU and Prisma.

Spørgsmål





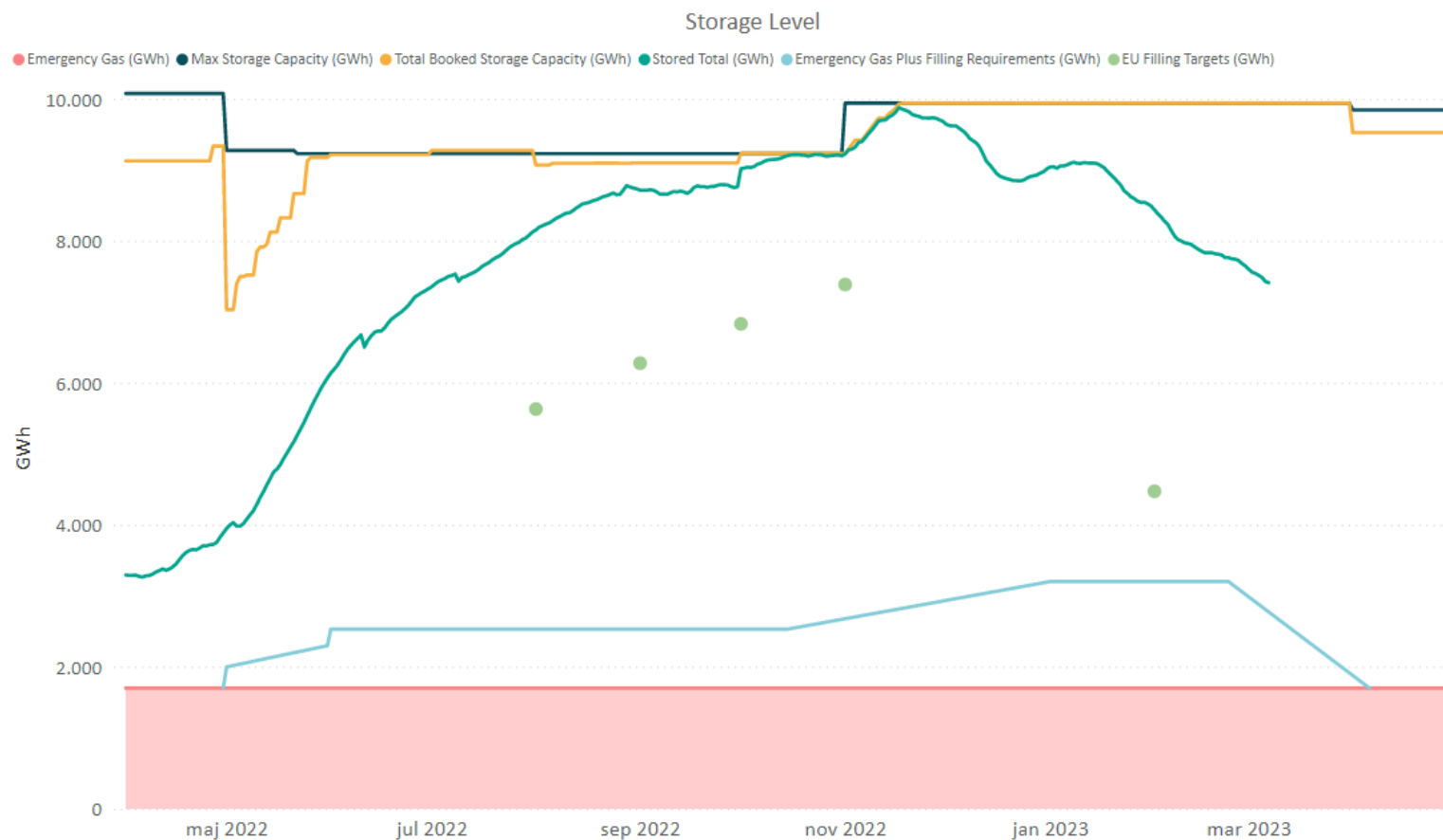
Tak for i dag



SECURITY OF SUPPLY

Birgitte Troelsen, Energinet

SECURITY OF SUPPLY



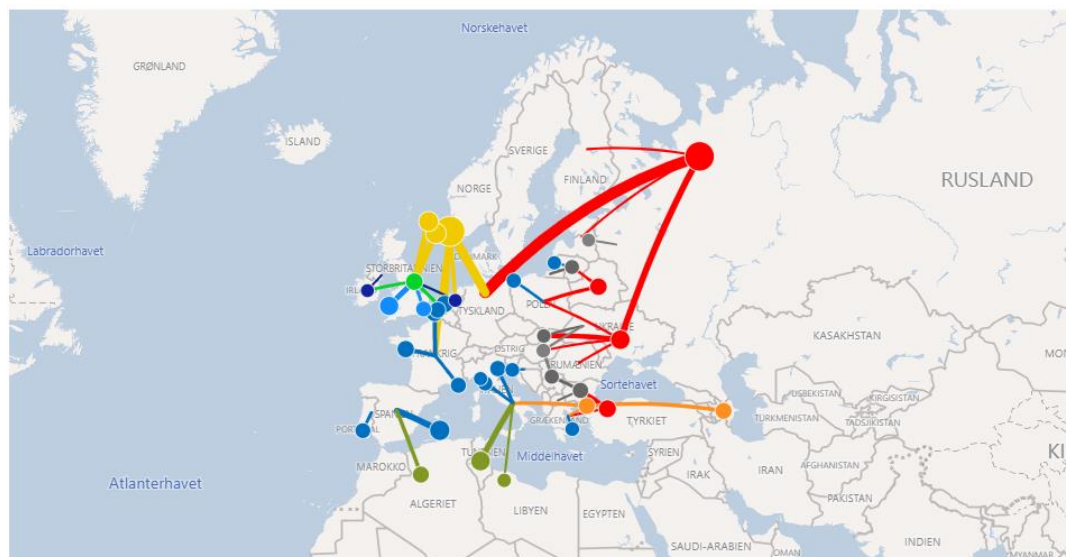
High inventory gas level for the season 75%

100% filled by November 17

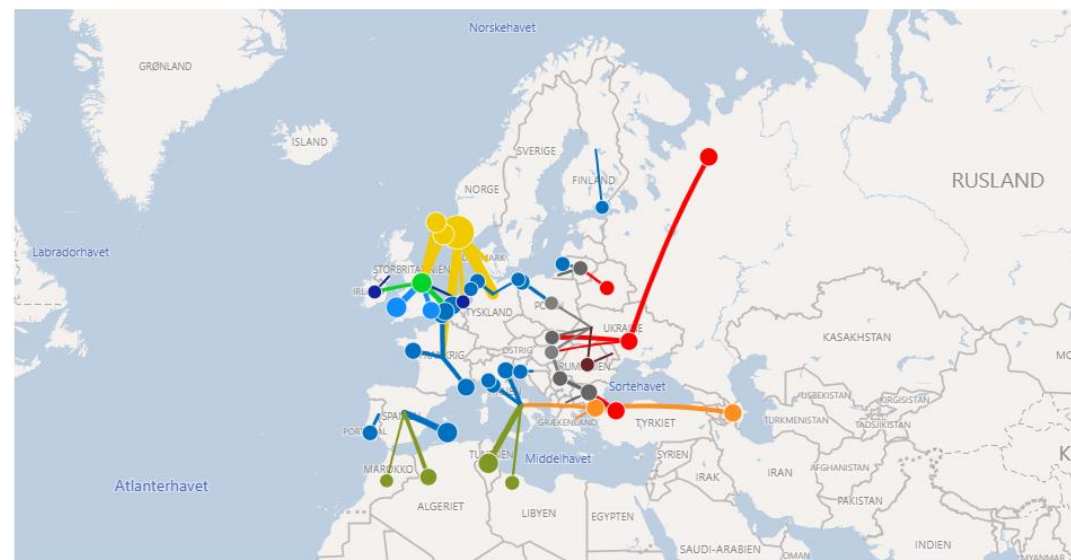
EU filling target of 45% fulfilled
February 1

PHYSICAL GAS FLOW TO EUROPE

February 2022

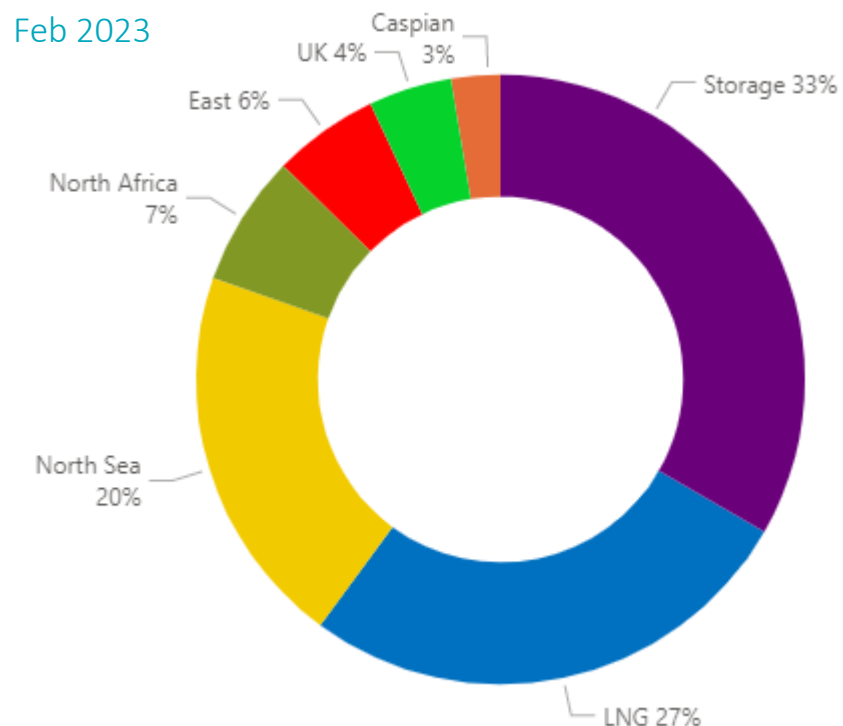


February 2023



<https://gasdashboard.entsog.eu/#map-flows>

SUPPLY TO EU FEBRUARY 2022 AND 2023



EU supply Feb 2023: 369 TWh

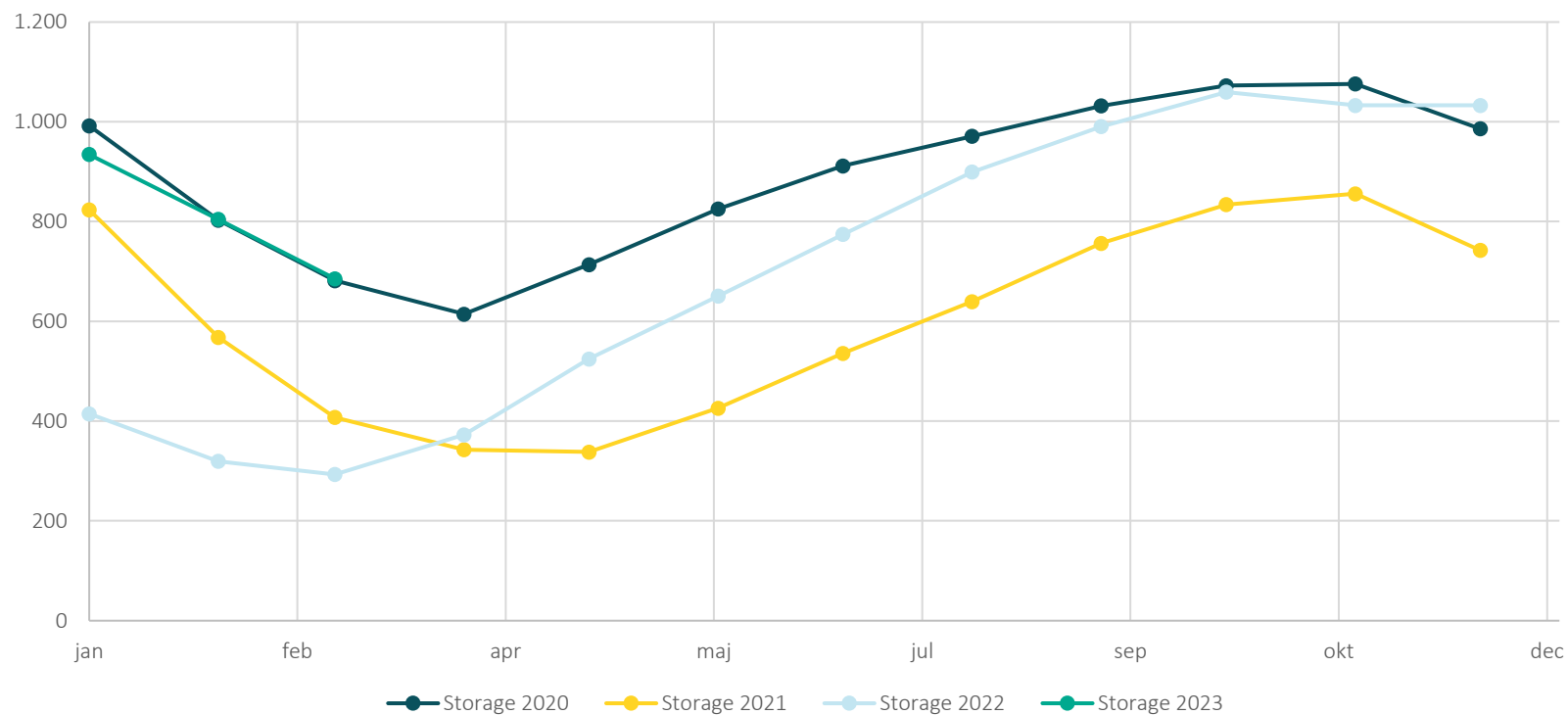
1. Storages: 33% (121 TWh)
2. LNG: 27% (100 TWh)
3. North Sea: 20% (74 TWh)
4. Other: 20% (74 TWh)

EU supply Feb 2022: 399 TWh

1. Storages: 24% (96 TWh)
2. East: 22% (88 TWh)
3. LNG: 22% (88 TWh)
4. North Sea: 20% (80 TWh)
5. Other: 12% (47 TWh)

EU GAS STORAGE INVENTORY LEVEL

EU Storage filling on the 1st of month [TWh]



1.3.2023: More than double the inventory level compared to 1.3.2022

QUESTIONS



Contact: btr@energinet.dk

—
**GAS
STORAGE
DENMARK**
—

SHIPPER'S FORUM

9 MARCH 2023

AGENDA

1. CAPACITY OVERVIEW
2. CUSTOMER PORTAL - NEW FEATURES
3. VARIABLE INJECTION 1 APRIL
4. E-WORLD 2023
5. Q&A

CAPACITY OVERVIEW

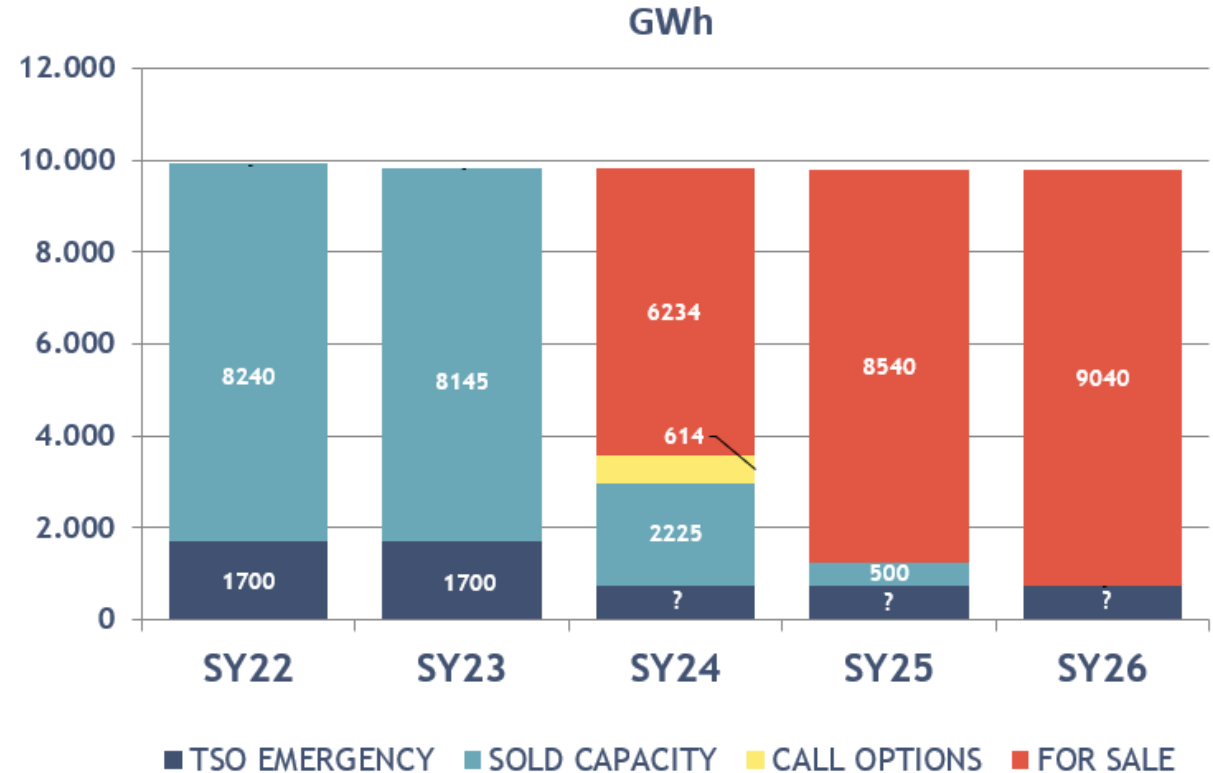
- 2023 - SOLD OUT
- 2024+ available for sale

Pricing:

- 120/60: 4.0 €/MWh/year
- 170/85: 3.5 €/MWh/year
- 170/170: 3.0 €/MWh/year

Additional flex:

- Injection: 750 €/MW/year
- Withdrawal: 2,100 €/MW/year



NEW FEATURES • CUSTOMER PORTAL



- Relations, Master data and Contracts overview
- Nomination to storage
- Storage data and Invoices overview
- Initiate transfer available soon
- Book short-term capacity available soon
- Bulletin board available soon

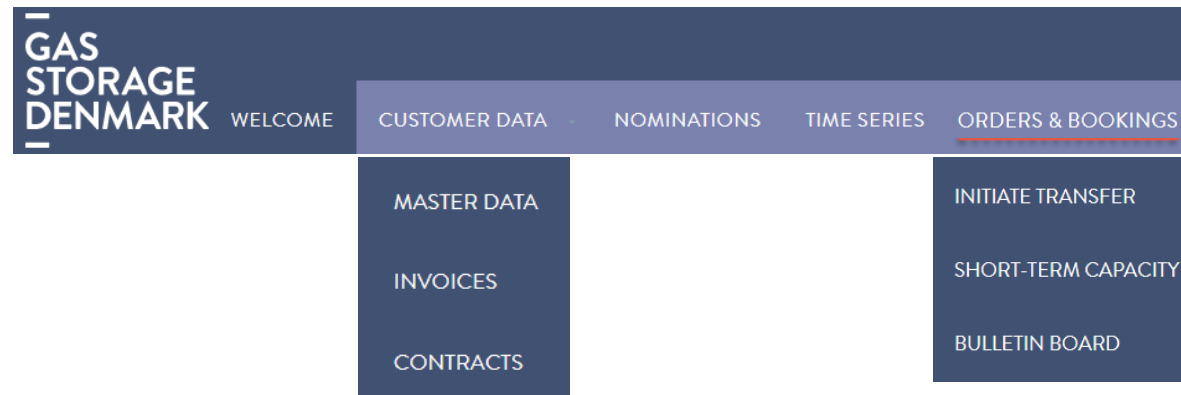
USERSPECIFIC VIEW

- ✓ View/access is depending on the user's authorization

AUTHORIZATION TYPES

- ✓ Storage Customer
- ✓ Nomination
- ✓ Contract Viewer
- ✓ User Administrator

<https://customerweb.gasstorage.dk/home>



TIME SERIES										
Hour	WG TOTAL [kWh]	WG Interruptible [kWh]	WG Transfer [kWh] buy = '+' / sell = '-'	IR NOMINATED [kWh]	IR CONFIRMED [kWh]	IR Interruptible [kWh]	WR NOMINATED [kWh]	WR CONFIRMED [kWh]	WR Interruptible [kWh]	Filling Requirement [kWh]
01.03.2023/06	34405859	0	0	0	0	0	50000	50000	0	75000
01.03.2023/07	34355859	0	0	0	0	0	50000	50000	0	74777
01.03.2023/08	34305859	0	0	0	0	0	50000	50000	0	74554

Gas Day	WG TOTAL start-of-day [kWh]	WG Interruptible start-of-day [kWh]	WG Transfer [kWh] buy = '+' / sell = '-'	IR TOTAL [kWh]	IR Interruptible [kWh]	WR TOTAL [kWh]	WR Interruptible [kWh]	WG TOTAL end-of-day [kWh]	WG Interruptible end-of-day [kWh]
04.11.2022	936729010	139929010	0	0	0	0	0	936729010	139929010
05.11.2022	936729010	139929010	0	0	0	0	0	936729010	139929010
06.11.2022	936729010	139929010	0	0	0	0	0	936729010	139929010
07.11.2022	936729010	139929010	0	0	0	0	0	936729010	139929010

Gas Month	WG TOTAL start-of-month [kWh]	WG Interruptible start-of-month [kWh]	WG Transfer [kWh] buy = '+' / sell = '-'	IR TOTAL [kWh]	IR Interruptible [kWh]	WR TOTAL [kWh]	WR Interruptible [kWh]	WG TOTAL end-of-month [kWh]	WG Interruptible end-of-month [kWh]
11/2022	936729010	139929010	700000000	57920000	8806568	32541658	56069475	1544919348	748119348
12/2022	1544919348	748119348	0	73582624	6705873	28638875	7607742	765150030	0
01/2023	765150030	0	-750000000	46687981	72144897	44325581	5344749	45653969	0
02/2023	45653969	0	0	27428456	9363384	20805456	8607417	756622183	0

VARIABLE INJECTION • FLAT RATE → 1 APRIL

starting per 1 APRIL 2023 the variable injection tariff will change 0.36 → 0.59 €/MWh

PRICE DRIVES

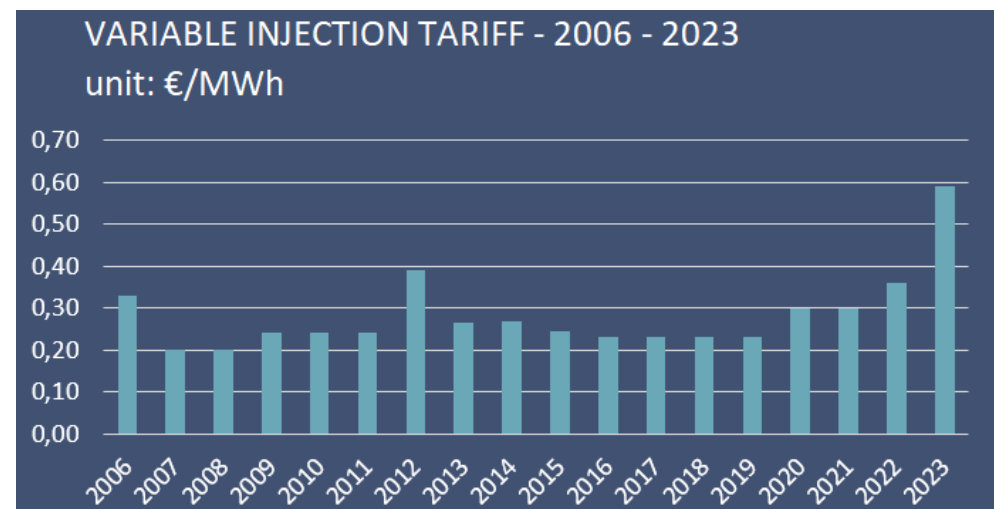
□ THE STORAGE FACILITIES USE

POWER FOR INJECTION
GAS FOR WITHDRAWAL

□ RISING POWER AND GAS PRICE



<https://gasstorage.dk/news/2023/02/22/change-in-the-variable-injection-tariff/>





E-World

23-25 May
Essen

YOU ARE INVITED
TO VISIT US AT
STAND 527
HALL 2



QUESTIONS?

CONTACT

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Iliana Nygaard

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- Tel. No. +45 61243403

BREAK



Current cases and pipeline

The Danish Utility Regulator

Energinet Shippers' Forum

March 9, 2023

DUR/TERI/PELJ



Current Cases and Pipeline

Decisions:

1. **Entry Capacity Conversion**

- Final method application received 31st January
- Decision March 3rd, published March 7th
- Approved with certain conditions

Ongoing:

1. **Offshore tariff complaints 2011-2021**

- Expect decisions second half of 2023
- Comparison to market practice ongoing
- Rejection of part of fourth new complaint December 2022

2. **Long and short term capacity quotas, Faxe and Ellund**

- NC CAM, article 8.9
- Consultation on applications end December

3. **Congestion management at IPs**

- New regulation 2022/2576 (“Enhancing solidarity ...”): TSO must offer underutilised capacity on MA, DA and WD basis
- Energinet seeks derogation (article 14.7(c)). Must be applied before March 31st
- Consultation with URE, BNetzA, Ei

4. **Balancing model issues**

- DUR is following the situation
- Ongoing dialogue with Energinet



Recent publications and other news

Market Correction Mechanism:

(Council Regulation (EU) No 2022/2578)

ACER: *Effect Assessment Report*

March, 2023

<https://acer.europa.eu/gas/market-correction-mechanism>

ESMA: *Effect Assessment*

March, 2023

<https://www.esma.europa.eu/press-news/esma-news/esma-finds-mcm-had-no-measurable-impact-financial-markets-under-current-market>

Conclusions:

No discernable market impact, but may emerge if markets change

Other news:

Evaluation of Danish-Swedish wholesale gas market postponed

- ACER recommends evaluation of markets every three years as part of Gas Target Model
- Purpose: market design changes
- DK/S market last evaluated 2017
- In 2020 DUR and Ei decided to postpone to 2023 due to Tyra and Baltic Pipe
- Tyra now delayed till 2023/24

Questions?

Revenue cap regulation on Gas- TO

03/09/2023 00:00:00

Tomas Skov Lauridsen

Structure of presentation

Status on regulation as of today

Quick note on terminology

Revenue cap – principles

Components of a revenue cap

Regulatory process

Efficiency requirement



Quick note on terminology used in the talk

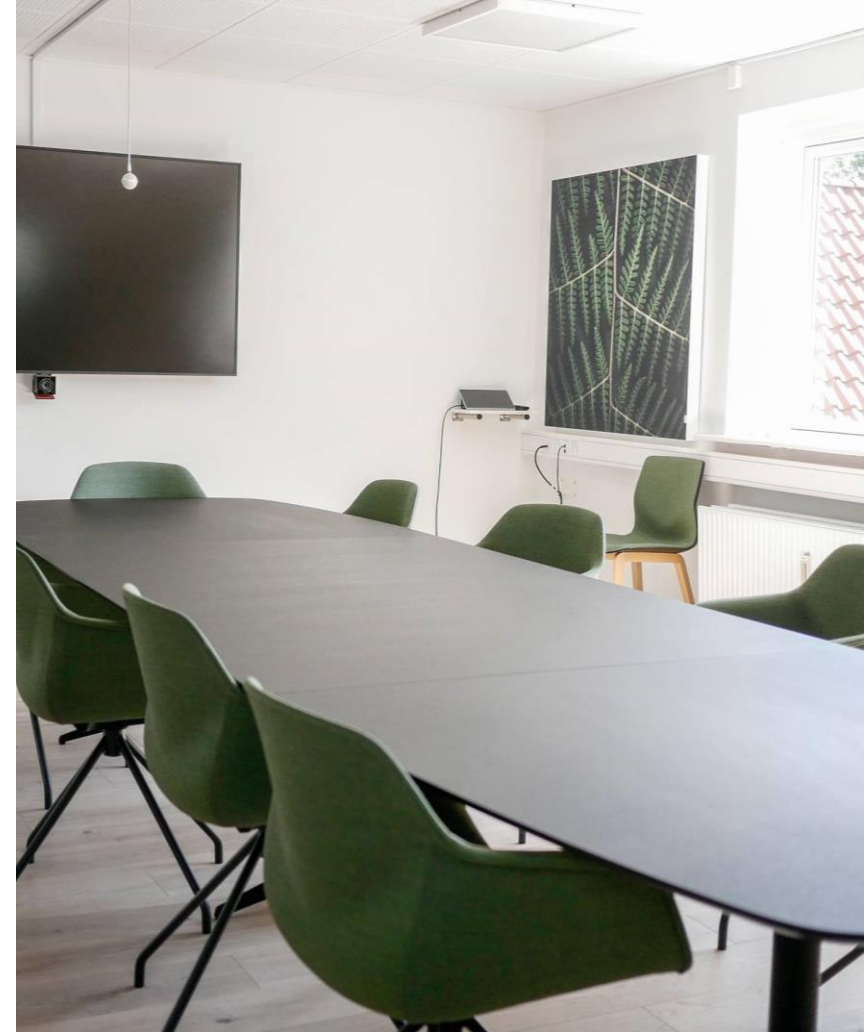
Law (lov) – Parliament (Folketinget)

Executive order (Bekendtgørelse) –
secondary law issued by DUR or the ministry

Decision (afgørelse) – issued by DUR,
administrative complains to ENK

TO: Transmission operator (systemejer)

SO: System operator (systemansvarlig)



The overall status of the economic regulation of GAS-T(S)O

With a legal change as of 28/12-2022, regulation of the GAS TSO has been split into a GAS-SO and a GAS-TO regulated activity.

The GAS-SO remains under existing regulation for 2023 and its future regulation will be clarified this year.

The current presentation focuses on the GAS-TO as it is currently under a revenue cap.



Revenue cap regulation: principles



Revenue cap approach

- Not realized cost, but a cap based on actual costs in the previous period and regulatory adjustments.
- Two year regulatory period, then recalculation (5 for electricity DSO, 4 for Gas DSO, 2 for electricity system operator)
- Implications:
 - Incentive for efficiency gain
 - Cost of capital to reflect risk for the company
 - The company carries risk of increase costs in the period

Important notes:

- the revenue cap does not directly sets prices – this happens though the tariff proces (which is not my brief). No decision on a final revenue cap will be made till Q3 2024.

Components of the revenue cap (§3-7)

The revenue cap is based on cost from a reference period.

- OPEX plus depreciation (omkostningsramme)
- Cost of capital (forrentningsramme)

DUR can make a number of adjustments to the cap that reduce or increase the cap to take network and exogenously caused changes in the period into account – including an adjustment based on a input price index (split between wage level increase in industry and a material index) (§9)

Note on depreciation: assets activated after 1. january 2023 used standard lifespans (set by DUR) and liniar depreciation profiles. Assets activated before 2023 uses Energinets current (as of the time of the issuance of the executive order) depreciation profiles. These profile cannot subsequently be changed.



Regulatory process

Before the regulatory year/period:

- Guidance of expected revenue caps: aid to set tariffs for Energinet (important: not a decision) (§8 – note §8 stk 4)
- Decision on cost of equity capital for the period: sets cost of equity as a RoR and a maximum equity cap (§18)
- Decision on efficiency requirements for the year (§10-§11)

In the year following the regulatory year DUR renders a decision on the corrected revenue cap for the previous year and any differences between actual and allow revenue is added to the difference account and handled according to §21

After the regulatory period, the revenue cap is recalculated based on actual realised costs (including cost of debt service) and the process starts again.



Efficiency requirements decision (§10, §11 and appendix 1)

Efficiency has two aspects: general and individual

The general aspect seeks to require the TSO to follow increases in productivity in comparable companies, the individual seeks to require the TSO to "catch up" with

Work on a method to set individual efficiency requirements across Energinet's regulated entities is underway – DUR and Energinet also participates in European TSO benchmarking work.

Due to lack of expected reinvestment in most of the GAS-TSO's depreciation costs are not subject to efficiency requirements....

- ...but is also not adjusted for inflation like other costs.



Cost of equity decision (§18)

Currently under the complains proces.

The broad outline: COE rate, maximum equity and debt service cost passthrough.

Decisions before regulatory period



Questions?



CAPACITY

Lasse Ellebæk Krogh, Energinet

CAPACITY CONVERSION BETWEEN ENTRY POINTS

Introducing more flexibility to the system

Approved
by Danish
Utility
Regulator

Available
for April
auction

The Service

- Capacity can be re-utilised between the points Entry Ellund, Entry North Sea, Entry Faxe and Entry Nybro.
- If you are successful in booking capacity at one entry point (without over-demand), you will be able to convert existing entry capacity contract to the new contract.



Why

- To increase security of supply for Danish consumers in an uncertain time in the gas market
- To increase efficiency in the use of the system

CAPACITY CONVERSION BETWEEN ENTRY POINTS

The approved methodology



The service applies to **Annual, Quarterly and Monthly Capacity**.



If there is **over-demand** in an auction it is **not possible** for Energinet to offer the entry **capacity conversion service** for the period covered by the given product.



Thus, a request can only be accepted for **one month at a time** (also for quarterly and yearly products).



If you wish to use the service, please submit your request **not later than 3 Business Days** after the conclusion of the **monthly capacity auction** to gasinfo@energinet.dk

DIALOGUE WITH GASUNIE DEUTSCHLAND ABOUT SOUTHBOUND CAPACITY

LNG facilities in North-West Germany can potentially influence the southbound capacity from Denmark towards Germany

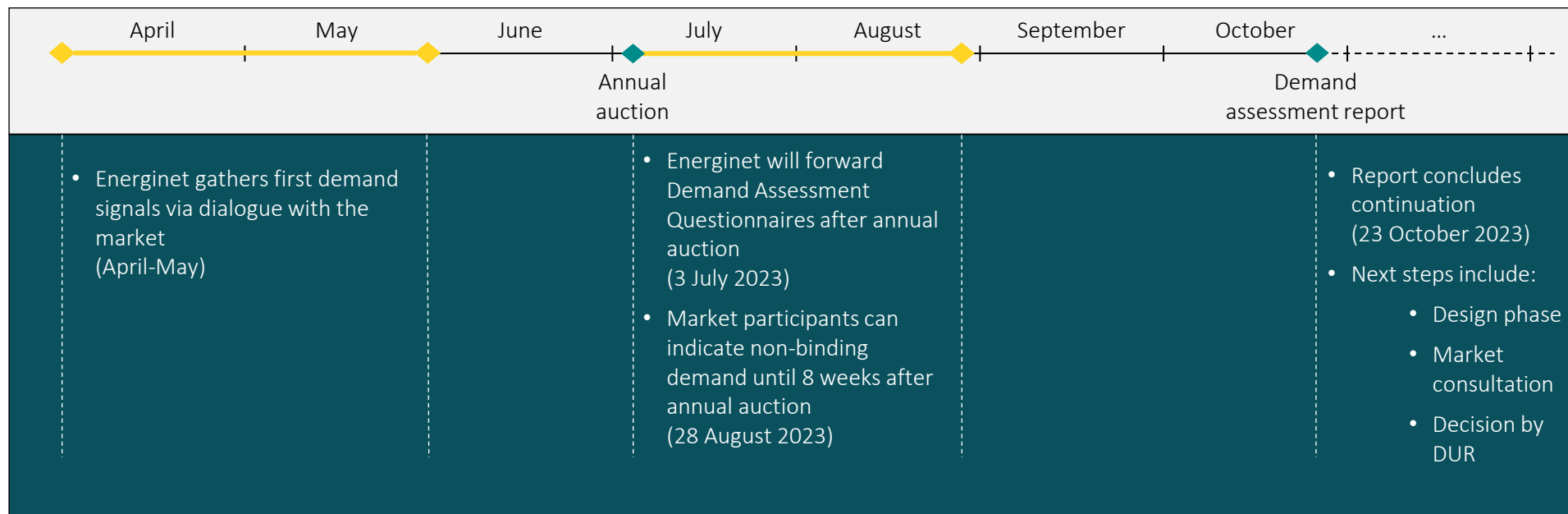
- The gas systems in Germany is affected by changed gas flows after the Russian invasion of Ukraine.
- The previous deliveries of gas from the east are now largely replaced by deliveries of gas from the west – especially in the form of LNG.
- Energinet is in dialogue with Gasunie Deutschland and works to ensure the capacity towards Germany is not reduced.
- If you are interested in southbound capacity – we encourage you to let us and Gasunie know so that market signals may be considered!



Source: ft.com

INCREMENTAL CAPACITY PROCESS

You are encouraged to send your demands for Incremental Capacities in the Danish gas system, so this can be considered in the overall planning.



Point	Entry North Sea	Entry Nybro	Entry Faxe	Entry Ellund*	Entry RES	Entry Storage	Exit Faxe	Exit Ellund	Exit Storage
Explanation	Imports from Norway	Imports from Norway + Danish North Sea	Imports from Poland	Imports from Germany	Biomethane injection	Withdrawal from Danish storage	Exports to Poland	Exports to Germany	Injection to Danish storage
Expected possible capacity (GWh/h)	13.4	20.3	3.8	7.7	According to socioeconomic valuation	8.2	13.4	10.0	4.2

* Entry Ellund capacity is expected to be 7.7 GWh(on a long-term basis)

QUESTIONS



Contact: ltk@energinet.dk



BALANCING

Christian Rutherford, Energinet

STATUS ON THE NEW BALANCING MODEL

Operational and billing status since last Shippers Forum

Balancing model as of 9th of March

IT-status

- Major issue with matching solved early January
- Confirmation feature for smoothing in place, and different issues have been solved (e.g., wrong placement of trades at night)
- General status considered positive, still new issues occur that needs solving + new possible features

Data quality

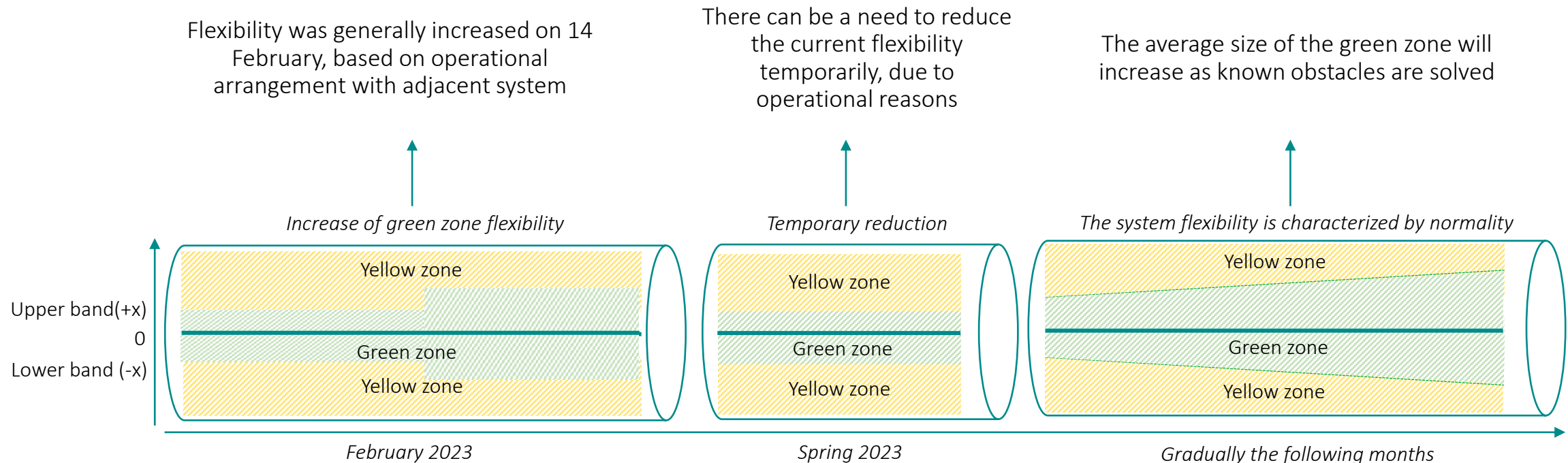
- It is Energinet's general impression that data quality has improved during the past months, based on general communication with shippers and stand-up meetings
- Large focus on data errors from certain Swedish distribution companies, where we still see large data errors frequently

Status on billing

- Extensive test activity going on these days to ensure balancing invoices as soon as possible
- Invoicing of first months will be done in 2 steps: 1) Focus on invoicing based on permanent solution, and 2) investigating and possibly neutralizing certain days/periods

EXPECTATION ON GREEN ZONE FLEXIBILITY

Energinet will always optimize the size the green zone, to ensure that as much flexibility from the system is put towards the market



COMMUNICATION AND EVALUATION

Weekly stand-up meetings every week since December

Evaluation of the Balancing model, based on the first 5 months of operation

Stand-up meetings and evaluation of balancing model

Weekly stand-up meetings

- Since last Shippers Forum in December, Energinet has hosted weekly stand-up meetings, to discuss progress on balancing model issues
- Meetings are well attended, with plus 20 participants every week
- It is Energinet's impression that latest meetings show a positive trend, with less new issues
- Weekly meetings are so far planned until end-May – Energinet will discuss relevance and frequency with the participants

Evaluation of balancing model

- Based on the method approval of the balancing model, Energinet are obliged to evaluate the balancing model based on dialogue with the market (page 54-56): [Godkendelse af metodeændring til balancemodellen på gasområdet \(forsyningstilsynet.dk\)](https://www.forsyningstilsynet.dk/godkendelse-af-metodeaendring-til-balancemodellen-pa-gasomraadet)
- Energinet will involve the market in 2 steps; 1) ask for first written comments until **10 April**; and 2) ask for written comments to the following evaluation report, which is expected around **mid-May**
- Deadline for forwarding the final evaluation report to DUR is **1 July**

QUESTIONS



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FINAL REMARKS

Clement Johan Ulrichsen, Energinet