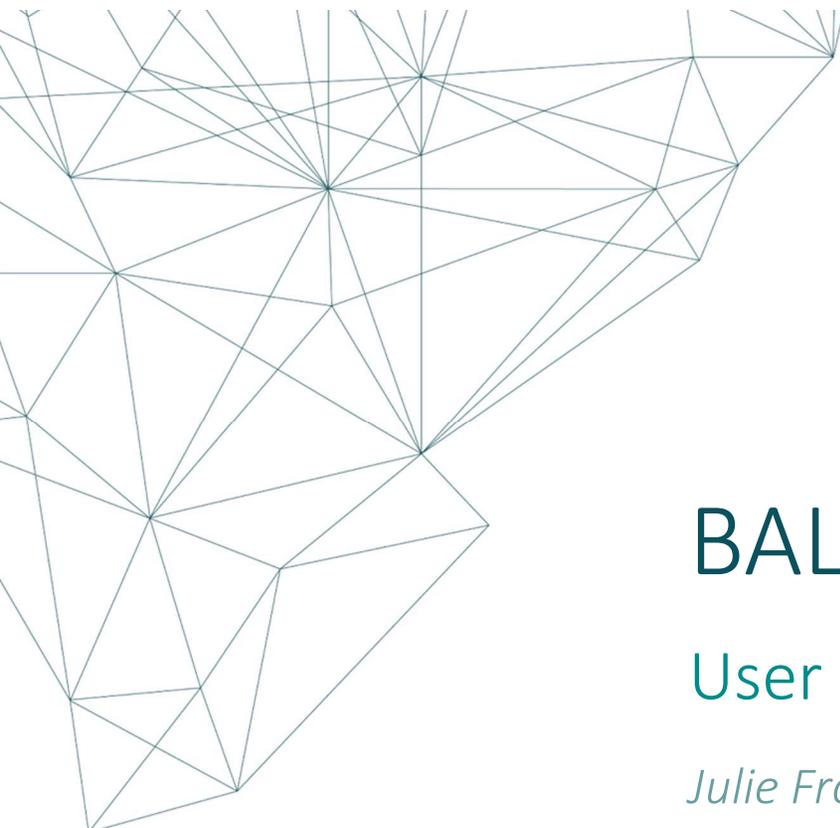




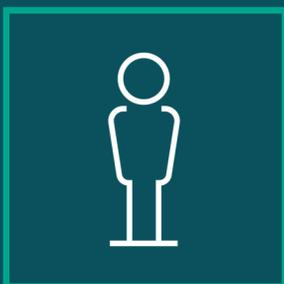
ENERGINET



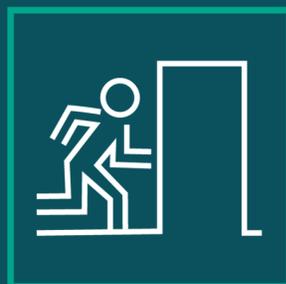
BALANCING MODEL 2022

User group, 15th of November 2019

Julie Frost Szpilman og Jens Kristian Jensen



SIKKERHEDSGUIDE



NØDUDGANGE



HJERTESTARTER

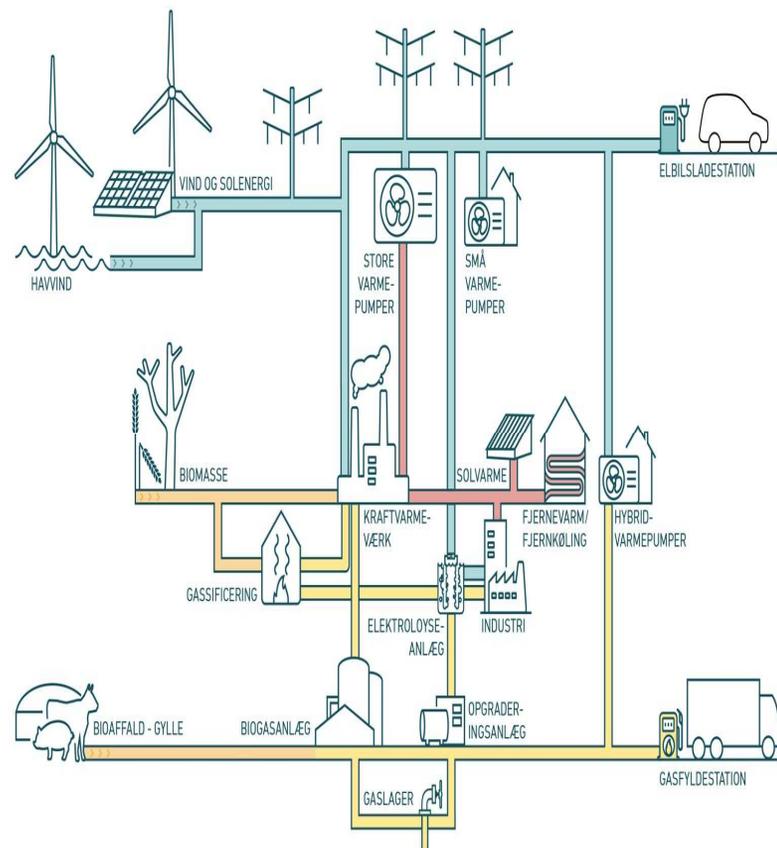


SAMLINGSSTED

AGENDA



- Welcome
- The characteristics of the Danish system
- The characteristics of the Danish market
- Glance of possible models
- Next steps



WHY DO WE NEED A NEW BALANCING MODEL?

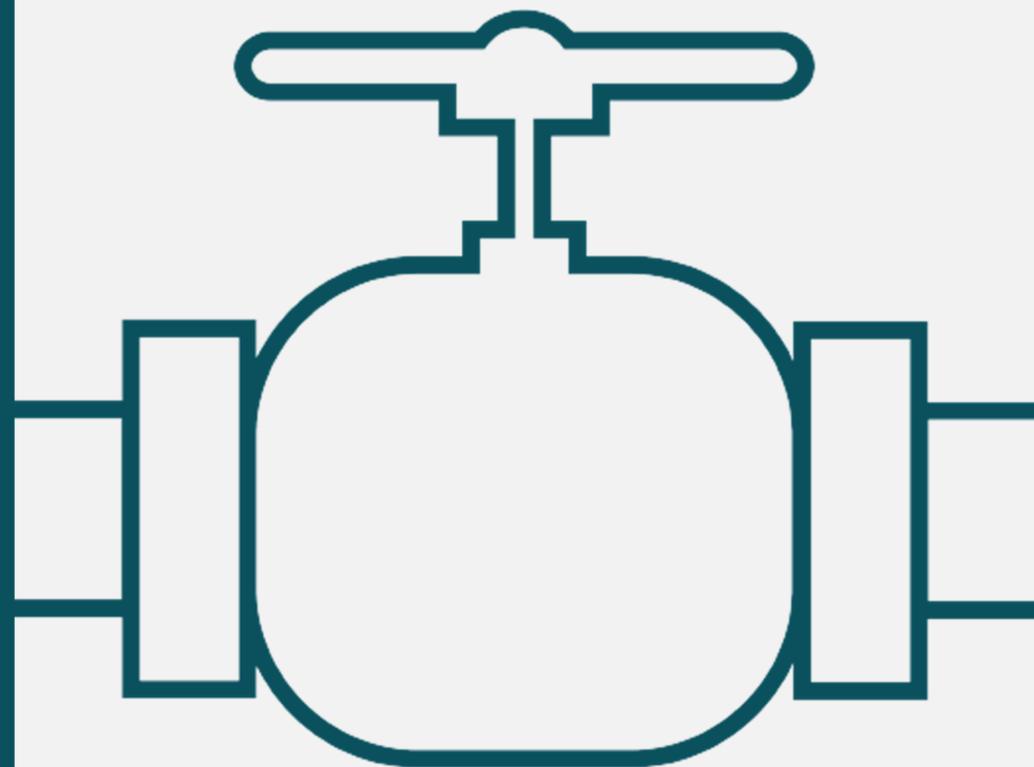
- In the current system, shippers are only required to be in balance at the end of the day
- With Baltic Pipe, Energinet needs that shippers help to balance the system during the day

- 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?

Because the Danish gas system and market will go through some fundamental changes at the same time, the system is going through a green transition



HOW DO WE DEVELOP A NEW MODEL?

DIALOGUE AND INVOLVEMENT WITH OUR SHIPPERS AND STAKEHOLDERS

THE CHARACTERISTICS OF THE DANISH SYSTEM AND MARKET

INSPIRATION FROM OTHER SYSTEMS AROUND IN EUROPE

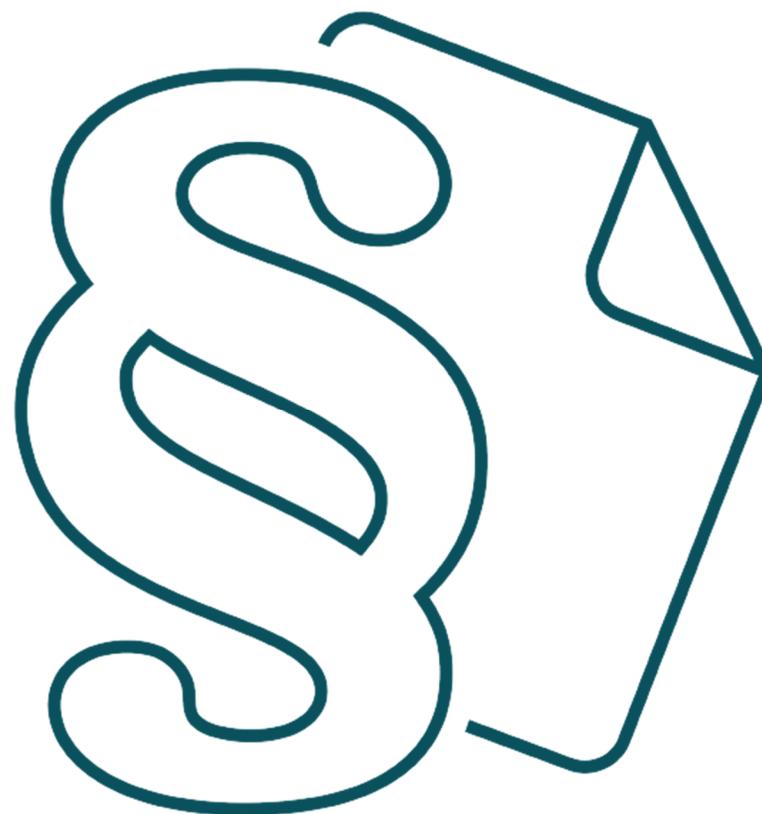
Those parameters are important for Energinet



LEGAL WORK ONGOING

Structure and market model after 2022 are to be approved by Danish Utility Regulator

- Pipe from Europipe II to Nybro is subject to Danish offshore regulation
- Energinet Group will develop a company structure that fulfils legal requirements regarding split between upstream and transmission
- Legal analysis is ongoing in that respect and dialogue with market participants on market model and balancing model will continue in 2020.





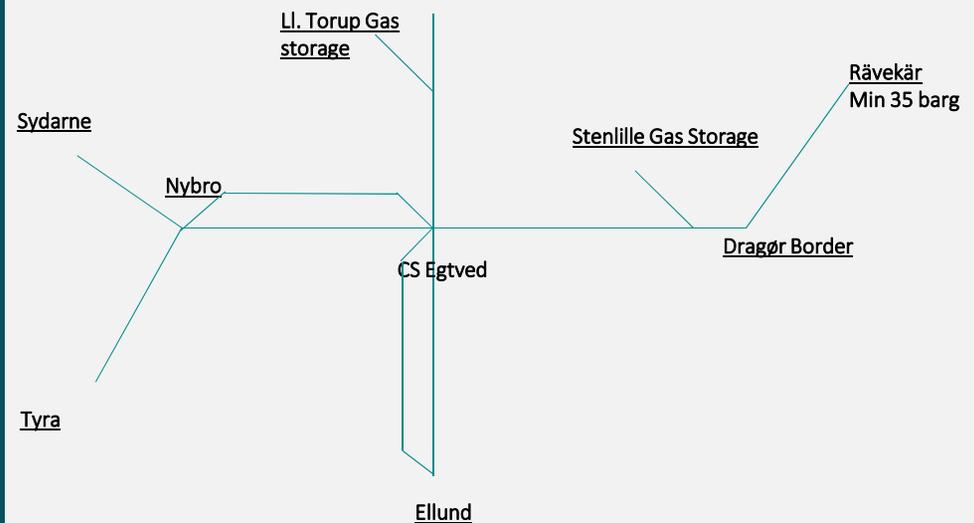
THE CHARACTERISTICS OF THE DANISH SYSTEM

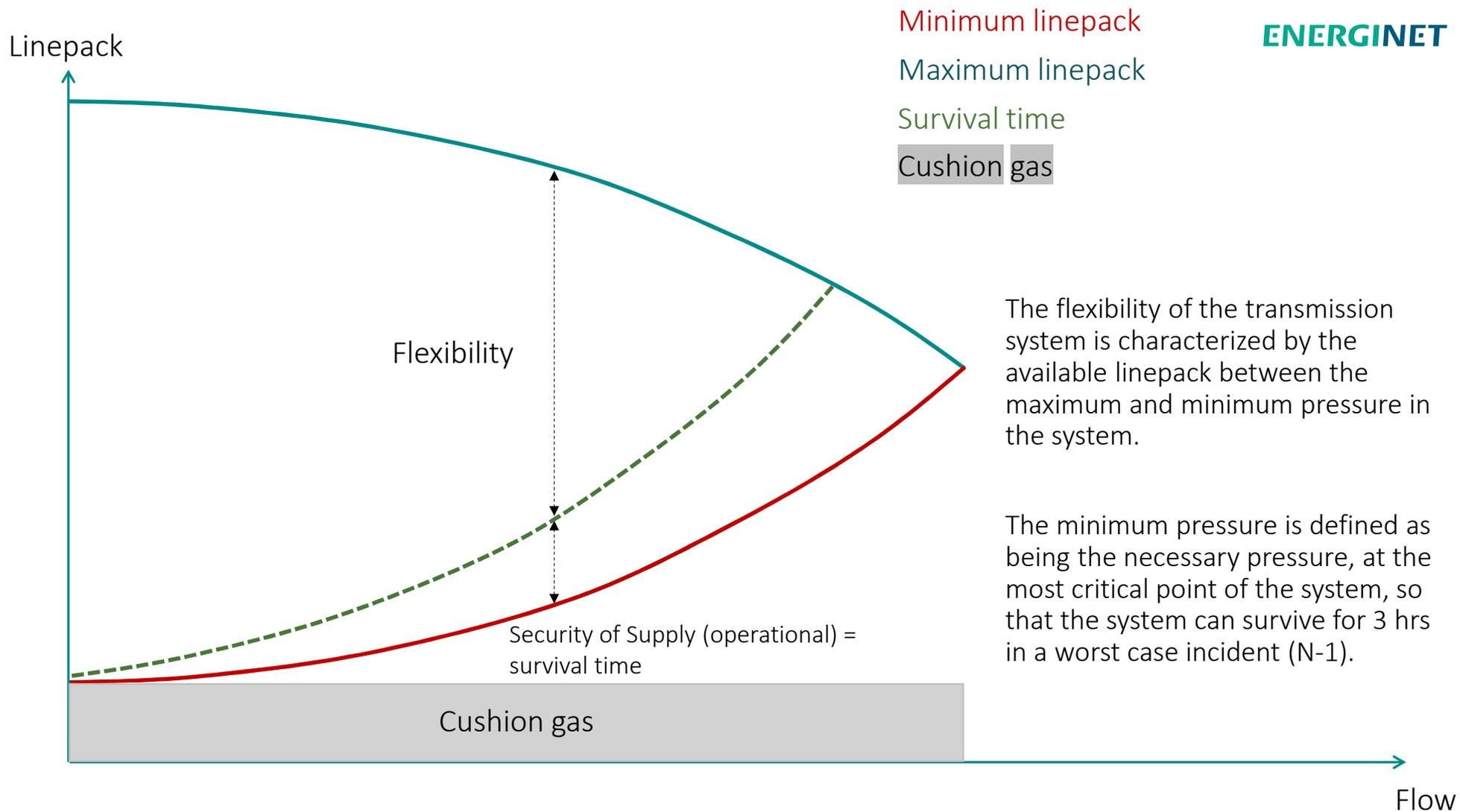
THE CURRENT SYSTEM

Main characteristics

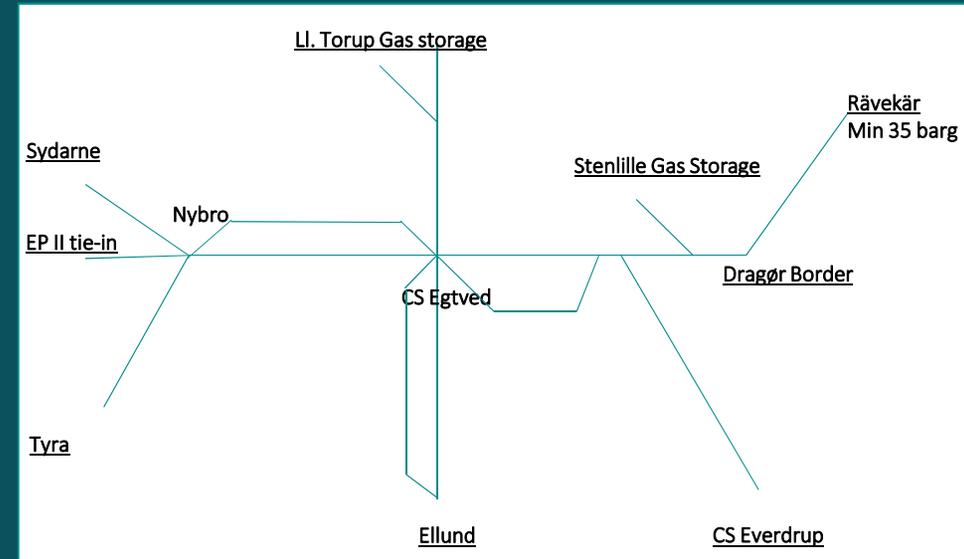
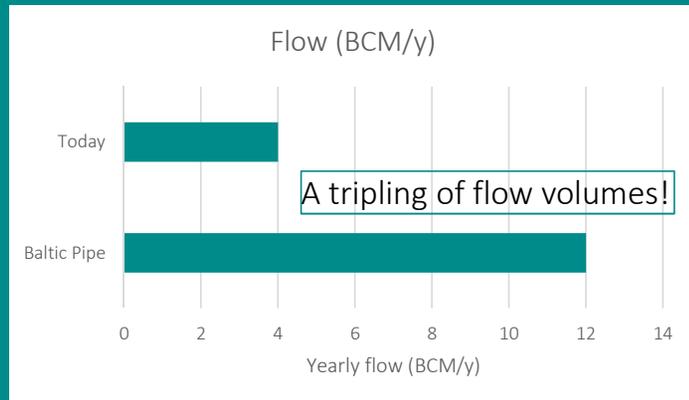
- Yearly flow ~ 4 bcm (3 to DK, 1 to SE)
- Linepack ~ 27-28 mio. Nm³
- Average Green Zone size ~ 32 GWh

Shippers are balancing on a daily basis.

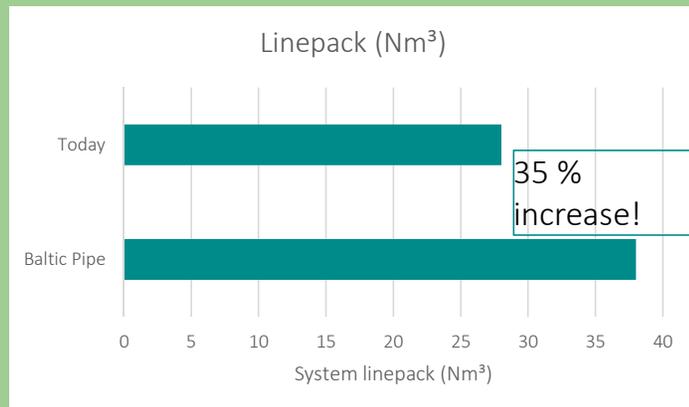




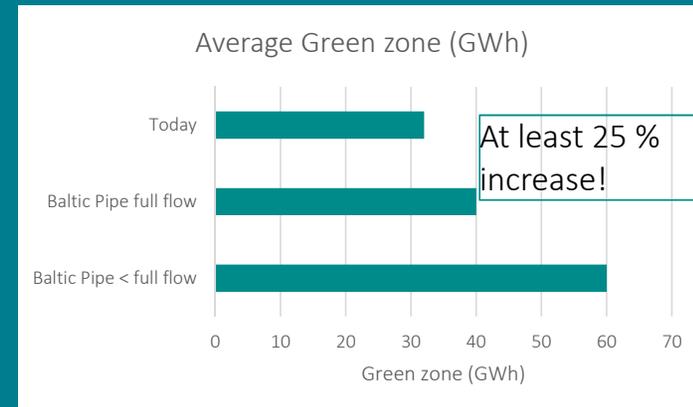
INCREASING FLOW

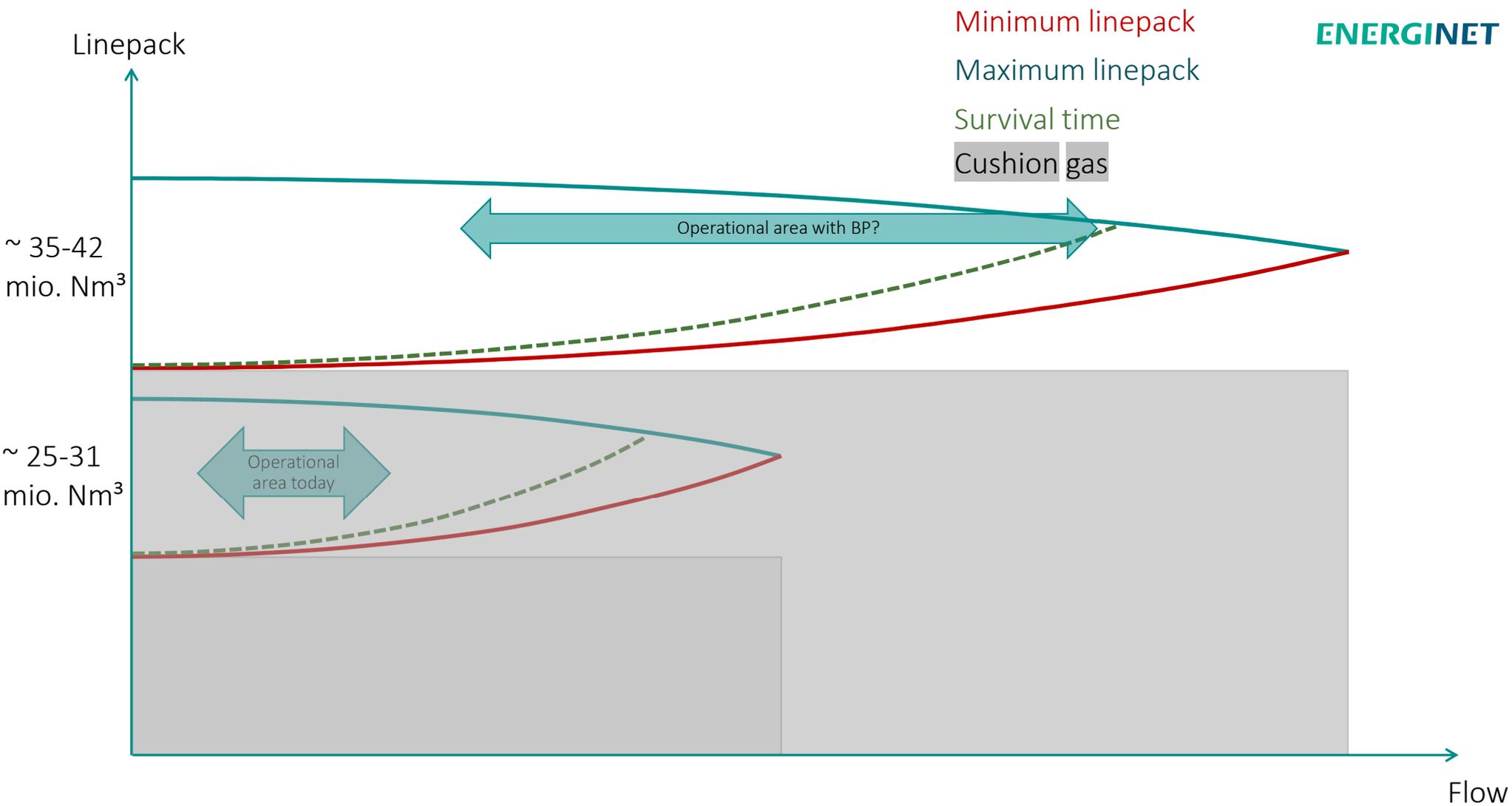


GREATER LINEPACK



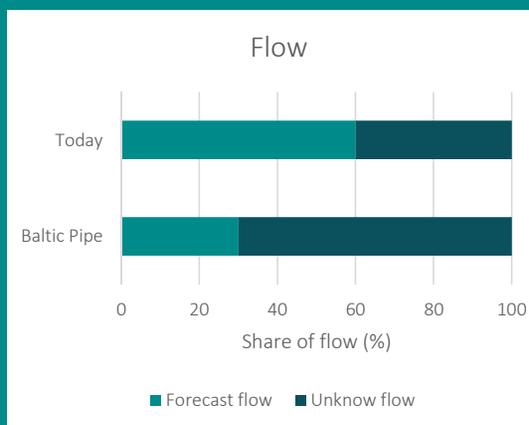
WIDER GREEN ZONE



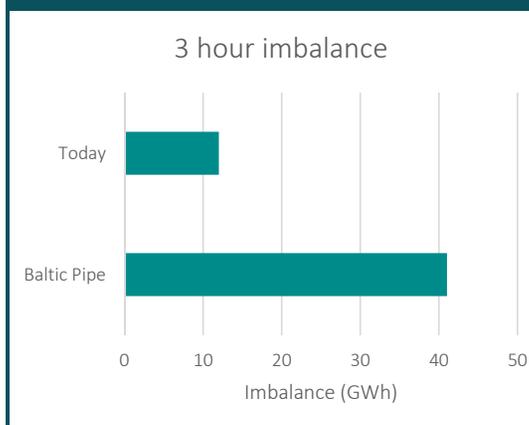


FLOW UNCERTAINTY INCREASES

UNCERTAIN FLOW



IMBALANCES



POSSIBLE RENOMINATIONS

Today, storages and Ellund are able to replace an N-1 incident (e.g. Tyra shutdown).

With Baltic Pipe, other sources are not able to replace the supply volume from EP II.

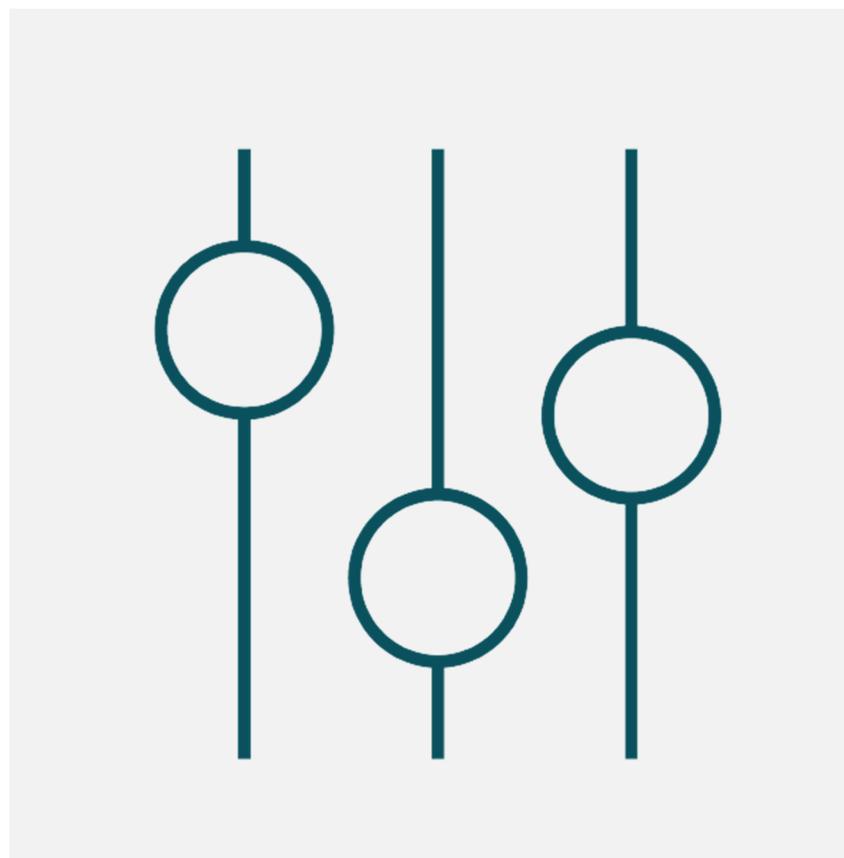
CONCLUSION

With Baltic Pipe in operation the transmission system will increase on the following parameters:

- Geometric volume
- Linepack
- Flexibility (on average)

The challenge with Baltic Pipe in operation is the flow uncertainty, and the risk of large change in the nominations during a gas day. This can potentially mean a drastic change in flexibility

We therefore need the possibility for a faster reaction from the market within day when the system is in a too large imbalance





THE CHARACTERISTICS OF THE DANISH MARKET

DENMARK – A GAS HUB

Two new sources of gas:

- Norway
- Poland – also with LNG

Access to new (growing) markets:

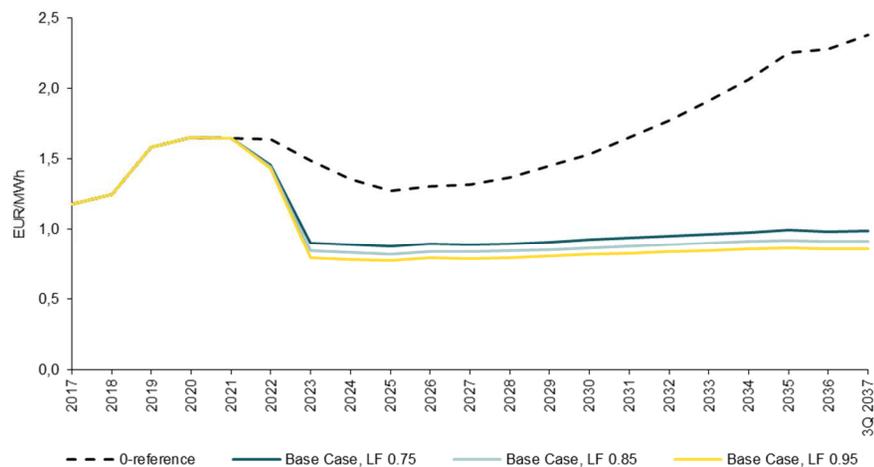
- Poland
- Eastern Europe and Ukraine

By all means, a better usage of the Danish gas system



EXPECTED LOWER TARIFFS

Denmark will increase its transported volume by four times, which may stabilize tariffs in Denmark



Source: Information package to Open Season

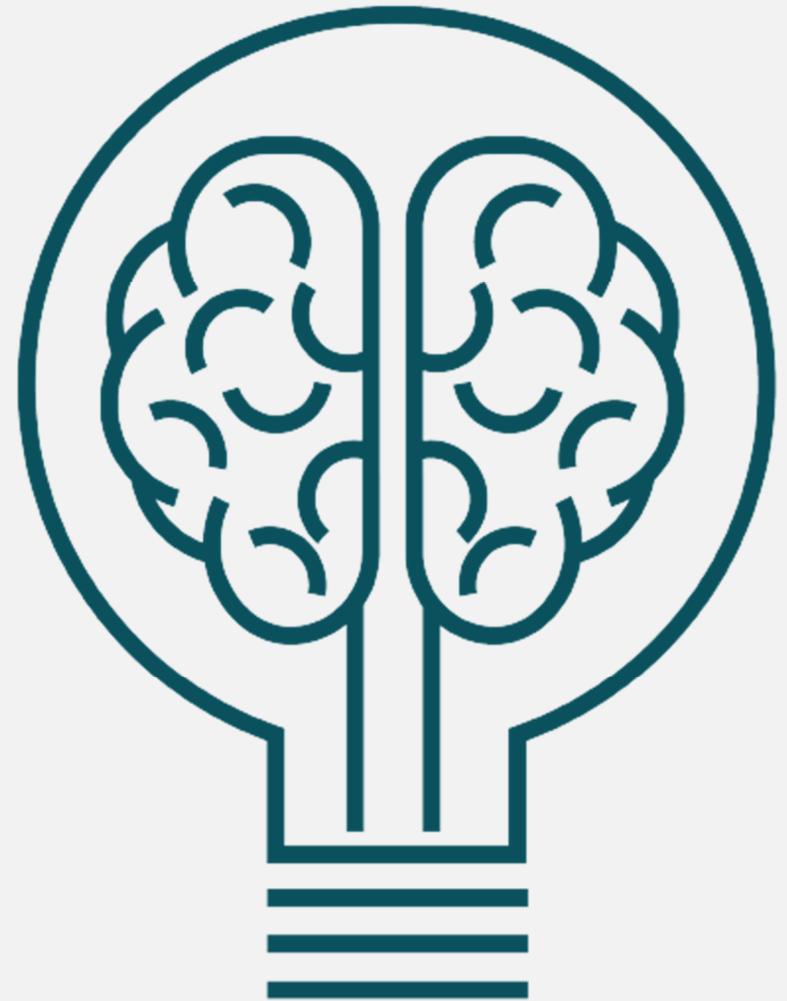




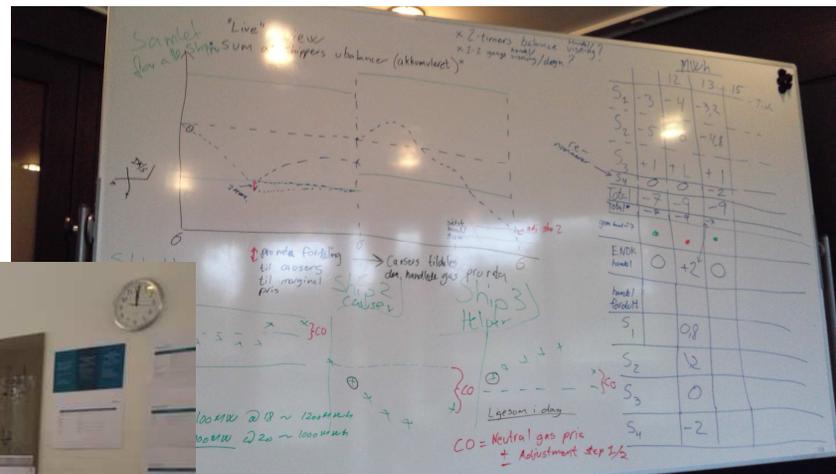
HOW WILL THE FUTURE
BALANCING MODEL
LOOK LIKE?

QUESTION

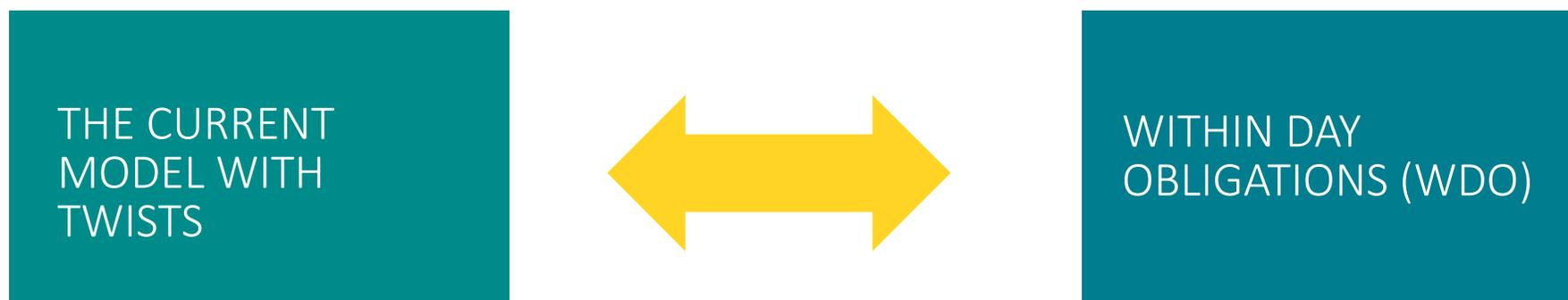
How can we create a balancing model with strong enough economic incentives for shippers to stay inside the green band each hour during the day?



WE HAVE BEEN WORKING INTERNALLY



THERE ARE MANY DIFFERENT KINDS OF MODELS



WE ARE STILL IN THE PROCESS TO MAKE ALL THE NECESSARY ANALYSIS; WHAT WILL BE ENOUGH, WHAT IS POSSIBLE?

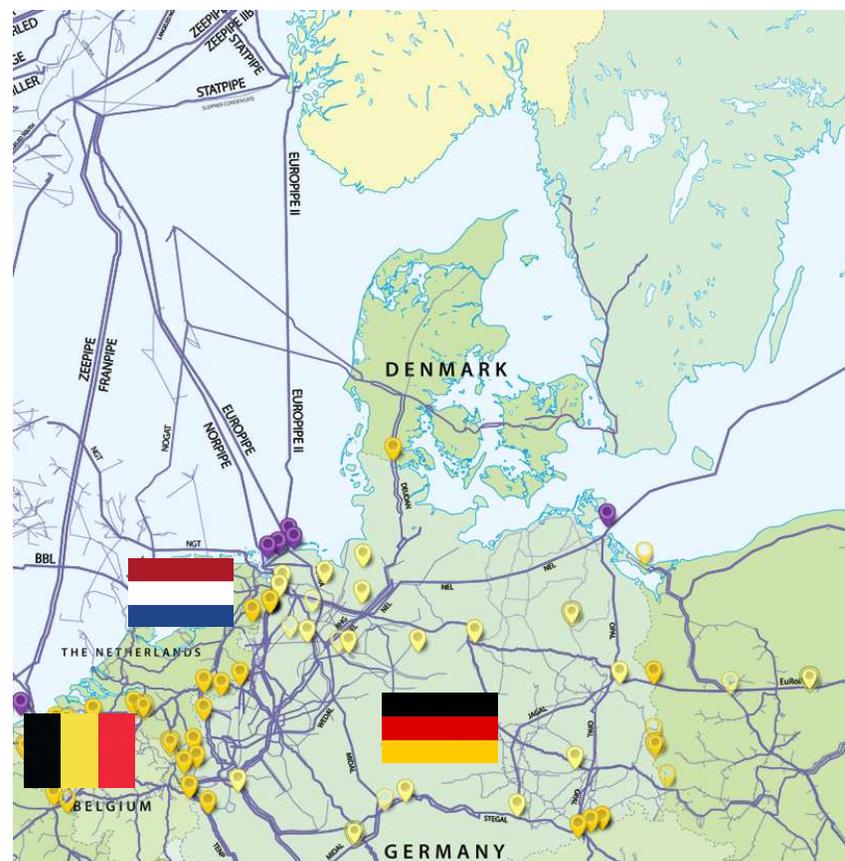
WHAT IS A WDO?

According to the network code: *“to incentivize network users to manage their within day position”*

Or in other words, to put up a restriction of how much imbalance that can be tolerated within a certain time slot during the day

Different types of WDOs:

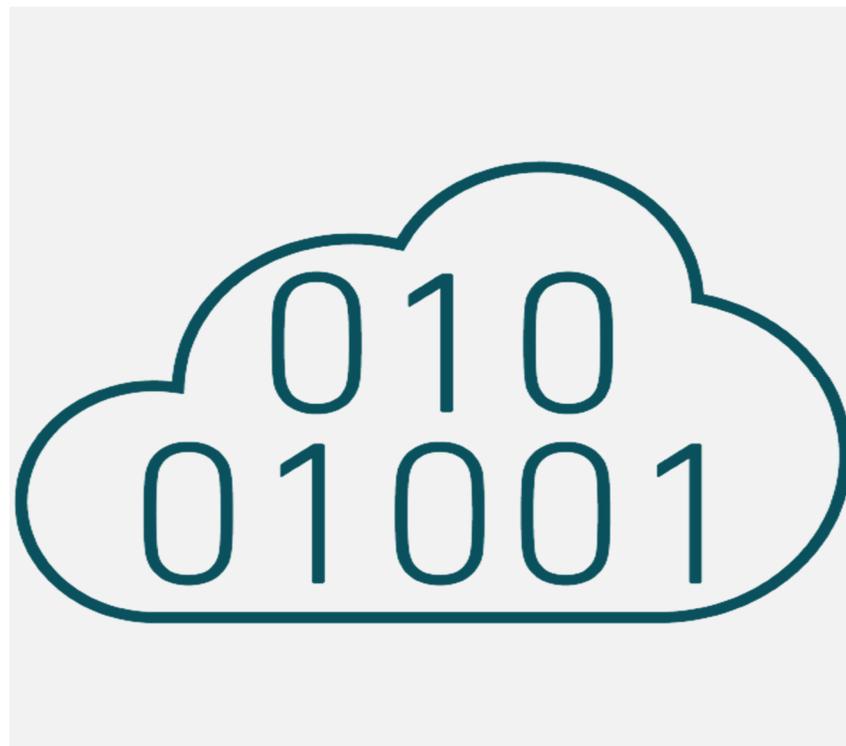
- System-wide
- Portfolio
- Entry-exit point



WHAT DOES A WDO REQUIRE?

A WDO requires that

- The regulator accepts that the TSO need such a incentive to ensure the system integrity and to minimize the TSO's need to undertake balancing actions
- Data and information. A lot. Each shipper shall know its status of its own imbalance within the day



We are in the process to test if this is possible

QUESTIONS TO YOU

Please use some time to reflect on the answers to those questions

General

- How do you expect the market development will be with Baltic Pipe?
- How will the price signals be in the market? Will the exchange be used?
- How will storage in Denmark be used?
- How can a firmer balancing model be attractive for shippers?

Specific

- Will intensified market surveillance be enough to keep shippers inside the green band?
- Shall the shippers, who have created an imbalance, also be those who pay?
- Shall the reaction from the TSO be mechanic and predictable?
- Who shall have the gas, when Energinet has been forced to trade during the day?
- How can we be sure that shippers also has the possibility to react outside business hours?



THE PROCESS GOING FORWARD

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 ALWAYS LISTEN

Please book a meeting

Questions



Contact: Julie Frost Szpilman, 23 33 86 52, jfs@energinet.dk