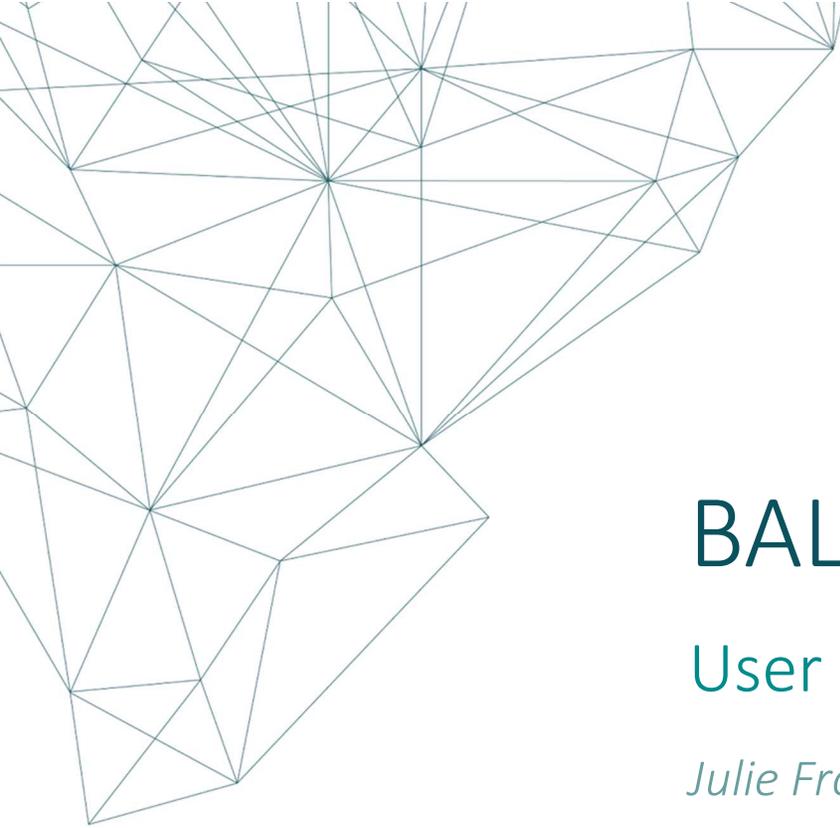




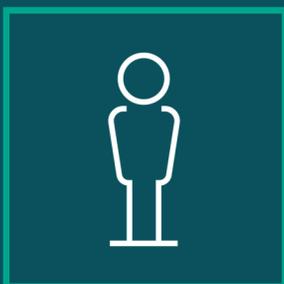
**ENERGINET**



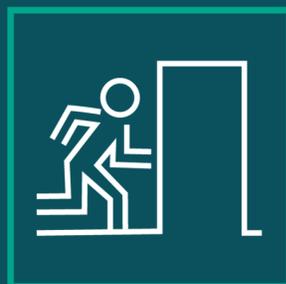
# BALANCING MODEL 2022

User group, 15th of November 2019

*Julie Frost Szpilman og Jens Kristian Jensen*



SIKKERHEDSGUIDE



NØDUDGANGE



HJERTESTARTER

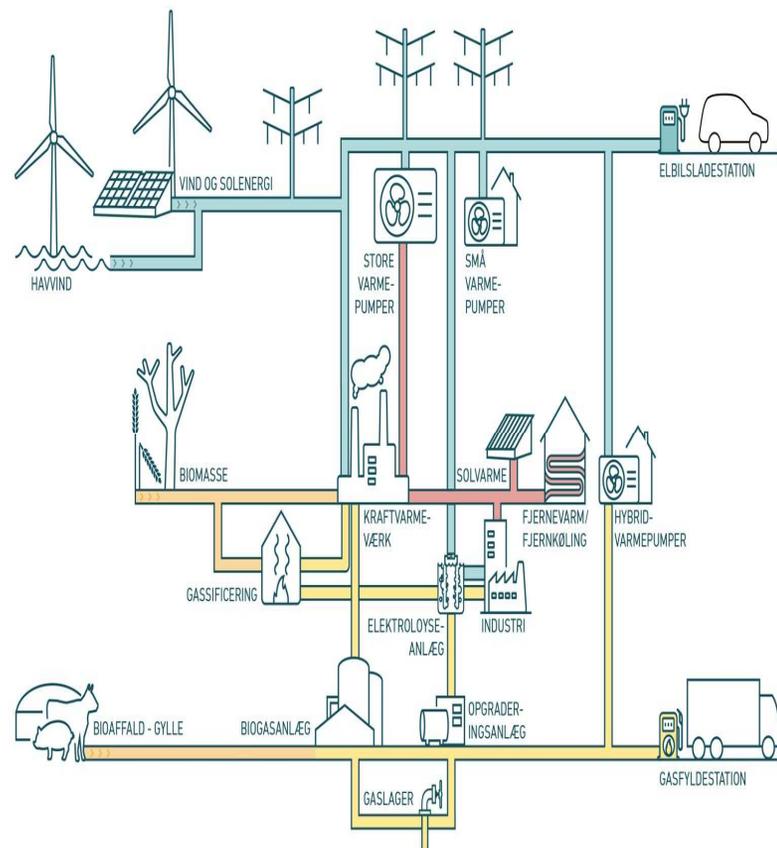


SAMLINGSSTED

# 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?

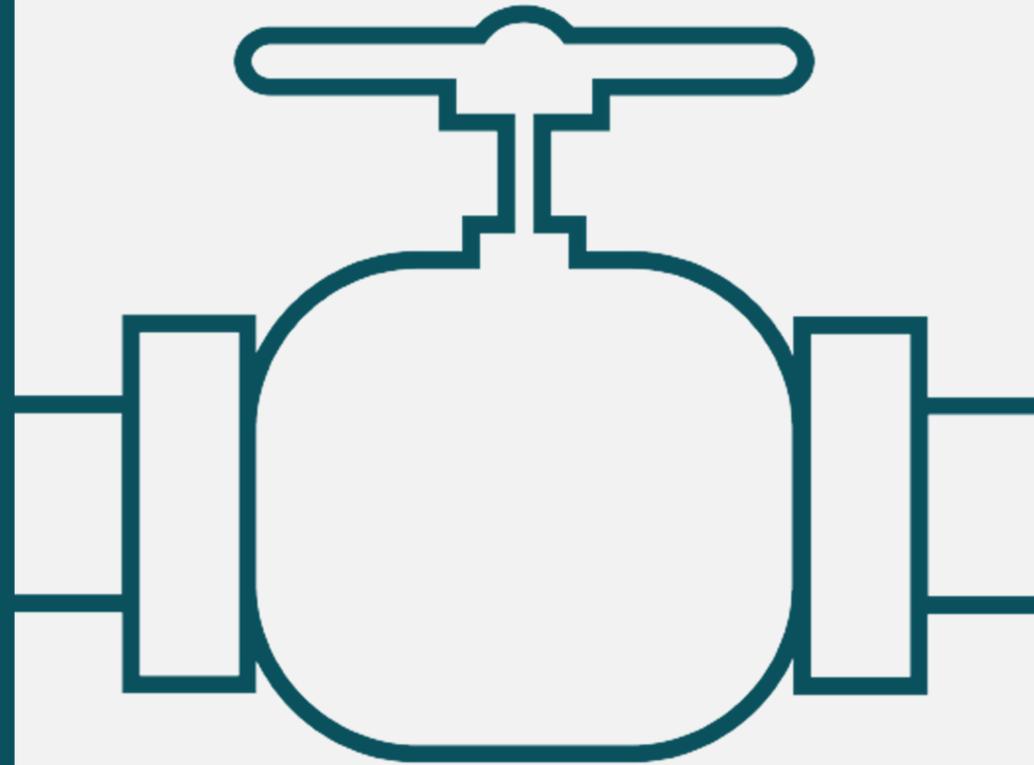
- In the current system, shippers are only required to be in balance at the end of the day
- With Baltic Pipe, Energinet needs that shippers help to balance the system during the day

- 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

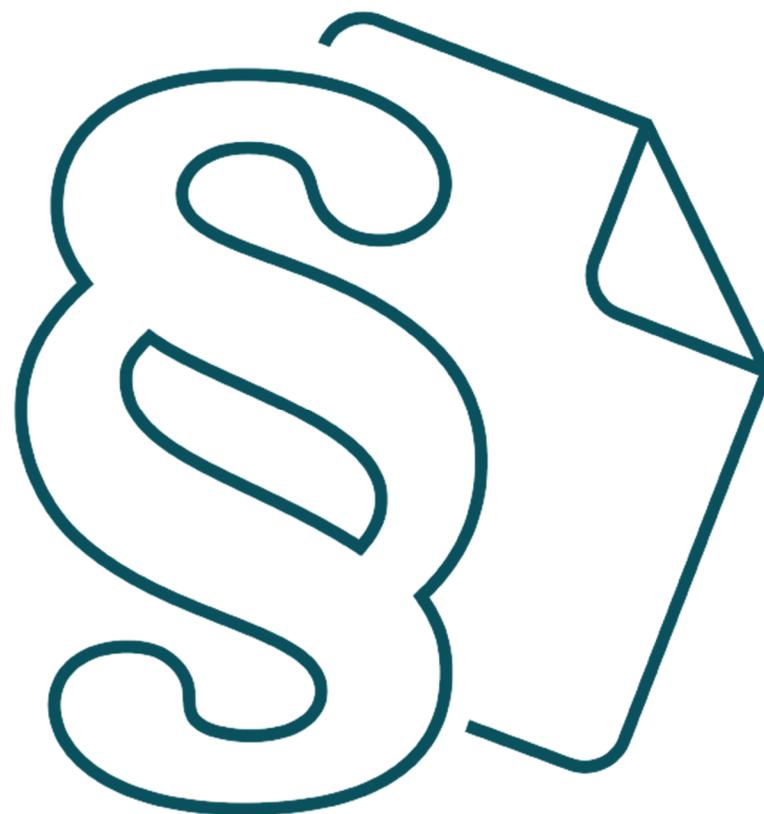
Those parameters are important for Energinet



## 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.





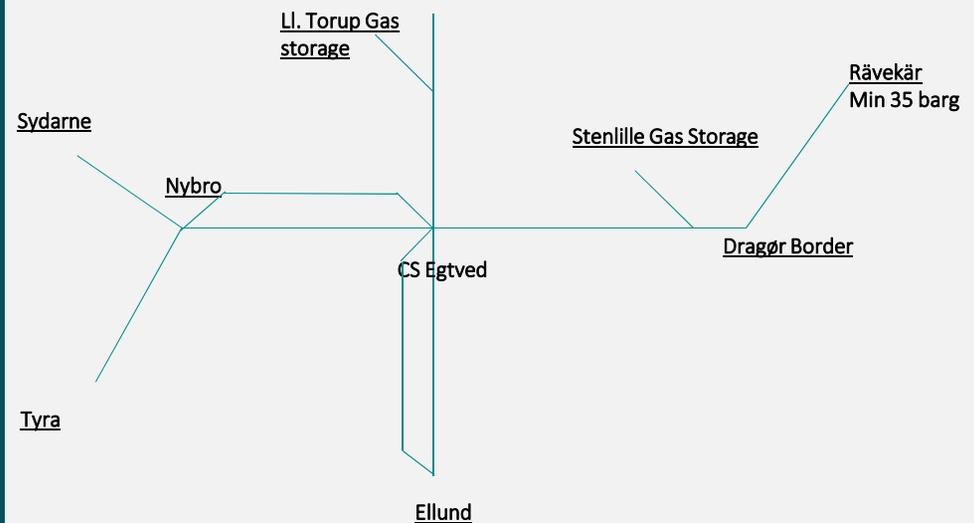
# THE CHARACTERISTICS OF THE DANISH SYSTEM

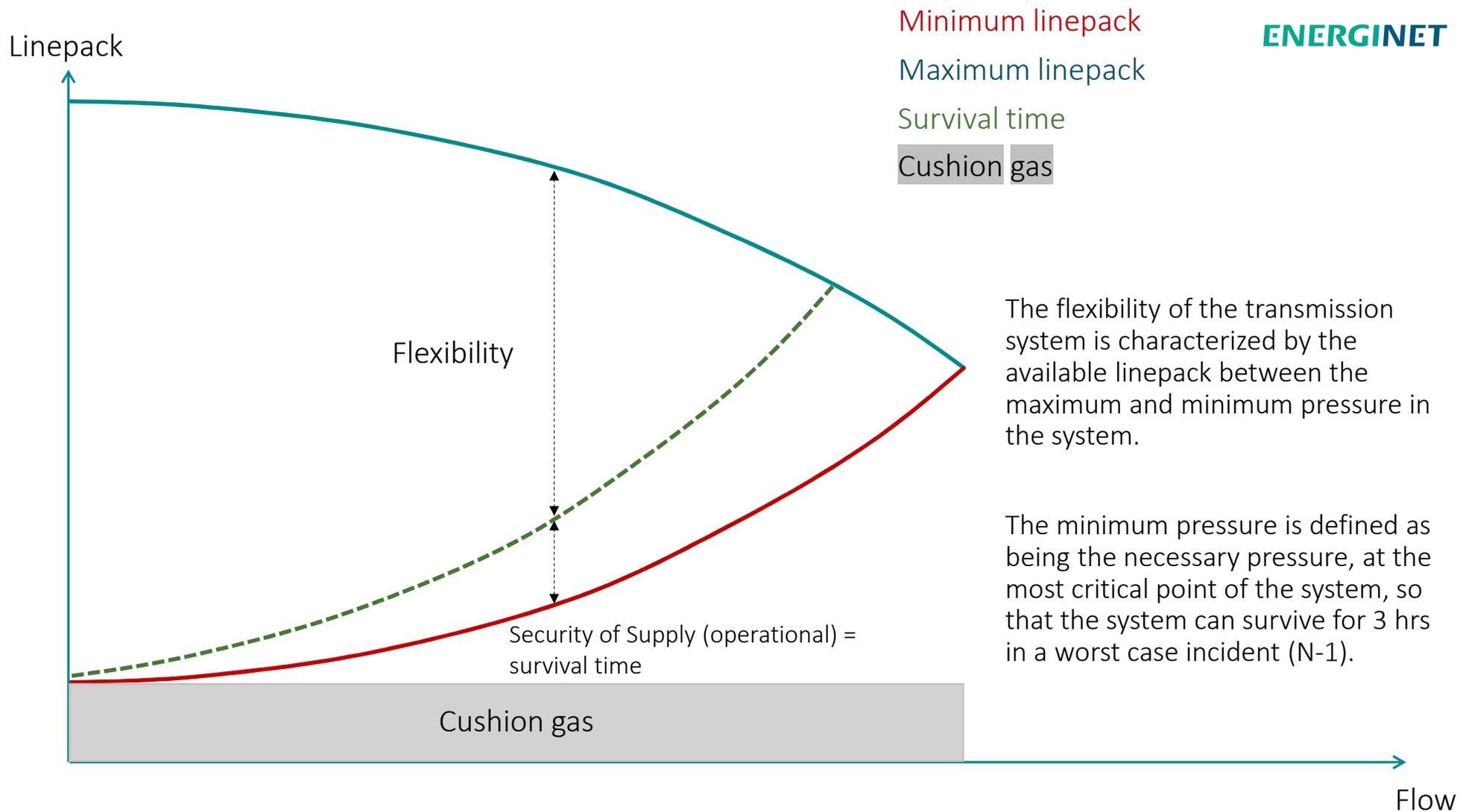
# THE CURRENT SYSTEM

## Main characteristics

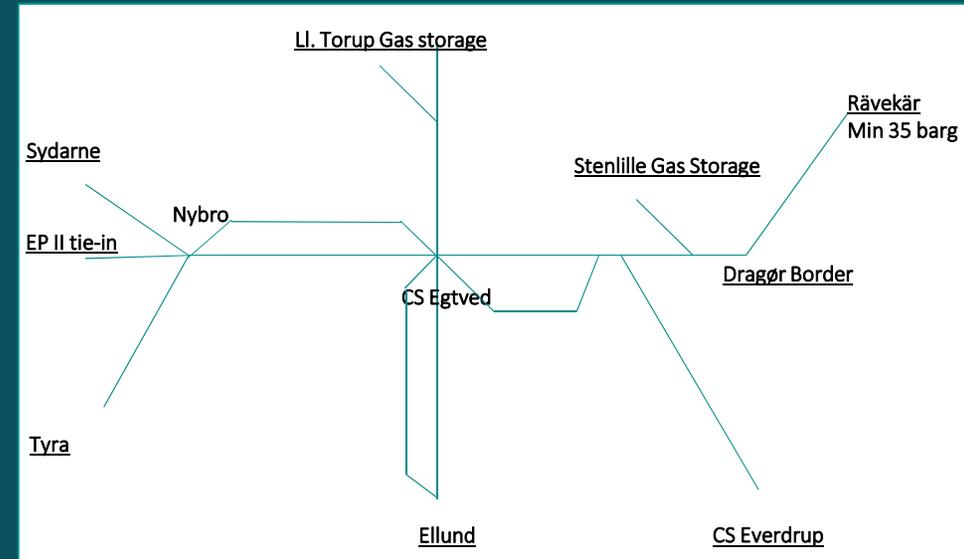
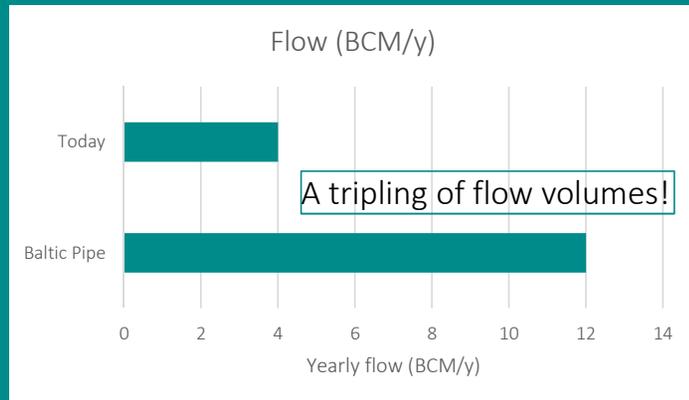
- Yearly flow ~ 4 bcm (3 to DK, 1 to SE)
- Linepack ~ 27-28 mio. Nm<sup>3</sup>
- Average Green Zone size ~ 32 GWh

Shippers are balancing on a daily basis.

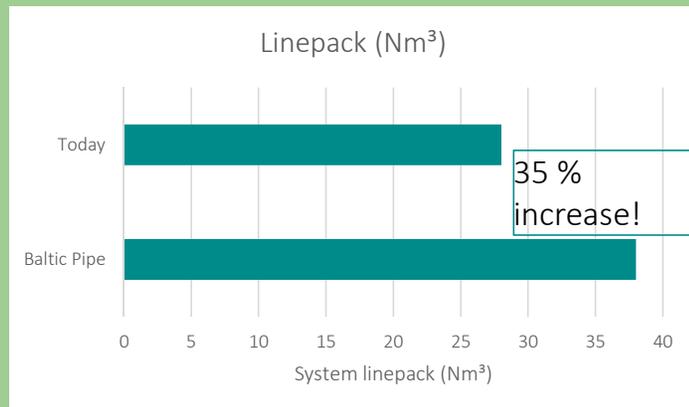




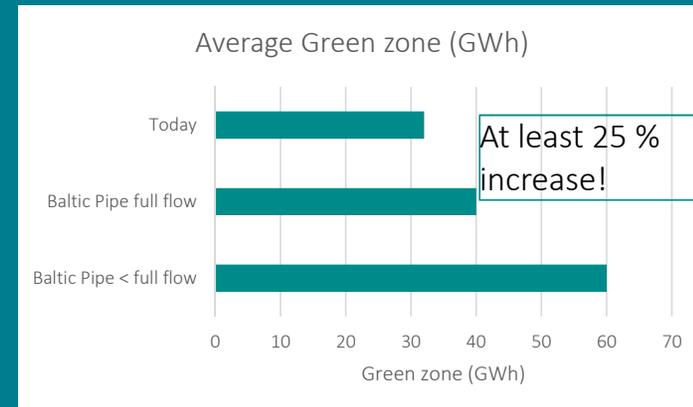
# INCREASING FLOW

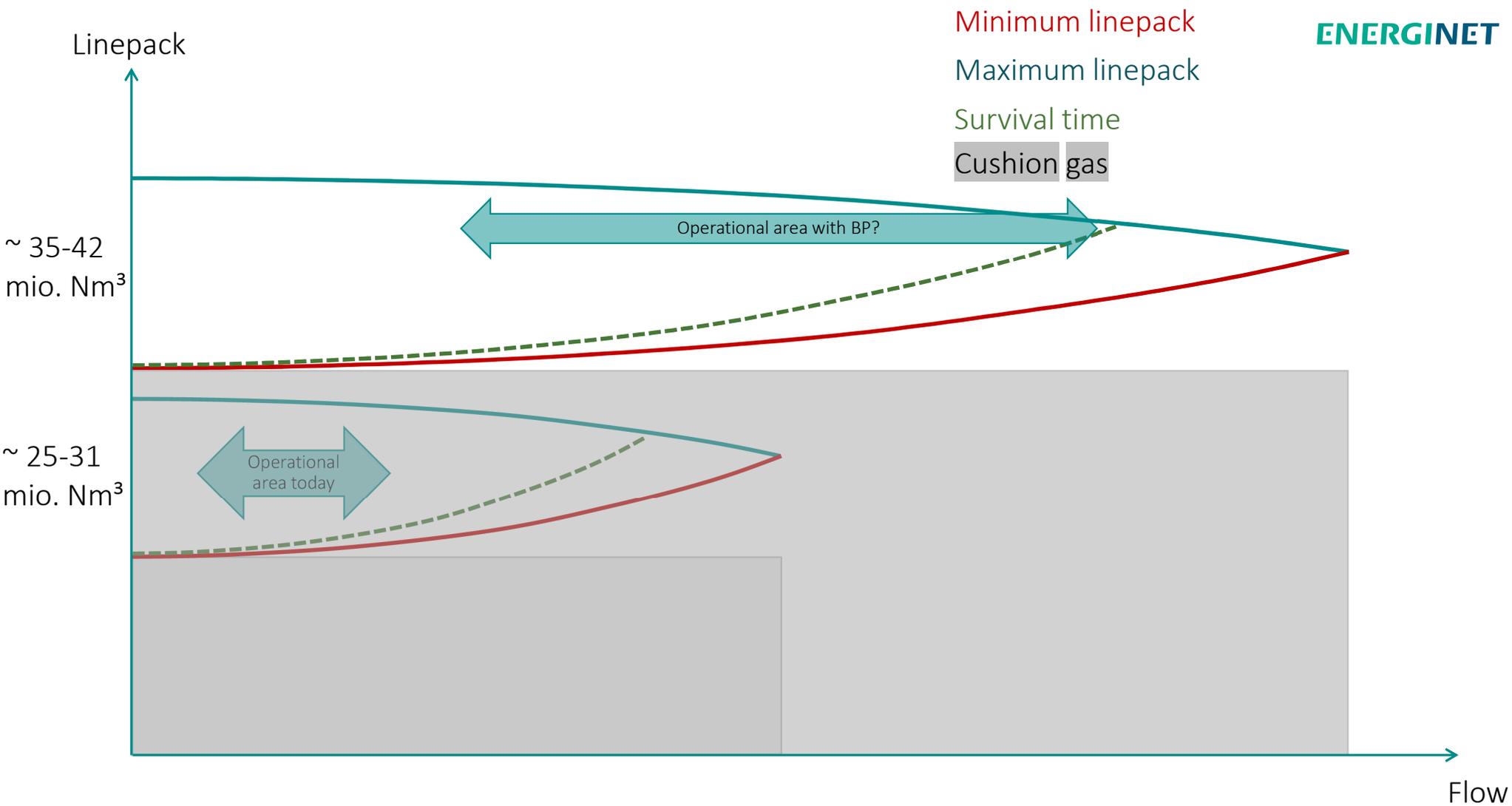


# GREATER LINEPACK



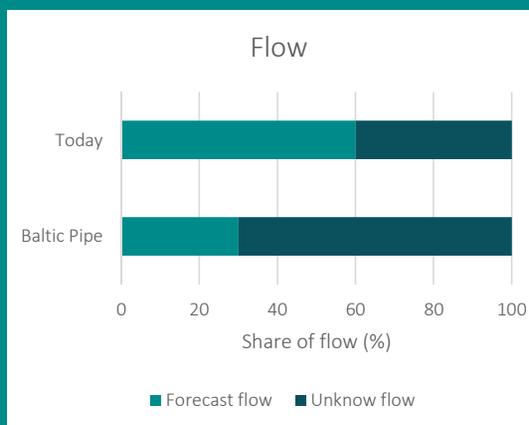
# WIDER GREEN ZONE



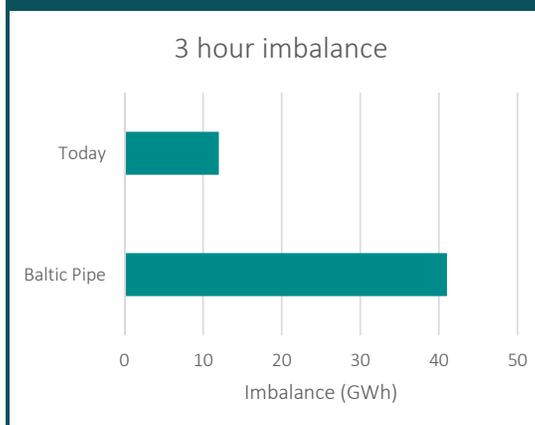


# FLOW UNCERTAINTY INCREASES

## 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.

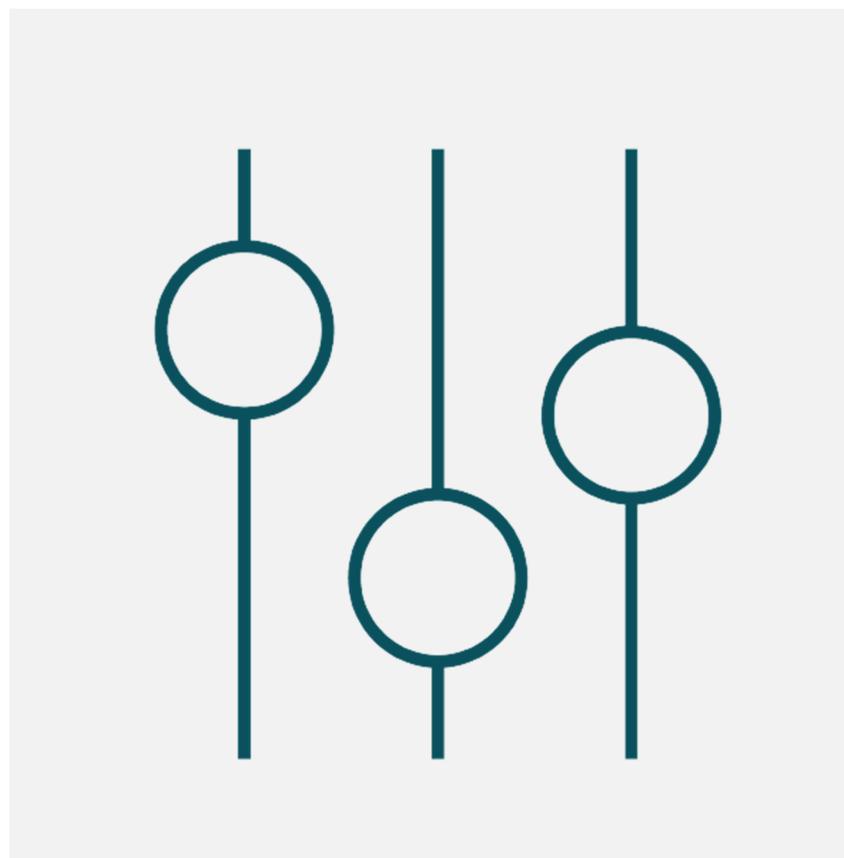
## CONCLUSION

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:

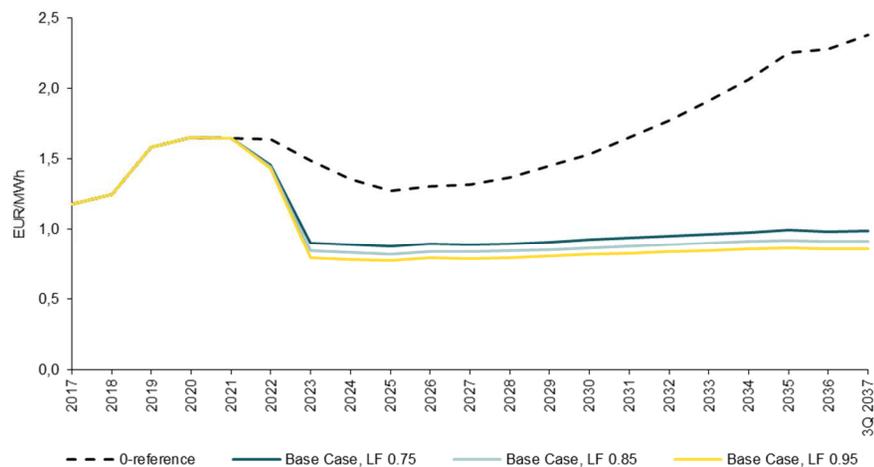
- Poland
- Eastern Europe and Ukraine

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

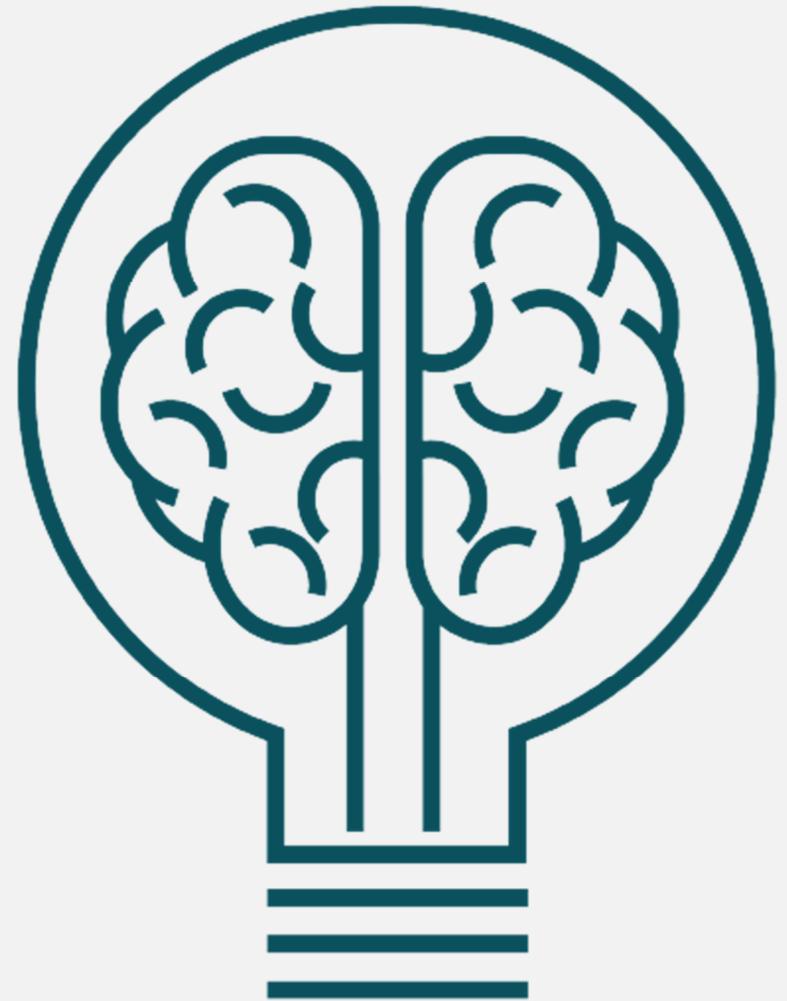




HOW WILL THE FUTURE  
BALANCING MODEL  
LOOK LIKE?

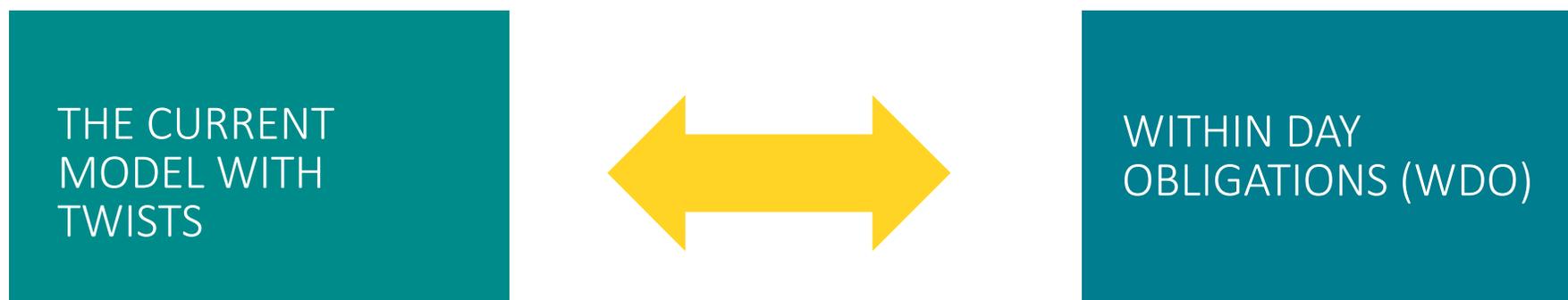
# QUESTION

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?





## 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?

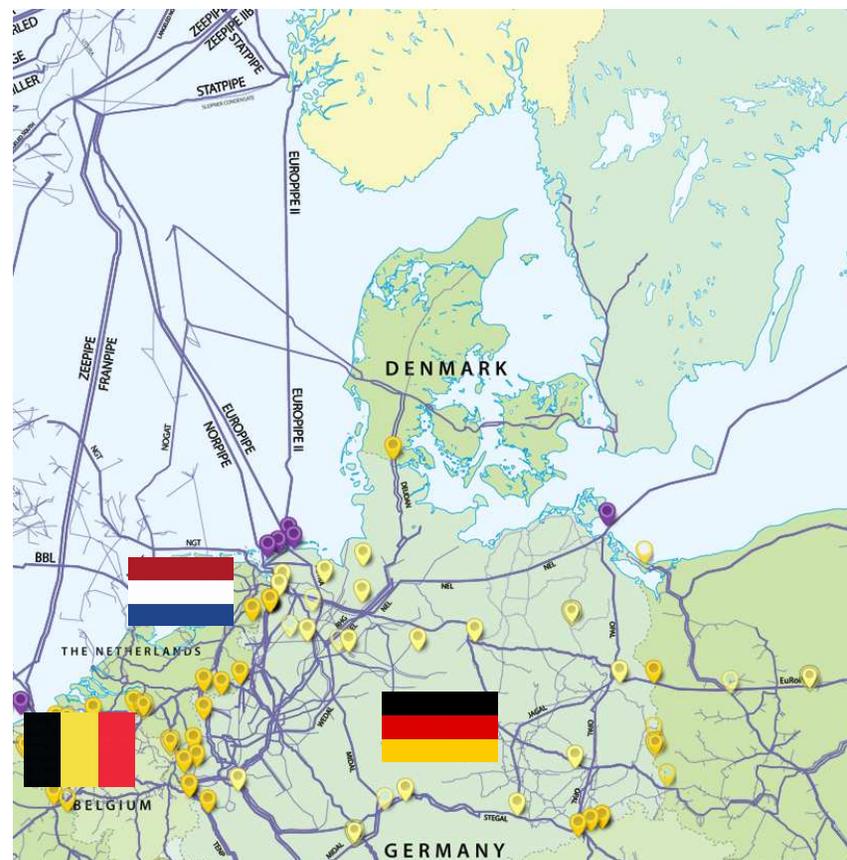
## WHAT IS A WDO?

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:

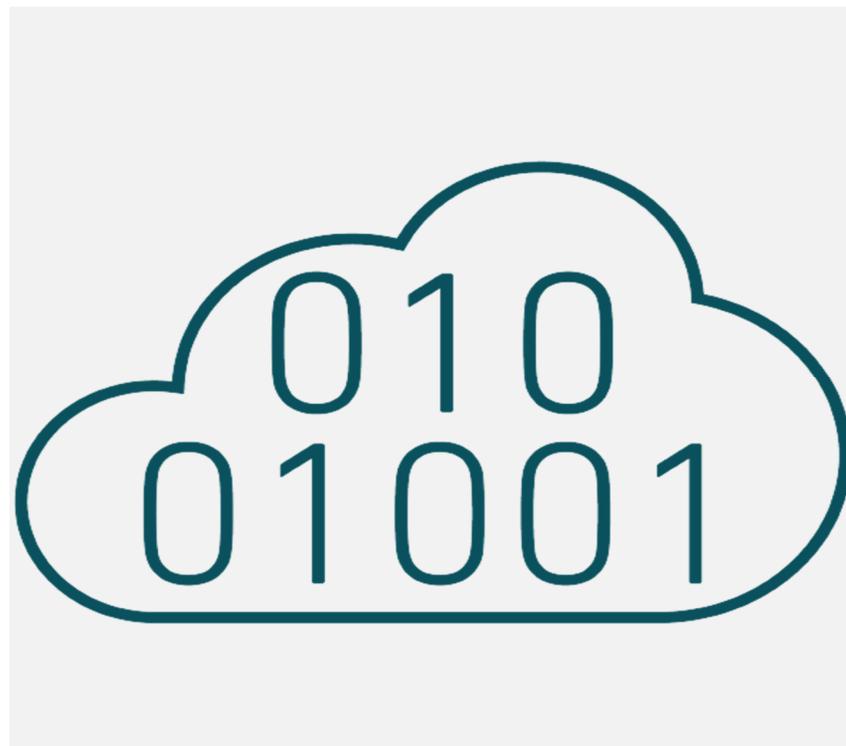
- System-wide
- Portfolio
- Entry-exit point



## 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](mailto:jfs@energinet.dk)