

A decorative graphic on the left side of the slide, consisting of a complex network of thin, light blue lines forming a series of interconnected triangles and polygons, resembling a wireframe or a mesh structure. In the top-left corner of this graphic, there is a small circular icon containing a stylized human figure.

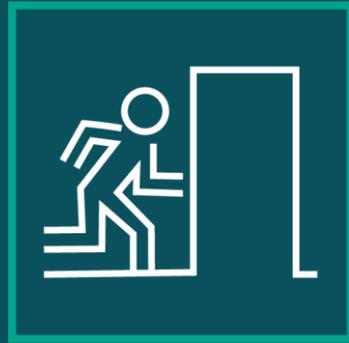
USER GROUP

Balancing model

Hosts: Christian Rutherford & Jannik Blok-Riisom



HOST



EMERGENCY
EXIT



DEFIBRILLATOR
(AED)



MEETING POINT



MUTE YOUR MICROPHONE,
WHEN YOU DON'T SPEAK



SWITCH ON YOUR CAMERA, ONLY
WHEN YOU ARE GIVEN THE
WORD TO SPEAK



USE THE 'RAISE HAND'
FUNCTION IF YOU WISH TO
COMMENT OR ASK A
QUESTION...



...YOU CAN ALSO WRITE YOUR
QUESTION USING THE CHAT -
THE HOST WILL ASK THE
QUESTION FOR YOU



WELCOME

Energinet Systemansvar

PARTICIPANTS

SHIPPERS

- Ørsted
- Andel Energi
- Energi Fyn
- Modity Energy Trading
- Nature Energy
- Norlys Energi
- PGNiG
- Axpo Solutions AG
- Chevron Products UK Limited
- RWE
- Shell
- Öresundskraft

EXTERNAL

- Danish Utility Regulator
- GAZ-SYSTEM
- Naftogaz of Ukraine
- Nordion Energi

Agenda



- Purpose of this User Group
- Timeline & milestones
- Answers to general questions
- Answers to smoothing
- Q&A session

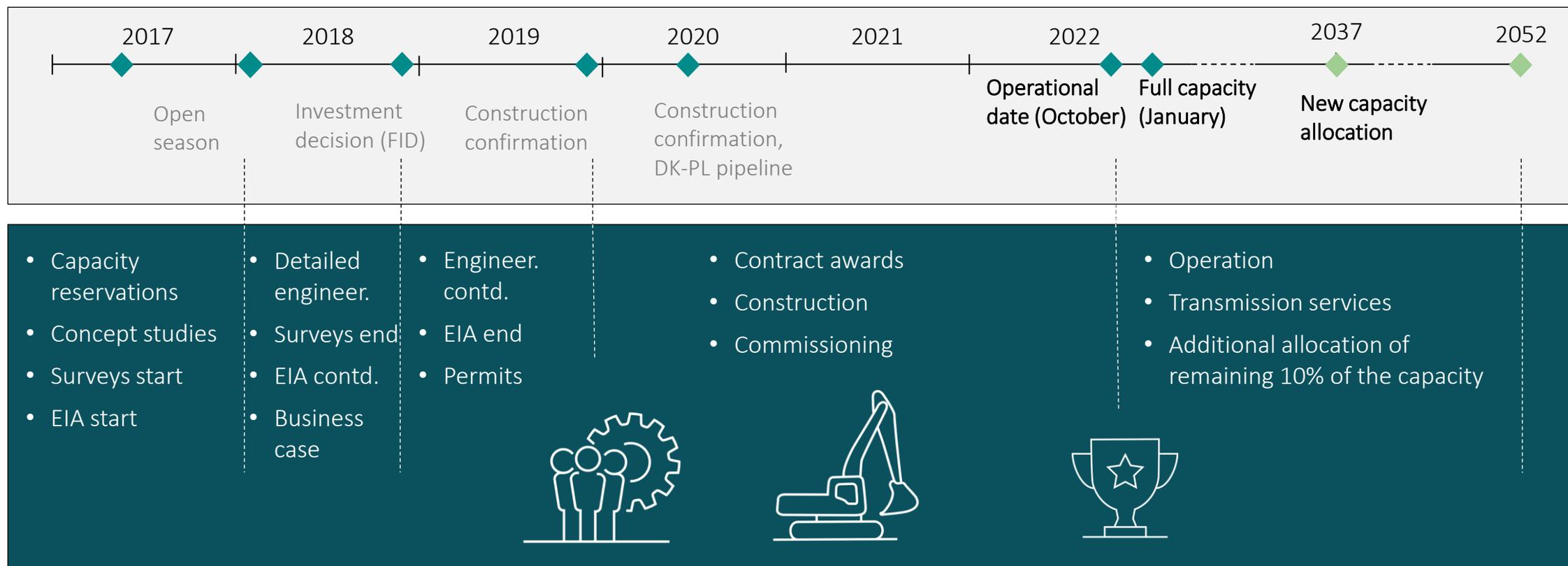


PURPOSE
OF USER GROUP:
PREPARING FOR GO-LIVE

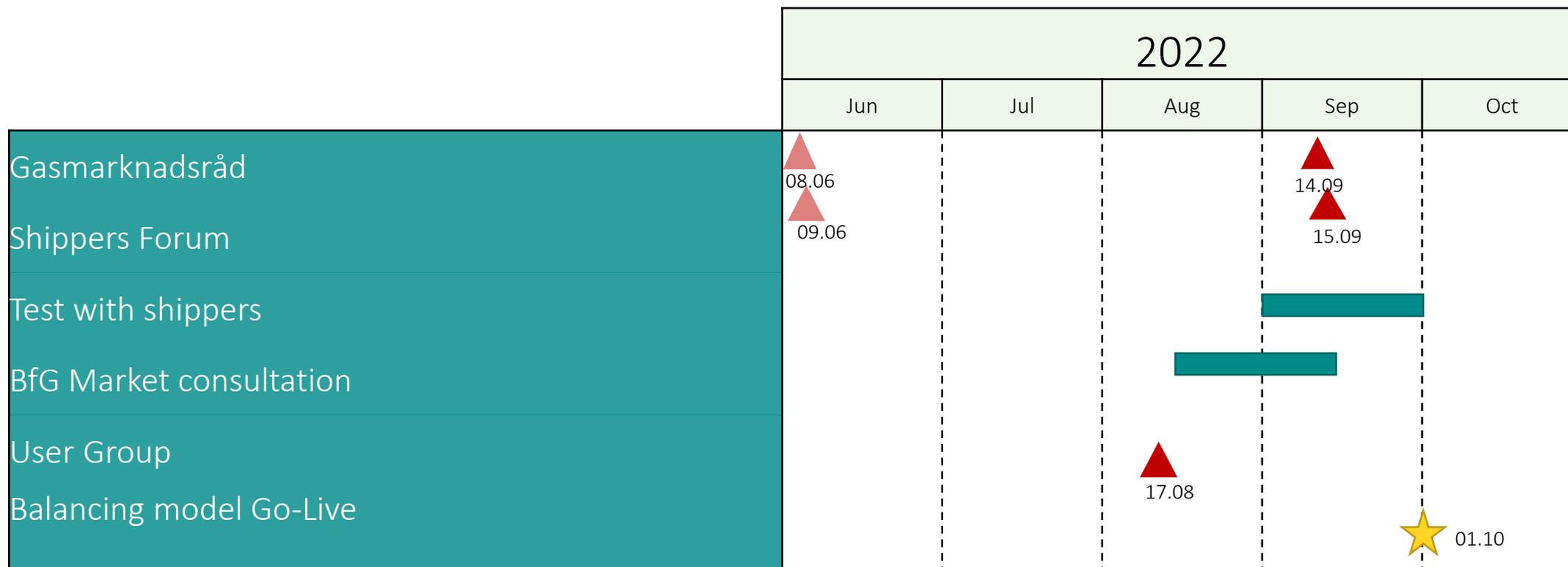


TIMELINE & MILESTONES

Baltic Pipe project – Almost there



BALANCE MODEL ON TRACK



ANSWERS TO GENERAL QUESTIONS

DATA

- Data flows
 - Described in the balancing method application towards the Danish Utility Regulator. [Developing the gas balancing model for implementation in 2022 | Energinet](#)
- Daily forecasts
 - Estimates/nDMS forecasts will continue to work just like today meaning the first forecast at 13:00 day ahead and 5 updates during the gas day.



DATA

- DMS data basis
 - We expect to develop a message to showcase how much of DMS data is based on actual measurements vs. estimates. However, this will not be part of the go-live system on 1 October 2022.





AVAILABILITY

- Accumulated System balance & balancing zone data
 - Initially, only available online.
 - Energinet will consider the possibility to forward data directly as an add-on after 1 October 2022.
- Message type & format
 - Updated documentation regarding the new balancing model is available here:
<https://en.energinet.dk/-/media/5232F9382F6941359013FAD9FA40C444.pdf>

CAUSER VS. HELPER

CAUSER:

If your accumulated imbalance is in the **same direction** as the total accumulated imbalance

HELPER:

If your accumulated imbalance is in the **opposite direction** as the total accumulated imbalance





EMERGENCY SITUATION

Primarily, the balancing model will continue...

- ...but with other imbalance prices (force majeure price and potentially increased imbalance payment)

In a scenario where the balancing model cannot be optimally maintained, Energinet's options regarding balancing in the case of Emergency are described in the GT&C's (BfG) chapter 16.3.1.

[Rules & Reports | Energinet](#)

ANSWERS TO SMOOTHING

SMOOTHING

Value based on historical data

- Initial conservative value
- Value may change in the future, based on experience with the new system and flows

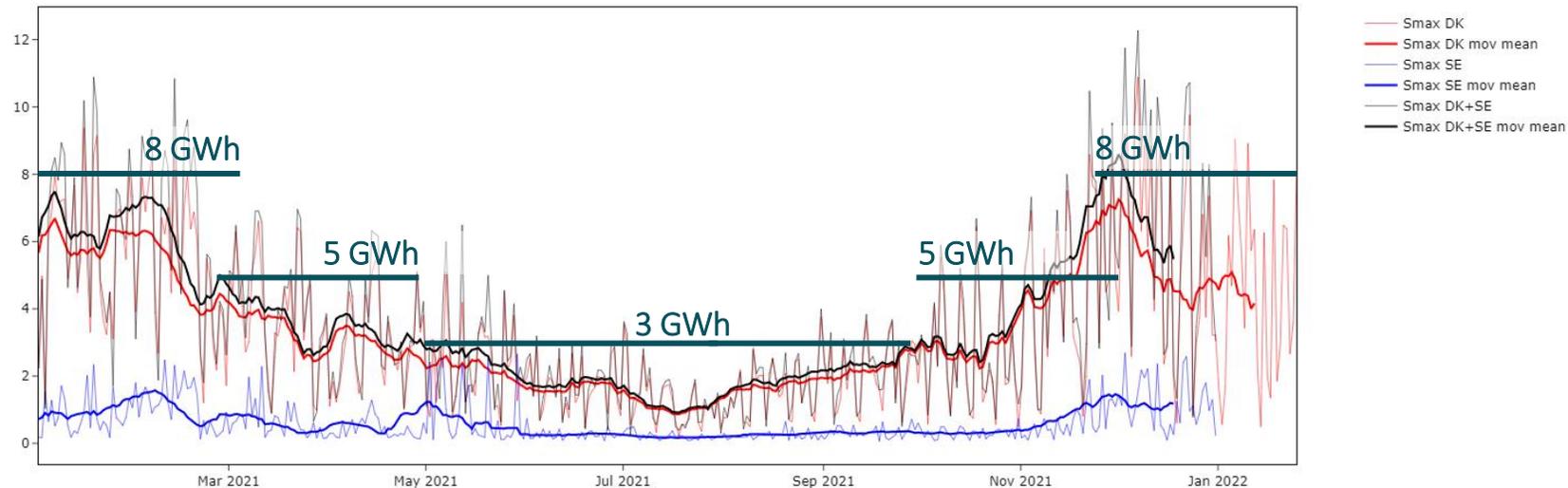
5 GWh

Smax

100%

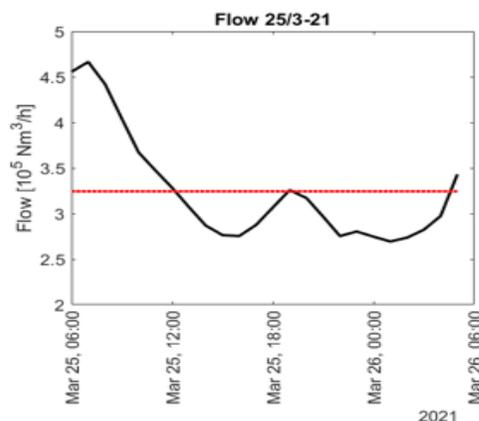
Daily coverage
– majority of
the year

Smax

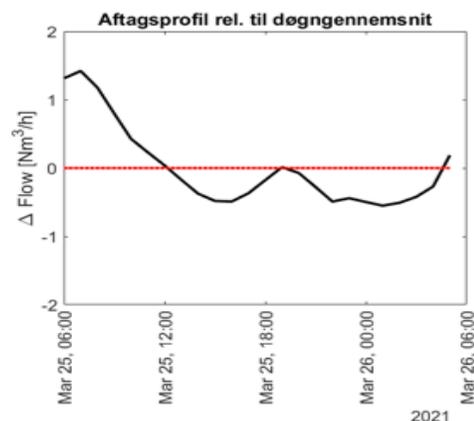


SMOOTHING

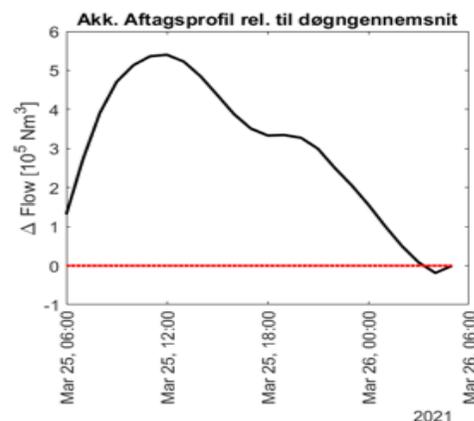
1. Profile vs daily flat
2. Hourly imbalances when flowing flat profile = total offtake – avg.(total offtake)
3. Accumulated hourly imbalance through the day
4. S-Max (maximum value of accumulated imbalances)



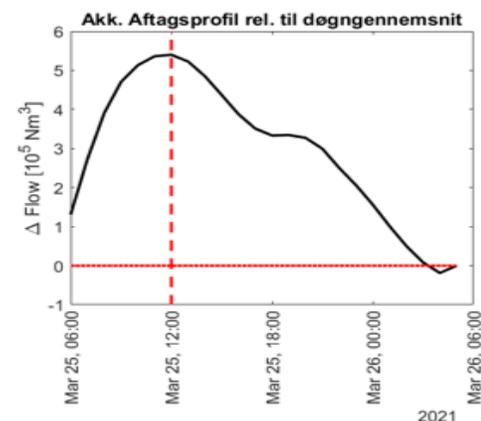
1



2



3



4

SMOOTHING PROCEDURE

1. SAP nomination point in the market model
2. Shippers active in JEZ can nominate at the SAP point
3. S-Max for the whole system set by BAM for a given period (5 GWh/h)
4. Customers individual S-Max is calculated daily and distributed by BAM
5. Nomination between 13:00 and 04:00 D-1
6. Any unused smoothing allocation is calculated into the green zone

S-MAX

MESSAGE TYPE

- Receive directly through Edigas message type.
- Message type is being developed.

CALCULATION

- The individual S-max value is calculated on market shares 7 days before.

DAILY VALUE

- S-max is an upper-limit that is not to be exceeded (maximum accumulated entry)
- Hours can be nominated however (Entry – Exit = 0 for all 24 hours)

HOURLY NOMINATION

- The smoothing profile is nominated in opposite direction of average offtake.
- Values should be nominated as entry and exit values

SMOOTHING

AVAILABLE

- Only for JEZ.
- Extension to include RES will be considered.

IMBALANCE

- The imbalance resulting from smoothing at the start of the gas day must be resolved later in the gas day (total smoothing = zero)

SAP NOMINATION

- Only the smoothing required by the shipper (while respecting S-max) is nominated on SAP
 - Not including expected consumption

ALLOCATION POINT

- **Causer** allocation point: allocated directly by Energinet
- **Smoothing** allocation point: nominated by the shipper

SMOOTHING EXAMPLE

e.g.:

for a given hour the **actual** offtake is **higher** than the (expected) daily **average** offtake

→ Considered an **exit** in terms of smoothing

= can be *smoothed out* by nominating an **entry** value towards the smoothing allocation point in that specific hour

TIMETABLE

13.00 before the gas day:

- S-max is forwarded to the relevant market participants

04.00 before the gas day:

- Deadline for renomination of smoothing profile

06.00:

- Gas day starts

Q&A session

- Test & Communication
- Smoothing
- Settlement
- A.O.B.

cru@energinet.dk
jlo@energinet.dk



Q&A session

- Test & Communication
- Smoothing
- Settlement
- A.O.B.

cru@energinet.dk
jlo@energinet.dk



Q&A session

- Test & Communication
- **Smoothing**
- Settlement
- A.O.B.

cru@energinet.dk
jlo@energinet.dk



Q&A session

- Test & Communication
- Smoothing
- **Settlement**
- A.O.B.

cru@energinet.dk
jlo@energinet.dk



Q&A session

- Test & Communication
- Smoothing
- Settlement
- **A.O.B.**

cru@energinet.dk
jlo@energinet.dk





THANK YOU FOR YOUR PARTICIPATION

Next major milestone:

- GO LIVE!

1 October 2022