



WORKSHOP ON THE DANISH- GERMAN BORDER (DK1-DE)

Energinet

7th of September 2017



AGENDA

- 1 Welcome and introduction of participants
- 2 Presentation of purpose of the day and process for the workshop
- 3 Presentation of the Joint Declaration and countertrade models
- 4 4x rounds of discussions of countertrade models
- 5 Recap of inputs to the countertrade models
- 6 Presentation of next steps



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PURPOSE OF THE DAY AND NEXT STEPS

Inputs and new suggestions for
countertrade models

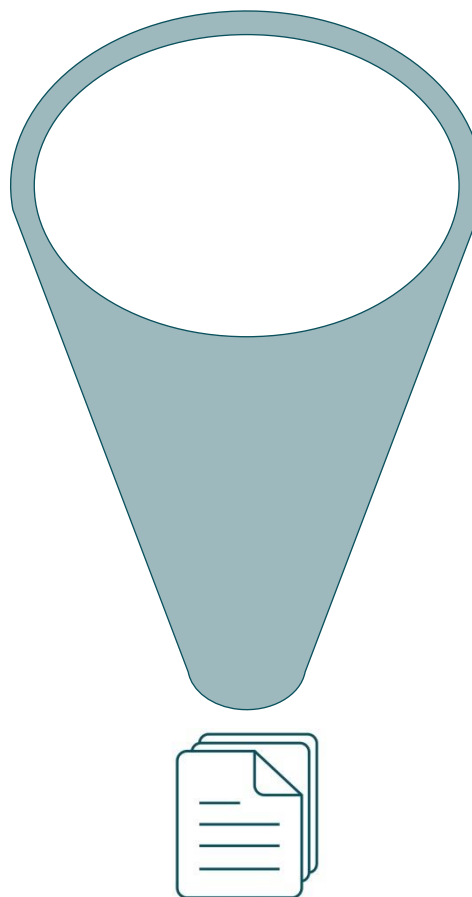
Stakeholder workshop
7th of September

Impact assessments

[Stakeholder meetings]

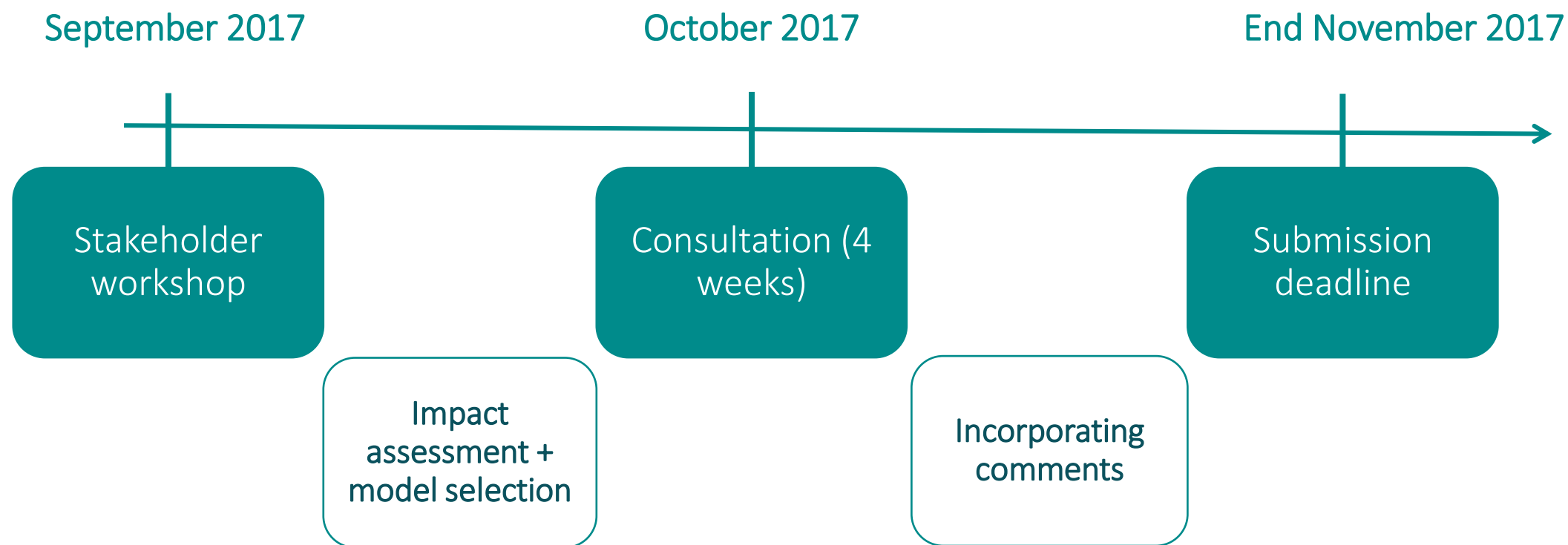
Methodology for a
countertrade model

Consultation



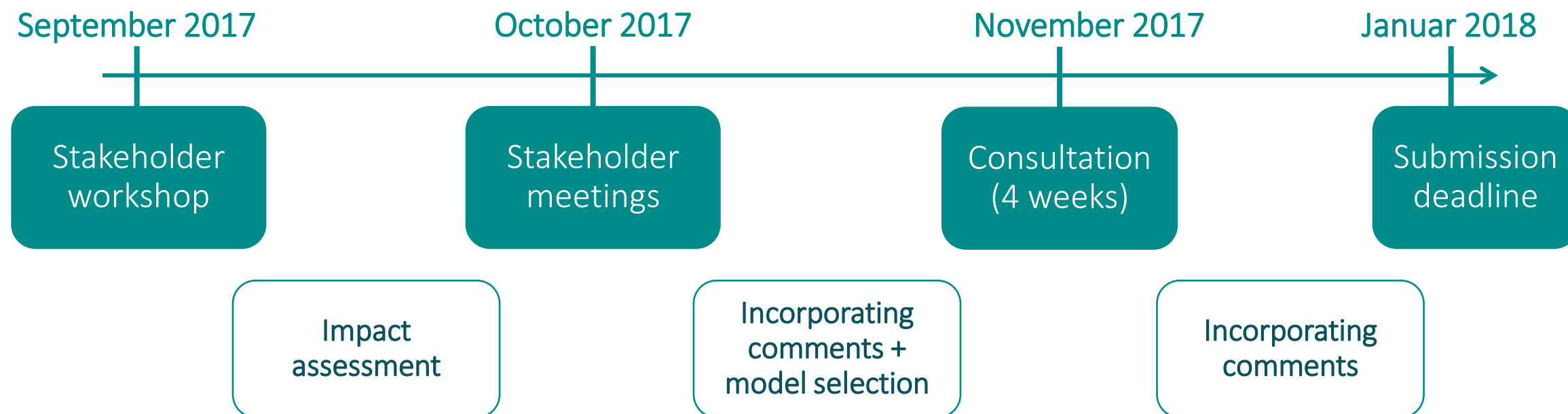
NEXT STEPS

Following the deadline of Joint Declaration



NEXT STEPS

Preferred time-plan

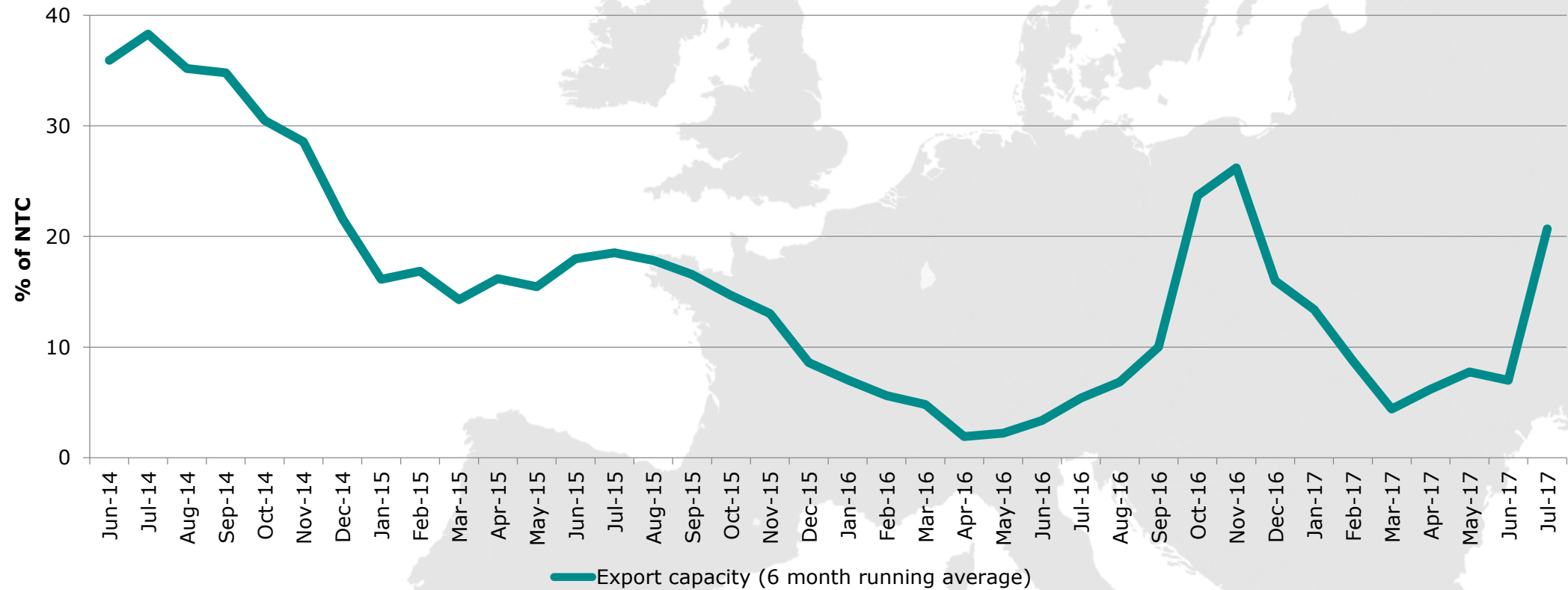




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EXPORT CAPACITY FROM DK1 TO DE



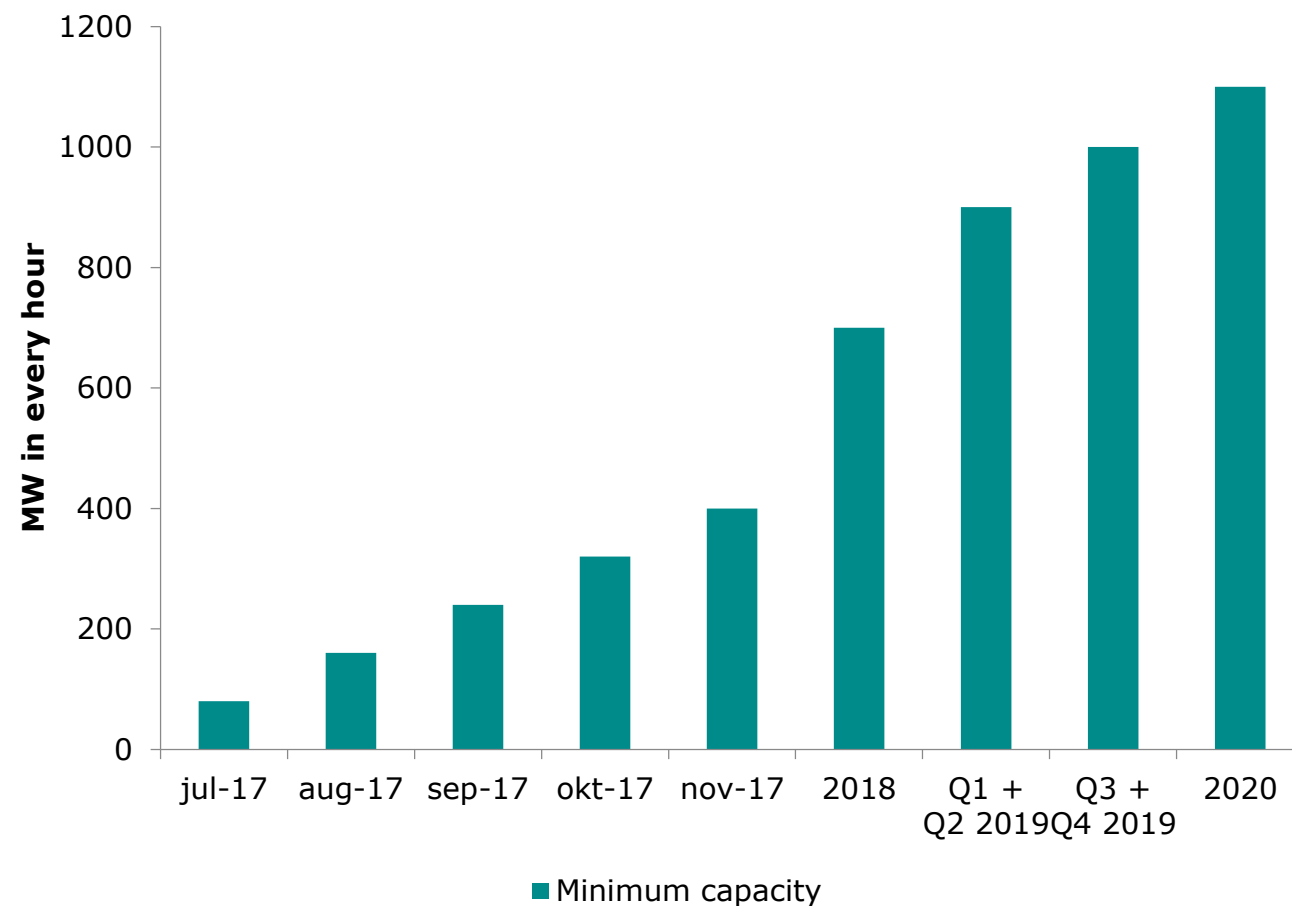
A man in a dark long-sleeved shirt is seated at a desk in a control room, looking at multiple computer monitors. The room is dimly lit, with the primary light source being the screens. In the background, other monitors and a world map are visible. The man's hands are on a mouse and keyboard. A white mug is on the desk. The text 'Joint Declaration IS A POLITICAL AGREEMENT' is overlaid on the left side of the image.

Joint Declaration IS A POLITICAL AGREEMENT

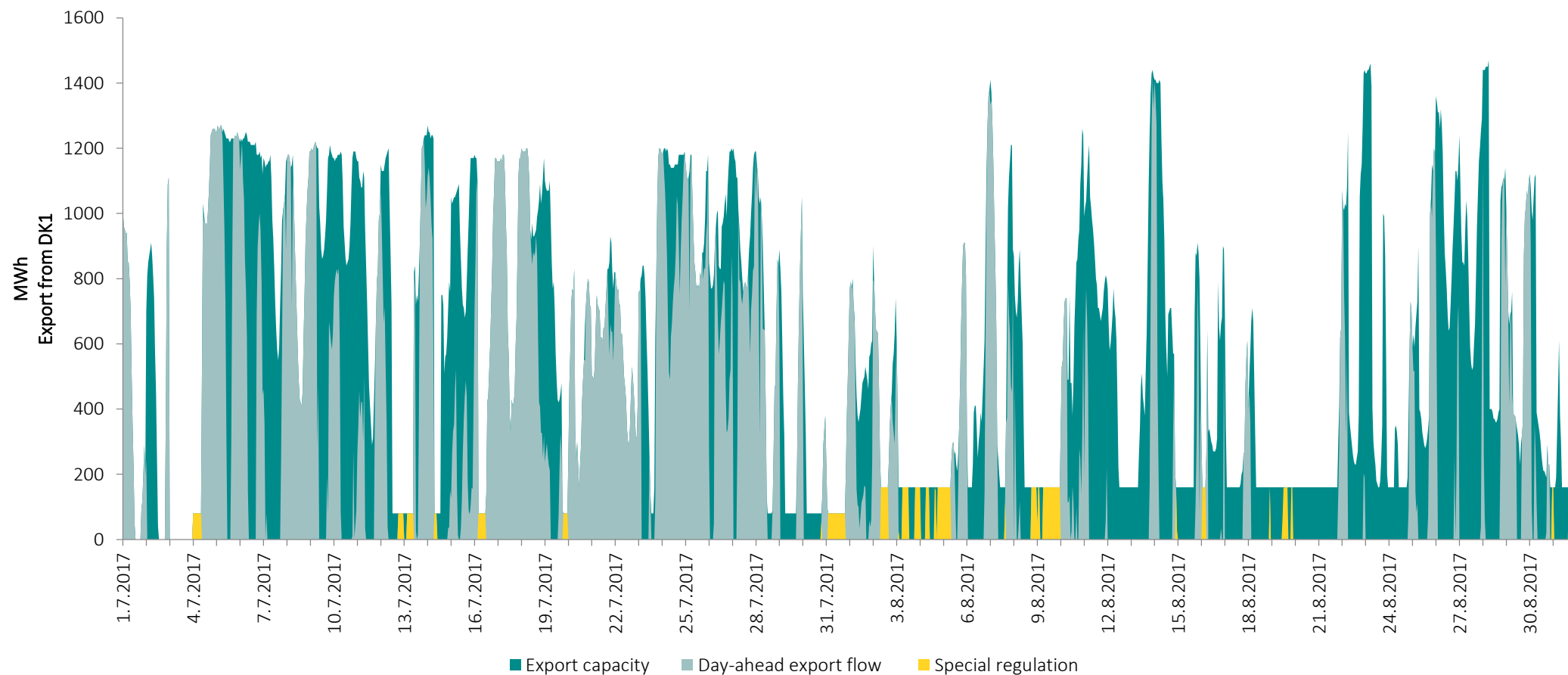
Which will secure more
capacity for the electricity
market

THE MINIMUM CAPACITY INCREASES OVER TIME

The capacity has to be secured in both import and export direction for every hour.



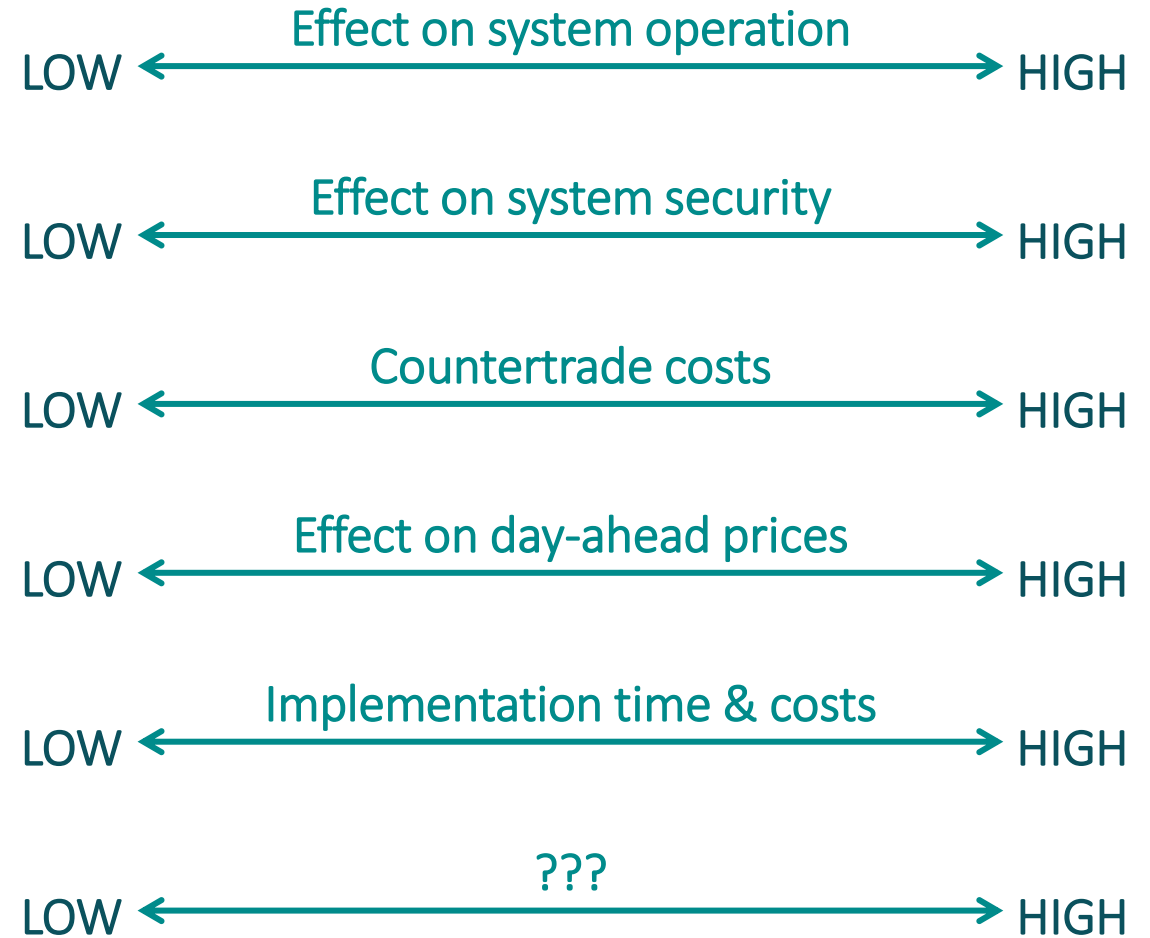
ACTIVATED DOWNWARD REGULATION IN DK1



CRITERIA FOR MODEL SELECTION

Each model should be discussed on the basis of the criterias on the right.

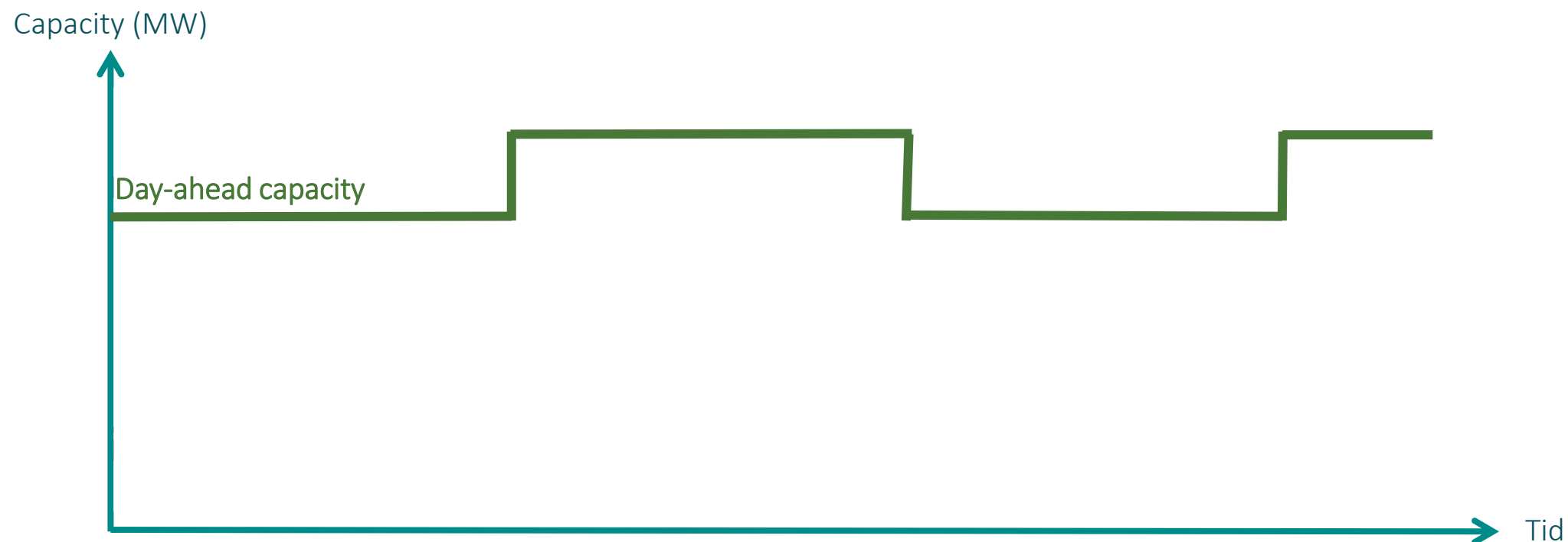
But all pros and cons should also be addressed.



THE CAPACITY FOR THE DAY-AHEAD MARKET

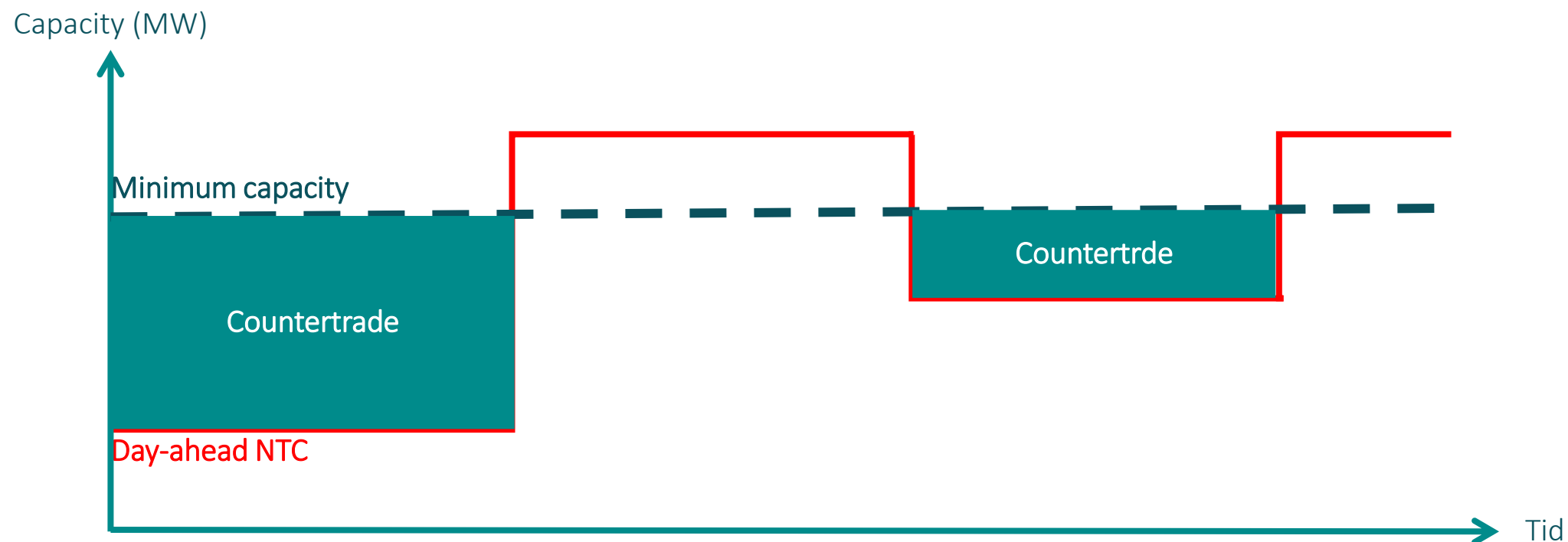
..... is based on the day-ahead NTC and the minimum capacities

Whichever is higher, determines the day-ahead capacity



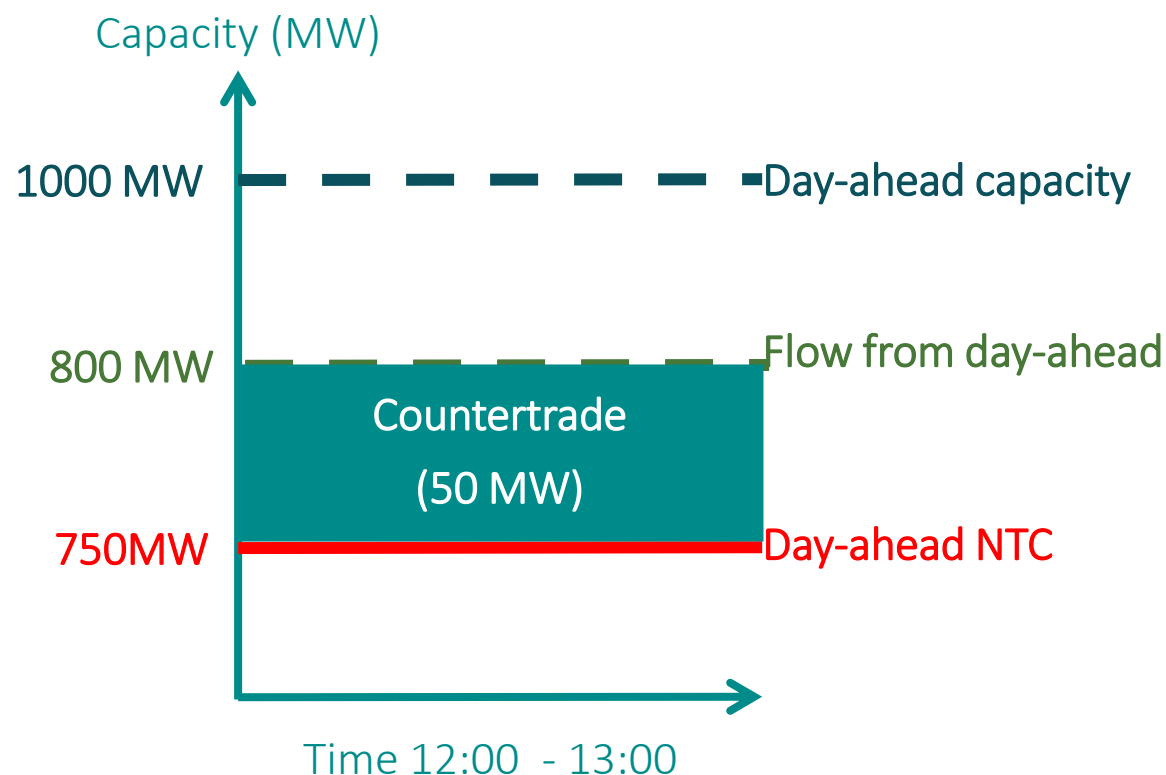
MW TO BE COUNTERTRADED

...is dependent on the minimum capacity, day-ahead NTC and flow from day-ahead



EXAMPLE

Southbound flow exceeds day-ahead NTC



Day-ahead capacity(southbound):

$$\text{Max}(750; 1000)$$

= 1000 MW

Flow from from day-ahead (southbound):

$$= 800 \text{ MW}$$

Countertrade

Flow > DA NTC

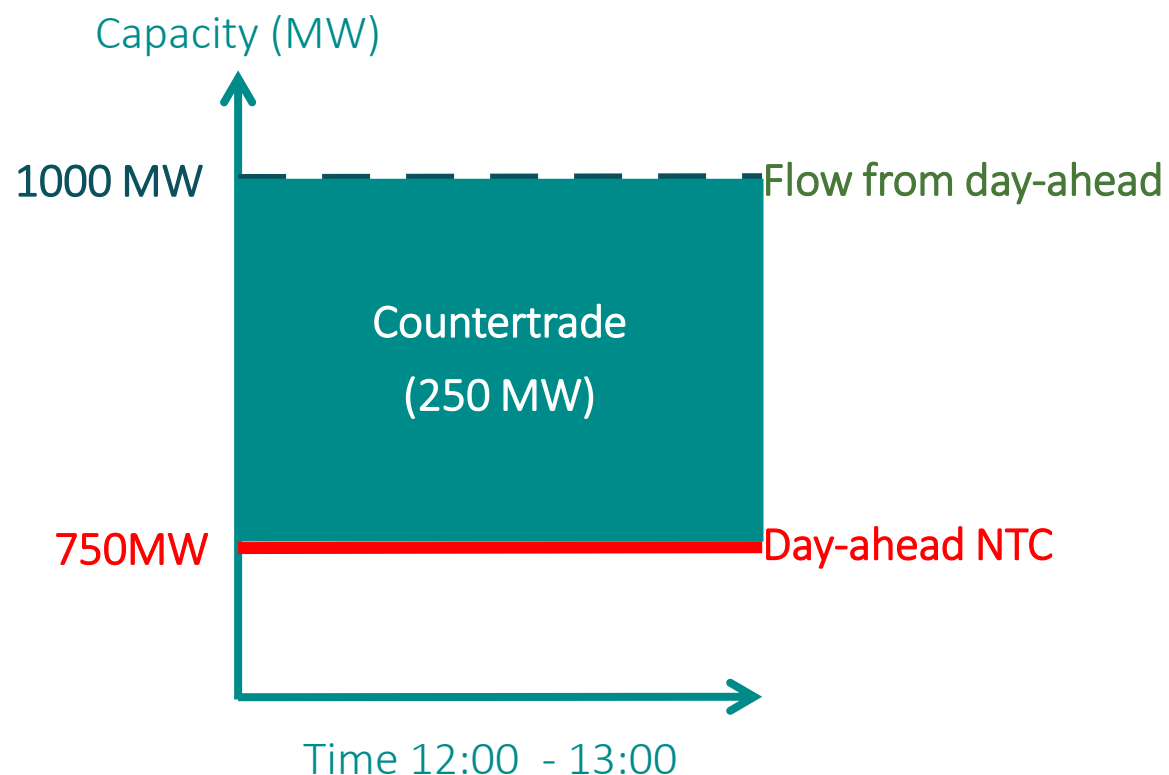
MW to countertrade =

$$\text{Max}((0+800)-750; 0) = \text{Max}(50; 0)$$

= 50MW

EXAMPLE

Southbound flow exceeds day-ahead NTC



Day-ahead capacity (southbound):

$$\text{Max}(750; 1000)$$

$$= 1000 \text{ MW}$$

Resultat from day-ahead (southbound):

$$= 1000 \text{ MW}$$

Countertrade

Flow > DA NTC

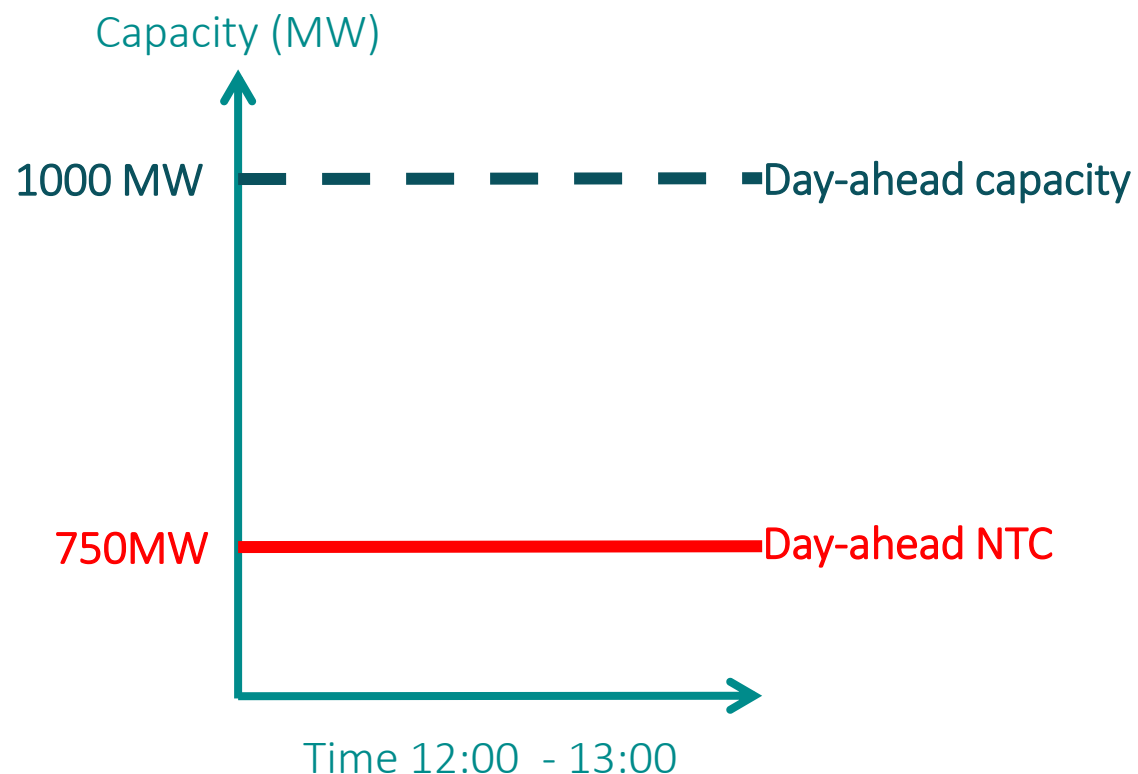
MW to countertrade:

$$\text{Max}((0+1000)-750; 0) = \text{Max}(250; 0)$$

$$= 250 \text{ MW}$$

EXAMPLE

No southbound flow from day-ahead



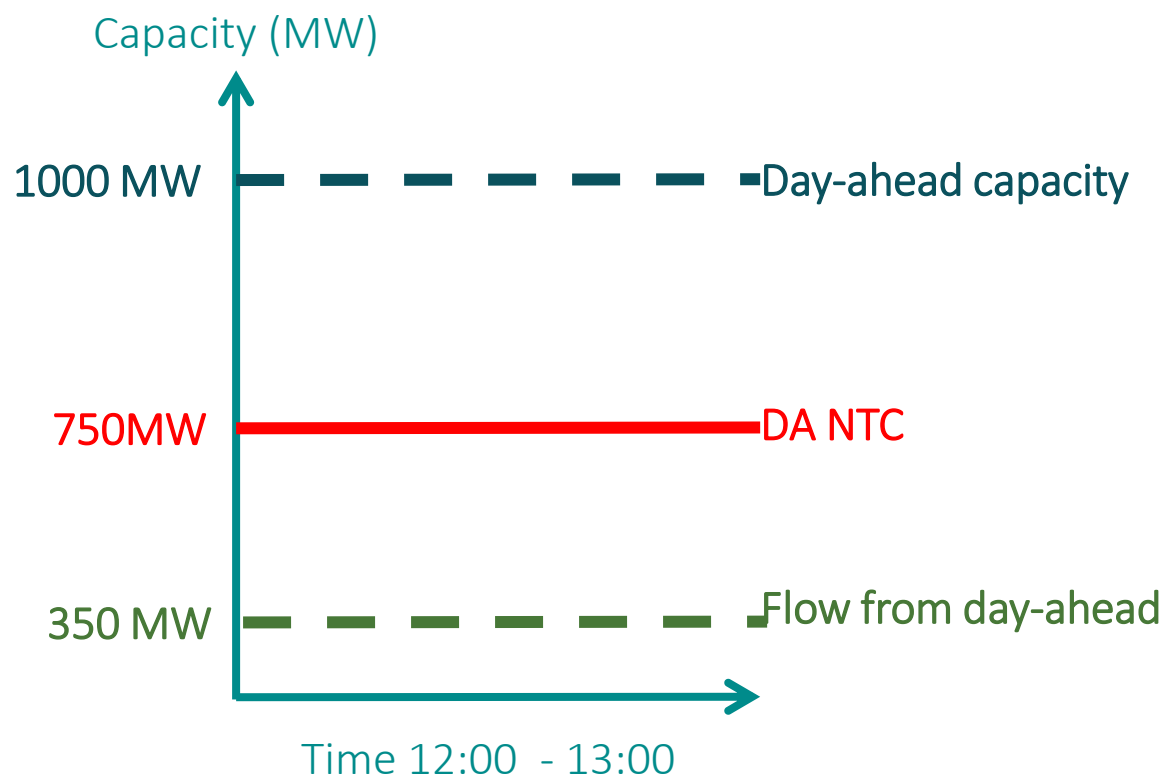
Day-ahead capacity (southbound):
 $\text{Max}(750; 1000)$
= 1000 MW

Result from day-ahead (southbound):
= 0

There is no need to conduct countertrade

EXAMPLE

Day-ahead flow less than the Day-ahead NTC



Day-ahead capacity (southbound):
 $\text{Max}(750; 1000)$
= **1000 MW**

Result from day-ahead (southbound):
= **350 MW**

**AS flow is lower than Day-ahead NTC,
there is no need to conduct
countertrade**

TIMEFRAME FOR THE COUNTERTRADE



ENERGINET ON THE INTRADAY MARKET

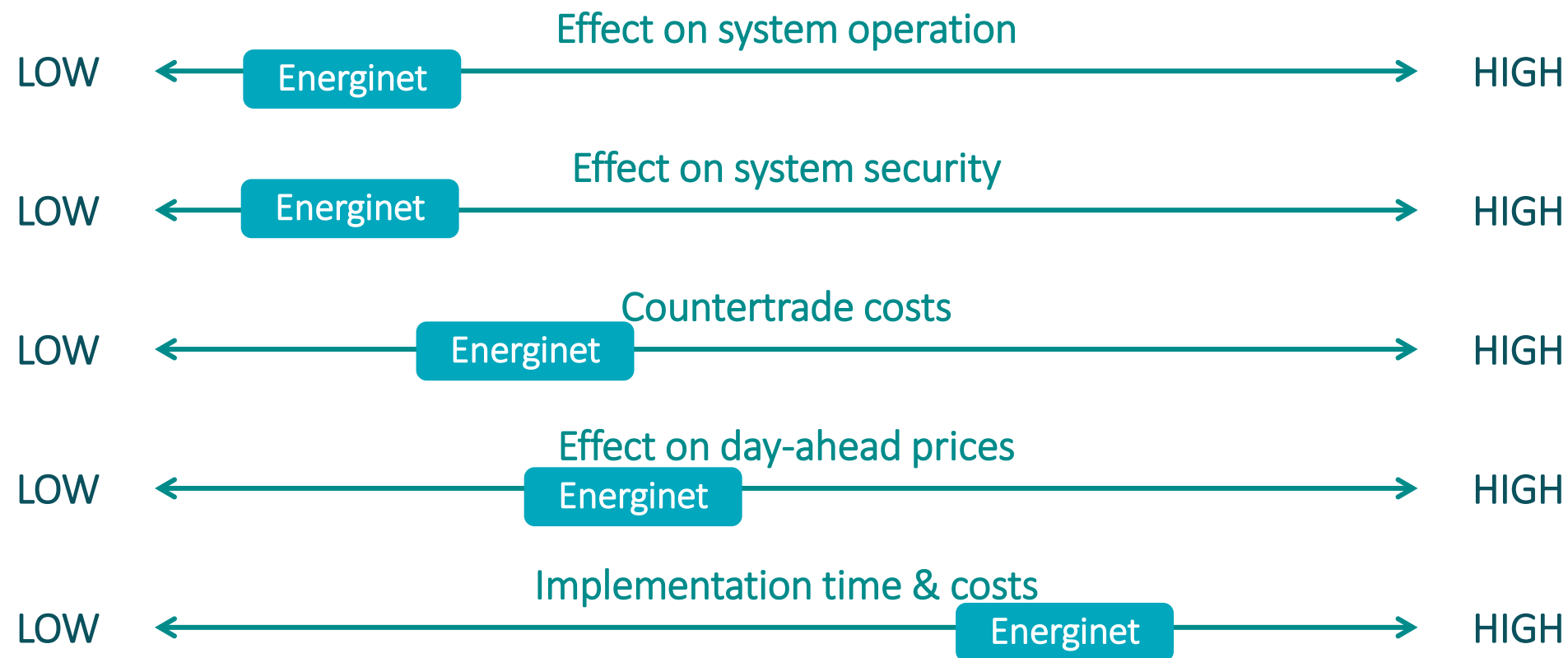
Energinet buys up- or downward regulation on the intraday market

Either on its own or through a service provider

Transparency needs to be ensured through market messages



EVALUATION CRITERIA



COUNTER CAPACITY ALLOCATION (COCA)

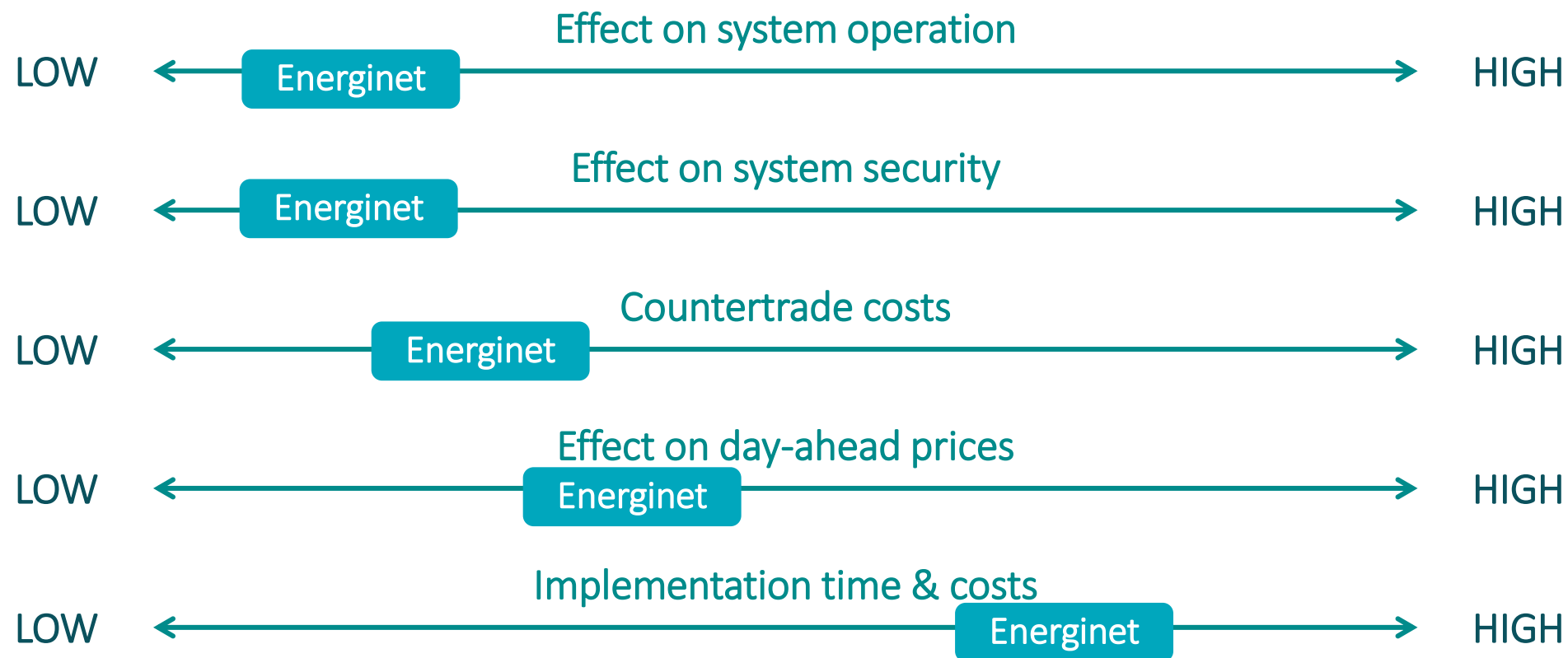
Energinet and Tennet auction explicit capacity through a Physical-Transmission-Obligations (PTO).

PTOs are not subject to Use-It-Or-Sell-It, cannot be used as balance products, and are nominated automatically

Market participants with at PTO, can trade bilateral or use the intraday market



EVALUATION CRITERIA



INTRADAY AUCTION

Euphemia (day-ahead) algorithm is used to launch an intraday auction with negative capacities on DK1-DE border

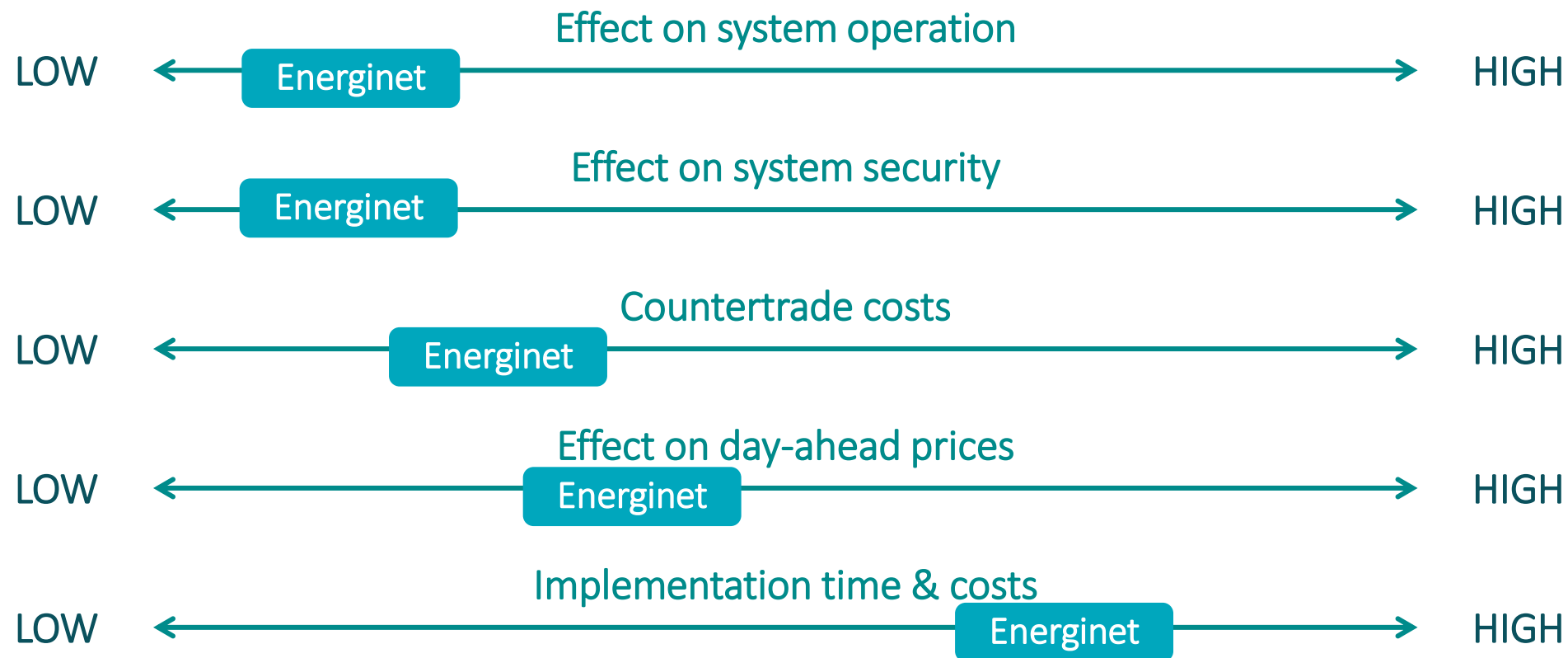
The auction will then move production from a low price area to a high price area creating negative congestion rents

All market participants in participating bidding zones can provide up- and downward regulation in the auction

Needs to be facilitated by NEMO(s), ensuring equal access of all bids



EVALUATION CRITERIA



SPECIAL REGULATION

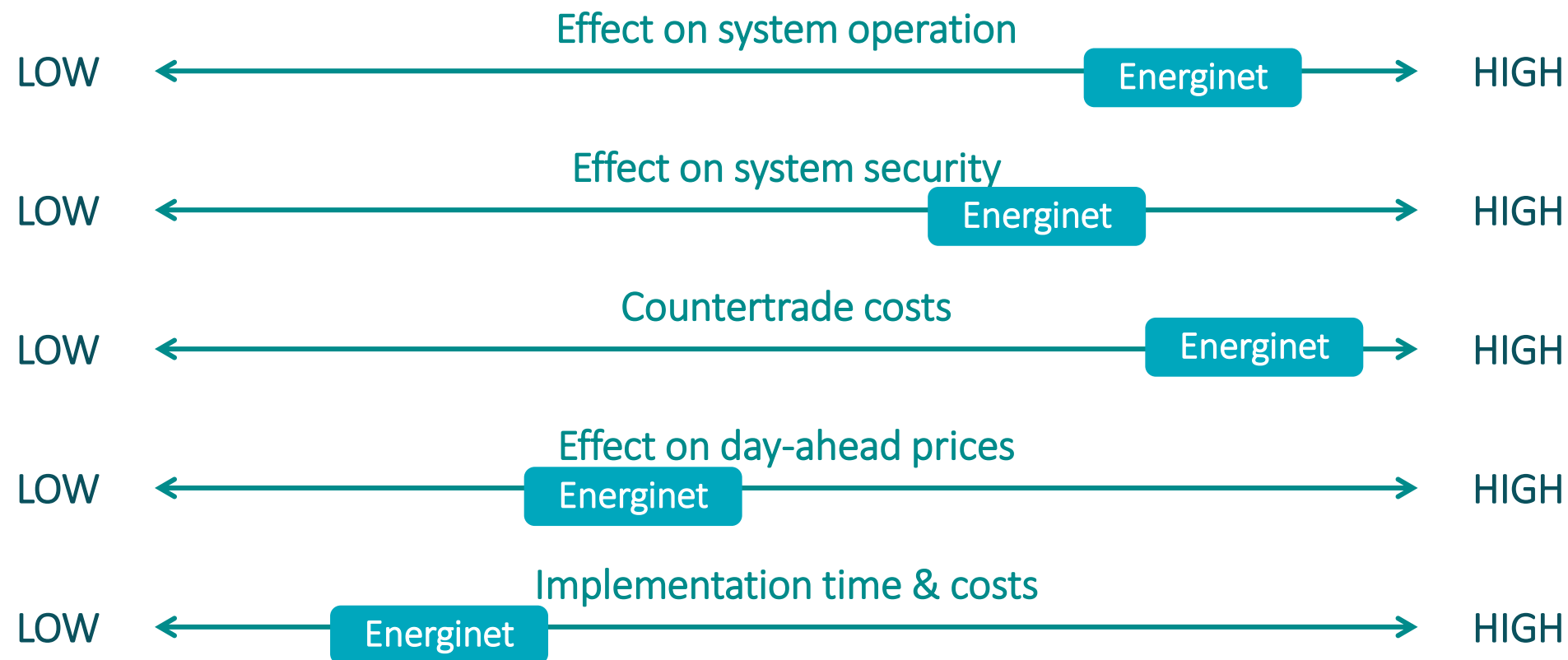
Energinet selects bids from Nordic regulating power market according to pay-as-bid.

Only bids in DK1 and DK2 can participate.

Energinet can purchase the capacity in the morning.



EVALUATION CRITERIA



QUESTIONS





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TEAMS

Team 1:

Starts at "Energinet on the intraday market"

Søren Klinge

Jens Mortensen

Karsten Kingo Rasmussen

Lotte Holmberg Rasmussen

Carsten Køpke

Rebecca Nilsson

Team 2:

Starts at "CoCA"

Gerard Doorman

Randi Skytte

Henrik Møller Jørgensen

Simon Henckel Harloff

Jan Beck-Nielsen

Jonas Holmgren

Henning Parbo

Team 3:

Starts at "Intraday Implicit Auction"

Anders Damm

Thomas Houliind

Torben Marius Gregersen

Henrik Hansen

Håkon Egeland

Niels Dupont

Team 4:

Starts at "Special Regulation"

Norbert Kint

Andrea Stengel

Anders Bjørn

Jon Brücher

Carsten Chacha

Mikkel Hesselbæk

Henning Haugaard

MODEL STATIONS AND TEAM MOVEMENTS

	Energinet on the Intraday Market	CoCA	Intraday Implicit Auction	Special Regulation
Team 1	1	2	3	4
Team 2	4	1	2	3
Team 3	3	4	1	2
Team 4	2	3	4	1



AGENDA

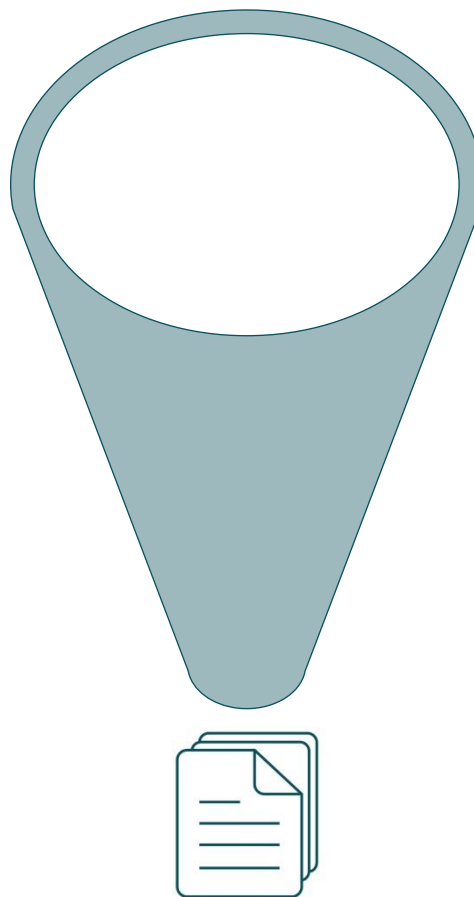
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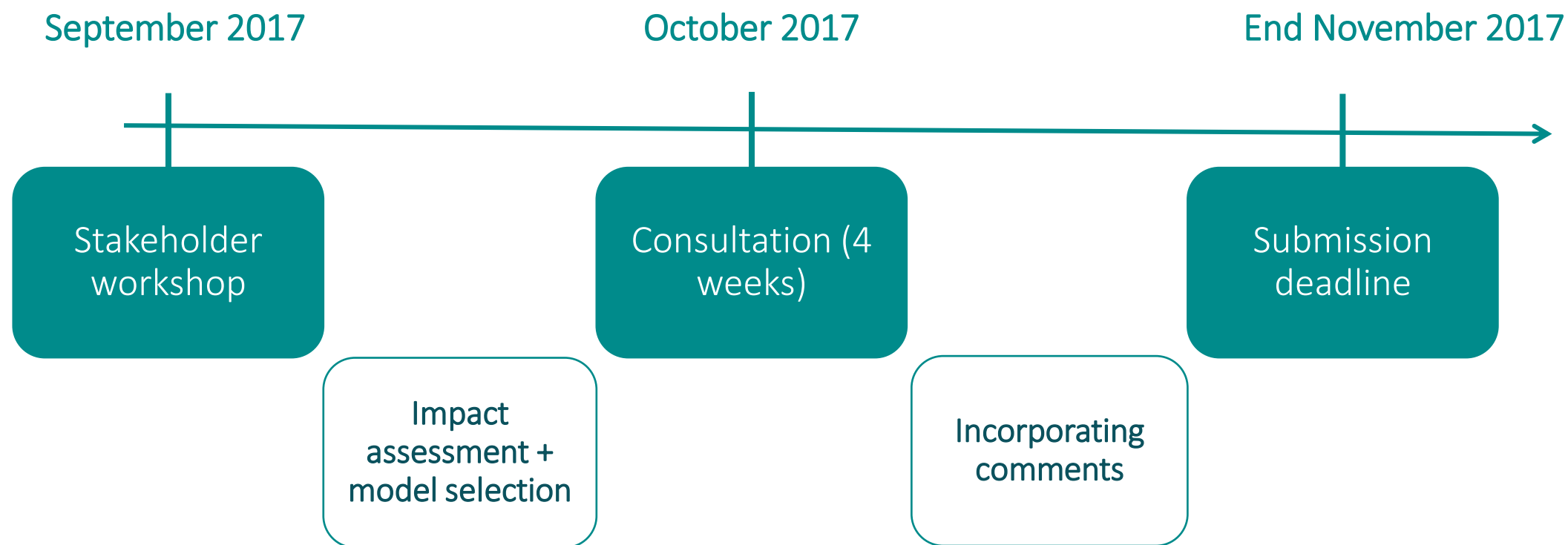
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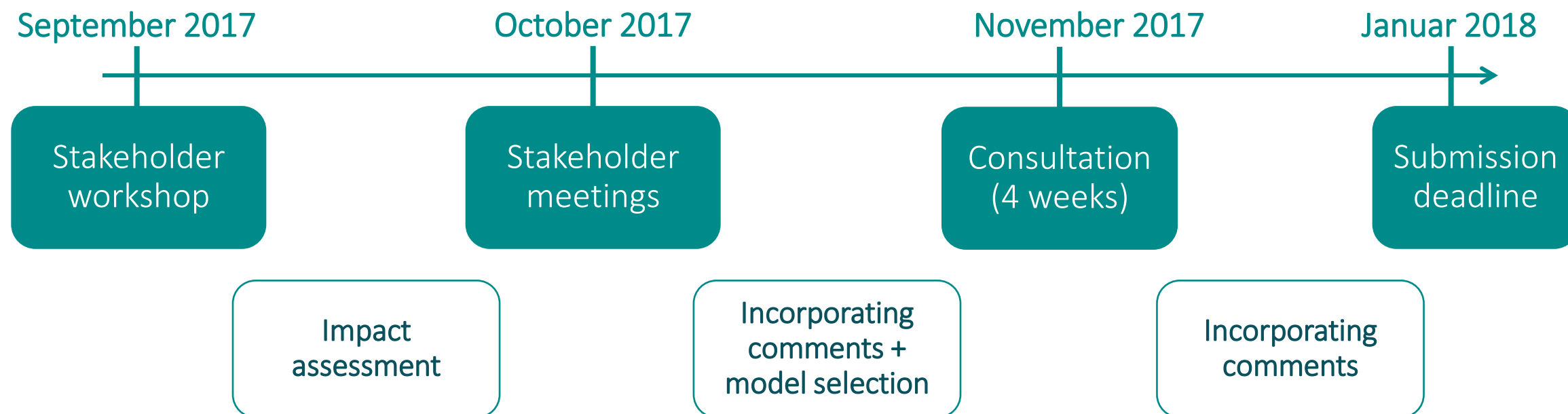
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Following the deadline of Joint Declaration



NEXT STEPS

Preferred time-plan



THANK YOU

If you have any further comments or questions, please feel free to contact us:

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