



Danish Offshore Wind: Tender Framework Update

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Energistyrelsen

AGENDA

- Introduction DEA
- 2024 Initial 6 GW Tender Framework
- Market dialogue and revision
- New 3 GW tender framework and rationale



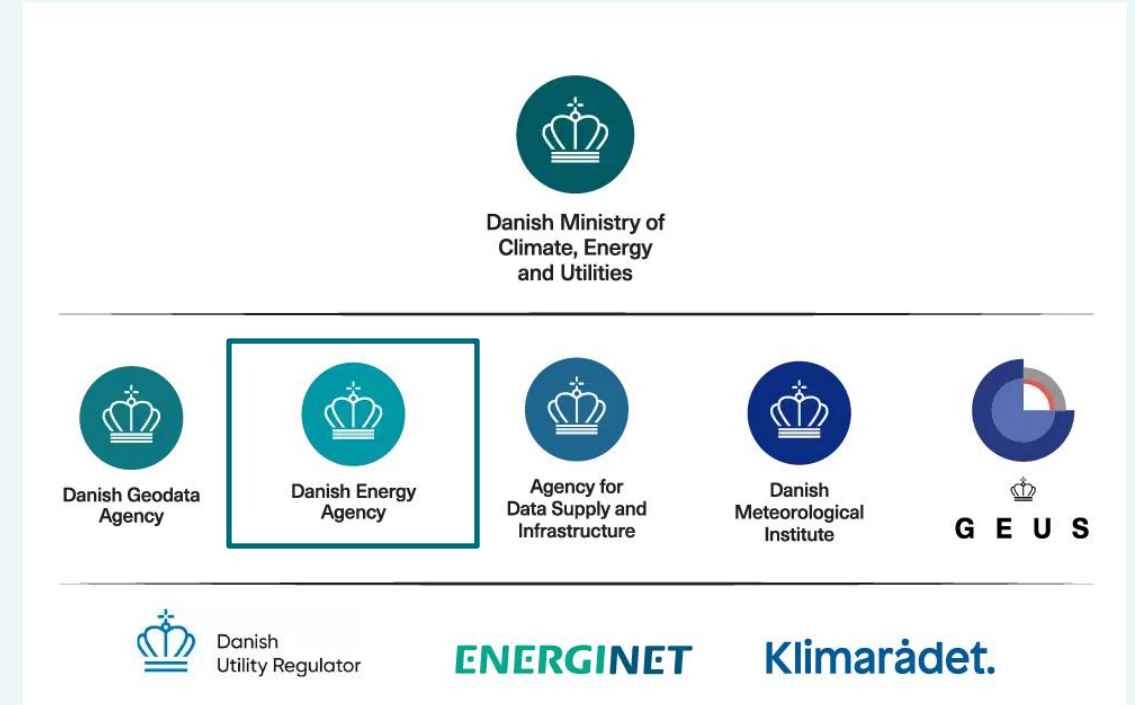
Danish Energy Agency, DEA

Our responsibilities

- Carry out tasks related to energy production, supply and efficient consumption
- Ensure a high security of supply
- Enable efforts to reduce carbon emissions
- Ensure affordable energy prices
- Support the economic optimisation of utilities

Our Services

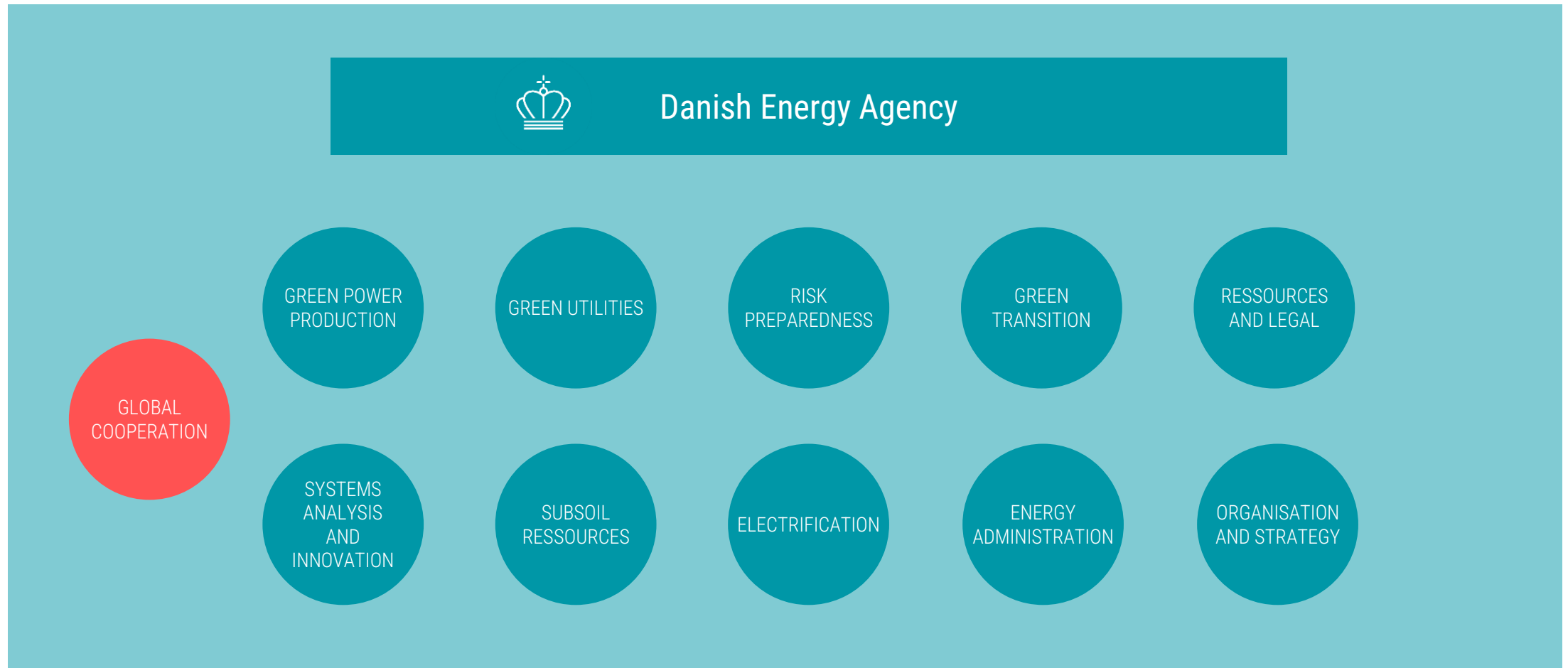
- Providing subsidies, publications, scenarios, statistics, energy maps and analyses – and, *inter alia*, managing offshore wind tenders and permitting processes.



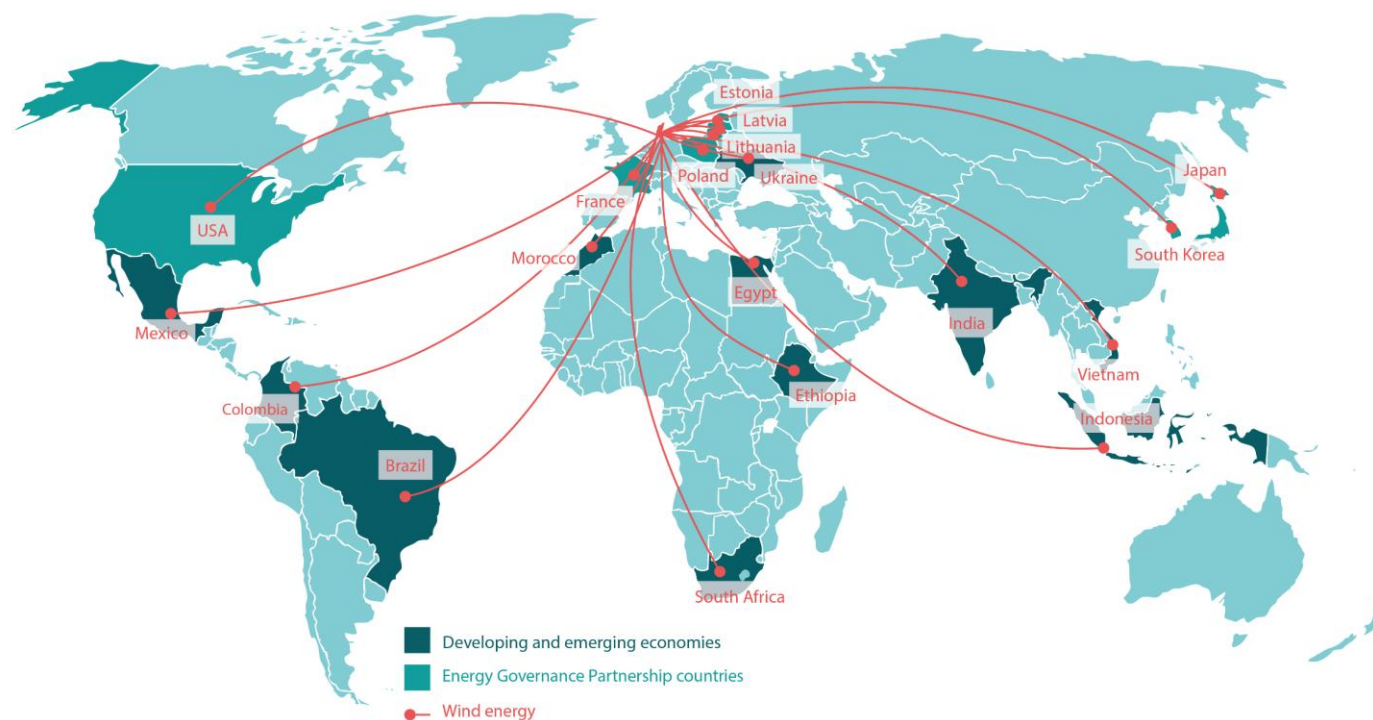
DEA is implementing and regulating energy legislation including the Danish Climate Act (2020)

Part of the Danish Energy Agency (DEA)

A government agency under the Ministry of Climate, Energy and Utilities



Denmark's 24 partner countries on energy

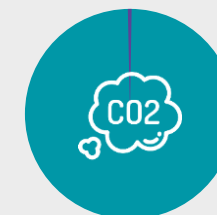


From the Danish Climate Act
"Climate challenges are a global issue. Therefore, Denmark must be a pioneer in international climate action that can inspire and influence the rest of the world. Denmark also has both a historical and moral responsibility to lead the way."

In Denmark...



... we represent **0,07** % of the world's population

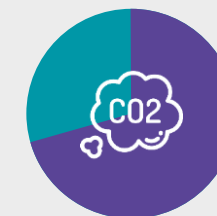


... we emit less than **0.1%** of global CO₂ emissions

Our partners...



... represent **~61%** of the world's population



... emit **~70%** of the global CO₂ emissions

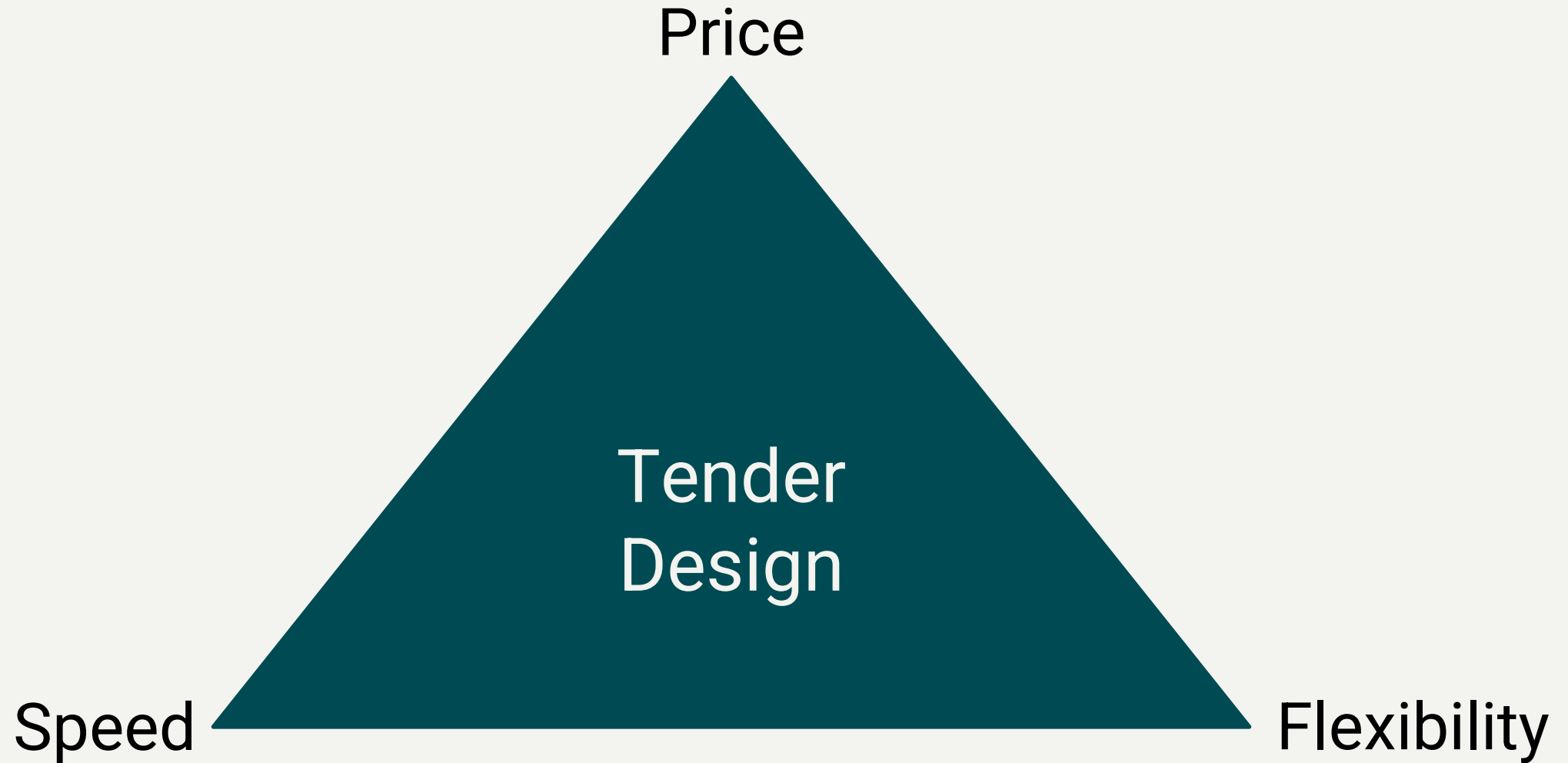


Our (recent) offshore wind journey

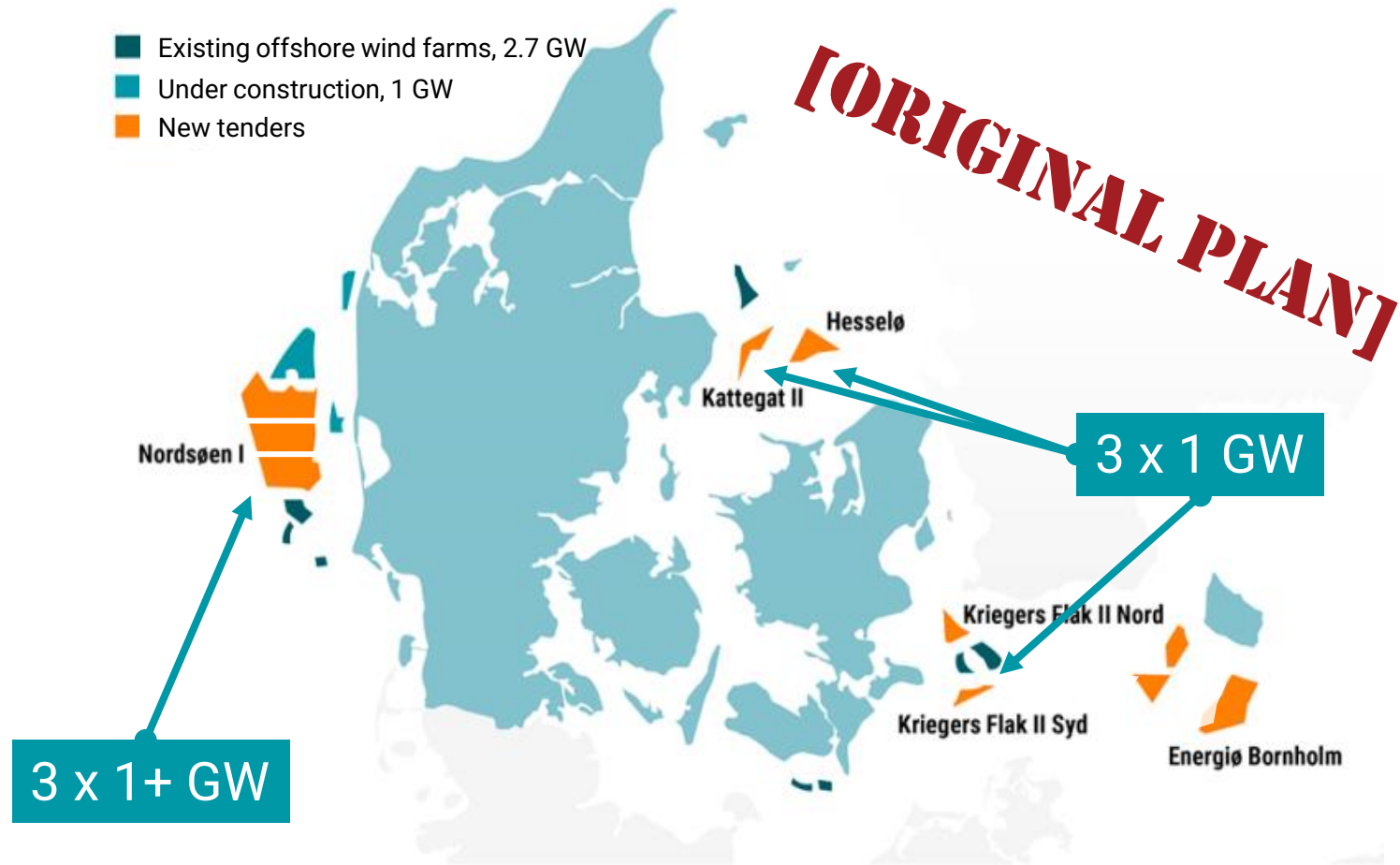


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Our core principle has been to strike a balance



Original plan: Tender 6 GW in 2024-2025

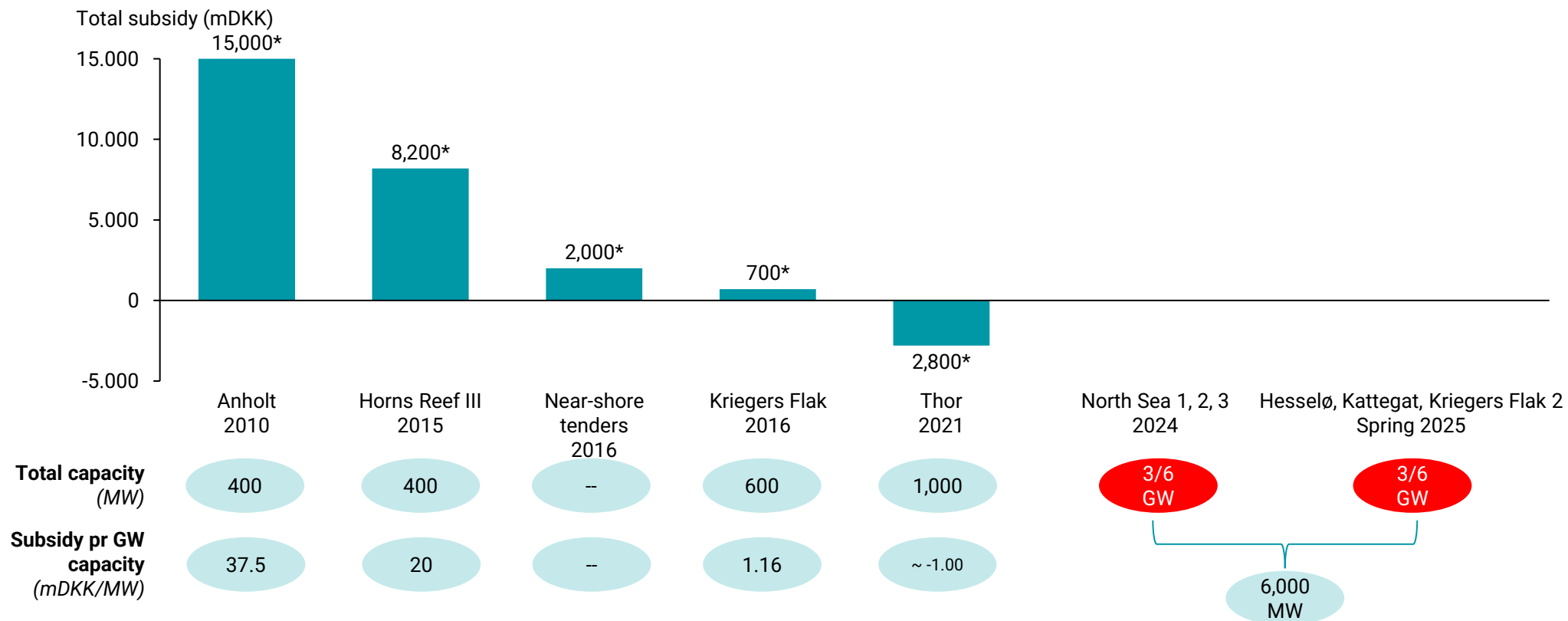


Key characteristics:

- All projects were planned to have been fully operational no later than year-end 2030 and 2031 respectively
- There will be no subsidies rather concession payments to the state
- Grid connection will be guaranteed for 6 GW.
- Developers are free to overplant (uncapped on most sites)
- Quickly escalating penalty regime
- The state will require 20% ownership of each project
- Minimum sustainability requirements

Subsidies through 2024 – quick overview

Danish bottom-fixed offshore wind subsidies by project



* 2022 nominal prices, 1 DKK = 0,13 EUR

† Base case estimated average subsidy level per project, 2025 nominal prices



From 6 GW zero bid tender to new 3 GW tender



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Market dialogue + BCG Report

Main conclusions from subsequent market dialogue

Project profitability challenged



- Costs have increased (supply chain bottlenecks, higher CAPEX, higher interest rates)
- Increased uncertainty regarding development of electricity consumption and absence of possibilities for hedging revenue risks with e.g. PPAs
- Several players pointed to the need for CfDs

Timeline & flexibility



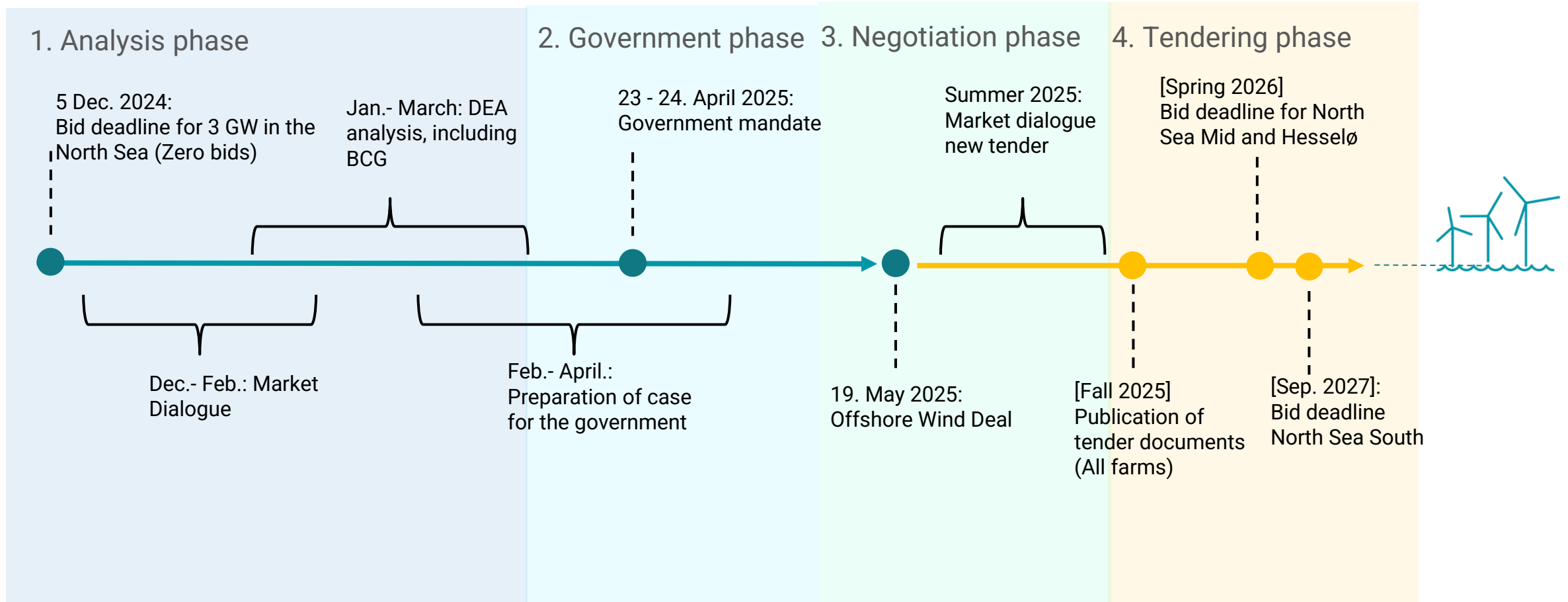
- Need for increased level of flexibility regarding COD for offshore wind to accommodate supply chain bottlenecks
- COD in 2032 at the earliest, several point at 2033 or 2034
- Need for transparency and predictability regarding tenders incl. desire for continuous tendering (not all at once + there was overlap with 2030 targets elsewhere)

Other conditions



- Need to remove certain risks for developers (co-ownership, expenditure on defence-related installations, etc.)

Timeline: from no bid to new round



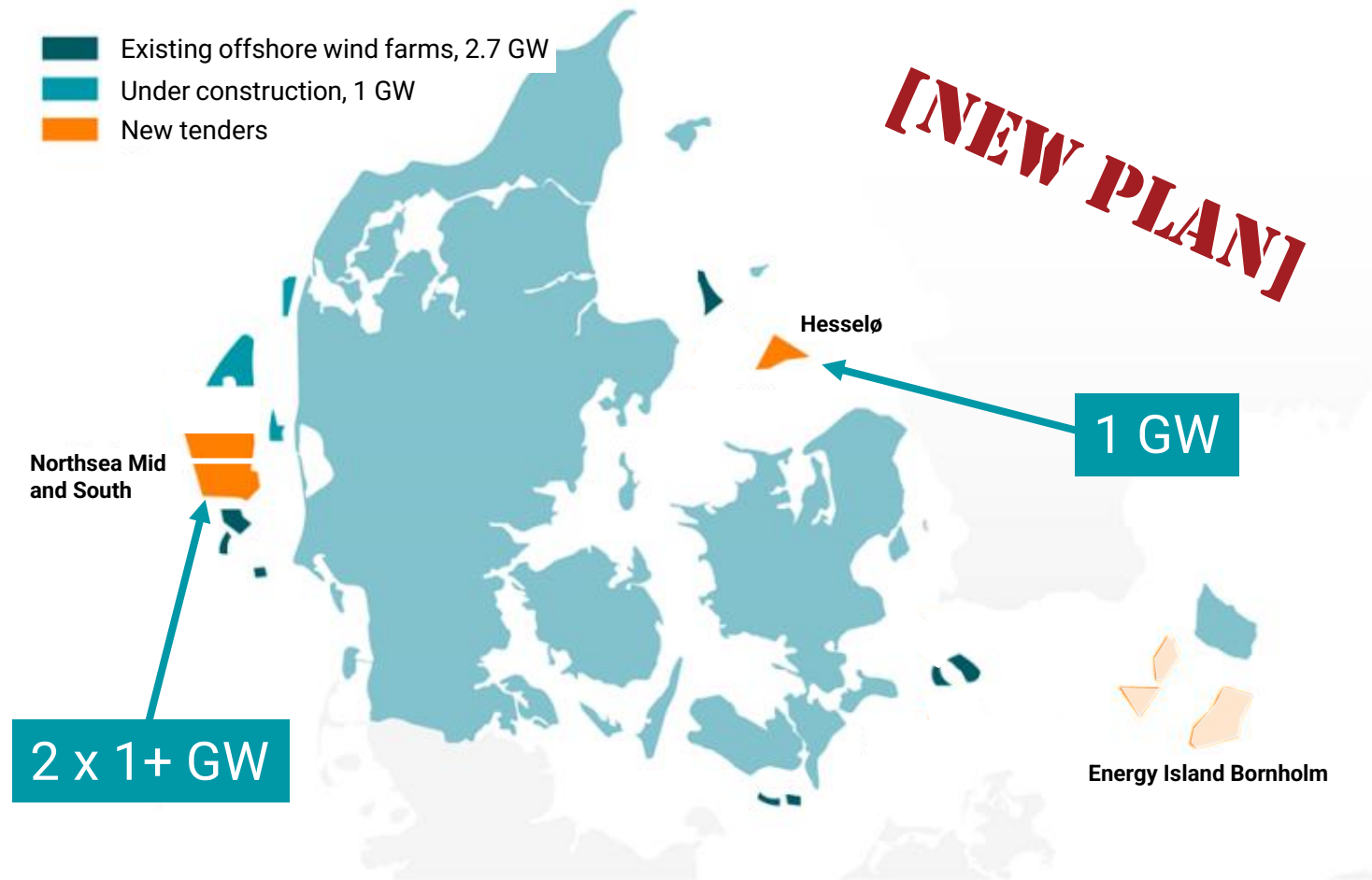


Tender Frameworks for new 3GW Offshore Wind Projects



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New plan: 3 GW tender

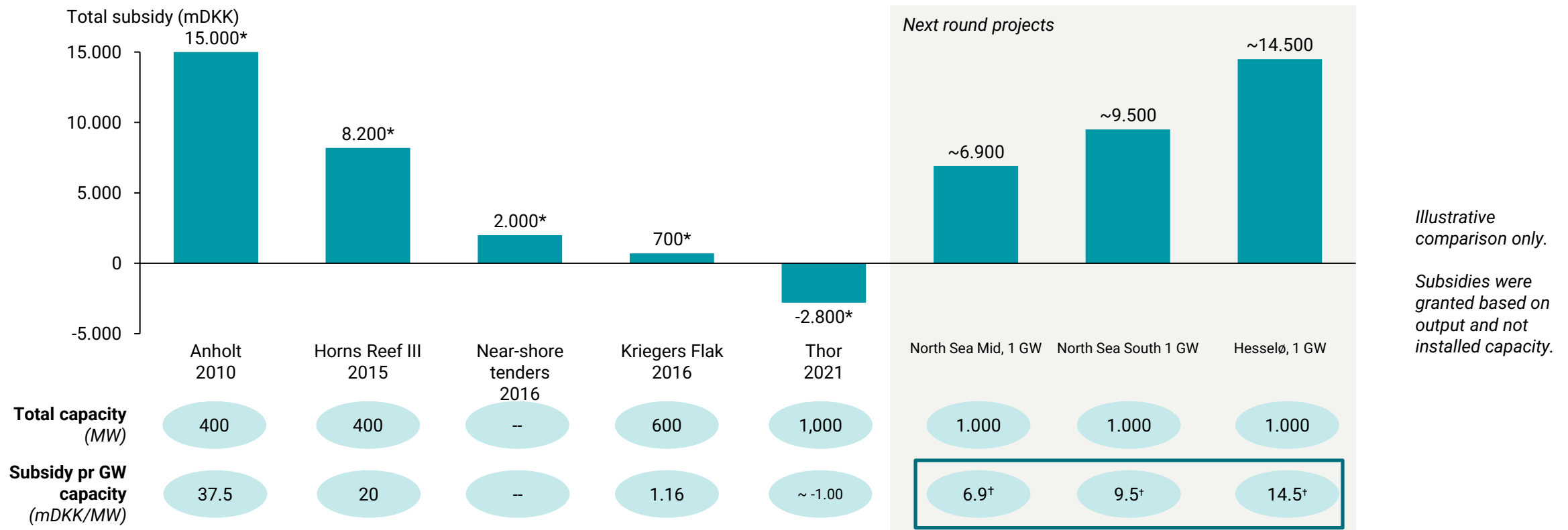


Headline changes:

- 1) Adjusted subsidy model
 - re-introduction of a CfD
- 2) Added Flexibility
 - Flatter delay penalty regime
- 3) Further efforts to reduce risk
 - State takes on price uncertainties

1. From no subsidy to reintroduction of a CfD

Danish bottom-fixed offshore wind subsidies by project

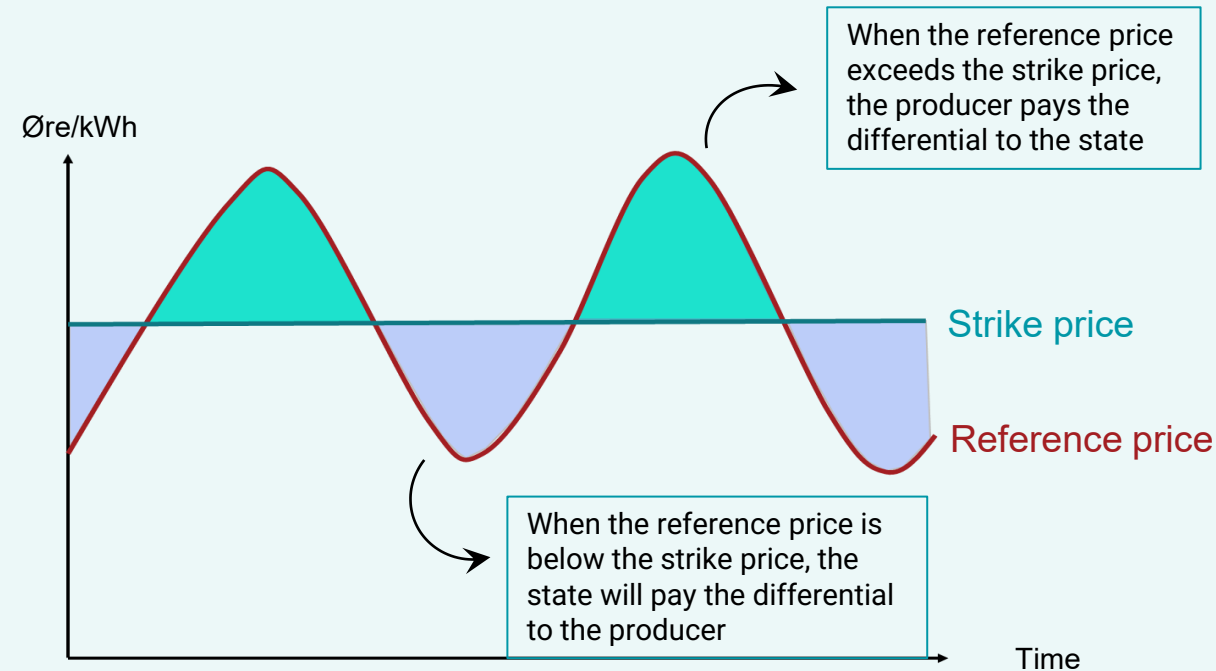


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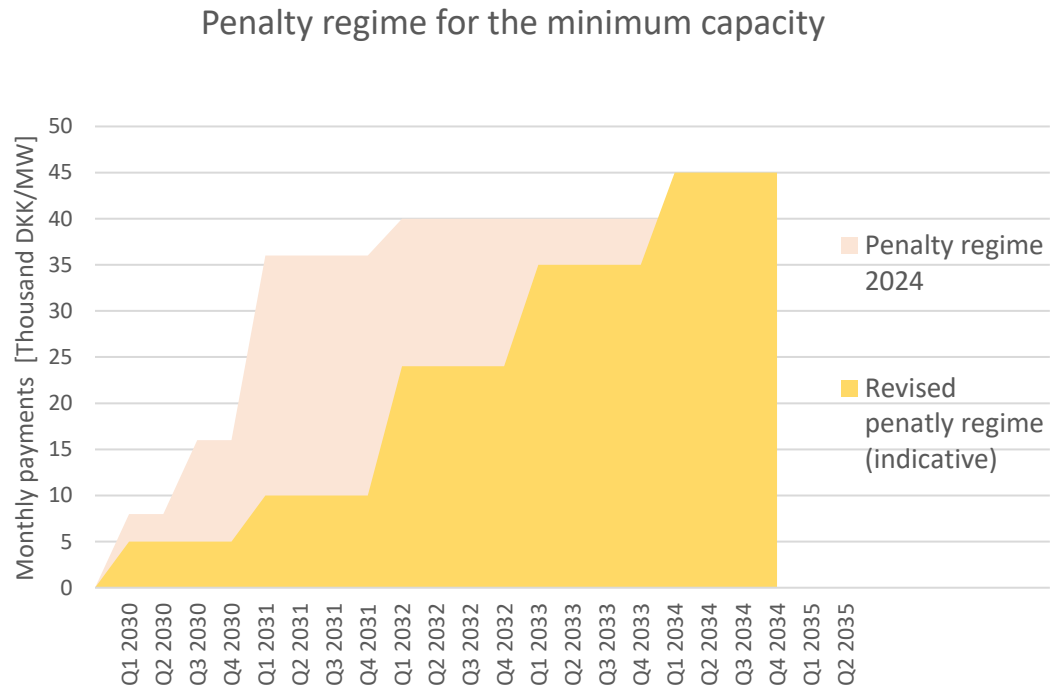
† Base case estimated average subsidy level per project, 2025 nominal prices

1. State Aid Support Scheme: Capability-based CfD

- A two-sided CfD can support the business case for offshore wind by providing revenue certainty for the producer.
- The European Commission has stated that if a CfD is used, it should be designed to minimize distortionary effects.
- The government proposes to tender offshore wind with a so-called **capability-based CfD**, which settles based on potential production and not actual production
- To a large extent, the capability-based CfD corresponds to a classic CfD. The capability-based version is a technical refinement of a classic CfD aimed at limiting distortionary effects.



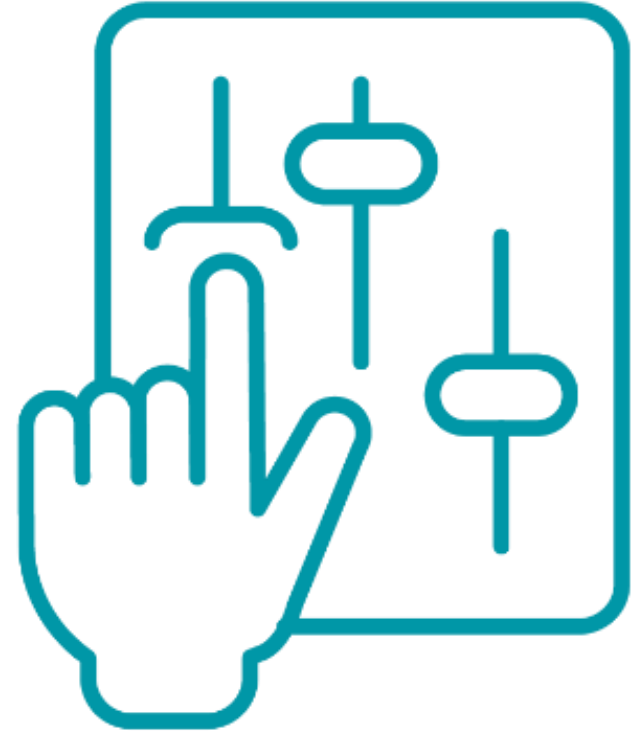
2. Added flexibility – Adjusted *penalty regime* (indicative)



- A unified market requested a more relaxed regime regarding penalties, including progressivity over time.
- Penalty regime increases progressively over time – both minimum capacity and overplanting capacity - so that the concessionaire is hit less hard by the penalties in the beginning of a delay.
- Penalty regime corresponds to a maximum delay of 4 years after deadline
- When maximum penalties are reached, the contract shall be terminated with a requirement for the concessionaire to pay a termination fee.

3. Further derisking measures

- No state co-ownership
 - In the previous unsuccessful tender round state would have had a 20% ownership stake
- State pays defence mitigation measures
 - Ministry of defence will cover the necessary costs associated with defence-related installations (estimated up to EUR 140 million) to further reduce price uncertainty for developers
- State pays preliminary site investigation
 - EUR 100 million set aside for covering the costs



High level changes to tender conditions

Indicative only. Not exhaustive

	Previously planned tender	NEW tender
Capacity	6 GW	3 GW
Ownership	State-ownership 20%	None
Risk-taking	Price risk was comparatively more on developer side	Price risk more evenly distributed
Subsidy scheme	None (concession payments to the state)	Capability-based CfD
Remuneration	None	27.6 bDKK (3.70 bEUR) total estimated but with a cap of 55.2 bDKK (7.4 bEUR)
Award criteria	Highest annual concession payment to the State	Lowest strike price <i>(least amount of subsidies required)</i>
Commercial Operation Date	2030 and 2031	2032 and 2033
Sustainability	Requirements on recyclability, environmental monitoring etc.	Recyclability requirements, 3 rd party verified life cycle assessments, active monitoring of environmental impact
Overplanting	No limit (limit of 200MW Overplanting for Hesselø)	No limit (limit of 200MW Overplanting for Hesselø)
Penalty regime	Steeper penalty regime	Flatter penalty regime
Defense mitigation measures costs	Developer pays	The State pays
Preliminary investigation requirements costs	Developer pays	The State pays



Thank you



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