



# How New Markets Can Develop Offshore Wind

(Using France as a Case Study)

Mocca Gong

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- Houston
- California

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- Edinburgh
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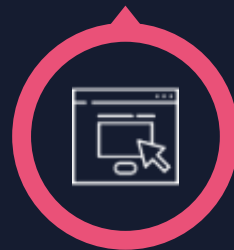
EMISSIONS

HYDROGEN

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# Presentation Overview

Case study of how Xodus assisted a global installation contractor with the exploration of market entry opportunities in the French offshore wind market.



Floating offshore wind forecast



Market readiness and market size



Project development pathway comparison: UK & France



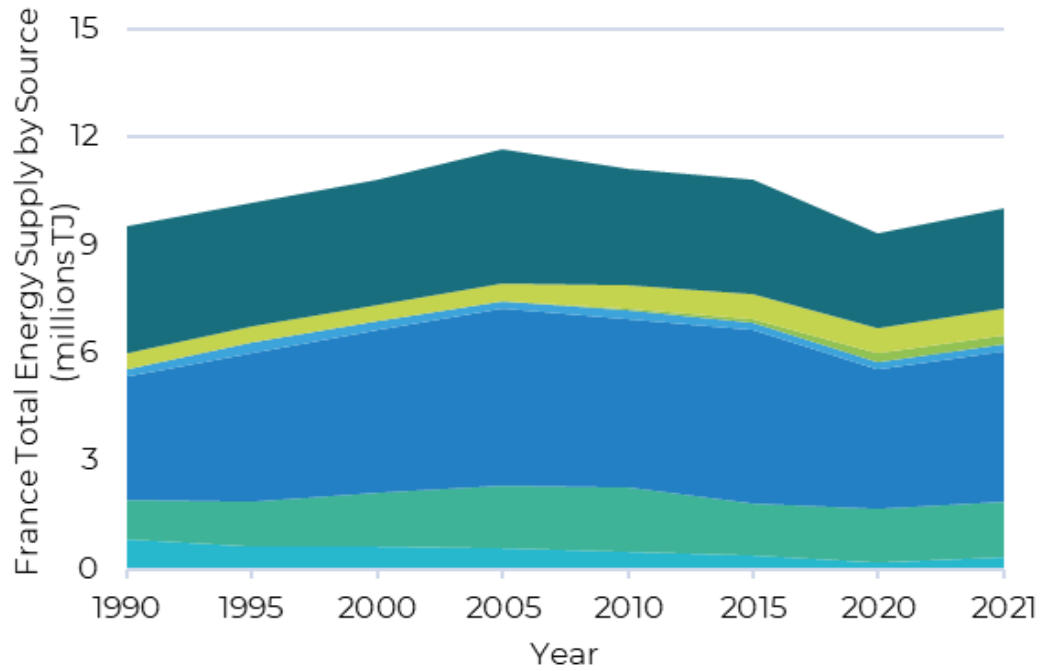
How new markets can develop offshore wind



# What is France's Energy Supply?



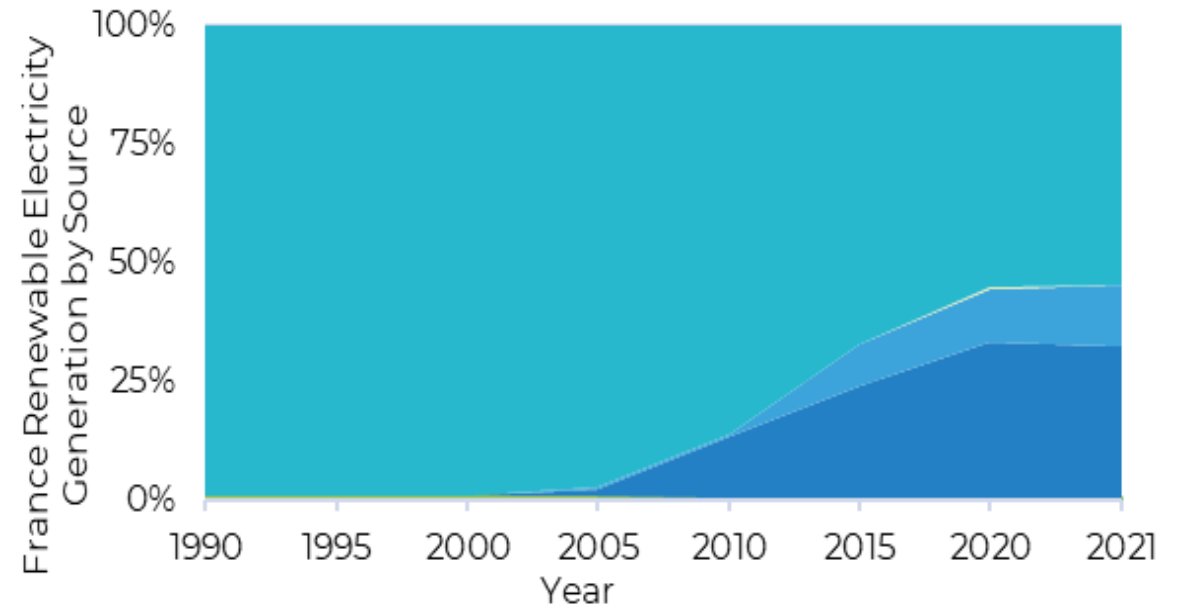
### France Total Energy Supply by Source



- Coal
- Hydro
- Oil
- Natural gas
- Wind, solar, etc.
- Nuclear
- Biofuels and waste

Source: IEA

### France Renewable Electricity Generation by Source



- Tide, wave, ocean
- Wind
- Solar PV
- Geothermal
- Hydro

Source: IEA



# How Big is France's Target?

# France's Energy Transition Target



**Carbon Neutral**  
from 2050



Reach at least  
**33% renewables**  
**generation** by  
2030  
(currently <20%)



Cap **nuclear**  
**capacity** at 50%  
to leave space for  
renewables  
(currently 50-75%)



**40GW offshore**  
**wind** installed by  
2050

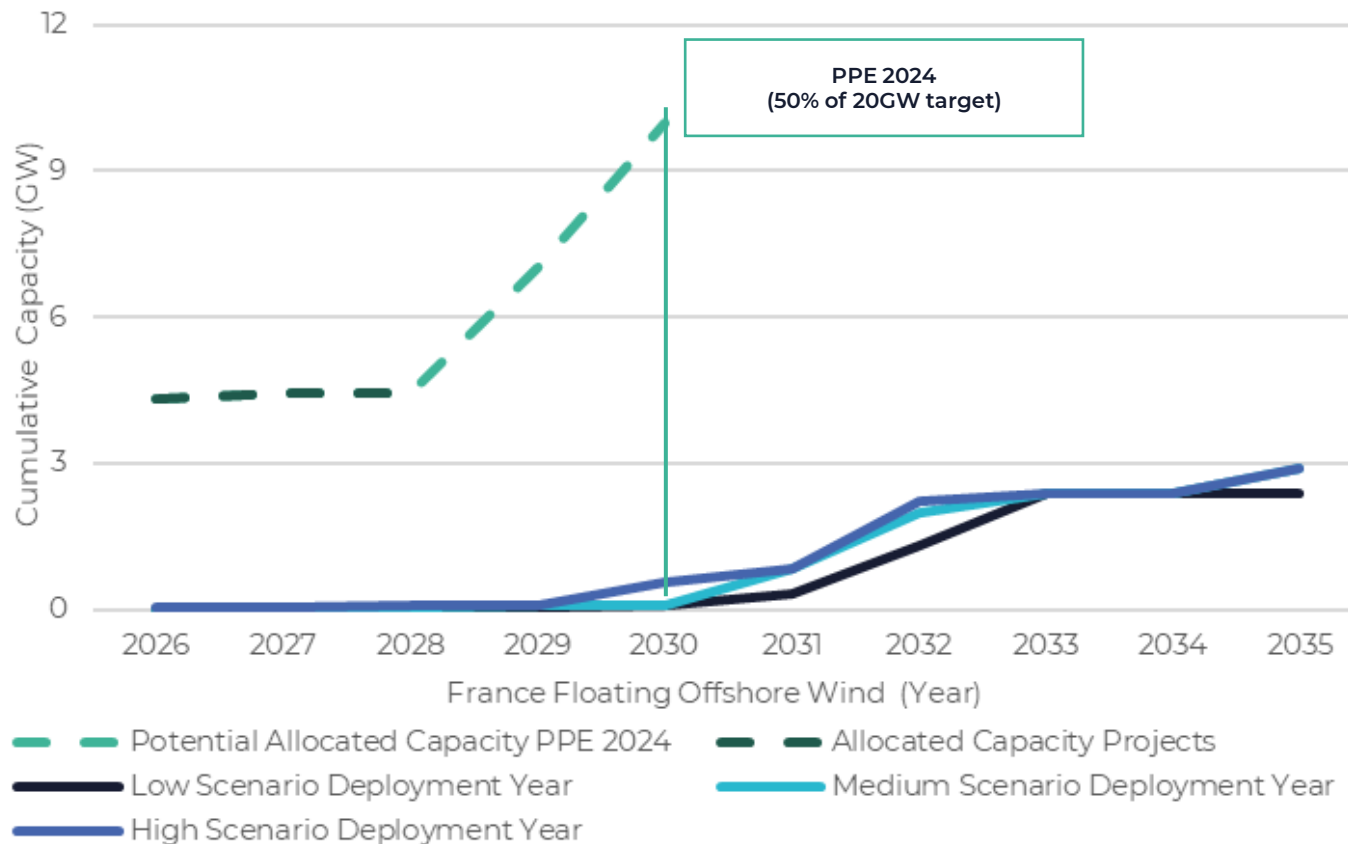


# How can France Achieve the Target?



# France FOW Forecast

Source: Xodus



## Current Installation

- Fixed-bottom: 480MW Saint-Nazaire
- Floating: 2MW Floatgen

## Aspirations: PPE 2024

(France's multi-year energy plan )

- Increase annual tender award from 1 GW p.a. to 2GW p.a. from 2025
- Allocate 20GW by 2030,
- Commissioned 18GW by 2035, and 40GW by 2050
- 50% local content for the projects fully commissioning by 2035



# Floating Tenders

## South Brittany (AO5): 230-270MW



### Bidding Price Cap

€120 / MWh

## South Brittany Extension (AOX): 500 MW



€110 / MWh

## Mediterranean (AO6): 2 X 230-280MW



€110 / MWh

## Mediterranean Extension (AO6): 2 X 500 MW



Capacity auctioned depending on the price

## South Atlantic II (AO11): 1000MW



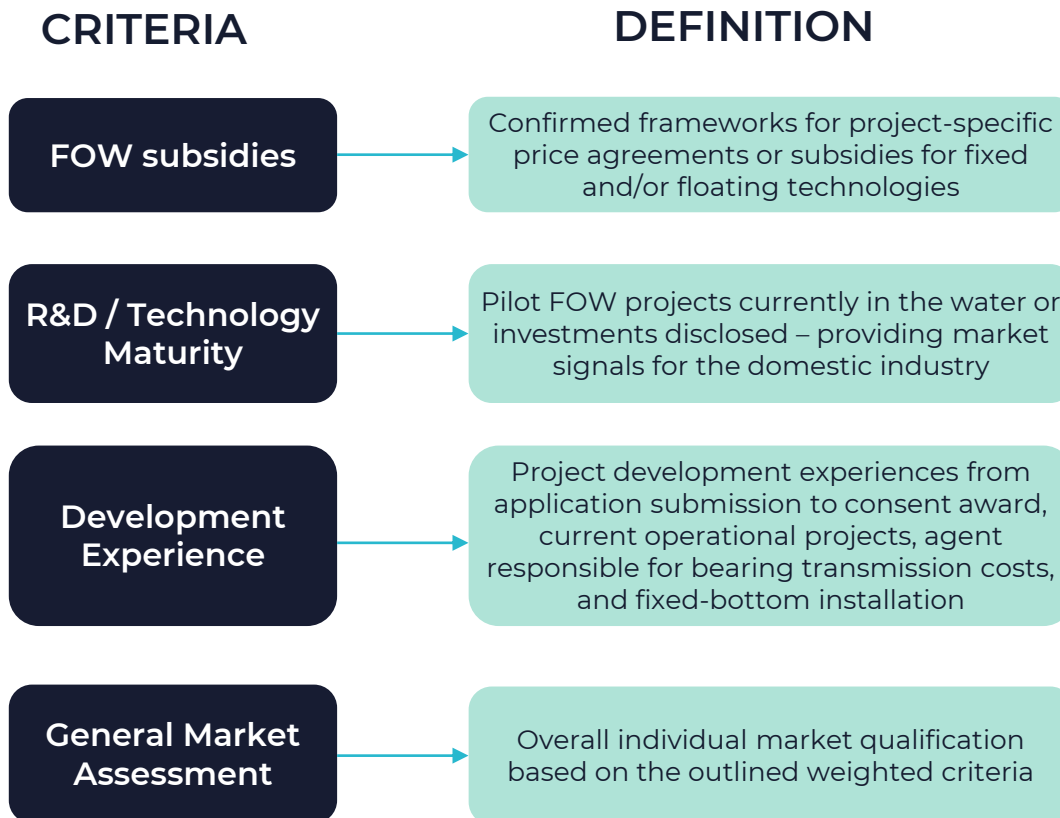
Capacity auctioned depending on the price



# Is France Market Ready?



# FOW Market Readiness



- FOW in France is ‘Market Ready’.
- The essential procedures and legislation are in place to provide dedicated subsidies and a transparent development pathway.



# FOW Market Value

Assuming half of the 20GW allocated capacity by PPE 2024 will be FOW, France's FOW market value is up to € 45B, making France an attractive FOW investment market.

CAPACITY	CAPACITY(MW)	MARKET (€)
Forecast by 2035	2,385-2,855	10.7-12.9B
Allocated	4,445.7	23.9B
PPE 2024 (FOW)	10,000	45B

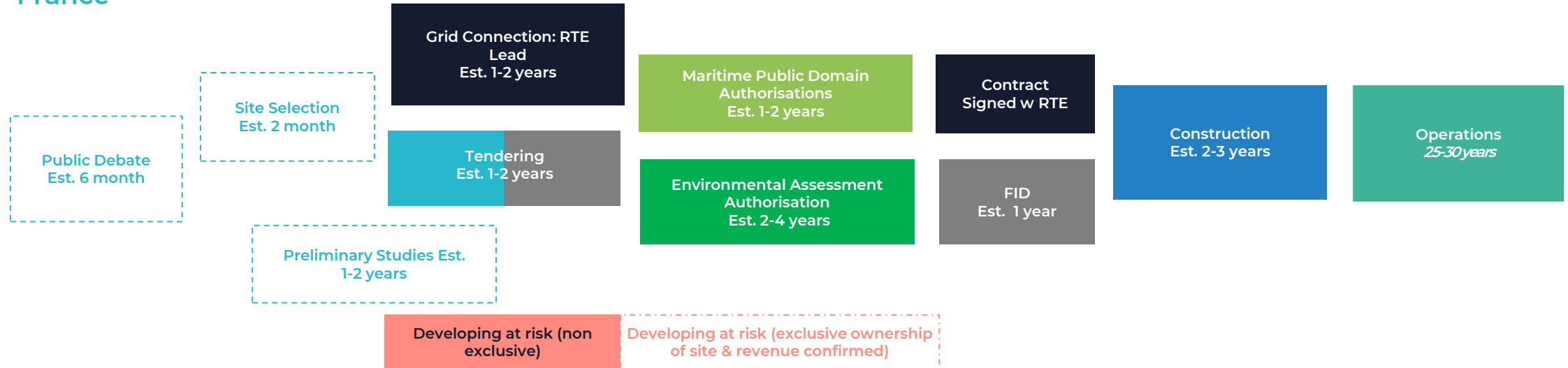


# How does Development Pathway in France Compare to the UK?



# Project Development Pathway Comparison: France & UK

## France



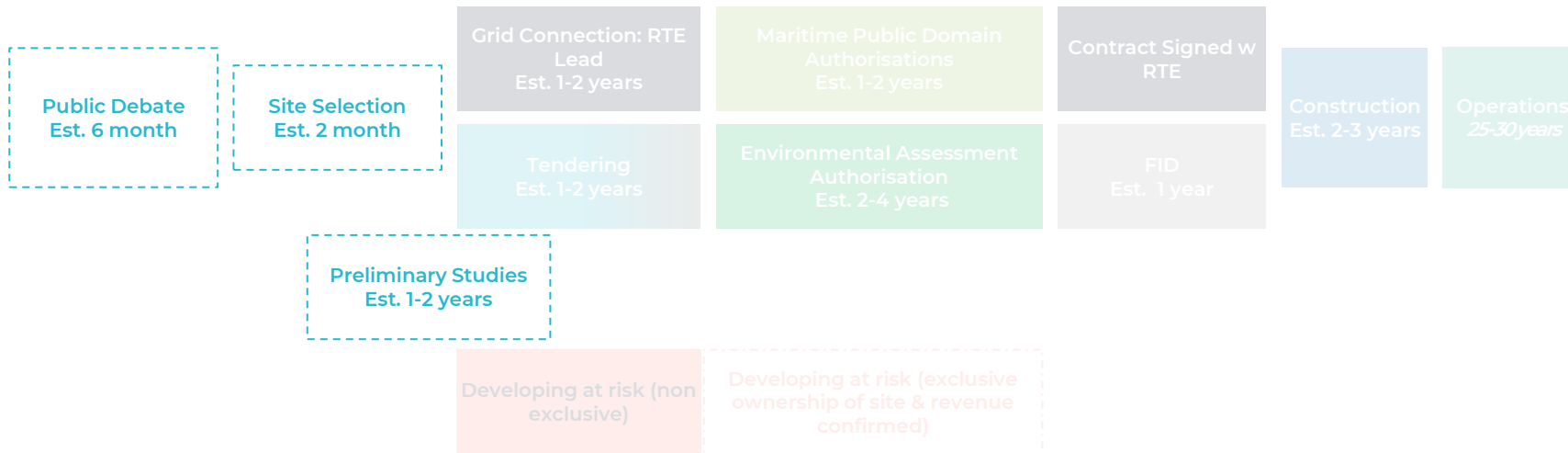
## UK





# What's the Difference?

## France



## UK



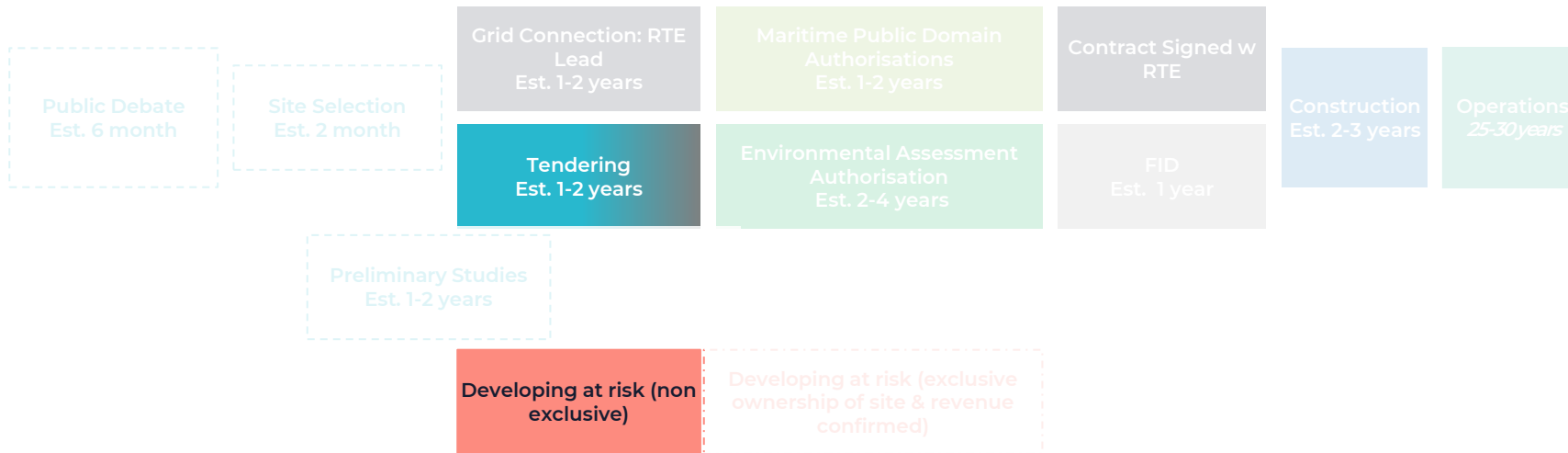
## Limited Risks for Developers At the Beginning of the Process

- French government takes over the responsibility before tendering.
- This reduces the time length when developers are at risk, especially at the beginning of the process.



# What's the Difference?

## France



## UK



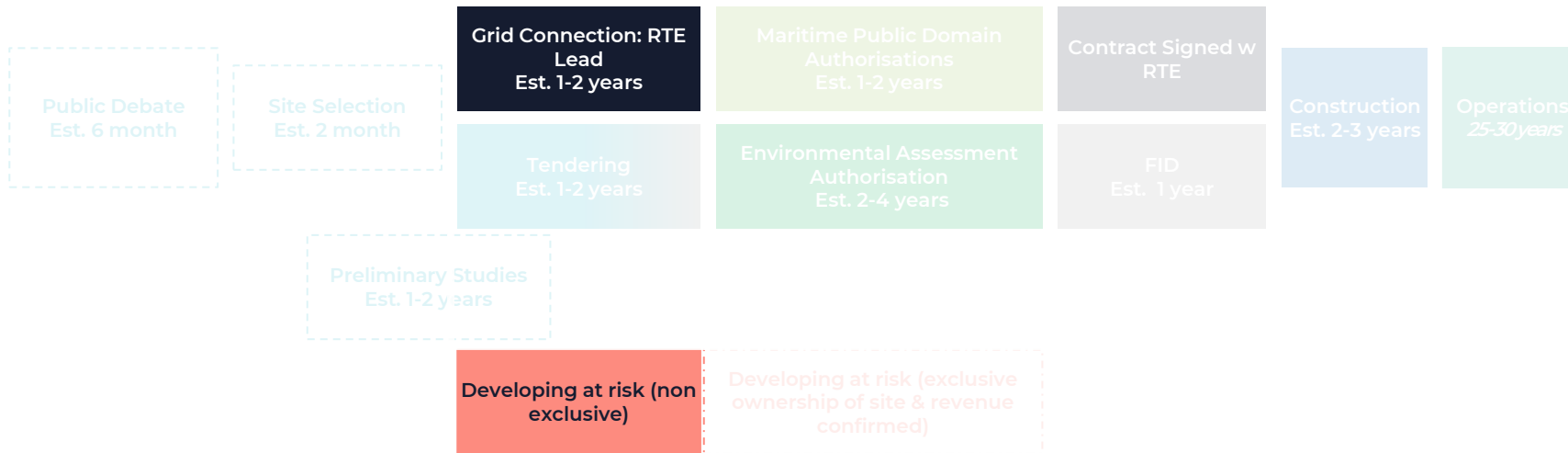
## CfD Awarded at the End of Tender

- Winners will be awarded with a Contract for Difference at the end of tendering.
- This gives developers more financial security and speeds up the projects to reach FID.



# What's the Difference?

## France



## UK



## Grid connection led by the state-owned transmission operator

- Grid connection will be implemented by RTE, French state-owned transmission system operator.
- Developers only need to complete a connection contract with RTE before the project is fully commissioned.



# Project Development Pathway Comparison: France & UK

## France



## UK





# Key Takeaways



# France is Market-Ready

## French Government is Ready to Invest in FOW

- Ambitious targets via PPE 2024.
- Multiple upcoming tenders
- Aggressive new legislation reducing development timelines.

## FOW Market Value Is Up To € 45B

- Assuming half of the allocated capacity will be FOW from PPE 2024.
- Larger value opportunities will not be available until 2030.

## Market-Ready France might challenge the UK's supply chain

- Project development pathway in France is less risky for developers than in the UK and allows for faster deployment, which might challenge the UK's supply chain.



# How New Markets Can Develop Offshore Wind

## Streamline the consenting process and reduce the risks of developers

- The French government has been working to decrease the time when developers are at risk during project development phases.
- For example, the government selects the sites and conducts the preliminary studies before the tender.

## Create a safe investment environment (Secured subsidy or financial support)

- Effective financial support can move projects forward to reach FID and realise the significant opportunity pipeline.
- For example, in France, a CfD will be awarded to the winner at the end of tendering which gives developers greater financial guarantees.

## Address common industry challenges e.g. grid infrastructure and ports availability

- Achieving ambitious deployment targets will require upgrades to grid infrastructure and ports (particularly in countries developing FOW).
- Countries with no deployment to date can learn from established markets and address those challenges early (e.g. conducting transmission network reviews).



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# Any Questions?



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# Thank You!



# XODUS GROUP: PLEASE COME AND SPEAK TO US!



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