## **Introducing Aurora's**

# Offshore wind park valuation



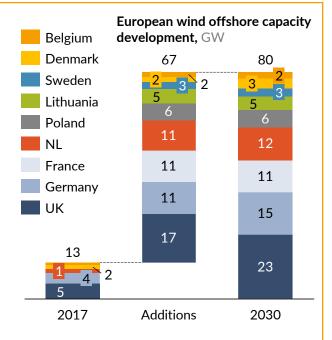
Market analysis and revenue and cost forecasts for offshore wind parks

## Offshore wind is expected to grow by 6x

Offshore wind is a crucial element in reaching European energy policy targets and mitigating greenhouse gas emission. Europe is the global leader with 13 GW, with most turbines installed in the UK and Germany. Until 2030 the market is likely to become truly European, with also other countries planning to add significant capacities.

European coastal states have announced a total target of about 80 GW by 2030, which is a six-fold increase in gross capacity. In the short term, tenders in Germany, Belgium, the Netherlands and the UK will secure a full pipeline.

The recent auction results with very low prices reached in Denmark, the Netherlands and Germany opening scope for further build-out potential without any subsidies.



### Investments are complex and site-specific factors matter

The high level of political support is a result of offshore wind becoming increasingly competitive. CAPEX are decreasing fast and are expected to fall by 30% until 2025 (CoD) as higher turbine ratings drive down cost per MW. Understanding the cost of construction and O&M requires anticipation of technological progress and the impact of location. Additionally, different tendering and auction schemes across Europe result in different returns, while some enable operation without any subsidies already. Furthermore, curtailment, O&M, balancing costs and (post-subsidy) capture prices have to be accounted for.

### Aurora is perfectly positioned to help you think through the most pressing topics

# Brownfield valuation

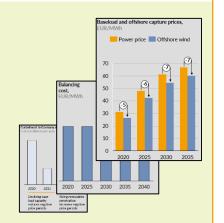
- Evaluate regulation and future regulatory risk
- Project market size development until 2030
- Forecast expected revenues
  - Wind yield
  - Subsidies or PPA
  - (Post-subsidy) capture prices
  - Other revenues
  - Curtailment
- Forecast expected ongoing cost
  - OPEX
  - Balancing cost

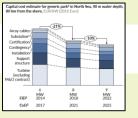
## Additions for Greenfield

- Project location specific CAPEX development
- Analyse development of financing structure and cost

Pre-auction valuation

- Model expected development of subsidies
- Identify focus markets





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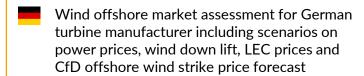
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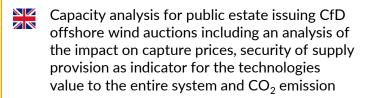


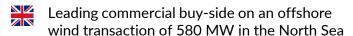
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### References

Aurora has successfully conducted several wind market and asset assessments (examples)





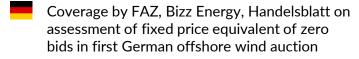


Engagement with all major offshore wind operators and owners in our group meetings (DONG, E.ON, Vattenfall, Siemens, Macquarie, EnBW, Centrica, 50Hertz, Crown Estate, SWM)

# In the past Aurora has successfully forecasted results of auctions in the energy sector (example)

Development of bidding strategy for first German offshore auctions for project owners in the North and Baltic Sea





# Why Aurora?

Extensive wind project experience contributed to a comprehensive in-house knowledge

- We understand the cost developments and the technological implications of operating and installing wind onshore and offshore farms
- Our European power model simulates hourly capture prices for offshore wind generation, balancing cost and economic curtailment (i.e. 6 hour rule)

# Winning bids and winning probabilities have been predicted on point

 We have supported clients in deciding about the bidding strategy and forecasted correct outcomes

### Our team is well suited to support

- Many years of experience in the European power and renewables sector
- Senior team consists of power market specialists from management consultancies (McK, BCG, Berger)
- Cross-functional project teams including consultants and energy modellers allow for rapid response to client needs
- Significant experience of working in high-paced transaction and due diligence projects

For more information, please contact

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