

ScotWind Leasing Option Price Review



Exe	cutive Summary1
1.	Terms of Reference
2.	Introduction
3.	Legislative background
4.	General approach to Option Fees5
5.	Bids made for options in Round 4 (R4) of TCE's offshore wind programme7
6.	Comparison of SWL and R4 Terms8
7.	Comparison of the physical differences9
8.	Analysis of the Round 4 bids10
9.	Review of the Aurora Report
10	Conclusions14
App	endices

Executive Summary

- CES has requested JLL to provide a second opinion of the advice provided by Aurora on the offshore windfarm option fee analysis and how that fits into the market for UK windfarms and the Crown Estate Scotland Windfarm policy requirements.
- There is no set valuation methodology when approaching option fees in real estate and the approach used to measure an option fee will be dependent on the proposed development and the involved parties. The amount agreed will commonly reflect a balance of (i) the party's respective costs (ii) their appetite for the deal (iii) competition from other potential developers, and (iv) the loss of alternative income streams as a result of granting the option. Hence, little weight can be applied to the evidence from TCE R4.
- However, analysis of the R4 option bids (excluding those from Special Purchasers) shows it is reasonable to expect SWL
 option bids will be significantly lower. This is largely due to the increased Capex and Opex of schemes in SMP Option Plan
 Areas where waters are deeper than 60m.
- It is possible that SWL schemes will only be viable if the route to market is through a higher rate CfD applicable to a separate Floating Wind pot.
- There remains the possibility that those who regard themselves as special purchasers will have an appetite to bid at a higher level than other market participants.

1. Terms of Reference

- 1.1 CES has requested JLL to provide a second opinion of the advice provided by Aurora and how that fits into the market for UK windfarms and the Crown Estate Scotland Windfarm policy requirements.
- 1.2 The scope as confirmed in our email of 10th March 2021 covers the following:

Background to:-

- a. ScotWind Leasing (SWL)
- b. CES Act 2019
- c. Comment on difference between best value and market value as defined by s.12(1) of the CES Act.
- d. The Crown Estate's Round 4 (R4) option bids
 - Explanation of limitation of analysis and potential valuation implications.
 - Comparison of the R4 lease offer (including rental terms) with SWL.
 - Analysis of the Round 4 bids and estimation of the rate per km².
 - Contrast of the physical differences between the R4 and SWL sites and impact on capital expenditure and operational expenditure
 - Commentary on the R4 bidding and reaction in the market.
 - Review of the Aurora research on the impact of R4 bids on SWL and commentary on Aurora's justification for an option fee cap.
 - Commentary on why lower option bids can be expected in SWL compared to the average R4 option bids (ignoring those from Special Purchasers) whilst highlighting the appetite of special purchasers to bid in excess of the proposed cap.
 - The advice provided is analysis and is not a formal valuation of an option which is not specific to a particular project.

2. Introduction

- 2.1 Crown Estate Scotland (CES) launched ScotWind Leasing (SWL), a round of seabed leasing for offshore wind, on 15 January 2021. Developers were invited to apply for seabed rights to build the next round of offshore wind farms In Scottish waters.
- 2.2 Developers are invited to define sites in zones identified in the Sectoral Marine Plan (SMP). The closing date for option bids was 31 March 2021.
- 2.3 The option is to acquire a lease providing a developer with the rights required from CES to construct and operate an offshore wind farm on the seabed. Other permissions are also required and a lease will only be awarded once all the key consents and permissions have been obtained from the relevant regulatory authorities including Marine Scotland. This Option Agreement will set out the terms on which Crown Estate Scotland would grant such a lease in the event that the developer succeeds in obtaining all the necessary consents. The key terms are
 - The Option Period granted is that requested by the Applicant, up to a maximum of 10 years. After expiry of the Option Period, a lease cannot be requested so a project cannot be constructed.
 - The Option Fee payable when entering the Option Agreement is set by multiplying the Applicant Valuation selected by the applicant (which is one of the pre-defined levels £2,000/km², £6,000/km² or £10,000/km²) by the area of seabed covered by the Option Agreement.
 - There are two milestones in the Option Agreement. Both relate to submission of key project consent documents, which encourage progress to be made. If the milestones defined in the Option Agreement are not met, then a reduction of the Option Period shall result. If the first milestone is not met, and the second milestone is met, then restoration of a previously reduced Option Period shall result.
 - The intended capacity of the project will be noted in the Option Agreement and will be a consideration when an Option Notice is served.
 - Rent will be payable quarterly based on the offshore wind farm output at a rate of £1.07/MWh indexed to CPI.
- 2.4 On 8 February 2021 The Crown Estate (TCE) published the results of its tender for options to develop windfarms in the territorial waters and continental shelf of England, Wales and Northern Ireland. It resulted in lease option fees that exceeded industry expectations.
- 2.5 On 11 February, following the publication of the result of TCE's leasing auction, CES announced a review of the option structure for SWL. The decision was taken with the support of Scottish Government Ministers.
- 2.6 The result of the review of the option structure is targeted to be completed by 24 March 2021. The deadline for applications to ScotWind Leasing will now be later than 31 March 2021. The updated Closing Date will be confirmed on completion of the review of the option structure.
- 2.7 CES commissioned Aurora to assess whether higher option fees would make SWL schemes less able to compete with TCE schemes in future CfD Allocation Rounds.
- 2.8 CES has requested JLL to provide a second opinion of the advice provided by Aurora and how that fits into the market for UK windfarms and the Crown Estate Scotland Windfarm policy requirements.

3. Legislative background

- 3.1 The 2019 Scottish Crown Estate Act contains provisions which are relevant to the disposal of assets including the granting or leases and options. In particular, Section 12 which provides the following meaning of Market Value
 - (1) "market value" means the estimated amount which it would be reasonable to pay in respect of a relevant transaction based on the assumption that the transaction is agreed to—
 - (a) on the day on which the determination of the estimated amount is made,
 - (b) on an arm's-length basis,
 - (c) after proper marketing,
 - (d) between parties each of whom has acted knowledgeably, prudently and willingly,
 - (e) on a day on which a person other than a manager is offering to make a transaction equivalent to the relevant transaction in relation to an asset which is similar to the asset to which the relevant transaction relates, and
 - (f) where the relevant transaction is a grant of a lease, on appropriate terms of lease.
- 3.2. The Scottish Public Sector Finance Manual ("SPFM") (Disposal of Property Guidance section) (Disposal of Property Guidance section) contains the requirement that:
 - 20. Where there are wider public benefits, consistent with the principles of Best Value, to be gained from a transaction, disposing bodies should consider disposal of assets at less than Market Value. This includes supporting the acquisition of assets by community bodies, where appropriate. Otherwise, assets are to be disposed of at Market Value, as defined in the International Valuation Standards (as used in the RICS, Global Standards) but reflecting any special value and the effect of any voluntary conditions imposed by the seller.
- 3.3 We have discussed the meaning of section 12(1) of the CES Act 2019 with CES and its advisers, Anderson Strathern. We have concluded that the definition of "market value" in 12(1) is not the same as Market Value as defined by the RICS Red Book nor is it a requirement to obtain "best consideration". It is the amount which it is reasonable to receive where the parties have acted knowledgeably, prudently and willingly. We have been advised to ignore the bid of a Special Purchaser. We will return to each of these themes in our analysis of the option bids received by TCE.

4. General approach to Option Fees

- 4.1. To provide context as to why an option fee is appropriate, it is worth considering the general reasons why option fees become relevant in property transactions along with how these option fees are typically arrived at.
 - 4.1.1. Option fees are commonplace in property and whilst their overarching purpose is simple, there are a number of more detailed reasons that an option fee will be agreed:
 - 4.1.2. The grant of an option commits the landowner to one developer and prevents it from treating with another party. The option fee compensates the landowner's risk of the developer not proceeding 'adequately'. In the case of windfarms, this is an exclusivity period whereby developers can formulate a scheme, which they will deliver within the option period.
 - 4.1.3. The option fee and exclusivity period may have the effect of sterilising the land and preventing the possibility of other revenue generating projects being pursued on the site.
 - 4.1.4. If set at the right level, the option fee will ensure the developer is financially motivated to progress the scheme in a timeframe specified in the option period to ensure a scheme can be delivered. In the case of windfarms, the option granted commonly requires developers to commit to investing resources into the project during the life of the option period, to ensure progress is being made and that project milestones are met.
 - 4.1.5. The option gives the developer exclusivity and the certainty that once the project consents are in place it can proceed with the development, knowing that the land is already secured. Additionally, for offshore wind farm developments, this allows the developer to invest greater sums of capital and secure additional funding for the scheme. It also allows the developer to secure government backing via a CfD.
 - 4.1.6. The option fee aims to balance the risks and rewards of both parties.
- 4.2. Taking the above matters into account, there are some specific nuances relating to setting the level of an option fee in relation to a windfarm development:
 - 4.2.1. If the fee is too high a windfarm could be less competitive when bidding at a CfD auction. Electricity prices could be higher as a result of the additional cost.
 - 4.2.2. If the fee is too low, it won't motivate the developer. As a result, the developer could under-value the opportunity.
 - 4.2.3. If it is too low, it may also give the developer the opportunity to "sell-on" the option at a profit.
 - 4.2.4. In the case of an offshore windfarm, if the fee is set at the right level it will allow the scheme to progress with an appropriate level of risk held by both the Crown Estate Scotland and the developer. It is worth noting that the successful delivery of a scheme will not only provide the Crown Estate Scotland with a future income stream from the site, but it will also aid the generation of new jobs in Scotland and allow the UK to progress towards its net zero emissions target.
- 4.3. Option fees are subject to a wide range of factors and are inherently complex and unique to their specific circumstances, thus the approach that must be taken to assessing the level of option fee will vary case by case. This is in order that the relevant risks, rewards and special purchaser factors can be appropriately taken into account for the unique circumstances.

ScotWind Leasing - Option Price Review

- 4.4. There is no set valuation methodology when approaching option fees in real estate and the approach used to measure an option fee will be dependent on the proposed development and the involved parties. The amount to be agreed will commonly reflect a balance of the following:
 - a) The party's respective costs.
 - b) Their 'appetite' for the deal.
 - c) Competition from other potential developers.
 - d) Landowner's loss of opportunity for alternative revenue
- 4.5. As a result of these factors, the weight which can be applied to evidence from the Round 4 transactions is limited.

5. Bids made for options in Round 4 (R4) of TCE's offshore wind programme

- 5.1 Table 1 below provides a summary of the bids accepted by TCE for wind farms in Round 4. These bids are analysed in greater deal in Section 7 to assess the impact they might have on SWL.
- 5.2 TCE received multiple bids for up to 8 GW of new offshore windfarms in 4 bidding areas around the coast of England and Wales (see plan in Appendix 1). These zones were arrived at as a result of consultation with the industry and stakeholders. Participants in the auction were required to pre-qualify based on their experience and resources in much the same way as in SWL.
- 5.3 The process required the identification of sites within the zones having resolved any conflicts with other bidders. This differs from the SWL process where any physical conflicts between sites are resolved after bids are made. The SWL process takes the form of a sealed tender whereas the R4 process was a quasi-auction (see section 10.6).
- 5.4 On acceptance of a bid, TCE will undertake a plan-level HRA before proceeding to the AfL. This differs from the SWL process where applicants are bidding for sites in Plan Option Areas identified in the Scotland's SMP.
- 5.5 The following bids were accepted for 6 wind farms in 3 zones

Zone	Bidder	Option fee pa	Capacity (MW)	Area km²
Dogger Bank	RWE Renewables	£114,304,500	1500	495.4
Dogger Bank	RWE Renewables	£133,350,000	1500	494.3
Eastern regions	Total/Green Inv Gp	£124,573,500	1500	500.0
Irish Sea	EnBW/BP	£231,000,000	1500	497.6
Irish Sea	Cobra/Flotation Energy	£44,751,840	480	125.6
Irish Sea	EnBW/BP	£231,000,000	1500	322.3
	Dogger Bank Dogger Bank Eastern regions Irish Sea Irish Sea	Dogger BankRWE RenewablesDogger BankRWE RenewablesEastern regionsTotal/Green Inv GpIrish SeaEnBW/BPIrish SeaCobra/Flotation Energy	Dogger BankRWE Renewables£114,304,500Dogger BankRWE Renewables£133,350,000Eastern regionsTotal/Green Inv Gp£124,573,500Irish SeaEnBW/BP£231,000,000Irish SeaCobra/Flotation Energy£44,751,840	Dogger Bank RWE Renewables £114,304,500 1500 Dogger Bank RWE Renewables £133,350,000 1500 Eastern regions Total/Green Inv Gp £124,573,500 1500 Irish Sea EnBW/BP £231,000,000 1500 Irish Sea Cobra/Flotation Energy £44,751,840 480

Table 1



6.Comparison of SWL and R4 Terms

6.1 In order to assess the impact of the Round 4 bids on SWL, Table 2 compares the wider commercial terms which might affect option bid prices.

	TCE R4	SWL		
Nature of bidding	Bidding cycles	Fixed tender		
Capacity	8 GW	10 GW		
Zones	 Dogger Bank North Sea South Coast Irish Sea 	15 Plan Option Areas (see plan in Appendix 2)		
Planning	HRA required	SMP approved areas		
Bidding caps	3.0 GW per bidder 3.5 GW per zone	"Realistic maximum development scenario"		
Minimum per scheme	600 MW In Dogger Bank; 400 MW elsewhere	100 MW		
Maximum per scheme	1.5 GW	860 km²		
Minimum density requirement	3 MW per km ²	1 MW per km ²		
Option period	Up to 10 years	Up to 10 years		
Lease term	60 years	60 years		
Option fee	An annual fee payable until the grant of a lease, indexed annually by reference to CPI	A single fee payable on the grant of an AfL at one of three defined rates selected by the applicant - 1) £2,000 per km ² 2) £6,000 per km ²		
		3) £10,000 per km ²		
Construction period rent (Base Rent)	Lower of 1) the option fee 2) 80% of projected output x £0.90 + CPI	£1 pa		
Generating rent	 Higher of 1) 2% of Gross turnover 2% or average annual revenue in previous 2 years 3) The Base Rent 	 Higher of Output x £1.07/MWh indexed to CPI 70% x Projected Output x £1.07/MWh indexed to CPI 		

Table 2

6.2 Overall, the SWL lease rental terms are marginally but not materially more favourable than R4. The principal differences are

- 6.2.1 SWL base rent is 70% of output compared to 80% in R4.
- 6.2.2 SWL charges no rent until commencement of generation.
- 6.2.3 2% of gross revenue (R4) is projected to be marginally higher than £1.07 x output (SWL). However, the R4 methodology introduces the possibility of lower revenues if market prices fall.

7. Comparison of the physical differences

7.1 In addition to the commercial differences there are number of physical differences between R4 and SWL which could impact bids. These fall in to two categories; those which affect Capex and those which affect Opex.

7.2 Sea water depth

- 7.2.1 The Sectoral Marine Plan (in Appendix 2) shows the majority of the Plan Option Areas have a water depth of 60m-100m. There are very few areas where the water depth is between 45m and 60m. These depths require the use of expensive jacket foundations or floating turbines.
- 7.2.2 The water depth in the successful bid areas in TCE R4 is typically sub 20m across large parts of each site. In shallower waters, fixed monopile foundations can be used.
- 7.2.3 The cost of a jacket foundation is greater than a monopile; in the region of 10% (45m) and 20% 60m).
- 7.2.4 In deeper waters the alternative is floating wind turbines (FOW). The floating wind industry is currently at the pre-commercial stage, with the first multi-unit 30MW demonstration project having been commissioned in Scotland in September 2017. Prior to this, deployment has been in the form of single unit prototypes and demonstration units. The cost for such small-scale deployments on the bases of per MW installed and per MWh produced is very high. Many of the costs incurred are disproportionate to the relatively small amount of capacity. Infrastructure projects such as floating wind require scale in order to reach cost and technical maturity¹.
- 7.2.5 The cost of floating wind is currently in the region of 60% higher than fixed (monopile) foundation costs. The general trajectory is towards cost parity in the next decade. This will require an increased roll-out and competitive economies to come into to play. For this reason, the Government has announced a separate pot for floating wind in the next CfD Allocation Round.
- 7.3 Transmission Network Use of System (TNUoS) charges
 - 7.3.1 Transmission licensees plan, finance, build and maintain the transmission grid. Their investment is repaid by those that use the transmission system demand and generation users through Transmission Network Use of System (TNUoS) charges
 - 7.3.2 The load flow model generates a price for every one of the current 175 generation nodes on the system. These nodes are grouped into zones. Generators pay a zonal charge, which is the weighted average of the nodal prices. Currently the GB system is split into 27 generation zones, starting with Zone 1 in the far north of Scotland and finishing with Zone 27 in Cornwall. (See plan in Appendix 3.)
 - 7.3.3 Charges are highest in northern parts of Scotland, and negative in a number of zones in the south of GB, meaning generators are paid to connect to the network. For example, a scheme connecting to the grid in Zone 1 (North and East Scotland) is likely to pay a charge of £7.62/MWh². Whereas a scheme connecting in Zone 15 (England, north of the Humber) will receive a rebate of £0.41/MWh. As a result, scheme of 1.5 GW has a £42m pa higher OPEX compared to a similar scheme in England.
- 7.4 Taking account of these factors, the increased costs facing SWL projects will potentially erode the value of the revenue surplus over the installation costs out of which option bids can be made.

¹ Macroeconomic benefits of floating offshore wind in the UK - CES and OREC Sept 2018

² Based on 2025/26 projected charge - per ITPEnergised – March 2021

8. Analysis of the Round 4 bids

8.1 We have analysed the Round 4 bids accepted by TCE and set out our results in Table 3, below.

			Option fee £pa	MW	km²	£/km² pa	£/MW pa	MW/km ²
1	Dogger Bank	RWE Renewables	£114,304,500	1500	495.4	£230,732	£76,203	3.03
2	Dogger Bank	RWE Renewables	£133,350,000	1500	494.3	£269,775	£88,900	3.03
3	North Sea	Total/Green IG	£124,573,500	1500	500.0	£249,147	£83,049	3.00
4	Irish Sea	EnBW/BP	£231,000,000	1500	497.6	£464,228	£154,000	3.01
5	Irish Sea	Cobra	£44,751,840	480	125.6	£356,304	£93,233	3.82
6	Irish Sea	EnBW/BP	£231,000,000	1500	322.3	£716,724	£154,000	4.65

Table 3

- 8.2 There is a clear and close alignment of bids 1-3
 - 8.2.1 Same scheme capacity
 - 8.2.2 Similar scheme areas
 - 8.2.3 Similar seabed conditions
 - 8.2.4 Similar sea-shore distances
 - 8.2.5 Similar TNUoS
- 8.3 Resulting in closely aligned analysis -
 - 8.3.1 Average £250k/km² pa
 - 8.3.2 Average £82,500/MW pa
 - 8.3.3 Average 3 MW/km²
- 8.4 Bid 4 is for a scheme with similar physical characteristics but the financial offer is more than 80% higher. Bid 6 is from the same party and at the same level. However, the development density at 4.65 MW/km² is more than 50% greater.
- 8.5 Bid 5 is for a much smaller scheme. The financial value in £/MW is higher but of the same order of magnitude to bids 1 3. The development density is 3.82 MW/km².
- 8.6 These are annual amounts payable for the duration of the option period indexed each year by CPI. Assuming a sevenyear option period, the average aggregate of bids 1-3 is in excess of £900m per for each 1.5 GW scheme.
- 8.7 We have reviewed the Aurora report (see section 9) and note they give a number of potential reasons for the high Round 4 option fees suggesting there is an element of "Special Purchaser" value.
 - 8.7.1 Traditional fossil fuel companies such as BP and Total have a strong incentive to switch to renewable energy. Such strategically important investments for them could justify high option fees
 - 8.7.2 Oil and gas majors will have larger balance sheets and are therefore able to front large option fees where others might not
 - 8.7.3 Low supply relative to demand Roughly 8GW of lease options were auctioned in Round 4. This is less than the Government target set out in the 2020 Energy White Paper of 40GW of offshore wind by 2030 (even accounting for the ~18GW of existing or committed offshore wind projects)

- 8.7.4 The policies required to tackle the economic effects of COVID-19 has provided an expectation of low interest rates for the foreseeable future, resulting in low cost of capital for projects
- 8.7.5 The increase in deployment due to the 40GW of offshore wind by 2030 target may have created more optimism in offshore wind technology learning rates and cost declines. Economies of scale can also play a role when the same developer builds multiple projects
- 8.7.6 CfD Allocation Round 3 prices could be interpreted as an outlier due to especially competitive one-off projects (e.g. Dogger Bank). Future CfD tender rounds may result in higher strike prices as the remaining projects are less competitive
- 8.7.7 Projects need to first secure lease options before bidding for a CfD. With fewer competitors in CfD auctions, strike prices could be higher to recover option fees. BEIS may be pressured to increase the CfD price cap in future tenders
- 8.8 Special Value is 'An Amount above the Market Value that reflects particular attributes of an asset that are only of value to a Special Purchaser.' Special Purchaser is 'A purchaser to whom a particular asset has special value because of advantages arising from its ownership that would not be available to general purchasers in the market.'
- 8.9 To ignore the impact of any Special Purchaser we have focussed on the average of bids 1-3 ie 500 km² x 3 MW/km² x £82,500/MW pa.
- 8.10 In order to provide a direct comparator for the SWL bidding structure this analyses to a rate of £250,000 per km² per annum. As SWL only requires a single option payment it is necessary to determine the net present value (NPV) of this sum. Assuming a seven-year option period until the lease is drawn down, the NPV based on a 6% target rate is £725,000 per km²

9. Review of the Aurora Report³

- 9.1 We have been asked to review the Aurora Report which considers whether the current cap (£10,000/km²) should be increased in the light of the TCE R4 results and if so, whether it would adversely affect the ability of SWL projects to compete with R4 projects in a CfD Allocation Round.
- 9.2 The Aurora report is a report analysis prepared by energy experts. Our analysis considers whether the application of Aurora's recommendations will impact on the strategy of those bidding for SWL projects.
- 9.3 Aurora reached a number of conclusions on which we comment as follows

Aurora	JLL
The high R4 option fees are primarily a result of strategic bidders and low supply relative to demand.	We agree that greater supply and no Special Purchasers would have resulted in lower bids.
The R4 results suggests SWL would likely see a lot of interest with most bids at the current option fee cap of £10,000/km ² .	This may not be the case unless Special Purchasers are in the mix or bidders are anticipating FOW.
There is potentially room for the SWL price cap to increase.	Agreed. There is a strong argument to let the market decide (see below).
An increase by a factor of 10 would still allow Scottish projects to compete favourably against English projects with R4 lease options.	SWL projects with fixed foundations can't compete with R4 projects due to increased CAPX and OPEX.
The current SWL price cap would allow the best Scottish projects to succeed in floating-only CfD tenders.	This is impossible to predict without some certainty that strike prices will be adequate over a sustained period to support sufficient roll-out of FOW to drive down installation costs.

- 9.4 On the option price cap, Aurora recommends the following:
 - 9.4.1 Increase price cap by tenfold to £100,000/km2
 - 9.4.2 Distinguishing between fixed-bottom and floating might not be required as long as the new price cap is not raised too high from the recommended new price cap.
 - 9.4.3 Retain the original £2k, £6k, and £10k/km2 pricing structure, but introduce evenly spread intermediate price points with moderate size gaps until the higher price cap of £100,000/km2
- 9.5 Aurora's view is an option price cap of 10 times the current level strikes a good balance between enabling Scottish projects and raising revenue. These are Aurora's reasons and our comments

Aurora	JLL
Limiting the option price cap to 10 times the current levels (£100k /km2) enables Scottish projects to overcome structural barriers they face relative to English projects (i.e. higher TNUOS charges, higher CAPEX levels).	Our analysis suggests the structural barriers are greater than the proposed option cap.
At a £100k/km2 lease option fee, average Scottish projects are estimated to be on a par with English projects with R4 lease options and thus are able to compete effectively in future CfD allocation rounds.	Only Special Purchasers will be able to justify option bids at or close to this level. Bids may be lower due to the increased Capex and Opex costs unique to projects in SWL.

³ Implications of The Crown Estate Round 4 results on ScotWind Leasing - 04 March 2021

Aurora	JLL
Going beyond £100k/km2 risks undermining the economic viability of Scottish projects and hence their ability to compete effectively.	Agreed although their ability to compete based on fixed foundations is in question.
Uncertainty exists around what actual project costs and return requirements will be in the future, and how projects will bid in upcoming CfD allocations; it is hence considered prudent to limit any option fee increase to a factor of no more than 10 compared to current levels.	Given the uncertainty should CES let the market decide?
The cap of £100k /km2 would likely be reached for the most attractive sites in ScotWind. This allows CES to allocate the lease options for these sites based on the detailed assessment to ensure the project granted the option has a high chance of success.	Only if Special Purchasers are in the mix or bidders are anticipating FOW.

9.6 Aurora were asked whether a premium at the proposed cap level of £100,000/km² would adversely affect the ability of an SWL project to compete with R4 projects in a CfD Allocation Round. We haven't seen how this figure was calculated. It appears to satisfy the test of not making SWL projects less competitive but not whether this is the highest figure which would pass the same test.

10 Conclusions

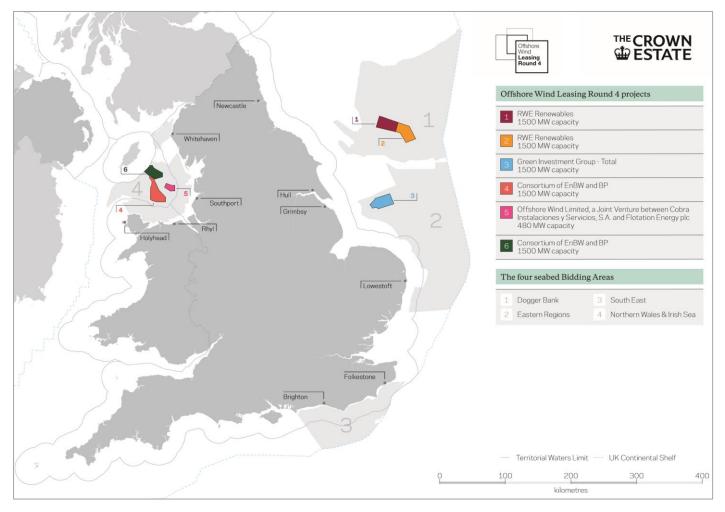
- 10.1 The net present value of the average Round 4 bid (ignoring the Special Purchaser value) is £725,000 per km². SWL currently limits bids to £10,000 per km². Aurora have been asked to assess the impact of bids up to a higher cap of £100,000 per km². We have not seen the rationale underpinning that higher cap but have been asked to comment on whether it is an appropriate adjustment to make.
- 10.2 Our analysis shows the increased CAPEX and OPEX costs facing SWL projects will erode the value of the revenue surplus over the installation costs out of which option bids can be made. The result of this could be that only special purchasers or those anticipating strike prices to a level adequate over a sustained period to support sufficient roll-out of FOW to drive down installation costs, will be able to make anything more than a nominal option bid. Based on the analysis above, nominal option fee levels for SWL Option Agreements could be considered as reasonable; higher option fees could be possible but might not align with prudent bidder behaviour.
- 10.3 TCE in Round 4 adopted an unrestricted open market process which allows the market to find its own level. Whilst this is not the only way to invite bids, other than setting a reserve price, we rarely see limits placed on how people can bid particularly where there a large number of unquantifiable factors such as
 - Will there be sufficient rollout of FOW for it to become competitive?
 - Will there be separate pots for FOW in all future allocation rounds to make this happen?
 - Will CfDs still be a route to market for offshore wind by the end of the decade?

The best way to maximise option fee receipts to have an unrestricted bidding process.

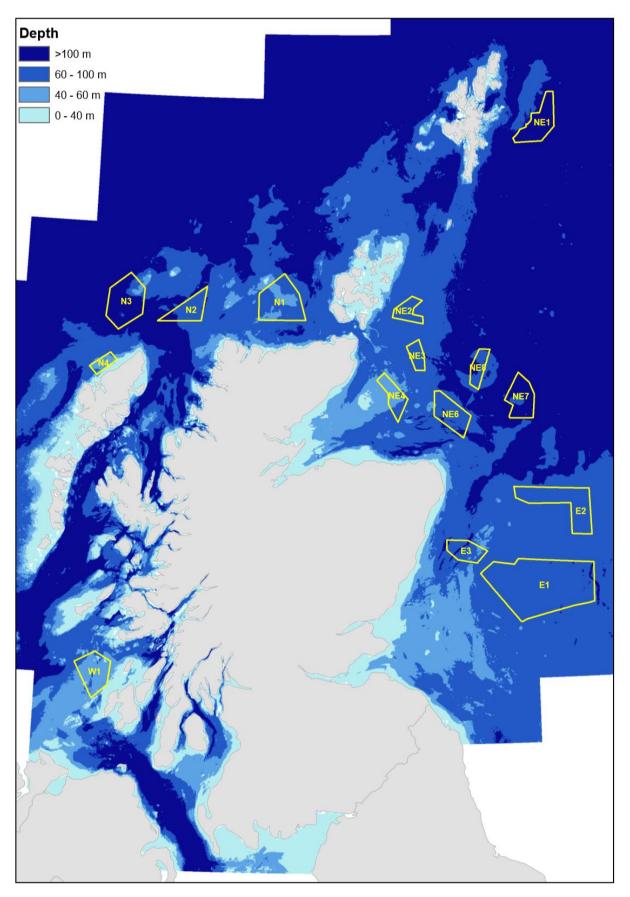
- 10.4 Proceeding without a cap or with pre-defined bidding pots might allow Special Purchasers to make very high bids to secure a position. This has the obvious and immediate advantage to CES of securing revenue. However, CES must decide whether this will ultimately lead to the delivery of installed OW capacity or whether bidders are merely land-banking ie securing sites that may never be developed. This would of course be to the detriment of wider aims and ambitions of both the Scottish and UK governments.
- 10.5 Given the very high level of option fee bids in Round 4 there is an argument TCE might be facing the same issue. Aurora refer to this by suggesting developer's might need to seek higher Strike Prices in order to meet the increase in their costs caused by this level of bidding.
- 10.6 TCE used a daily bidding cycle where unsuccessful bidders on day one of the process were invited to re-bid on day two and so on until the overall 8GW target was reached. This might have driven up prices incrementally in a way the SWL process will not. However, in an attempt to be successful SWL bidders might be inclined to over-bid at the outset, were it not for the proposed cap.
- 10.7 .We do not believe a cap on SWL option prices will enhance the opportunities to compete with their Round 4 rivals as the underlying economics suggest the proposed caps won't be reached by the prudent bidder unless there is a reduction in the CAPEX and OPEX costs facing SWL schemes. The Special Purchaser may of course bid at a much higher level.

Appendices

1. TCE bid plan



2. SMP Plan



3. TNUoS Plan

ing Siles Including Pumped Storage 6 al. 400kV 6 al. 275 kV



JLL

30 Warwick Street London W1B 5NH



FRICS Director Valuation Advisory London

@eu.jll.com

Morley Riches & Ablewhite

Kings Court Newcomen Way Colchester CO4 9RA







