Danish Energy Agency

Market dialogue on Thor call for tender:
Aim of the dialogue, project scope, pre-qualification, timetable and tender process

Chief Adviser Jeppe Lundbæk
Danish Energy Agency,
Copenhagen, 25 Nov 2019

Program of the day

9.30 – 10.00	Coffee and registration
10.00 – 10.15	Welcome and opening remarks by Director General Kristoffer Böttzauw from Danish Energy Agency
10.15 – 10.45	Aim of the market dialogue, project scope, pre-qualification, timetable and tender process *Danish Energy Agency*
10.45 – 11.45	Subsidy scheme and award criteria *Danish Energy Agency*
11.45 – 12.00	Coffee break
12.00 – 12.45	Process for environmental assessments *Danish Energy Agency / Energinet*
12.45 – 13.30	Lunch break
13.30 – 15.00	Grid connection *Energinet*
15.00 – 15.15	Other relevant issues to be addressed (questions from the audience)
15.15 – 15.30	Wrap-up and next steps *Danish Energy Agency*

Basis for the dialogue: the Market Dialogue material

The published discussion paper considers these themes:

1. **Time table for tendering process**
2. **Conditions for pre-qualification**
3. **Subsidy scheme and award criteria**
4. Penalty for defective performance
5. Compliance with deadline for completing the wind farm
6. Capacity of the wind farm and designated area for construction
7. **Offshore grid connection, onshore facilities and Point of Connection**
8. **Process for environmental assessments**

We pose a number of questions in the paper, which we would like your reaction to!

The teams behind the process

The Danish Energy Agency

Theme	Primary lead
Project Management	Jeppe Lundbæk
Environment	Tobias Grindsted Jeppe Lundbæk
Legal issues, tendering conditions	Ulrike Clade Christensen Kenneth Schelde Andresen
Technical aspects	Søren Dale Pedersen
Support scheme Process and Q&A	Therese Kofoed Jensen Anette Norling

Energinet

Theme	Primary lead
MetOcean	Jan Havsager
Grid planning and technical aspects	Poul Mortensen
Environment	Margot Møller Nielsen
Site-investigations	Jens Colberg-Larsen

Concept for the dialogue

Input into the process (at this stage):

25 Nov 2019 - Market Dialogue conference

26-29 Nov 2019 - Bilateral meeting, market players and DEA/Energinet

26 Nov–6 Dec 2019 Questions posed in writing

Outcome:

Possible adjustments to tendering conditions, time table etc.

Format for the dialogue

- Today – clarification, immediate reactions and preliminary feedback (any detailed questions posed today must also be emailed to us in writing)

- Next 10 days – send us detailed questions (or answers to our questions) in writing by email to: thor@ens.dk
  Deadline: 6 December 2019

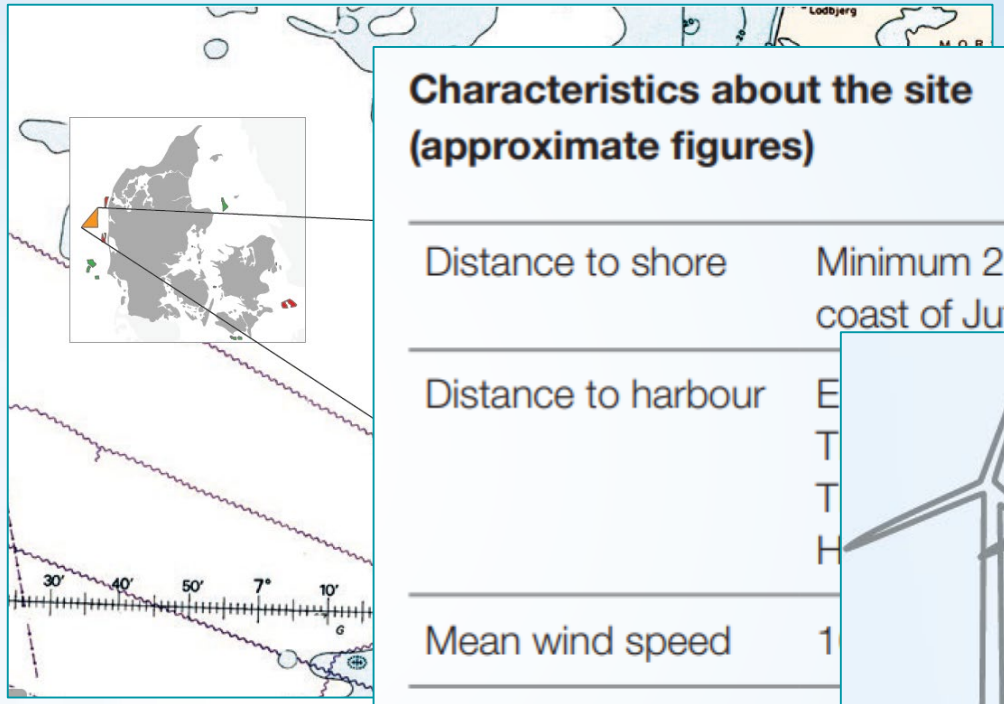
- Results from the dialogue to be posted at the Thor website: https://ens.dk/thor in the form of Q&A's in January 2020

Publication of Q&A results

1. Metocean

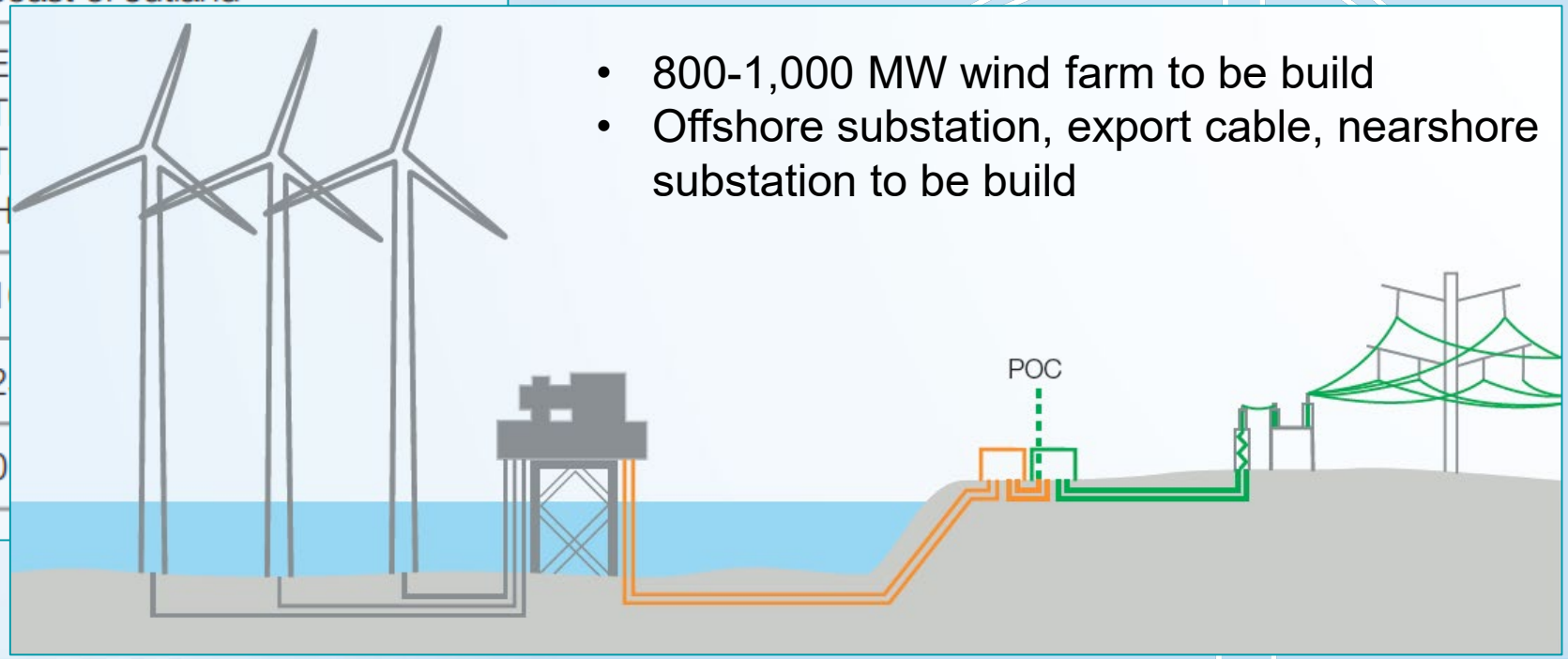
General subject	Summarized question	Answer
Metocean Scope	We prefer the comprehensive scope as it gives the possibility of a more detailed loss analysis (Yield) and thus a lower uncertainty in the results.	Most bidders indicate that the default scope is sufficient; especially if on-site Lidar conducted We believe that the default option in combination with on-site Lidar me liver adequate data for the bidding process. Furthermore, most bidders prefer to c assessment of both Wind Recourse and Oceanic conditions. The majority prefers a of the comprehensive scope.
Metocean Scope	It is preferred that detailed design level metocean and wind studies are provided. This will enable the most competitive tenders due to an increased level of accuracy in design and reduced additional conserv-atism.	Most bidders indicate that the default scope is sufficient; especially if on-site Lidar conducted We believe that the default option in combination with on-site Lidar me liver adequate data for the bidding process. Furthermore, most bidders prefer to c assessment of both Wind Recourse and Oceanic conditions. The majority prefers a of the comprehensive scope.
Metocean general	The proposed workstream follows the Industry practice for obtaining Metocean conditions (in this area).	The proposed option is the Default option.
Metocean comment to proposed process	The default scope of delivery is concluded to be sufficient of our needs. We will assess these data further in-house.	No answer needed
Metocean comment to proposed process	The comprehensive scope is required to be able to submit an optimized bid. Otherwise all bidders would have to conduct the additional analyses in the bidding phase This is time-consuming and not optimal	Most bidders indicate that the default scope is sufficient; especially if on-site Lidar conducted We believe that the default option in combination with on-site Lidar me

Thor Offshore Wind Farm – quick overview of the project



Characteristics about the site (approximate figures)

Distance to shore	Minimum 20 km to the west coast of Jutland
Distance to harbour	E T T H
Mean wind speed	1
Sea depth	2
Tide	0



- 800-1,000 MW wind farm to be build
- Offshore substation, export cable, nearshore substation to be build

Overall elements of call for tender

Key elements:

- Follows EU Directive 2014/24/EU on public procurement (and DK Procurement Act)
- Step 1: Preliminary dialogues with potential tenderers and investors (site-investigations, tender conditions)
- Step 2: Prequalification in order to participate in bidding process
- Step 3: Negotiated tendering procedure to allow for adjustments of selected tendering conditions (based on preliminary bids)
- Step 4: Submission of final bids

New issues to be aware of (compared to previous DK call for tenders):

- A new design for the subsidy scheme
- Inclusion of the offshore substation and the grid connection from the offshore substation to the point of connection at the nearshore substation
- An adjusted approach to environmental assessments

Set-up and conditions for pre-qualification

Purpose of pre-qualification:

- Ensuring that the concession winner will be financially and technically capable of establishing the offshore wind farm

Set-up:

- Minimum requirements to test the financial, economic and technical strength of applicants.
- Requirements applied similar in nature to previous pre-qualification rounds for Danish call for tenders

Number of applicants to be pre-qualified:

The DEA considers to pre-qualify a maximum of 5-7 applicants

Minimum requirements on financial and economic capacity

The DEA considers, the applicant must document:

- An annual overall turnover (in IFRS: 'revenue') of minimum DKK 27 bn.*, (calculated as an average of the last three financial years available), corresponding to approx. EUR 3.7 bn.,

and

- An equity ratio (total equity/total assets X 100) of 20% or more

OR

- A long term credit rating of BBB- or above (Standard & Poors and Fitch) and/or Baa3 or above (Moody's) or an equivalent rating from another reputable international credit rating agency.

Minimum requirements on technical capacity

The DEA considers, the applicant must document experience in:

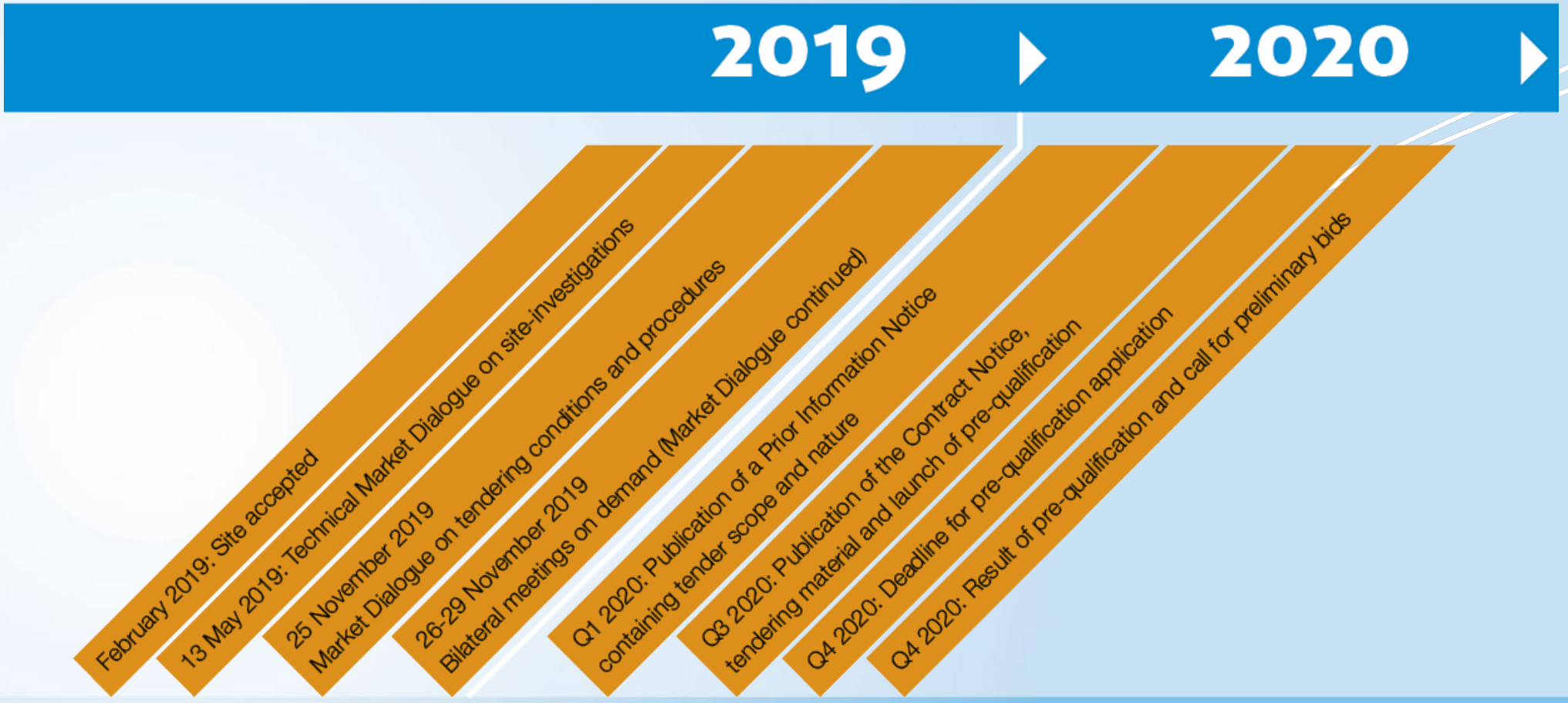
- Project development, procurement and management of construction of at least one largescale offshore wind farms with the capacity of 150 MW or more, completed within the last five years,

and

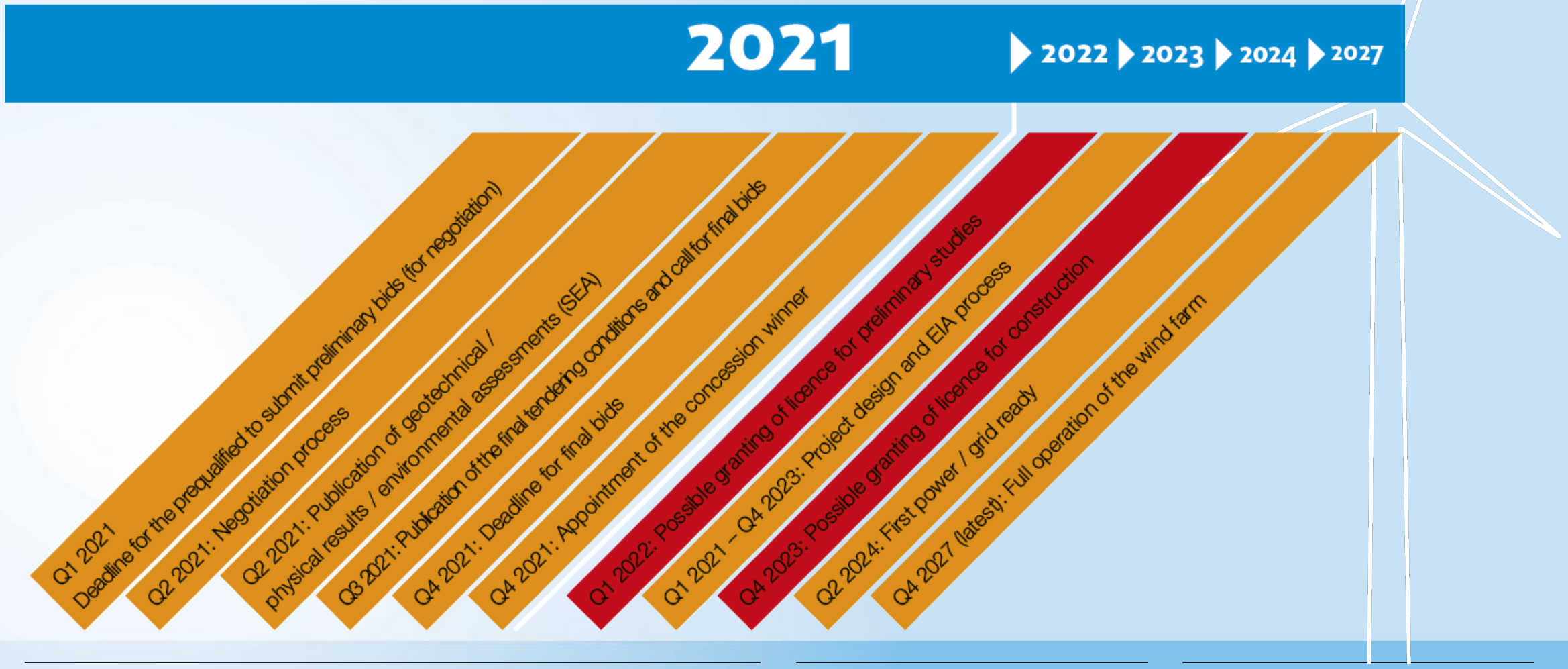
- Project development, procurement and management of at least one offshore AC-substation servicing an offshore wind farm completed within the last five years.

Time table for Thor (1)

Timeline



Time table for Thor (2)



Time table for Thor (3)

LiDAR-measurements begin Q1 2020

Do you prefer these measurements to be published by:
1) **March 2021 (only allowing for 8-10 months data-collection) or by**
2) **June 2021 (allowing for a full year's data-collection)?**

Deliverable	
Sea-bed investigations	
Geophysical survey	
- Geophysical survey report, wind farm site	2020 June
- Export cables routes survey report	2020 June
- Hydrographical report, wind farm site	2021 Feb
- Hydrographical report, export cable routes	2021 Feb
Marine Archaeology	2020 Nov
UXO risk assessment report	2020 Feb
Geotechnical investigations	
- Geological desk study	2020 Jan
- Geotechnical investigation report	2021 Mar
- 3D geological model report	2021 April

MetOcean	
Lidar-measurements	At intervals, final data medium 2021
Report on wind resources (Mesoscale)	2021 Mar
Report on Ocean data (Hindcast)	2021 Mar