



(DRAFT)

US INFRASTRUCTURE SPEED BOAT Survey Research Proposal & Plan

September 2020

The purpose of this proposal and plan

The purpose of this report is to align the team around common thinking and ideas towards completing a 'white paper' that will concisely inform readers and provide insights into the complex issues related to US infrastructure in supporting the wind industry.

Cover Photo(s)

In June 2020, two turbines at the Coastal Virginia Offshore Wind (CVOW) pilot project in the US were installed. The 12 MW CVOW demonstration project, located some 43km off the coast of Virginia Beach, is being developed jointly by Ørsted and Dominion Energy. The two turbines are expected to provide the operational, weather, and environmental experience needed for the 2.6 GW development in the adjacent 112,800-hectare lease site, expected to be operational by 2026.

Research Survey Objective

An industry white paper presenting OEM and developer views of the 'US infrastructure challenge' in aggregate and with insights.

Infrastructure is a critical catalyst to unlocking offshore wind development in the United States. To sustain the pace of market development and meet the growth aspiration, infrastructure challenges need to be addressed.

Objective:

To deliver a 'white paper' that informs readers about the key infrastructure issues that exist in the view of OEMs and developers currently planning the delivery of offshore wind projects.

The paper will be an authoritative guide that:

- Informs readers about key challenges in aggregate from OEM and developer
- Presents the issuing body's (i.e. the speed boat's), and where possible relevant supplier, opinions and insight on the matter
- Help with understanding the issues and opportunities to solve problems



A 'mock-up' for illustrative purposes.

Value Creation & Capture

There's an opportunity to create value through the consolidation of timely and relevant information gathered from OEMs and developers.

Value Creation

For Industry (i.e. the readers):

- Timely and relevant information about US infrastructure challenge
- Access to the OEM and developer view through issuing body's network
- 'Piloting through the problem' - Availability of a single reference (the information is difficult to find except in piecemeal, where available)
- Prioritization of issues in aggregate
- Insights provided by issuing body

Value Capture

For Issuing Body (i.e. the speedboat):

- Brand affiliation - Company logo on report
- Free use for any purpose - Distribute the 'white paper' at their discretion
- Access to OEM and developer information

Survey Execution

General Considerations:

- Maintaining confidentiality - individual responses and reporting survey results only in the aggregate.
- Precision and consistency - Make sure that wording chosen for questions has the same meaning and is consistent for all respondents.
- Interviews to be completed by telephone or in a group meeting format (or possibly by email)

Timeline:

Three (3) 'stage gate' meetings have been proposed by Thomas Poulsen. Team needs to consider timeline of key activities.

- Tuesday, October 6, 2020 at 1330 PM CET
- Tuesday, October 27, 2020 at 1330 PM CET
- Tuesday, November 10, 2020 at 1330 PM CET

Key Activities::

- Develop timeline of key activities
- Sample selection (list and assignment of targets)
- Survey design (list of questions)
- Performing interviews / meetings (execute survey)
- Collation of information
- Draft report design (organization)
- Insight and analysis
- Final report design
- Report Review

Survey Execution

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Sample Selection (i.e. Survey Targets):

OEMs:

- Siemens Gamesa
- MHI Vestas
- GE Renewables

Developers:

- Orsted
- Copenhagen Offshore Partners (Vineyard Wind)
- Equinor
- Shell New Energies
- EDP Renewables
- Dominion Energy

Relevant Suppliers:

Should relevant suppliers be contacted for targeted insights once information from OEMs and developers is received?

Relevant Definitions:

Infrastructure – defined as ‘hard’ infrastructure which includes harbours (quayside, draft, hardstand, laydown areas, and other port features), roads, bridges, terminals, industry facilities (plants, testing, etc.), and equipment. It excludes ‘soft’ infrastructure which may include capabilities, policies, etc.

{Excerpted from document produced by Morten Basse}

Survey Execution

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Interview questions should, at the very least, be selected on the basis of precision, level of insight offered, and the final deliverable contemplated. A list of possible questions is provided below to illustrate the possible range of questioning.

[Sample] Possible Survey Questions:

General:

- Where does infrastructure rank in your list of challenges with project execution in the US? (Biggest challenge / Top 3 / Moderate / Not a concern)
- What is the largest risk factor related to infrastructure in the project planning phase? (What challenge exposes you to the most project risk?)
- Are you pleased with the pace of addressing infrastructure challenges? (No it needs to be quicker / Somewhat / Yes)
- In your view is there any infrastructure challenge that you think can't be solved (in the short-term)?
- Is there an infrastructure challenge that needs to get more attention?
- Can you order the infrastructure challenges in order from 'most' to 'least' concerned? (provide list of infrastructure challenges)

Equipment:

- What is the largest risk / challenge related to equipment?

Manufacturing:

- With limited manufacturing capacity in the US, what is the largest risk / challenge related to manufacturing?

Financial:

- Have US infrastructure challenges impacted project financing?

Government:

- Are you pleased with the level of commitment State governments have shown to addressing infrastructure challenges? Is there a particular State that you would single out as particular responsive?