Joseph Triepke

Partner ◤ Lium

"With the change in the White House this year, you've just seen (the offshore wind) sector get turbocharged."

◤ What is your role with Lium?

I'm a partner in the research practice at Lium, where we cover power, renewables, and shale.

We're a hybrid data service/equity research platform. Our focus is on providing predictive data and reports for investors and executives who are deploying capital into the energy sector and renewables.

We cover both offshore and onshore wind power, with a geographical focus on the U.S.

◤ With U.S. offshore wind taking off, what is being done to address the U.S.'s immature supply chain, and why is the supply chain considered immature?

Starting with the second question first on why it's immature, we've written that we see 2021 as an inflection year in the sector — it's a transition year from plans on paper to steel in the water.

A new sector is emerging from a long incubation period into actually building everything that has been planned. Because the focus has been on development planning, technology, financing, and the regulatory and permitting hurdles; there is no supply chain. We've never built this stuff at scale in the U.S.; we've only planned it and thought about it and talked about it for a decade.

In terms of what's being done, to circle back to that question, you're seeing the first inning of capital deployment in the story now. The sector stands at the cusp of investing hundreds of billions of dollars in Capex. And this is going toward building infrastructure, repurposing facilities, manufacturing the actual equipment like turbines and vessels that are needed, and also assembling the workforce.

◤ How do you see regional markets developing around the U.S. offshore complex?

If you asked us that question in five to 10 years, we'd probably be talking about two markets. There's going to be the East Coast and the West Coast, and both will be climbing up the development curve. Each of these, East Coast and West Coast, have very different problems to solve.

The West Coast is going to be a floating offshore wind market, and so that'll come with different assembly and quayside requirements, different kinds of equipment. And the East Coast will be fixed bottom, so that comes with its own issues. If you think maybe shorter term between now and 2025, most of the development will be on the East Coast. It's just further along the curve technologically and regulatory speaking.

In that near-term timeframe, you'll probably see these markets develop within state lines. There are various reasons for that. Certain states are promoting the space more. And some of them are approaching it more locally in terms of development and diversity and build-out. And we're seeing an interesting phenomenon where localized roof line for the companies is going to factor heavily into contract awards.

You're already starting to see some of this happen with turbine packages, where we can already start to see some of the manufacturers dominating within state boundaries. And that'll be interesting. Guys who invest more in a particular state will have a better shot of winning contracts there.

In the short run, as we think about North Carolina and New York, Massachusetts, Maryland, these all might look a little different and proceed at different paces. But then, as you start to achieve scale a few years down the road, it's going to just be thought of as the East Coast market.

◤ Will this dovetail into a domestic manufacturing boom? And what factors are involved in making that happen?

The short answer is yes. We see a huge boom coming and I think, to elaborate, we'd raise three key points related to your question: First, I think the market is generally underestimating the size of this opportunity. We've seen third-party estimates that fall into the $100 billion to $150 billion spend range. At Lium, we are modeling north of $200 billion in U.S. offshore wind Capex spending over the next 10 to 15 years. Consensus expectations are too light for a couple of reasons

including development acceleration under (President) Biden, indirect infrastructure requirements, and inflation.

The second key point is that developers are going to focus on local content. That's going to be a key element of the story. It's part of the reason why these developers have been able to sell these projects to local communities. There's going to be a large build-out of factories, foundries, assemblies, mills, ports, etc. We're already seeing some of those investments begin. And a lot of Capex will be invested that way driving domestic manufacturing.

And finally, the third point is what we're seeing is just the regulatory climate. With the change in the White House this year, you've just seen this sector get turbocharged. So, there's a big push on the regulatory front that will drive domestic content.

How does the Jones Act put a market wrinkle in offshore construction, and what can be done to tackle that challenge?

The Jones Act requires that commercial activity in U.S. waters utilizes vessels built, owned, and operated by U.S. citizens. Since this pertains to transport, we will likely see some foreign-flagged installation vessels used. In fact, with the very first handful of U.S. turbines installed, we have seen that happen where equipment is ferried using U.S.-flagged vessels to foreign-flagged wind-turbine installation vessels.

But as we think about the next couple of years, there's going to be a need for a lot of vessel construction, both from the Jones Act perspective, and those will be your crew transport and supply transport vessels, but also on the installation vessel front. And we're seeing the start of that now. I think the first two WTIVs that are U.S.-destined have been ordered, and we're going to see a lot more. And the reason is that, even if you look globally — and we track about 30 vessels outside of China that could do work in the U.S. — if you look at those vessels, No. 1, they're very busy in their markets, which would be Asia Pacific and in the North Sea. And, No. 2, a lot of those vessels are too small to handle the new size of turbines that we're seeing on the U.S. projects. You're going to have to build larger vessels and, in general, more vessels to accomplish the power gen targets that we see for U.S. offshore wind.

Bottom line, what does offshore wind mean for the job market?

Bottom line is, probably close to 50,000 jobs directly in the sector, with another 25,000 to 40,000 jobs created indirectly to support the industry. It's going to be a jobs juggernaut, a massive employer over the next 10 years. Positions will include some high paying, good, stable jobs in manufacturing, construction, engineering, marine, and more.

One interesting thing that we looked at over at Lium was to analyze job openings across the renewables landscape, and we have already seen, this year in fact, that U.S. offshore wind hiring trends have surpassed some other notable segments in renewables. Open positions this summer in U.S. offshore wind were roughly the equivalent of utility scale solar, which is huge.

Offshore wind is expected to be a jobs juggernaut.

That kind of puts in context some of the urgency around workforce assembly and really this beginning of the supply chain journey.

Turbine manufacturers will no doubt see a huge increase in business, but what does offshore mean for some of the tangential businesses that could profit in this venture?

I think that's huge. And everyone's going to look at the turbine guys first, because they're the most visible, and they announce big awards, and they're leading edge, but we're tracking a couple dozen publicly traded companies outside of the turbine manufacturers that have large exposure to U.S. offshore wind. And a lot of them are developing divisions or hiring business development specialists to go after the space and talking a lot about this opportunity to investors.

One of the things to watch will be companies that have been involved in U.S. offshore oil and gas activity repurposing their assets and in-house talent pools to serve this new industry — such as the helicopter companies, the boat companies, a lot of the engineering and service companies. And again, that's 24 or so public companies, but there are over 700 private companies that we've identified that are chasing opportunities in the space as well. And these are not turbine manufacturers. This will be a huge opportunity for companies outside of turbine specialists.

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