

Progress is good, but more needs to be done

One of the executives who took part in this issue's roundtable interview was Kurt E. Thomsen, of Advanced Offshore Solutions Aps. Here, he goes into greater depth about a few of the more pressing issues facing the wind industry.

PES: What are the obstacles to the development of wind energy?

Kurt E. Thomsen: Personnel, equipment, knowledge and money. The reasons are this: we need personnel in very large numbers. The people however do not materialise out of the blue with all the competence that is required in order to carry out production line work offshore.

WE need to train them, to implement a new mindset to the predominantly construction workforce we employ. This is difficult but necessary. If we cut corners, people will be injured and even killed on the job. Therefore, a large effort is required in order to develop and train the workforce we need. EWEA has recently estimated that in 2020, 145,000 people will be working in the European wind sector – 75,000 of them offshore. Currently there are about 2,000 people who can call ourselves experienced. This presents a very big challenge to us all. To educate 70,000 people in 10 years while putting up wind farms offshore is almost impossible.

Equipment is crucial. For the public, this is now almost boring to talk about and certainly to hear about. But it is crucial that we develop the necessary and capable equipment for the industry, otherwise we cannot deliver the required targets within the time-frame that has been given. I am slightly worried that the equipment now being built is too small and too focused on a 'here and now' requirement, rather than looking at the

big picture. But this is what happens when you must build your business case on an investment horizon of two or three years of work at best. We see these 110m vessels coming out with not much space, capacity and, certainly in my opinion, not capable of delivering what is required in four to five years in terms of size and the exposure to the elements in the North Sea.

We must not forget, that it took the oil and gas industry 50 years from getting their feet wet until they got into deep water. And by the way, they still have accidents. We are trying to bridge the gap in less than 10 years. With what competence? And with what equipment?

This also takes you into the next item – knowledge. Do we know what we are doing? Are we comfortable with the level of expertise in the industry? Comfortable enough to go to the mid-North Sea where you can experience 25m waves? Frankly I would not like to be jacked up in a storm out there. The level of competence is low at this point. We have a number of companies being developed with a knowledge span from nothing to a whole lot. But this goes for both sides of the negotiating table – those who buy and those who sell services and goods to the offshore wind industry. The worst-case scenario is when you have no knowledge on both the buyer's and seller's side. And this can easily happen today. Then you get a situation where a disaster is waiting to happen. And as a good friend once said: you don't achieve

any positive results by putting two dead bodies into one bed.

Money is the last factor I would mention. We have seen how utilities are being incentivised in order to build the wind farms offshore, and while that is all well and good, I believe there is a major flaw in the entire food chain. The industry requires plant and personnel for the offshore installation side. But this is left entirely to the prosperous entrepreneur to design build and operate his equipment. This is really bad. With an investment exceeding €100m easily, and the banks in a non-spending mode, we do not achieve what we want. And when the European Investment Bank and others are not capable of stepping into the arena, the possibilities of financing become extremely slim.

Therefore only a small handful of craft will be built – and not necessarily the type and size of craft we want.

PES: How are governments and the energy industry encouraging innovation?

KET: I think they did their best by issuing policies which set out the numbers for the industry. By giving incentives to the developers and by paving the way for pan-European co-operation in this industry.

I do also think however, that they missed out a very large portion of the industry in that they forgot to look at the entire supply chain and only focused on the requirements of the utilities. Nothing



wrong with listening to what the utilities want, and frankly they have a far easier access to the ears of the politicians than, say, I have. Thus they are heard and I am not. But the utilities still struggle with the conundrum of having to work with small companies which deliver the infrastructure and knowledge they require, in order to deliver the renewable energy they are obliged to install.

The inability for parts of the industry to talk to the politicians is a big problem and will slow down the industry. Let's take an example. There are now some five vessels in construction for the European offshore wind industry. This is all well and good. But while we are closing down the European shipbuilding industry at large, the vessels which are owned and operated by European companies are built in China and South East Asia.

In so many ways I understand the companies building the vessels. They want maximum value for their money. But since we have a situation where the rest of the world is subsidising their industries and blaming the 'Credit Crunch', we in Europe let an entire business bleed to death in order to serve an industry in which we are leading. We could be leaders in building these vessels as well. But to my knowledge Windlift 1 from Bard is the only newbuild to come out of Europe. This is altogether very very bad. And this is an

area where the politicians are sleeping the day away.

PES: The EC has earmarked €6bn in grants for R&D into wind power innovation. Many say that's not nearly enough. What's your view on the state of R&D in the industry?

KET: My problem with R&D grants is that they seem to end up in the wind turbine developers' pockets, the universities which are trying to develop more outlandish solutions. This is ok per se, that's what these institutions should do. But we are trying to achieve a solution for the 'be all and end all' of renewable energy production in Europe. Without the right skills and technologies and whilst it is important to figure out how to cope with power overruns, forecasting the amount of power to be produced in the next 24 hours, etc. It is even more important to figure out how to get the turbines out there and operating without loss of lives, limbs and/or equipment.

This is fairly low-tech and thereby not sexy for a scientist, I know. But it is actually more important and not the least expensive to figure out. If you leave this part of the technology development to private enterprise it will almost certainly not be developed properly. For this we need grants as well.

How do we install cables offshore? The way it is done now is slow unreliable and if you ask the insurance companies

where they have paid out, 95 per cent is for cable damages. Now isn't it important to figure out how we can do this better?

The solution today is for the insurer to raise the premium and deductibles for the project. This cost however is put on the consumer in terms of a higher electricity price. This is actually counterproductive to what we are trying to achieve. There are many examples like this which require action – now. But it doesn't attract any attention. So I am not impressed with the granting schemes of the EU in general. ■

Advanced Offshore Solutions Aps is a leading consultancy company for the offshore wind industry. Established in 2006 by Kurt E. Thomsen, the company has established a reputation for being world leading in the design, build and implementation of transport and logistical solutions for the offshore wind industry in particular, and the offshore heavy-lift industry in general.



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AOS offers project management and execution, HSE and Q standard and policy development, transport and logistics solutions and evaluations, technical due diligence, O&M solutions as well as design and build of purpose made vessels and equipment for the installation of offshore wind farms.

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