At the heart of the industry
ASK THE EXPERTS

A world leader in offshore wind installation and service solutions, A2SEA A/S is dedicated to providing the wind industry with safer, sustainable, and more cost-efficient operations. We spoke to Kaj Lindvig, Senior Advisor.

PES: Welcome to the magazine. Before we get on to the main issues of the day, would you like to introduce your company and explain your role within the wind industry?

Kaj Lindvig: A2SEA started in 2000 by exploring new methods to efficiently transport and install wind turbines offshore by cutting the overall time per installed turbine in half, together with improving safety in regards to jack up rigs used before.

PES: As a company that’s installed most of Europe’s offshore turbines, what’s your on-the-ground assessment of the state of the market at the moment?

KL: The last five or six years have been recognised by the industry through improving, expanding wealthy business relationships for most companies involved in offshore wind installations, so for A2SEA. As by now, we do see quite some grey clouds in the sky. The UK market’s rounds 2.5 and 3 will not materialise at the expected timeframe and seem to be delayed by at least two to three years – expected to start in 2016, but the majority will not really start installation before 2017/18. On top of this, the German market is a bit disappointing in 2014/15 mainly due to the delays to get the grid connections ready for the developers and utilities to install and connect their turbines.

On the positive side, we see that many new purpose-built vessels arriving to the industry in the North European waters while turbines are getting larger, more efficient and run on higher availability. Another upside is the fact that actual wind resources seem to be on the higher end, adding 10-15% more full load hours to the turbine clock as previously expected.

PES: Can you tell us a little about your fleet and explain how it is suited to the specific challenges of the offshore industry?

KL: A2SEA has been pioneering the industry and was the first company to use converted, purpose-built vessels. Today our fleet consists of the first two semi-jack-ups which have been converted and upgraded a few times with longer support/jacking legs and larger cranes. The two jack-ups built in 2007 and 2008 are still reliable, good ‘work-horses’ for A2SEA and are installing both foundations and turbines on several of the most well known offshore wind projects being built between 2007 and 2013.

The first unit of second generation type offshore installation vessels arrived in Denmark in December 2012 (SEA INSTALLER) and the second of the same kind will arrive during spring 2014 (NB002). These six vessels will build the core part of A2SEA’s installation capacity until 2015, where we expect to welcome the first floating installation vessel – in this case in cooperation with our partner, Teekay Shipping A/S of Norway. The total fleet will at this time consist of six or seven vessels of different sizes and vessels will have their competitive advantage at different water depths, with different met-ocean conditions and sizes of components to install.
We trust to have the right and best flexible fleet to continue being an attractive partner for the future installations in offshore wind – 80% of the market to be covered by these vessels.

**PES:** We note that you were expecting delivery of four new crew boats at the end of 2012. What will these add to your fleet?  
**KL:** We have four on order; two are ready for delivery in spring 2013 and another two during summer 2013. These crew boats are built by Fred Odfjell in Norway on a Danish shipyard in Skagen and A2SEA charters these SWATH type vessels. Built as 24 pax swath crew transport vessels, these are capable to smoothly transfer up to 24 passengers to the construction site quickly and comfortably during high sea states.

**PES:** What do you think your new CSO, Martin Huss, is hoping to bring to the role?  
**KL:** Martin has more than 17 years of in-depth knowledge in the wind and especially offshore wind industry to the table, Martin Huss has held commercial and technical senior management positions with a turbine OEM, a UK utility and leading offshore consultancy. He knows A2SEA from his former time as both head of Germany and Group Sales Director role. He is now focusing on shaping a new Clients & Markets department, which will combine local knowledge in key markets like Germany and the UK, with the changed requirements within project sales and contracting strategies. Further areas of central focus are a continued deep knowledge of the industry, the needs of the clients and focus to each client’s specific project requirements targeting for efficient and safe installations through further implementing key account management and integration of tender and contracts into the sales department.

**PES:** The company’s business is mainly grounded in Europe, but are you looking to expand your operations in other territories?  
**KL:** We know how expensive it is to be a pioneer on a new market. We follow our clients through interesting developments in markets like the US, France and Asia, mostly covered by China, Taiwan, South Korea and Japan. Once these markets will show decent consistency, maturity and size we will be one of the first to enter here. We do see and prepare ourselves for a worldwide installation and service company for offshore wind.

**PES:** Can you explain how the process works with regards to initiating and carrying through a project? What stages would a client expect you to complete?  
**KL:** We often liaise with clients for years before a contract for the installation has materialised. Assessments of suitable vessel, harbour, logistic solution and installation method are of utmost important to add value to the agreed scope of work. The upfront planning process for a typical offshore wind project should ideally be
minimum one year, as for these types of projects like many others, the success comes via thorough planning as the devil lays in the detail. During most of the operation sequences you have to have a plan B even though you do not expect to use it, time is costly and lack of efficiency a major hurdle.

Typical projects include: Planning – Mobilisation –Executing – Demobilisation. These are facilitated through a close relationship with our clients, and followed-up through a lesson learned process.

PES: It seems hard to believe that the offshore market is just over 10 years old. What major changes have you witnessed during this time?

KL: Several issues, but mainly the following challenges:

• No European master plan for offshore wind: differences between countries, their permitting approaches and subsidy schemes; Denmark, UK, Holland, Sweden and Germany

• Regional differences and huge challenges between sites when it comes to met-ocean conditions like waves, swell, current, wind in areas such as The Irish Sea, the English Channel, the North Sea and the Baltic Sea

• Large differences and challenges regarding sea bed conditions and jack-up / punch-through criteria; very soft, soft, sand, clay, chalk, cliff, boulder stones, scour etc.

• Different contracting schemes and level of risks mitigated by subcontractors by different clients

• Last but not least: driving cost of energy down by approx. 30% until 2020 using more purpose-built vessels and increasing their efficiency

PES: Do you work with partners to develop your equipment so that it’s suited to your particular needs?

KL: Yes, we work together with clients in different levels of the supply chain – utilities, turbine OEMs, marine contractors, suppliers of foundations and suppliers to A2SEA.

It’s necessary to be flexible as changes come fast – who can predict the size of a turbine in 10 years’ time, the type of foundations, the installation technology or if the turbines are all floating.

PES: The company seems to be driven by a set of values, a vision and a mission. Can you tell us a little about these and how they impact upon your operation?

KL: A2SEA’s values have been very important when recruiting the best employees in the industry, the way we operate and the culture we have developed over the years. Our values have been up for discussion and change over the years, but always been agreed internally and in dialogue with our clients, that they still are key in order to execute successful projects in this industry: professionalism; openness; flexibility; teamwork and responsibility.

PES: What benefit does the membership of a number of associations (such as DWEG, EWEA, etc.) bring to your organisation?

KL: We believe it is important to be member of these associations to take our responsibility for the continuous work moving this industry in a better, more efficient and competitive direction. We know offshore wind is still dependent on public and political interest using support mechanism for at least some years in the future. The industry is still depending on support to compete with other sources of electricity: but the wind resource is for free until the day the turbine is decommissioned. Therefore we are looking ahead 25 years and longer.

The industry is rather young, we also need highly qualified people, we need European standards, we need continuous development and technical developments and guidelines to be developed as we take the next step. We need now what a couple of industries have built up within 50 years, we just had to do it in only 10 – and even now we still have a few steps to go.

PES: Industry standards at the manufacturing equipment and materials level are vital to the long-term success of the industry. Are we doing enough to ensure these standards are adhered to?

KL: We do suffer and work towards standards/recommendations for third generation installation and service vessels – but we strongly believe that what the installation business needs most are standards in contracting – for example the ‘logic contract’ for offshore wind, etc.

PES: What are your thoughts about prospects for 2013 with regard to your organisation, and the wind industry in general?

KL: We are still satisfied with both the market and our order book for 2013/14. A couple of new players entered the offshore wind installation market recently coming from oil and gas industries or the dredging industries – some new build vessels will probably exit the market due to lack of sufficient projects in Germany and UK during 2014 and 2015.