NORTHCONNECT FOLLOW UP - SUPPLY CHAIN SKILLS SHORTAGES

We have been asked to provide examples of skills shortages in the supply chain for the grid industry. The following examples are not for the grid industry per se, but relate to NorthConnect’s experience of the offshore, HVDC supply chain for the project.

The examples are symptomatic of a wider “capacity” issue in the supply chain, partly due to a shortage of skills, but also to a narrow market of supply chain players because of a historic low level of investment in these types of projects, which is now moving into a period of accelerated growth.

- **E.g. 1:** We have struggled to get hold of consulting engineers with experience of HVDC converter and cable design to work with us in the project team and as design consultants. There are a large number of projects now in development who are all after the same few people with this expertise and costs are excessive to secure their services.

- **E.g. 2:** We know from talking to people in the sector that a large Norwegian oil and gas survey of their sector of the North Sea in 2012, has put significant pressure on the availability of subsea survey vessels this year. Fortunately NorthConnect are not looking to carry out our main survey until 2013, but we understand that prices for this year doubled almost overnight with the launch of the procurement for the Norwegian survey. (for NorthConnect we are facing a cost of around £4m for the survey – doubling this would have a big impact).

- **E.g. 3:** The global market for HVDC technology suppliers and delivery contractors is extremely narrow. There are only two serious players, one German and one Swedish, with one other company trying to catch up and one recent new entrant from the US. However, this is a market that requires a large investment in research and development, and the experience and reliability gained from a long track record of successful projects (i.e. not one that new entrants can easily break into). All the developers of offshore windfarms and interconnectors are chasing the same two established suppliers which creates major capacity problems, with impact on prices, programmes and delivery risks for the clients.

- **E.g. 4:** Cable manufacture – sometimes a sub-contract of the above HVDC delivery and sometimes procured separately by the client. Again there are only two cable manufacturers in the world currently making HVDC cable of the rating and capacity that NorthConnect (plus any other interconnectors and the larger offshore windfarms) require. One is a Swedish company and the other an Italian subsidiary of the above mentioned German HVDC supplier. Current capacity between them is meaning lead times of two years, and this will only get worse as more offshore wind and interconnectors reach financial investment decisions and contract awards over the next three to five years.
• E.g. 5: Installation contractors – a similar problem in the field of subsea cable installation but this time driven by the shortage of vessels. This is a large cross-over area for the oil and gas supply chain, but we are competing in world markets for these and although we are hearing about a number of companies now investing in building new vessels, there is still a pressure and long lead times on securing particularly the larger vessels (E.g. given the length of NorthConnect at 600km, cables can only practically be installed by the largest 7.5 thousand tonne vessels of which there are only currently three in the world).

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