

MATERIALIZING LEADERSHIP: FROM OIL AND GAS TO RENEWABLE ENERGIES

**Odd Strømsnes, CEO – HAVFRAM
Norway**

“Onshore wind turbine installations will meet local resistance in many places due to the substantial footprint in nature”



The CEO of Havfram – the Norwegian subsea and offshore wind contractor formerly known as Ocean Installer – discusses the energy transition, the skills needed to become an offshore wind expert, and the challenges of onshore wind.

WHY DID YOU BECOME PASSIONATE ABOUT THE CHANGE FROM FOSSIL FUEL-DOMINATED ENERGY SYSTEMS TO SUSTAINABLE SOLUTIONS?

Odd Strømsnes. It is a competence-driven exercise; the energy transition will ultimately be governed by companies and institutions with know-how, skills, and experience, and one of the sustainable solutions in this context is offshore wind. Remember it is the oil and gas technologists of today who will be form the backbone of the technology muscle in the offshore wind developments of tomorrow.

HOW CAN NORWAY SET AN EXAMPLE FOR THE REST OF THE WORLD WHEN IT COMES TO RENEWABLE AND SUSTAINABLE ENERGY?

First of all, Norway has already set an example in the way we have managed and developed our oil and gas resources. Going forward, Norway can set an example by developing and grow the industry based on our current technologies, such as improve efficiency of the existing hydroelectric power and further grow domestic offshore wind farms.

HAVFRAM FOCUSES ON OFFSHORE ENERGY AND AIMS TO TRANSFER ITS KNOWLEDGE FROM OIL AND GAS OPERATIONS TO OFFSHORE WIND. AS CEO, WHAT DO YOU THINK ARE THE MAJOR DIFFICULTIES INVOLVED IN INCLUDING RENEWABLE RESOURCES IN THE OIL AND GAS ENERGY MIX?

Some challenges still exist making renewable energy profitable, which essentially means making the renewable energy business scale up; enforcing more efficient solutions; and creating a competitive marketplace for new opportunities. Economy of scale will certainly get the cost down – and this we can now see for bottom-fixed wind park developments all around the world. The cost competitiveness for offshore wind is continuously being improved relative to other energy mixes.

Nevertheless, it is impossible to ‘kill’ off oil and gas immediately and completely: it is the cash flow of today to finance the renewable investments of tomorrow. In other words, to complete the transition you need to have two thoughts going at the same time, it is necessary to slowly lower the use of oil and gas, and gradually augment the use of renewable resources at the same time. The world needs more energy and it is unrealistic that this supply is without a certain oil and gas mix.

YOU COME FROM THE OIL AND GAS INDUSTRY. IN YOUR OPINION, WHAT OPERATIONAL SKILLS AND TACTICS ARE TRANSFERRABLE TO OFFSHORE RENEWABLE ENERGY?

There are a number of similarities between the industries. To execute complex offshore projects the basics are pretty much the same. The ability to execute large and integrated projects; the use of marine based technical skills set such as vessel operations, lifting analysis, the basics of hydrodynamics, understanding currents and tides; the knowledge of government legislation related to licensing and the right to operate; and most importantly the implementation of an optimal quality and safety culture. I believe the renewable industry going forward has to learn from the best parts of the quality and safety culture being developed from the oil and gas industry over many years.

WHAT SKILLS ARE REQUIRED TO BECOME AN EXPERT IN OFFSHORE WIND?

There are different trades pending where in the supply chain you are located. Refining these skillsets is highly important in creating a team of experts in offshore wind. Some concrete actions that we have done recently include the new design of turbine installation ships, as well as optimized installation methodology for installation of foundations in rough seas. This is made possible through a combination of key recruitments of people with high level experience in a multitude of fields from offshore wind developments as well as our existing oil and gas team.

WHICH PART OF OFFSHORE WIND PROJECTS IS THE MOST TECHNICAL?

The most technical and complex part is probably the design and fabrication of the new turbine solutions for the offshore wind parks going forward. Next generation turbine weight is close to thousand tons. It is extremely complicated to install and position these structures more than 150 m above sea level. The turbine itself has a very small tolerance from a vertical position and we need competent workers to handle these incredible products.

In addition, there is the complexity of managing these large-scale operations. For example, we must ask ourselves, “How do we install 100 wind turbines safely and successfully? How do we do it efficiently so

that we are as cost-effective as possible?”

WHAT DO YOU THINK OF ONSHORE WIND?

First of all the energy we can harvest from offshore wind is more significant than from onshore wind. Basically governed by the fact the wind is stronger offshore. This means increased efficiency and we can get more energy out of the offshore developments than from onshore.

Secondly, we can see from the publicity that the onshore wind developments, at least in Norway, is increasingly unpopular – both from an environmental footprint point of view as well as the limited local value creation. These installations are often positioned in vulnerable natural areas where it’s obvious that large areas of ‘untouched’ nature is harmed. In particular the road infrastructure required to support these wind farms takes up a lot of area.

The third point is the obvious ‘NIMBY’ syndrome (*not in my backyard*)– where you don’t see the offshore wind farms.

WHAT ARE THE LIMITS OF OFFSHORE WIND AND ITS CONTRIBUTION TO THE ENERGY TRANSITION?

In principle I guess we can say its without limits. Especially when floating offshore wind becomes more competitive. However, the limits of offshore wind would be its environmental aspects. This means the danger of destroying fisheries, birds, and mammals. The protection of the environment is a constraint that needs to be managed in a proper way.

Another limit could be the supply chain. Potential limitations of assets and competence to cope with the growth scenarios of the industry. Like I have said before, scaling up the industry is also a limit within itself.

WHAT ARE YOUR AMBITIONS IN THE RENEWABLE ENERGY MARKET?

We are only focusing on offshore wind for the moment. Both floating and bottom-fixed. However, something that would interest us going forward is implementing floating solar developments offshore.

Essentially, anything related to marine installations and offshore developments in an renewable context would be our focus areas.