CorPower Ocean Redefining Wave Power

KIC InnoEnergy

CorPower Ocean AB was founded in 2009 by Dr. Stig Lundbäck, after he had spent about 30 years of his life imagining and designing various kinds of highefficiency pumping systems. Contrary to what might be expected, Dr. Lundbäck is not an engineer, but a medical doctor with a deep passion for the pumping principles of the human heart.

Few could have imagined that such a profound interest for the way the human heart works would have brought him to envision what today represents CorPower's core technology. The concept is a peaceful giant buoy gently oscillating in resonance with the sea waves, constructed to harvest clean energy from one of the most powerful sources on earth: the ocean.



KIC InnoEnergy SE is a European company that fosters the knowledge triangle of education, research and business in order to boost innovation and entrepreneurship. Our strategic objective is to become the leading engine for innovation and entrepreneurship in the field of sustainable energy in the world. KIC InnoEnergy is, along with Climate and ICT Labs, one of the three Knowledge and Innovation Communities (KICs) created under the leadership of the European Institute of Innovation and Technology (EIT). We are a commercial company with 27 shareholders that include top ranking industries, research centres and universities - all of them key players in the energy field. More than 100 additional partners contribute to our activities, forming a dynamic network that is always open to new entrants that will further our pursuit of excellence.

KIC InnoEnergy is profit oriented, but has a "not for dividend" financial strategy; we reinvest any profits generated in our activities.

Foreseeable impact

If we take 100 as the cost of any good produced or consumed in Europe, 27% is energy cost. Thus, just 1% of reduction in the cost of energy will represent €20B of savings, ensuring increased competiveness in the European industry.

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Success story. CorPower



The Potential of Wave Power

Ocean waves are an enormous available resource of clean, renewable energy. They have an energy density several times higher than wind and solar power. The flux of ocean wave energy is also more stable and predictable than wind, making it easier to optimise power outtake and forecast production.

The Recipe for Success

Despite its great potential, wave power has not yet proven its competitiveness compared to other more established renewable energy sources. Several projects have proven its technical feasibility, but almost none have been able to demonstrate its commercial viability. To understand what it really takes to succeed in such a challenging field, we turned directly to CorPower's CEO Patrik Möller.

"First of all, it takes a unique technology. It took time, effort and many trips around Europe and Asia to objectively judge the concept compared to the state of the art, but after working on an in-depth technology assessment it was clear that the technology had real potential compared to other wave power concepts".

However, no idea can be taken to the next level without bringing the right people on board. "It was in 2013 that we were able to attract enough funding to structure an experienced team and this was when things really started rolling. Having verified the technology with proper pilot testing, it was much easier to talk to energy companies and investors."

"Last but not least, you must never give up." This is one of the key factors, which allowed CEO Patrik Möller to transform an unpredictable technology to one of the most promising projects in the field of wave power. "No matter how many times you get turned down, if you believe in your idea you must keep pushing. But be objective about the potential of your technology and be real about what it takes to fund and develop your business".

Testing a Revolution

Today, CorPower Ocean stands on the brink of a major breakthrough in terms of redefining the efficiency of wave energy generation. Its Wave Energy Converter (WEC) promises to be as much as five times more efficient than competing solutions, and at a third of the cost.

KIC InnoEnergy has helped CorPower to assemble a team with extensive experience in energy generation, design, manufacturing and system engineering. It has also provided the essential network, market expertise and financial support to allow the team to transform tomorrow's technology into today's renewable energy applications. Möller affirms that, "KIC InnoEnergy provided a quality stamp that allowed us to gain additional reputation and credibility in front of partners and investors. This has provided a favourable context for CorPower to grow."

Looking forward, CorPower Ocean aims to establish a new generation of wave power for utility-scale energy generation, offering energy at a cost that can compete with conventional non-renewable energy resources. Today, through the 15 Million Euro joint project HiWave, CorPower's CEO Patrik Möller has successfully started a collaboration with the Spanish energy giant Iberdrola Engineering and the Portuguese organization Wavec Offshore Renewables to prove the technology on a full scale by 2016. Expectations are running high!

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