

## Ocergy, An Experienced Startup Focused on Floating Offshore Wind: The New Renewable Energy Frontier



**Dominique Roddier**  
President & CEO

**Ocergy**

**Interview conducted by:**  
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**CEOCFO Magazine**

**CEOCFO: *Mr. Roddier, what is the grand vision behind Ocergy, Inc?***

**Mr. Roddier:** Ocergy is a technology company that is developing offshore sustainable technical solutions. We have two products. The first one is the OCG-Wind. This is a floating solution for offshore wind. The principle there is that in most existing offshore wind projects, the turbines extend directly into the seabed; however, as we get into deeper waters, this becomes a challenge, so we need to replace the foundation by a structure that floats. The turbine is mounted on a floater that is anchored to the seabed. Then, in the same way as existing projects, interarray cables are connected to the turbines and to a substation and the electricity makes its way in to the grid. That is the first product.

Our second product is the OCG-Data. This is a data platform that not only monitors the waves, the wind, the current, but also biodiversity, including birds and bats, marine mammals, and all type of underwater sea life. It will enable us to know what type of birds are coming to a site and being able to look at migration patterns. Then underwater, we will be looking at marine mammals; whales, sharks, dolphins and pelagic fish, which is very important for fisherman. We will also look at very small structures that can form life around these wind farms. Therefore, the OCG-Data is to be used to prepare a site for future wind development, obtain data for environmental impact assessments, acquire permits and help our relationships with all our stakeholders, including OGM and fishermen.

**CEOCFO: *Are similar products available today or are these both somewhat unique? Where does your approach stand in the range of what is available?***

**Mr. Roddier:** In terms of the OCG-Data, there are some buoys that measure, what we call metocean conditions. This includes the wind resource and the waves and the currents. These instruments do not take a lot of power; hence the buoys are pretty small. We are different, because our buoy is larger, so it has more capacity in terms of power available. It has two small wind turbines on the buoy and some solar panels. We have a system that is more stable and that can accommodate more instruments. For example, a bird radar requires roughly 400 to 500 watts of power, which is quite a bit for a zero-emission, non-grid connected buoy. This is where we are unique, as we are increasing the amount of different data stream that we can gather. It has not been necessary yet to measure in-situ all the bio-diversity data for wind farms, but the regulations are getting more and more stringent, so we need to start to pass impact assessments.

The OCG-Wind is not unique. We have about ten to fifteen competitors in this space. One of the leaders is a company called Equinor, developing the Hywind. They are Norwegian. They deployed the first floating wind turbine in 2007. Another company called Principle Power, Inc. deployed the WindFloat, the second full-scale floating wind turbine in 2011. I was part of the start and growth of that company with my current partners for a long, long time. Today, PPI is also one of the leaders in the space. All these companies with their prototypes and pre-commercial projects were focused on the

basis of proving that Floating Offshore Wind is technically and economically feasible; that we can make a turbine float at some reasonable cost. Today, the industry has proven all that. The goal is to enable commercial projects, on the scale off 700+ megawatts. Now, the challenge is that the cost needs to be competitive against other sources of renewable energy generation.

The biggest technical difficulty is how we can scale up. It is all about industrialization and supply chain. Our system is different in the sense that we are starting with the experience of knowing how to make these systems work, but now we are really focusing on how do we install 50 units in one year and how do we reduce the cost? We had this wonderful opportunity to take a blank slate and, knowing what we know today and what we knew 10 years ago, to design a better system.

**CEOFCO: *Why is now the right time?***

**Mr. Roddier:** You saw the change in administration and the recent announcement from President Joe Biden on offshore wind for the east coast. This is the first time that we have really heard about offshore wind in the US. Therefore, we have a lot of new projects coming on. Today, everything is close to shore, in a depth of less than 50 meters of water. By being able to go deeper, we open more areas on the east coast further from shore. We also open up the entire west coast of the US which gets deep very quickly. Floating Offshore Wind is very important for the US and will see the number of projects growing.

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In Europe, there is about 20 gigawatts of installed bottom-fixed offshore wind projects. However, most of the good sites have already been developed, so the next frontier is in deeper waters. We are now seeing floating projects in Scotland and France that are being developed. In Spain, Italy and the rest of Europe there is also a large number of great potential projects.

Asia is going to be a huge market as well. It is just exploding right now. There are sites in Japan, Korea, Taiwan and China; these are the very big development areas for us.

**CEOFCO: *How are you reaching out to prospective customers or partners? Is it somewhat easy to get a foot in the door?***

**Mr. Roddier:** This is a small industry and having been in this space for more than 15 years we know all the developers well. Therefore, when I left my role as CTO of Principle Power, people were wondering what we were going to do. We spent over a year in stealth mode, entirely focused on developing our new technologies without talking much to anyone. COVID hit at that exact same time. Once we started reaching out to our customers, curiosity helped us get to the first meeting and present our solutions.

That said, if the solution had not resonated with the developers that would have been the end of it, but I think we were pretty much on target. So overall for us it was not extremely difficult to get in. For someone new that is just trying to get in this space right now with a new concept, I would assume it can be quite difficult to get to the right person, especially in the middle of COVID. We were lucky in that sense.

**CEOFCO: *How are you able to do this cost effectively? What have you learned? What do you understand that will make it a viable solution?***

**Mr. Roddier:** This is a very good question, because if we cannot do this stuff effectively then we will not have a floating offshore wind industry. We have a bottom-fixed industry (where the turbine extends into the sea bed) and will keep it at that. The reason we are able to reduce the cost is because we really understand the construction and we are focusing on the areas that need reduction. For example, CapEx is money that you up front for capital expenses. Primary steel is 50% of the CapEx, so being able to reduce the weight of the structure is going to reduce your cost. Therefore, a lot of emphasis is on making our system lighter than everything else out there. That will reduce the main cost of the structure.

If you have a lighter platform, then you need fewer mooring lines. Your mooring line tensions are also smaller, so the vessel that you need are not as big. If a platform can have 3 mooring lines instead of 6, then it's going to take you half the time to install your mooring system. The result is that with the smaller / lighter platform, all of these costs are reduced. On the other hand, if your structure increases in weight, then you get hooked into a vicious cycle, where these costs increase on top of you. Being able to really understand the cost structure and the weight you need to work on frames what you need to do; this is a big one.

The second one is about understanding the local supply chain: the harbors and existing infrastructure, the shipyards and passages that are there and try adapting your design so it can be fabricated locally with the infrastructure that exists, instead of waiting for very large investments that will modify the local supply chain, because if you do that, then your schedule and your budgets are all going to get blown out of proportion. Eventually the project will always end up having to pay in some fashion for these investments.

**CEOFCO: *What type of maintenance is needed?***

**Mr. Roddier:** It is very similar to a wind turbine. We tried to get the schedules in-sync in terms of Operation and Maintenance (O&M) with the turbines. Initially you have inspections every year and more inspections every five years to make sure that your platform operates. Therefore, you have a lot of preventative maintenance to make sure that things do not fail and then if things do fail then you have different steps that you can take to resolve them swiftly. However, it is kind of like a car: if you take good care of it, it will operate for a long time.

**CEOFCO: *What has changed in your approach over time? What have you learned through the development process?***

**Mr. Roddier:** Like everyone, we accept the fact that we have made some mistakes and what we have learned is not to make the same mistakes again. When you create your first or second startup, you do things and later you discover that you might not have had the best approach or made the best decision. This is one of the advantages that we have today compared to fifteen years ago, both in terms of the technology, some of the decisions that we made in design, as well as the decisions that we made in the corporate philosophy or positioning.

The same for some of the bold financial decisions that we made and the type of investors that we brought in, and some of the things that we agreed and disagreed on. Today with Ocergy, we have the chance to start from scratch and knowing what worked and what did not work; so now we are focusing on what worked, and what we know our clients need and can or cannot accept.

**CEOFCO: *How far will the recent funding take you? What are your plans?***

**Mr. Roddier:** Exactly three years.

**CEOFCO: *That is pretty good!***

**Mr. Roddier:** Yes, that is very good!

**CEOFCO: *There are many companies to look at today in terms of energy. Why should Ocergy stand out?***

**Mr. Roddier:** When you create a company, you have to look at the big picture of where you want to go. What creates a company is the team and what creates a team is the people that you hire. We are hiring very talented people that also want and are happy to work in renewable energy, and feel the passion to be in that space. I think that that is going to be very, very important, because it takes a long time to build up the know-how, especially since this is a very technically challenging field. The structural engineering coupled with the aero-hydrodynamics due to the wind and the waves is very complex, so being able to build these skill sets and keep the people motivated is essential. The team that we are creating and that will represent us day in and day out in client meetings, conferences etc. is what will make us stand out.

Understanding what our clients need and having open discussions with them and then being able to modify our strategy to meet these needs is also very important, so we do not work in a vacuum. We are now working with the developers and the turbine suppliers and we are tailoring our solution to their feedback. We take criticism very positively, and while we make mistakes, we do not say, "Our way is the way." We go back and think about what the implications are, and we try to make our product better.