



KETIV

CLEAN TECH CASE STUDY

Offshore Wind Energy

A Conversation with Marine Innovation & Technology

Berkeley, California consulting firm Marine Innovation & Technology focuses on solving challenging offshore engineering problems that involve complex hydrodynamics. Their newest project is the WindFloat, a platform designed to produce renewable electrical power in areas where water depth exceeds 50 meters—which includes many coastal areas near large urban centers and areas where proximity to the shore is inconvenient.

The innovative features of the WindFloat dampen wave and turbine induced motion, enabling wind turbines to be sited in previously inaccessible locations. The platform has been adapted to support large wind turbines with up to 10MW of renewable power production per unit.

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Principle Power, Inc. in Seattle, Washington, has purchased the WindFloat technology and working with MI&T, is developing and marketing it for the commercialization of green electricity. Principle Power, currently pursuing projects in Portugal, Oregon, and Maine, will deploy the WindFloat technology worldwide.



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- Our relationships with key VC organizations, and groups such as the Environmental Business Cluster, allow us to help our clients locate and obtain funding
- We've developed a cost-effective services package for Clean Tech startups that positions them for success with Venture Capital firms
- Our program enables clients to satisfy the requirement to demonstrate a high probability of success

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Inventive solutions for complex problems

We visited with Dominique Roddier, one of the principals at MI&T to learn more about how his company uses Autodesk solutions in their design work. Dominique obtained his doctorate in Naval Architecture from UC Berkeley and, after working in Houston in the offshore division of ExxonMobil's Upstream Research Company, co-founded Marine Innovation & Technology.

MI&T relies on a number of software solutions to engineer their marine solutions. The list is extensive and includes WAMIT, RhinoMarine, OrcaFlex, and more. They also employ Autodesk solutions in a suite of tools that include AutoCAD Mechanical 2010, Autodesk Inventor Professional 2010, and Showcase Professional 2010 made available through the Clean Tech Partner Program.

Quick Uptake. Quicker Output.

The ability to aptly use the software almost from the time of installation proved valuable to Dominique and his team. KETIV was told that the team had 3 weeks to completely render and model their concept. Even though new to Inventor, within just two weeks they were close to finishing the task. In one day of training they covered two days of typical instruction. With Inventor's Frame generator they created structural members for the bottom of WindFloat.

Interoperability is Essential to MI&T

Dominique explained that he will design the underwater structure in RhinoMarine, software particularly suited for naval architecture needs, and then export that to a webbing model. He will then build the topsides and create his rendering for marketing materials or his reports.

KETIV located an add-on solution at Autodesk Labs that imports Rhino models and another that converts models to open better in Inventor.

"We have absolutely no problem importing from Inventor into Rhino or Rhino into Inventor," said Dominique. "To me it's important to not build two models when we can build just one—and be able to use it in different ways." Working with KETIV has been more than satisfactory for Dominique. They were on a budget and KETIV worked with them to match it.

"Our designer received one-on-one training from KETIV," explained Dominique, "and we are all very appreciative of that. The KETIV instructor is very accessible to us." Dominique concluded the conversation by saying that, "We're a small company doing a lot of things. Simplifying every task is critical. And when you're working with a model it's important that the tools work well so that you don't lose your work because something crashed. That reliability is important to us."



Marine Innovation & Technology

Marine Innovation & Technology WindFloat™
Developed in Autodesk Inventor

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