



HOMER Energy Helps Craft 75% Renewable Deal for Virgin Limited Edition's Necker Island

HOMER Energy, a Boulder-based company specializing in feasibility and design of renewable energy systems that integrate multiple power sources, provided the analytical and modeling services behind a deal announced yesterday to build a new island energy system powered by up to 75% renewables.

Boulder, CO (PRWEB) February 5, 2014 -- [HOMER Energy](#) has used their HOMER (Hybrid Optimization of Multiple Energy Resources) model to demonstrate that most island locations can reduce their fossil fuel consumption by as much as 80% given current technology, far more than mainland utilities have achieved, while simultaneously decreasing costs. Getting islands to step forward and actually do this has been a challenge, however, until now. HOMER Energy and the HOMER model played a central role in a deal announced yesterday between Virgin Limited Edition and NRG Energy to build a mostly-renewable energy system on Necker Island, a high-end resort owned by [Virgin Limited Edition](#). The new power system will be a "hybrid renewable microgrid," which integrates multiple power sources into a single system to meet local electrical needs.

Prior to the project's RFP release, Dr. Peter Lilienthal, HOMER Energy CEO, used the HOMER model to identify hybrid power system configurations that were most likely to be economical given Necker Island's electrical use patterns and the particular mix of renewable resources there. He then worked closely with the RFP team, led by [CohnReznick Think Energy](#), to evaluate the project proposals for solid technical feasibility. The Necker Island system will integrate solar, wind, and storage with an existing diesel generator.

Sir Richard Branson, Founder of the Virgin Group, and David Crane, CEO of NRG Energy announced the deal at the Creating Climate Wealth Summit on Necker and Mosquito Islands ([NRG Feb 4](#)). The Necker Island system will set the stage for more islands to switch to a predominance of renewables, replacing dirty, expensive, diesel-powered generators with a combination of renewable energy and storage. The Summit also kicks off Branson's [Carbon War Room](#)'s "Ten Island Renewable Challenge," which is enlisting other Caribbean islands to build their own mostly renewable power systems. Dr. Lilienthal is serving as the energy expert for the Summit's utility renewables track.

"It was an honor to work with NRG and Virgin Limited Edition on this project," says Lilienthal, "because both companies clearly want to take a leadership role in high penetration renewable systems. But this ground-breaking step is only the beginning. Hybrid renewable microgrids are economical today on tens of thousands of islands throughout the world. It's a matter of finding the will and the skill to build them. This project is not just a demonstration – it makes strong economic sense. And that's only going to become more true in the future."

A critical challenge faced by the negotiating team was to create a new financial structure that matched the technical goals of minimizing the use of diesel fuel, which requires tight integration of the renewable

sources with the existing diesel generator. A common condition in retrofit situations, where an island is working to update an existing diesel-powered electrical system, is for the island to continue ownership of the diesel while the renewables are owned by the project developer. "In that situation a standard Power Purchase Agreement is not sufficient," Lilienthal says. "The Diesel Reduction Agreement instrument created for this deal has incentives for both sides to run the system using as much renewable energy and as little diesel as possible."

"Islands are paving the way for hybrid renewable microgrids throughout the world," says Lilienthal. "The high cost of diesel makes them economical on islands today. The lessons we learn there will make them possible everywhere in the future, replacing fossil fuels and providing clean, reliable energy wherever it is needed."

For more information contact Marilyn Walker, 720-565-4046

HOMER Energy

HOMER Energy LLC is the global leader in the design and analysis of remote microgrids. The HOMER (Hybrid Optimization of Multiple Energy Resources) software has over 100,000 users worldwide. HOMER Energy provides the HOMER software, consulting, training, analytical services, and community market access tools to professionals, researchers, and enthusiasts in the energy industry who desire to analyze and optimize distributed power systems and systems that incorporate high penetrations of renewable energy sources. Visit <http://homerenergy.com> for more information.

CohnReznick Think Energy

CohnReznick Think Energy was founded in 2000 as a full-service renewable energy consulting firm operating in the United States, and internationally, specializing in request for proposal (RFP) management, project development support, due diligence advisory, and energy purchasing services. We have extensive experience in all aspects of energy and renewable energy markets, working with commercial and industrial consumers, government agencies, investors, project developers, educational institutions, and non-profits. Visit www.crthinkenergy.com for more information.