Wind Economic Incentives and Opportunities

R.P. DELIO & CO.™

Hawaii is a hotbed for clean energy technology.

Hawaii has garnered itself a reputation as a hotbed for the development and deployment of clean energy technology. As the most fossil-fuel dependent state in the US, and one of the states most gifted with renewable resources (sun, sea, wind and geothermal), the case for a rapid clean energy transformation here is remarkably strong. There is both a pressing need and a massive potential, a fact which has both galvanized local politicians, and attracted the interest of the US federal government.

As a result, Hawaii has been provisioned with an increasingly favorable business and regulatory environment for the development of renewable energy opportunities, under the auspices of the groundbreaking Hawaiian Clean Energy Initiative (HCEI).

HAWAIIAN CLEAN ENERGY INITIATIVE

This Initiative dates back to 2007, when the US Department of Energy was seeking partners at the state-level for driving clean energy reforms forward. Discussions with Hawaii's state energy administrator led to the conceiving of the Initiative – forged as an unprecedented alliance between the Department of Energy (DOE) and the State of Hawaii – with the goal of easing Hawaii's dependence on imported oil, and scoping the potential for a clean energy transformation.

The HCEI outlines an extremely ambitious renewable energy target, with the Hawaii Public Utilities Commission (PUC) committed to delivering a 40% segment of electricity demand from renewable sources, by 2030. That's to build upon a 30% reduction in energy-consumption through energy efficiency measures.

WHY SMALL WIND?

While a host of clean energy resources are to hand to help the push towards the HCEI target, small wind is one resource showing the most untapped potential. This potential arises not so much from the scale and quality of wind resources available, but from the coupling of attractive state incentives – and a supportive regulatory environment – to a readily available and adequately-ranked wind resource.

Small wind also offers specific benefits for the integration of renewable energy into the grid:

- Spinning inertia on the distribution feeders
- Lower ramping rates for easier integration into weak, aged and slower distribution grids
- Evening power production to meet the later peaks common on island grids

HAWAII'S SMALL WIND INCENTIVES AND SUPPORT

Energy Tax Credit: Hawaii offers a state tax credit of 20%, of the total cost of installing a wind system – capped at $1500 for residential, and $500,000 for corporate income tax payers. That is in addition to any continued federal-level ITC for wind.

Feed-In-Tariff: The Hawaii PUC has approved Feed-In-Tariff payments for small wind amounting to $0.161/kWh for very small (less than 20kW nameplate capacity) turbines, and $0.138/kW for systems ranging up to 100kW.

Interconnection: Hawaii's PUC has been *praised* by IREC (Interstate Renewable Energy Council) for simplifying the connection process for grid-connected small distributed renewable generation, such as small wind turbines. Inverter-based systems up to 250kW can make use of this fast-track interconnection process, as can other systems up to 100kW of capacity.

Net Metering: The Net Metering arrangement on Hawaii is currently pegged out to 15% of peak circuit demand. But a sizable portion (30-50%) of that is allocated to small-scale generation, such as small wind (up to 10kW in capacity)

In addition there are municipality/ county specific supporting measures for wind, such as Honolulu's *Real Property Tax Exemption* – which excludes from property tax the value-added from installing wind turbines – and the *Farm and Aquaculture Alternative Energy Loan*, which provides low-interest loans from the Department of Agriculture for renewable energy including small wind – at up to 85% of installed cost, for farmers and aquaculturists.

SMALL WIND READY FOR A LIFT?

This favorable policy and incentive framework for small wind has led to Hawaii being ranked top in the US, for small wind financial returns. An analysis performed by eFormative Options, Pacific Northwest National Laboratory, and the National Renewable Energy Laboratory, concluded that Hawaii has the shortest payback period, for turbines of less than 100kW – primarily because of the positive financial impact of this policy framework.

Given Hawaii's strong commitment to achieving its demanding RPS target, and the need to exploit resources at the residential/ commercial-scales, as well as utility-scales, it seems likely Small Wind will see a significant ramp up going forward. R. P. Delio & Company is actively working to enable, and to participate in, this next phase in Hawaii's clean energy transformation.

THE R. P. DELIO APPROACH

Our approach to service provision and consultancy is guided by three principles, helping to ensure that 'process' doesn't deflect from the achieving of our client's goals:

- **Pragmatism** – success is not delivered through dogma and theory. We believe that success is ultimately underpinned by action grounded in the real world
- **Client-tailored** – there is no such thing as an 'off-the-shelf' solution. We believe in the fundamental value of applying common sense to individual client situations
- **Result-focused** – we believe in providing concrete, tangible and long-lasting solutions to your biggest challenges

R. P. Delio & Company have been Engineering Program Success since 1989; with us as your partner, your vision for transformation can, and will, be made real.

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