

Winds of change are blowing through the energy industry and a Michigan company is positioned to be the leader in providing novel energy solutions. McKenzie Bay International Limited has developed a new approach that gives it a unique niche in the alternative energy field.

McKenzie Bay was founded as a natural resource mining company eight years ago. It broadened its portfolio to first include the production and sale of batteries, and later acquired complementary businesses, such as wind power specialists Dermond, Inc., based in Montreal.

A NEW TILT ON WINDMILLS

McKenzie Bay is taking a new slant on wind power and the new approach is opening new markets. While the industry has traditionally focused on building clusters of horizontally-oriented wind turbines in breezy locations, such as the Great Plains, McKenzie is looking to use Dermond Wind Turbine systems atop buildings in urban or suburban areas. These turbines have a vertical, rather than horizontal, spin axis using fewer moving parts which gives them a unique profile, low noise output and lower vibration than traditional horizontally-oriented wind turbines. The Dermond systems come equipped with batteries to store excess energy for later use. McKenzie Bay's solutions can generate 100kw or more of energy in a tightly confined space where traditional windmills would be highly impractical.

The response to the new style wind turbines prompted McKenzie Bay to shift its focus from mining to alternative energy. "We very quickly realized that this is an enormous market, especially when someone suggested that we put these on top of buildings," said Gary Westerholm, president and CEO of McKenzie Bay International Limited. "We woke up and realized just how big a market we were toying with".

THE SKY'S THE LIMIT

McKenzie Bay has several projects in operation or under development across the country. The highest-profile project on the drawing board is the Freedom Tower, the 1,776 foot-tall skyscraper to rise at the site of the former World Trade Center in New York City. McKenzie Bay is one of two finalists bidding on the project that would place wind power generators atop the building to provide electricity for the building's tenants. Even at a height as low as 200 feet McKenzie Bay can set up a system that can capture adequate wind and generate enough electricity to be economically feasible.

Closer to home, McKenzie Bay announced an agreement last year with the Brighton Area Schools to collect wind data at four schools to see if it would be feasible to install up to eight Dermond Wind Turbine systems. McKenzie Bay would then sell the energy to the Brighton Area Schools under a fixed-price long term contract, thus protecting the schools from grid-based energy rate fluctuations or supply disruptions. Under this agreement, the customer doesn't have to bear equipment or installation costs, they have only to purchase power at rates that are generally lower than if they were to continue to purchase power from their incumbent electric utility. Most utility companies are supportive of what McKenzie Bay is doing because it reduces peak electrical demand. "By going into an urban environment, we can accomplish a few things that maybe no one else can do," said Westerholm. "We don't require transmission lines, the fact that we have a full system with a battery allows us to store some power and distribute it on demand, which then gives some benefits to utility companies under their peak requirements."

SECURITY AND RELIABILITY

From a homeland security and energy reliability perspective, solutions like those offered by McKenzie Bay can help diversify the North American energy grid. By building several thousand such independent systems across the continent, Westerholm says the security of the U.S. and Canadian power system would be greatly enhanced because "it would be virtually impossible to shut down every turbine".

Michigan has been a good home for McKenzie Bay and the company is looking to settle into a new headquarters in southeast Michigan in the near future, probably near its current facility in Brighton. "There are great people for us to bring into our organization from this region, but we're truly international," said Westerholm. "Operations and components and all the things we'll be working on for the commercialization side, will be based here in Michigan."

The answers to America's energy needs could be blowing across the Great Lakes right now and McKenzie Bay could be among the leaders in delivering an era of relative energy independence.