

Wind power the latest energy darling at the green debutantes' ball

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VICTORIA - The B.C. push for green sources of electricity appears to have generated unprecedented interest in developing wind power.

Eight major projects are before the provincial environmental assessment office in either the preliminary or subsequent stages of review and approval.

Together they offer several billion dollars in investment, hundreds of construction jobs and enough electrical capacity to make B.C. a national leader in wind-driven power generation.

North Coast Wind Energy is proposing a giant wind farm -- more than 200 turbines spread over 7,000 hectares -- on Banks Island, south of Prince Rupert.

The site would be linked via overland and undersea cable to the provincial power grid at Kitimat. Capacity would be 700 megawatts (MW) -- enough to power a city of 200,000 homes -- and that would only be the first instalment.

The company envisions second and third phases of equal or greater size, with the first phase alone budgeted at \$1.4 billion.

While Banks Island is still in the planning stage, the company is going ahead with a modest (25- MW) wind farm at Mount Hays near Prince Rupert.

Also thinking big is NaiKun Wind Development, with plans for an offshore wind farm between Haida Gwaii (the Queen Charlotte Islands) and the mainland.

The first phase calls for 110 turbines atop 100-metre pylons in the relatively shallow waters of Dogfish Banks, off Naikoon Park and north of the ferry route linking the islands and mainland.

Subsequent phases would add another 440 turbines, pushing the capacity to 1,750 MW, with an eventual price tag of several billion dollars.

Undersea cables would link the turbines to both the islands and the mainland. The Haida First Nation has praised the project for offering energy self-sufficiency to the islands.

But the goal is to generate power for well beyond the region: "Supplying the increasing demand for electrical power in Western Canada and the United States," as the draft terms of reference puts it.

A third project, the \$1-billion Nahwitti Wind Farm, would place 250 wind turbines on a site northwest of Port Hardy at the north end of Vancouver Island. Capacity: 450 MW.

Though the coast may seem to offer the most obvious locations for wind farms, some of the most promising sites are atop ridges in the northeast.

Finavera Renewables has proposed building four ridge-top generating stations -- with a combined 370-MW capacity -- near Chetwynd and Tumbler Ridge. Estimated cost: \$800 million.

The environmental assessment office is also reviewing a proposal for a 120-MW wind park on a site southwest of Dawson Creek. It is budgeted at about a quarter of a billion dollars.

All this, as noted, is subject to environmental approval. And though wind power is both renewable and emissions-free, it raises other environmental concerns.

Wind turbines are noisy. Some say they are also ugly. They pose a threat to wildlife, particularly migrating birds, but also marine life in the case of the offshore sites.

Then there's the dreaded Wind Turbine Syndrome, which reputedly afflicts those living within three kilometres of the low-frequency vibrations from the turbines.

Symptoms include sleep disruption, headaches, dizziness, exhaustion, lack of concentration and miscellaneous anxieties.

Opponents of wind power, citing the "precautionary principle," argue that the farms should be located far away from population centres and wildlife habitation, or scrapped altogether.

Many of the alleged downsides of wind power are disputed. For instance, advocates say that the average family cat will kill more birds in a year than the average turbine -- and the turbine doesn't make a practice of delivering the dismembered corpses to your bed or the dinner table.

In any event, it is worth noting that the environmental assessment office has already certified several wind energy projects.

Just last year, Dokie Wind Energy was greenlighted for a 300-MW facility southwest of Hudson's Hope and a 70-MW farm southeast of Chetwynd.

Worth noting, too, that certification does not necessarily mean the project will be built. Other approvals are necessary, the key one being a nod from the provincial utilities commission.

Economic considerations can intervene as well. The environmental assessment office certified two wind farms for the northern end of Vancouver Island in 2004, but neither has gone ahead.

One, a proposed 60-MW facility near Holberg, was cancelled after the developer concluded that the cost of producing power would be greater than the returns.

Wind power, being intermittent, fetches lower prices in the open market than more reliable (albeit more polluting) sources.

But with the government-led drive for greener sources of power, the economics are shifting as well, and at least some of the current spate of wind power projects will likely go ahead.

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