

By Benjamin Freeland | Photography by Rod Sinclair

A MIGHTY WIND

While other energy sectors fall prey to recession, wind power continues to attract billions of investment dollars and is dramatically changing the landscape of western Alberta. Just how far can the industry get?



RENEWABLE ENERGY



WINDFALL: Ranchers like Mac Main welcome the wind power boom

ANYONE WHO HAS SPENT ANY TIME IN ALBERTA'S SOUTHWESTERN CORNER CAN ATTEST to the truly awesome power and persistence of the region's wind. The wind that blows from the Rocky Mountains through the municipalities of Pincher Creek, Cardston, Crowsnest Pass and Waterton Park east towards Lethbridge and Marmarth is serious stuff. For much of the time it is the bane of the region's residents, kicking up dust storms, spreading debris, knocking down utility poles and flaring local tempers.

The last decade has seen the residents of southern Alberta's "Wind Belt" grow rather less ill-disposed towards the region's near-constant wind, however, as it has transformed into a vital economic lifeline in the form of wind energy. With a growing, energy-hungry province at the door and an ever more pressing demand for green energy, the wind industry has turned a once economically depressed corner of the province into an economic powerhouse and has added a much-needed sustainable component to a resource economy long dominated by oil and gas. In the town of Pincher Creek, the central hub of the Wind Belt, wind energy converters (WECs) have become such an iconic presence that the town's official crest proudly features a wind turbine, and bumper stickers reading "I ♥ Alberta Wind" now outnumber the once-ubiquitous "I ♥ Alberta Beef" stickers. >



pute and develop authoritatively guidelines for setbacks. From our research, 1,500 metres is an appropriate distance."

The most oft-heard complaint against the wind industry, however, concerns the cosmetic impact of wind farms. While many Wind Belt residents profess affection for what they refer to as "the grain elevators of the 21st century," others have urged local governments to legislate against their uncontrolled spread. In an attempt to strike a compromise between acreage owners increasingly concerned about the loss of their once unadulterated views of the mountains and foothills and ranchers and other residents increasingly dependent on wind revenue, the Municipal Council of Pincher Creek tabled a bylaw in the summer of 2008 that sought to protect "viewsheds" of particular scenic or historical importance. The proposed amendments to the bylaw were heatedly debated through the fall of 2008 and ultimately shelved due to vocal opposition, primarily from local ranchers.

"There was no science behind it," asserts Main, who was among the most vocal opponents to the amendment. "It was simply a matter of one person's opinion on a view." Main advocates an approach based on dialogue with wind companies so as to strike a compromise. "I'd rather not see [WECs] built on native grass or on ridges," he adds. "And this could be pushed to the industry." He further suggests that wind companies could mitigate the visual impact of the industry through solutions as simple as painting the turbines a different colour. "What's to stop them from painting them wheat colour?" he inquires. "That way you'd barely see them at all."

WHILE WIND INDUSTRY CRITICS CONTINUE TO ADVOCATE a more restrained approach to the development of wind farms, few, if any, oppose the industry altogether. Moreover, the vast majority of southwestern Alberta residents appear to be of the view that the pros of the wind industry - which include jobs, economic diversification, supply-chain benefits, emission- and water-free power generation, a small environmental footprint and relative ease of development once regulatory requirements have been met - far outweigh the potential cons. As CanWEA's David Huggill explains, "Wind power provides great stability, particularly in resource and manufacturing-impacted economies. A 100-MW wind farm generates 100,000 hours of labour and an investment of \$500,000 per month, spent primarily at the project location."

Wind power goes a long way to solving a nagging problem faced by the transmission side of the industry as well. While much of the growth in the province's power demand is around Calgary, most of the current and proposed generation, whether from coal, natural gas, nuclear or hydroelectric, is in the north, requiring highly contentious, high-voltage transmission corridors like the one proposed by AltaLink LP and scuttled in 2007 after regulators were revealed to be spying on landowners who opposed it. The new wind-based generation, by contrast, comes from Calgary's southern backyard.

Utility companies are already shifting their emphasis to improving transmission links between wind farm-intensive areas and the



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rest of the province, such as AltaLink's \$133-million, 90-kilometre electrical transmission line linking the Pincher Creek and North Lethbridge substations, which was approved by the Alberta Utilities Commission in March 2009 and is due to be completed in the first half of 2010. This line will permit the transmission of some 1,000 MW of electricity from Pincher Creek to the rest of the province.

In terms of future development, Huggill is optimistic that Alberta will emerge as a world leader in wind energy. "A recent study shows that it is not unrealistic that upwards of 20% of Alberta's generation mix could come from wind within 20 years," he contends. "And this is consistent with CanWEA's Wind Vision target of 20% by 2025 for Canada."

Back in Pincher Creek, Mac Main agrees that the region's future is blowing in the wind, although he questions the feasibility of Huggill's 20% benchmark, given the inherent unreliability of wind. "I don't know if they can achieve that, as they're limited in terms of how much wind they get," he asserts. He does agree, though, that wind has a vital role to play in the future of Alberta's energy sector. And as the powerful southwestern gusts that batter the region rarely seem to let up for more than a few days at a time, it is hard to imagine this increasingly coveted natural resource ever falling into short supply. **AV**