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# **The Economic Impacts of the Horizon Wind Energy Project**

**Prepared for: Horizon Wind Energy**

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## **INTRODUCTION**

Horizon Wind Energy proposes to build 800MW of electric generation in Aroostook County, Maine. This report examines the economic impacts from the construction and the operational employment associated with the proposed project. The following information was provided by Horizon to form the basis for this analysis:

- The project will be constructed over a three year period, assumed to begin in 2010.
- 300 MW will be installed in 2010 and 2012 and 200 MW in 2011.
- Construction expenditures will average \$660,000 per MW for the project. This will result in total construction expenditures of \$528 million over the three years.
- Twenty five percent of construction expenditures will go to Maine labor and twenty five percent of the balance will go to materials and inputs provided within Maine. This results in \$86.6 million in expenditures on Maine labor, goods and services in 2010 and 2012 and \$74.3 million in 2011. The balance will be spent on goods and services imported from outside of Maine which will not have a direct impact on the Maine economy.
- Operating employment will equal 35 in 2011 (when the capacity built in 2010 comes on line). Operating employment will grow to 60 in 2012 and 95 in 2013 and thereafter.

The economic impact analysis was conducted using an econometric model of the Maine economy maintained by the USM Center for Business and Economic Analysis and developed by Regional Economic Models Inc. (REMI) of Amherst, Massachusetts. The REMI model is a widely used economic forecasting and impact estimation model which has been used by CBER for more than 15 years. It has been used by the State Planning Office more than 25 years, and is also used by public and private organizations throughout the country. The USM version of the model incorporates seven regions within Maine; total effects in Maine are the sum of impacts in all regions.

Impacts are estimated by comparing two forecasts of the regional economies. One is a “baseline” forecast without the project; the other is a forecast with the employment projected by Horizon Wind to be associated with the project included. The impacts are the differences between the two forecasts. The forecasts include a calculation of the purchases of goods and services by the project from all other industries within the region and from within Maine.

**RESULTS**

Table 1 shows the estimated total estimated impacts (including construction workers on the project), plus the wages and salaries generated.

Table 1

		<b>Employment</b>		
		Directly Employed by Horizon Wind & Contractors	Indirect & Induced Impacts	Total
Aroostook County	2010	720	180	900
	2011	545	135	680
	2012	750	180	930
	2013	95	25	120
	2014	95	25	120
		<b>Wages &amp; Salaries (\$Millions)</b>		
		Directly Employed by Horizon Wind & Contractors	Indirect & Induced Impacts	Total
Aroostook County	2010	\$11.75	\$5.24	\$16.99
	2011	\$10.00	\$5.43	\$15.42
	2012	\$14.24	\$7.75	\$21.99
	2013	\$2.64*	\$4.29	\$6.93
	2014	\$2.69*	\$3.68	\$6.37

\* Estimated by REMI model

The “indirect and induced” impacts are the so-called “multiplier” effect. These are defined below. The indirect and induced impacts are those which result from the effects of the project both inside and Aroostook County but still within Maine. The economic impacts of construction projects are somewhat different than the economic impacts of ongoing operations. Because of their relatively short duration, construction projects do not result in the creation of additional permanent jobs. Rather, the construction activity and employment as a result of the project may be said to support the wages and employment of the people affected by the “multiplier”.

This analysis is conducted at the county level and provides a broad picture of the economic impact of the project. But Aroostook County is of such a size that the economic impacts will primarily occur in the northern part of the county, with the communities of Fort Kent, Caribou, and Presque Isle (the latter being the service center for northern Maine). This type of project will require large numbers of specialized construction personnel who will be located in the region for varying periods of time during the construction project. While the exact level of spending cannot be estimated without detailed information on the number of days that construction personnel will spend in the region, the result will be substantial increases in sales by the lodging, restaurant, and retail industries during the construction period in the principal communities.

Effects on the Maine economy from the energy supply effects of the proposed project also exist, but cannot be estimated at this time. The proposed wind power project will sell into the New England power market. This integrated electric power market is vulnerable to price spikes as a result of instability in world fossil fuel markets. With over half of New England’s energy generation coming from fossil fuels<sup>1</sup>, the region, including Maine, will experience periodic spikes in electricity prices that will drain away economic resources that would otherwise be used to support economic activity and associated employment. Any mitigating effects of the more stable prices of electricity from wind power would offset the negative impacts occurring from fossil fuel price instability. These economic impacts are no less real for being more difficult to predict than the employment and income impacts noted above.

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<sup>1</sup> Source: ISO New England