GROVER
EXHIBIT 15.2

Economic Impacts of the Desert Claim Wind Project

A Report to the enXco Company

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ECONorthwest
ECONOMICS • FINANCE • PLANNING

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INTRODUCTION AND SUMMARY OF RESULTS

enXco Development, a renewable energy company, is proposing to construct and operate the Desert Claim Wind Power Project (Desert Claim) in Kittitas County, WA. The Desert Claim project would consist of 95 wind turbines, with a total nameplate power capacity of 190 MW. The project would be spread over 5,200 acres, of which 1,529 acres are state-owned land.

ECONorthwest was asked to estimate the potential economic impacts of the Desert Claim project for Washington State. This includes estimating the potential economic impacts during the construction and operations phases. The economic impacts are estimated in terms of increases in jobs, economic output, income, and tax revenue within Washington.

The results of the impact analysis are summarized as follows:

- The construction of the Desert Claim project will create approximately 282 full and part time jobs during the construction period. The construction period will also create over $33 million in new economic output for Washington's economy

- The ongoing operations and maintenance of the Desert Claim project will result in 36 full and part time jobs. Project operations will also increase Washington's economic output by an estimated $6.2 million annually throughout the life of the project.

Details on the analysis methods and results are provided below.

ECONOMIC IMPACT METHODOLOGY

The spending on construction and operation of a wind project affects the state economy through several different channels. Construction and operations expenditures impact the economy *directly*, through the purchases of goods and services in the state, and *indirectly*, as those purchases, in turn, generate purchases of intermediate goods and services from other, related sectors of the economy. In addition, the direct and indirect increases in employment and income enhance overall economy purchasing power, thereby *inducing* further spending on goods and services. This cycle continues until the spending eventually leaks out of the state economy as a result of taxes, savings, or purchases of out-of-state goods and services.

The economic modeling framework that best captures these direct, indirect, and induced effects is called input-output modeling. Input-output models provide an empirical representation of the economy and its inter-sectoral relationships, enabling the user to trace out the effects (economic impacts) of a change in the demand for commodities (goods and services).

The Desert Claim project data needed for the economic impact analysis were collected from enXco and secondary sources and are summarized in Table 1.

Table 1: Desert Claim Project Specifications

Desert Claim Project Statistics	Value
Project Size	
Number of Wind Turbines	95
Capacity per wind turbine (MW)	2
Total Project Nameplate Capacity	190 MW
Capacity Factor (estimated)	30 %
Annual Average MW	57 aMW
Annual Electricity Generation	499,320 kWh
Assumed Construction Phase Duration	< 1 Year
Project Land	
State Land (DNR)	1,529 acres (58 MW)
Private Land	2,551 acres (80 MW)
Private Land to be Owned by Project	1,120 acres (52 MW)

ECONorthwest utilized a specific input-output model called IMPLAN (for IMpact Analysis for PLANning) to develop the economic benefit results for this analysis.[1] The IMPLAN model is generally used for analysis at the state or county level: in our case, we utilized IMPLAN's multiplier factors for the state of Washington, which are based on historical spending levels within Washington to estimate the state-level impacts.

The IMPLAN model reports the following types of economic impacts:

- *Total Industrial Output (Output)* is the value of production by industries for a specified period of time. Output can be also thought of as the value of sales including reductions or increases in business inventories.
- *Employee compensation (Wages)* includes workers' wages and salaries, as well as other benefits such as health and life insurance, and retirement payments.

[1] IMPLAN was developed by the Forest Service of the US Department of Agriculture in cooperation with the Federal Emergency Management Agency and the Bureau of Land Management of the US Department of the Interior to assist federal agencies in their land and resource management planning. Applications of IMPLAN by the US Government, public agencies and private firms span a wide range of projects, from broad, resource management strategies to individual projects, such as proposals for developing ski areas, coal mines, and transportation facilities, and harvesting timber or other resources. IMPLAN has also been chosen by the National Wind Coordinating Committee and the National Renewable Energy Laboratory to estimate the economic impacts associated with wind power plants.

- *Proprietary income (Business Income)* represents the payments received by small business owners or self-employed workers.
- *Other income (Other income)* is all remaining sources of income, including lease payments, royalties, corporate profits and dividends.
- *Employment (Jobs)* impacts include both full and part time employment.
- *Tax revenues (State and Local Taxes)* are calculated for various federal, state and local taxing jurisdictions.

The economic impact results discussed below for the construction and operations phases rely on IMPLAN model data for the state of Washington for 2006, the most recent year available. Results are then adjusted outside the model to reflect 2008 dollars.

The model was run separately for the construction and operations phases of Desert Claim. The results of the IMPLAN modeling for both phases are discussed below.

CONSTRUCTION PHASE IMPACTS

During the construction phase, money will be spent on typical construction items such as labor and equipment rental. Some of this spending will be done within the state while other components (such as spending on the wind turbines) will flow outside the state.

Construction costs were estimated by ECONorthwest based on project information provided by enXco and published national construction cost data. Secondary sources relied upon are referenced below. Project construction data are summarized in Table 2. Given the project size of 190 MW and assumed average construction costs of $1,920/kW[2], the total project construction cost is estimated to be $364,800,000.

Table 2: Desert Claim Construction Costs

Data	Value
Number of Wind Turbines	95
Capacity per wind turbine (MW)	2
Cost per kW	$1,920
Total Construction Costs	**$364,800,000**

Table 3 shows the distribution of costs across various construction components based upon national averages that are used as the default cost options in the National Renewable Energy Lab JEDI economic impact model for wind energy projects.[3] The construction phase is expected to

[2] Source: *Annual Report on U.S. Wind Power Installation, Cost, and Performance Trends: 2007.* U.S. Department of Energy (May 2008).

[3] The JEDI model and documentation can be found at http://www.nrel.gov/analysis/jedi/.

last 9 to 10 months. The vast majority of the costs (85 percent) are assumed to be for the major wind turbine components (e.g., blades, nacelles, etc.) that will not be manufactured in Washington. As a consequence, this portion of the construction spending will not have any economic impact within the state and therefore has been excluded from the IMPLAN model analysis. The remaining 15 percent of construction spending is allocated based on the cost categories shown in Table 3.

Table 3: Desert Claim Construction Spending by Major Categories

Construction Cost Component	Amount	Percent
Equipment Costs (Outside WA)	$309,124,222	85%
Materials		
Construction (concrete, rebate, site prep, equip)	$19,185,778	5%
Transformers	$4,864,000	1%
Electrical (drop cable, wires, etc.)	$2,296,889	1%
HV line extension	$4,188,444	1%
Labor		
Foundation	$1,621,333	< 1%
Erection	$1,621,333	< 1%
Electrical	$1,891,556	< 1%
Management / Supervision	$945,778	< 1%
Other		
HV sub/interconnection	$13,376,000	4%
Engineering	$4,323,556	1%
Legal services	$405,333	< 1%
Site certificate / permitting	$945,778	< 1%
Total	**$364,800,000**	**100%**

Source: ECONorthwest calculations using JEDI data

Table 4 shows the estimated economic impacts from the IMPLAN model for the Desert Claim construction phase. Construction of the project is expected to create 282 jobs – both through direct hires (163) on the project and through indirect and induced spending (119 additional jobs combined). The construction phase is also expected to increase the total economic output in Washington by over $33 million relative to the case where the project is not built. As part of this increase in output, wage income is expected to increase by over $12 million and business income will increase by over $2 million.

Table 4: Desert Claim Economic Impacts for Washington (Construction Phase)

Impact Type	Output	Wages	Business Income	Other Income	Jobs
Direct	$18,975,300	$7,961,300	$1,715,700	$1,128,200	163
Indirect	$5,813,200	$1,763,000	$321,900	$618,600	41
Induced	$8,343,900	$2,878,400	$351,000	$1,068,800	78
Total	**$33,132,400**	**$12,602,700**	**$2,388,600**	**$2,815,600**	**282**

Source: ECONorthwest calculations using IMPLAN data

Table 5 shows the same impacts from Table 4 broken out by industry sector. Not surprisingly, the greatest economic impacts during this phase are expected to be in the construction sector. The service sector will also see a large share of the economic impacts, followed by positive impacts in the FIRE, wholesale and retail trade, and manufacturing sectors.

Table 5: Economic Impacts by Industry Sector (Construction Phase)

Industry Sector	Output	Wages	Business Income	Other Income	Jobs
Natural Resources	$367,800	$101,900	$20,800	$58,800	2
Construction	$12,216,700	$5,078,600	$1,281,400	$694,700	110
Manufacturing	$3,136,400	$461,100	$22,300	$268,500	7
Transportation & Comm.	$974,800	$322,500	$33,600	$131,900	6
Wholesale and Retail Trade	$2,999,700	$1,097,500	$83,900	$377,200	28
Finance, Insurance, and Real Estate (FIRE)	$2,443,900	$468,100	$134,800	$656,200	11
Services	$10,892,900	$5,059,700	$805,700	$598,900	116
Utilities	$100,100	$13,500	$6,200	$29,400	0

Source: ECONorthwest calculations using IMPLAN data

Table 6 shows some of the state and local tax revenues that are expected to be generated during the construction phase of the Desert Claim wind project. This table does not include property taxes, which we understand have been addressed in a separate study examining the local economic impacts to Kittitas County.

Table 6: Tax Revenues Generated Construction Phase (Excluding Property Tax)

Tax Source	Amount ($)
Business	$819,900
Personal	$93,000
Corporate Profits and Dividends	$72,600
Social Insurance	$9,700
Total	**$995,200**

Source: ECONorthwest calculations using IMPLAN data

OPERATIONS PHASE IMPACTS

Following the construction period, additional economic benefits will occur due to the ongoing operations and maintenance of the Desert Claim project. The operations and maintenance benefits will occur annually throughout the life of the Desert Claim project.

ECONorthwest developed the operations and maintenance model parameters based on information provided by enXco. The IMPLAN model inputs are shown in Table 7. With the current project size, enXco is planning on hiring 10-12 people to operate and maintain the project. When both wages and benefits are considered for 12 employees, total direct wage income is expected to be $937,700 for these jobs.

There are additional economic benefits during this phase that result from the rents paid to landowners for turbines located on private lands. Based on the information provided by enXco, approximately 40 turbines will be located on private lands. Rental payments to landowners are expected to total approximately $600,000 annually. Based on historically observed spending patterns for households within Washington, which are imbedded in the IMPLAN model, we have assumed that 76 percent of this amount will be available for spending, with the remainder going toward savings and taxes.

Table 7: Desert Claim Operations and Maintenance Parameters

Operations Cost Component	Amount
Operations and Maintenance Labor	
Direct Hires	12
Total Wages + Benefits	$937,700
Rents to Landowners	
Rent per MW (estimated)	$7,500
MW on private property	40 MW
Total annual rental payments	$600,000

The operations and maintenance parameters are also used as inputs in the IMPLAN model to estimate the annual economic impacts for operations and maintenance spending for each year that Desert Claim operates.

Table 8 shows the economic impacts on wages and income expected to result from the ongoing operation and maintenance of the Desert Claim project. Note that the direct impacts associated with Desert Claim power sales are not included in this table.

The combined direct, indirect and induced spending due to the operations of the wind plant is expected to create a total of 36 full and part-time jobs. Desert Claim operations and related spending is also expected to increase wage income within the state by $1.9 million annually. Income from other sources (primarily from rental payments to private landowners) is expected to amount to almost $1 million annually.

Table 8: Annual Economic Impacts for Washington (Operations Phase)

Impact Type	Output	Wages	Business Income	Other Income	Jobs
Direct	$3,156,450	$937,650	$0	$600,000	12
Indirect	$1,525,570	$470,430	$74,660	$217,910	10
Induced	$1,476,980	$509,760	$64,130	$141,500	14
Total	**$6,159,000**	**$1,917,830**	**$138,800**	**$959,410**	**36**

Source: ECONorthwest calculations using IMPLAN data. Totals may not sum due to rounding.

Table 9 shows the how the economic impacts from the operations and maintenance phase are distributed across the various industry sectors. In this phase, most of the job impacts occur within the utility and service sectors.

Table 9: Annual Economic Impacts By Industry (Operations Phase)

Industry Sector	Output	Wages	Business Income	Other Income	Jobs
Natural Resources	$19,450	$3,430	$1,290	$3,440	0
Construction	$69,010	$36,430	$9,040	-$2,930	1
Manufacturing	$363,580	$42,740	$3,200	$32,820	1
Transportation & Comm.	$348,570	$113,020	$9,110	$63,920	2
Wholesale and Retail Trade	$417,240	$153,490	$13,660	$24,320	4
Finance, Insurance, and Real Estate (FIRE)	$487,690	$101,530	$27,800	$109,770	2
Services, Government, and Non-NAICS	$1,191,970	$510,580	$65,750	$98,190	14
Utilities	$2,661,480	$956,620	$8,940	$629,890	12
Rents to Landowners	$600,000				
Total	**$6,159,000**	**$1,917,830**	**$138,800**	**$959,410**	**36**

Source: ECONorthwest calculations using IMPLAN data. Totals may not sum due to rounding.

A majority of taxes and fee revenues generated during the Operations Phase will be property taxes, which have been estimated by Central Washington University for the Desert Claim project as part of a separate economic impact study for this project.[4] Table 10 shows the property tax estimates along with some of the other revenues that are expected to be generated annually from Desert Claim operations. In addition to the tax revenues, the Desert Claim project will pay Washington approximately $435,000 annually in lease payments for those turbines that are located on state DNR land. These payments will go to the State School Fund and be distributed to school districts throughout Washington.

[4] *Kittitas County Economic Impacts from the Proposed Desert Claim Wind Power Project* by David Hedrick, Richard Mack, Donald Meseck, and Charles Wassell, Jr., Central Washington University, February 25, 2009.

Table 10: Revenues Generated (Operations Phase)

Revenue Source	Amount ($)
Business Taxes	$117,140
Corporate Profits and Dividends Taxes	$11,580
Personal Taxes	$6,860
Social Insurance Taxes	$3,030
Property Taxes	$1,259,236
Payments to State School Fund for turbines on DNR land	$435,000
Total	**$1,832,846**

Source: ECONorthwest Calculations using IMPLAN and Desert Claim project data. Property tax estimate from CWU Desert Claim report.