BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

In the Matter of Application No. 2006-02
Desert Claim Wind Power Project

EXHIBIT 15
PREFILED DIRECT TESTIMONY
STEPHEN GROVER, PH.D.

Q. Please state your name and address.
A. Stephen Grover. My business address is 888 S.W. 5th Avenue, Suite 1460, Portland, Oregon, 97204.

Q. What is your current occupation and position?
A. I am a Managing Director at ECOnorthwest, an economics consulting firm based in Portland, Oregon.

Q. What topics will your testimony address?
A. My testimony will focus on the economic impacts expected to result from the construction and operation of the Desert Claim Wind Project (the "Project").
Background and Experience

Q. Briefly describe your educational background.
   A. I have a Ph.D. and an M.S. in Economics from the University of Wisconsin, and a B.A. in Economics from Pacific Lutheran University.

Q. Please describe your professional experience.
   A. Since March 2000, I have worked at ECONorthwest, where I am the head of the firm's energy practice. I am also an adjunct professor at Portland State University, where I have taught graduate courses in econometric modeling and forecasting and energy economics. I am a member of the Oregon Energy Planning Council recently formed by Oregon Governor Kulongoski.

Prior to joining ECONorthwest, I worked at Quantum Consulting, a firm based in Berkeley, California that specializes in evaluating energy efficiency programs. Prior to that, I worked at Battelle Pacific Northwest Laboratories in Richland, Washington, where I researched topics for the U.S. Department of Energy and the Environmental Protection Agency. A copy of my resume is attached as Exhibit 15.1.

Q. Have you performed the type of economic analysis you performed in this case before?
   A. Yes, I have done this type of analysis before for several different energy-related projects. My firm also has completed several hundred economic impact studies across a wide range of topic areas, both energy and non-energy related.
Q. Have you analyzed the economic impacts of wind power projects before?

A. Yes. I have conducted similar impact analyses for the Wild Horse Wind Project and the Kittitas Valley Wind Project. I also developed a guidebook for estimating the economic impacts of wind projects in rural counties in Washington. We have also used the IMPLAN model to estimate the economic benefits of wind projects in Oregon and the potential benefits of having a wind power manufacturing facility located within Oregon.

Q. Have you testified as an expert witness on these topics before?

A. Yes. I testified before this Council in connection with both the Wild Horse Wind Project and the Kittitas Valley Wind Project.

Desert Claim's Economic Impacts

Q. Can you describe your involvement with the Desert Claim Project?

A. Yes. ECONorthwest was retained to estimate the Project's economic impacts in Washington State, and to provide testimony as needed in these proceedings.

Q. What is Exhibit 15.2, a report entitled "Economic Impacts of the Desert Claim Wind Project"?

A. Exhibit 15.2 is the report that I prepared, with the assistance of Alec Josephson, Logan Van Ert, and Robert Whelan, who are my colleagues at ECONorthwest. This report summarizes the work we performed and the conclusions we reached regarding the economic effects of the Desert Claim project in Washington State.
Q. Are you familiar with an economic analysis concerning the Desert Claim project that has been performed by Richard Mack and his colleagues from Central Washington University?

A. Yes. I have spoken with Dr. Mack and his colleagues, and have reviewed their report.

Q. How does your analysis differ from Professor Mack's analysis?

A. The primary difference is that Professor Mack's work focused on the local effects of the Project in Kittitas County, whereas we looked at the effects through the state. In other word's, Professor Mack looked at a subset of the economic effects that we considered. There are also some minor differences in the models and assumptions we used, but the local versus state-wide focus is the primary difference in our approach.

Q. Can you briefly describe the method you used to estimate the Project's economic impacts?

A. I used the IMPLAN model to estimate the net economic impacts of spending on the Desert Claim project on Washington State. I examined these impacts during the construction phase and during the operations phase. I also estimated the potential change in tax revenues resulting from the project. All economic impacts are estimated relative to a Base Case scenario where the Desert Claim project is assumed to not be constructed.
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).

Q. Is this approach one that is generally used and accepted by experts in your field?

A. Yes, the approach is the one most commonly used. The model we use for this analysis is IMPLAN, which was developed in the 1980's by the U.S. Forest Service to estimate economic impacts and is the model most commonly used for these types of projects. The IMPLAN model has been used thousands of times since its development to estimate economic impacts.
Q. Can you summarize your conclusions about the Project's economic impacts?

A. Yes. The economic impacts during construction are summarized in the following table:

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Output</th>
<th>Wages</th>
<th>Business Income</th>
<th>Other Income</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>$18,975,300</td>
<td>$7,961,300</td>
<td>$1,715,700</td>
<td>$1,128,200</td>
<td>163</td>
</tr>
<tr>
<td>Indirect</td>
<td>$5,813,200</td>
<td>$1,763,000</td>
<td>$321,900</td>
<td>$618,600</td>
<td>41</td>
</tr>
<tr>
<td>Induced</td>
<td>$8,343,900</td>
<td>$2,878,400</td>
<td>$351,000</td>
<td>$1,068,800</td>
<td>78</td>
</tr>
</tbody>
</table>

| Total       | $33,132,400 | $12,602,700 | $2,388,600      | $2,815,600   | 282  |

The economic impacts during operation are summarized in the following table:

<table>
<thead>
<tr>
<th>Impact Type</th>
<th>Output</th>
<th>Wages</th>
<th>Business Income</th>
<th>Other Income</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct</td>
<td>$3,156,450</td>
<td>$937,650</td>
<td>$0</td>
<td>$600,000</td>
<td>12</td>
</tr>
<tr>
<td>Indirect</td>
<td>$1,525,570</td>
<td>$470,430</td>
<td>$74,660</td>
<td>$217,910</td>
<td>10</td>
</tr>
<tr>
<td>Induced</td>
<td>$1,476,980</td>
<td>$509,760</td>
<td>$64,130</td>
<td>$141,500</td>
<td>14</td>
</tr>
</tbody>
</table>

| Total       | $6,159,000  | $1,917,830 | $138,800       | $959,410     | 36   |

Q. Have you also looked at the tax implications of the project?

A. I've looked at some of the project's tax implications. During the construction, I've estimated the amount of state and local tax revenue that will be generated from various business and personal taxes that are in affect for Washington State. I've estimated that these taxes will total $995,000 during the construction period.
During the operations phase, I've estimated that annual state and local taxes plus fees paid to the DNR will total more than $1.8 million annually. This includes approximately $1.2 million in property taxes that are estimated by Central Washington University for the Desert Claim project.

Q. Does that conclude your testimony at this point?
A. Yes.