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BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

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

EXHIBIT 14
PREFILED DIRECT TESTIMONY
RICHARD S. MACK, PH.D.

Q. Please state your name and address.

A. Richard S. Mack
Dept of Economics MS 7486
Central Washington University
400 East University Ave
Ellensburg, WA 98926

Q. What is your position?

A. Professor Emeritus of Economics

Q. What topics will your written testimony address?

A. My testimony will focus on the local economic impacts associated with the construction and operation of the Desert Claim Wind Project (the "Project").

Background and Experience

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3 **Q. Briefly describe your educational background.**

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5 A. I obtained a Ph.D. in Economics from Colorado State University, and obtained an
6 undergraduate degree in Economics (A.B.) from Dartmouth College.
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11 **Q. Please describe your professional experience briefly.**

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13 A. I retired in the Fall of 2008 after 36 years of teaching and research at Central
14 Washington University's (CWU) department of economics, offering courses in
15 Principles, Micro-theory, Environmental Economics, Economic Research,
16 Managerial Economics, Business Statistics, Comparative Systems, History of
17 Economic Thought, and Economic History. I also taught in CWU's Environmental
18 Studies, Resource Management, and Douglas Honors College programs, as well as
19 visiting professorships at Ball State University, Janus Panonius University in
20 Hungary, Dublin City University, Ireland, and in several London programs.
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25 Trained in International Economics and Regional Economics, most of my
26 publications are in journals specializing in Regional Development, Energy
27 Economics, Resource Use, Public Utilities, History of Thought, as well as the
28 economies of Ireland, the EU, and China. I have published 32 articles in juried
29 journals, several dozen research reports, and a number of chapters in books.
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34 I have maintained research and consulting activities throughout my career. Research
35 and contracts have been funded by: the National Science Foundation, the Lancy
36 Foundation, the National Council for Undergraduate Research, the U.S. Department
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1 of Education, the Office of the Washington Secretary of State, the Washington State
2 Department of Transportation, the Bonneville Power Administration, the
3 Washington State Institute for Public Policy, the Tennessee Valley Authority, the
4 U.S. Department of Energy, and the Electric Power Research Institute. I have been a
5 charter board member of two community banks.
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12 A copy of my curriculum vitae is attached as **Exhibit 14.1**.
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17 **Q. Have you testified as an expert witness before?**

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19 A. Yes. I recently testified as an expert witness in a labor arbitration case involving the
20 United Steel Workers and a Power Provider in Kennewick, Washington.
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25 **Scope of Analysis**

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27 **Q. What were you asked to do in connection with the Desert Claim Project?**

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29 A. I was retained to identify and describe the local economic impacts expected to result
30 from the construction and operation of the Project. I was asked to quantify the
31 economic impacts where possible, but also to identify any more qualitative effects.
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37 **Q. What do you mean when you say that your analysis was focused on "local"
38 economic impacts?**

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40 A. I was specifically asked to look at the economic effects in Kittitas County. I
41 understand that Mr. Steven Grover of ECONorthwest has undertaken a broader
42 analysis to consider statewide economic effects of the Project, but we focused strictly
43 on Kittitas County.
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Q. Exhibit 14.2 is a document entitled "Kittitas County Economic Impacts from the Proposed Desert Claim Wind Power Project." What is that document?

A. This is the report we prepared in connection with this Project. It describes the analysis we performed and the conclusions we reached.

Q. In addition to yourself, Exhibit 14.2 lists David Hedrick, Donald Meseck and Charles Wassell as authors. What was their involvement?

A. David Hedrick and Charles Wassell are professors in the Economics Department at Central Washington University. Donald Meseck is a regional economic analyst with the Labor Market and Economic Analysis Division of the Washington State Employment Security Department. We collaborated in the analysis of the Project's economic impacts and in the preparation of this report.

Q. What did you do in order to predict the economic effects of the Project in Kittitas County?

A. Our approach is described in more detail in our report (**Exhibit 14.2**), but I can also describe it briefly here. We performed essentially four types of analysis:

First, we used an Input-Output model to quantify the economic effects of Project construction and operation. This is a common sort of economic analysis used to evaluate how direct expenditures ripple and multiply through an economy. We took published data and data from enXco regarding wind project construction and operation costs, and input them in a model that calculated indirect and induced

1 effects. This modeling exercise allowed us to estimate the total number of jobs and
2 the total amount of economic activity that is expected to result in Kittitas County as a
3 result of the Project in both the construction and the operations phases.
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9 Second, we evaluated Kittitas County economic statistics in light of the recent
10 construction and operation of the Wild Horse Wind Project. In doing so, we tried to
11 determine whether the local economic effects predicted by the model for the Desert
12 Claim Project were generally consistent with what actually happened in the Kittitas
13 County economy when another wind project was recently built and put into
14 operation.
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23 Third, we calculated the expected local tax benefits resulting from the Project. We
24 used published cost information and current tax rates to calculate the taxes that
25 would be paid to local taxing districts, including school and hospital districts.
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31 Fourth, we analyzed the potential qualitative benefits associated with the Project. In
32 particular, we looked at the current makeup Kittitas County economy and considered
33 whether the Project would contribute greater economic diversification and help build
34 the County's economic base.
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Local Economic Impacts

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3 **Q. Please summarize your conclusions about how the Project will affect the Kittitas**
4 **County economy.**

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7 A. As discussed in more detail in our report (**Exhibit 14.2**), we conclude that both the
8 construction and operation of the Project will result in significant employment and
9 spending in Kittitas County.
10

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12 Construction: During the 9-10 month construction period, we expect the Project to
13 result in approximately 160 jobs, with earnings totaling approximately \$3.6 million
14 and a total economic output of approximately \$17.3 million. These totals include
15 direct, indirect and induced effects. In other words, it includes the first tier of direct
16 expenditures by Desert Claim for goods and services, the second tier of indirect
17 expenditures to vendors, contractors or manufacturers who supply first tier entities,
18 and the third tier of induced effects resulting from expenditures that derive from
19 spending incomes generated from direct and indirect activities. The following table
20 breaks down the estimated construction effects:
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Construction Impacts from the DCWPP

	Jobs	Earnings	Output
Direct Impacts	85.5	\$2,062,000	\$11,096,000
Construction Sector Only	85.2	\$2,050,000	
Manufacturing Sector Only	0.1	\$7,000	
Other Industry Sectors	0.2	\$5,000	
Indirect Impacts	29.5	\$953,000	\$2,493,000
Induced Impacts	44.6	\$613,000	\$3,711,000
Total Impacts (Direct, Indirect, Induced)	159.6	\$3,628,000	\$17,300,000

Local Tax Revenues

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3 **Q. Did you estimate the local tax revenues that would be generated by the Project?**

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5 A. Yes. We estimated that the local property tax revenues from the Project would total
6 approximately \$1.26 million in the first year following construction. This amount
7 would be allocated amongst various local taxing districts:
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Estimated Local Property Taxes

Taxing District	Value of Project in District	Mill Rate	Tax
State Schools	\$155,040,000	\$2.187856	\$339,205
County Current	\$155,040,000	\$0.920835	\$142,766
County Roads	\$155,040,000	\$1.125328	\$174,471
Hospital #1 Levy	\$155,040,000	\$0.001929	\$299
Hospital #1 Bond	\$155,040,000	\$0.250840	\$38,890
Fire #2 Levy	\$77,520,000	\$1.377273	\$106,766
Fire #2 (contract payment)			107,000
Ellensburg School #401 Levy	\$146,880,000	\$1.890419	\$277,665
Ellensburg School #401 Bond	\$146,880,000	\$0.424322	\$62,324
Cle Elum School #404 Levy	\$8,160,000	\$0.845079	\$6,896
Cle Elum School #404 Bond	\$8,160,000	\$0.361910	\$2,953
Total			\$1,259,236

Diversification and Economic Base

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35 **Q. In addition to the local economic effects you have discussed above, do you
36 expect the Project to result in any more qualitative benefits to the local
37 economy?
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42 A. Yes. The Project will result in at least two kinds of qualitative benefits to the Kittitas
43 County economy: the first is the diversification of the economic base, and the second
44 is its impact of retaining agriculture in the county.
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1 Until recently, agriculture and state government dominated the economic base of
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3 Kittitas County. Therefore, diversification of the economic base has been a constant
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5 theme amongst local government leaders. Desert Claim and other wind power
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7 projects offer additional opportunities to promote diversification of Kittitas County's
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9 economy. The jobs created by these industries are especially beneficial because the
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11 fluctuations in revenue from wind power production are relatively small and largely
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13 independent of economic shocks to other sectors in the County's economic base.

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17 The Project will also help to preserve Kittitas County's agricultural base by providing
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19 additional lease income to farmers and ranchers while allowing their continued
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21 agricultural use of the project properties. The Project's role in preserving Kittitas
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23 County's agricultural component to its economic base has both quantitative and
24
25 qualitative aspects. Agriculture is the historic base of the Kittitas County economy.

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29 Finally, the Project's construction will serve to maintain jobs in the construction
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31 sector during a time period in which the local economy will still be suffering from a
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33 paucity of major construction projects such as Suncadia and major CWU projects, as
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35 well as a significant reduction in residential construction. The Project will
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37 accordingly help to keep construction crews together and to keep skilled individuals
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39 in Kittitas County.

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43 **Q. Does that conclude your testimony at this time?**

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45 A. Yes.