

BEFORE THE STATE OF WASHINGTON
ENERGY FACILITY SITE EVALUATION COUNCIL

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

EXHIBIT 40
PREFILED DIRECT TESTIMONY
TONY USIBELLI

Q. Please state your name and business address.

A. My name is Tony Usibelli and my business address is 906 Columbia St. SW,
Olympia, Washington, 98504.

Q. What is your present occupation, profession; and what are your duties and responsibilities?

A I am the director of the Energy Policy Division of the Washington State Department of Community, Trade, and Economic Development (CTED). In this capacity I am responsible for analysis, development, and implementation of state energy policies.

These include: policies related to state and regional electricity issues, energy efficiency, renewable energy development, energy emergency and security preparedness and response; development and implementation of the state energy

1 strategy, retention and expansion of our clean/smart energy industry; and
2 management of federal energy contracts. As a member of the CTED management
3 team I am involved in establishing policies for state economic development.
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6 **Q. Would you please identify what has been marked for identification as Exhibit**
7 **40.1**

8 A. **Exhibit 40.1** is a résumé of my professional energy experience and educational
9 background.
10

11 **Q. Are you sponsoring any other exhibits for entering into the record, and if so**
12 **would you please identify each exhibit you are sponsoring?**

13
14 A. Yes. I am sponsoring the following exhibits.

15 **Exhibit 40.2** Excerpt from 2003 Biennial Energy Report (*Energy Strategy*
16 *Update: Responding to the New Electricity Landscape, Title page and pages 2-2*
17 *& 2-3*), February, 2003.

18 **Exhibit 40.3** 2008 Washington State Utility Resource Plans.

19 **Exhibit 40.4** HB 1303 November Progress Report: A Comprehensive
20 Assessment of the Impacts of Climate Change on the State of Washington
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22 **Exhibit 40.5** Growing Washington's Economy in a Carbon-Constrained World;
23 A Comprehensive Plan to Address the Challenges and Opportunities of Climate
24 Change.

25 **Exhibit 40.6** 2008 Washington State Green Economy Jobs.
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1 **Q. Are you able to answer questions under cross examination regarding these**
2 **sections and exhibits?**

3 A. Yes.
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6 **Q. What will be the subject of your testimony?**

7 A. My testimony will focus on four major areas: 1) The role of wind and renewable
8 energy development with respect to Washington State energy law and policy; 2)
9 the environmental benefits of wind compared to other fossil fueled electricity
10 production technologies; 3) the large scale economic benefits of wind
11 development; and 4) electricity system benefits of the Desert Claim wind project
12 site.
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15 **Q. How strongly does state law and policy support permitting for the Desert**
16 **Claim Wind Power Project?**

17 A. I would say very strongly, with what we know at this point in the process. The
18 project and site have been examined comprehensively through a previous county
19 permitting process, and through the EFSEC process up to adjudication. The state
20 process must be completed before we will have all the necessary information, but
21 barring some unexpected, rather remarkable development, the project appears to be
22 exactly what the law and policy contemplate.
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1 **Q. In previous testimony for wind power projects under consideration by**
2 **EFSEC you spoke primarily about policy, not law. What has changed?**

3 A. A lot has changed. The key policy referred to is in RCW 43.21F.015, which says:
4 "It is the policy of the state of Washington that: (1) [t]he development and use of a
5 diverse array of energy resources with emphasis on renewable energy resources
6 shall be encouraged[.]" From there we look to the State Energy Strategy (Exhibit
7 40.2) for a definition of "renewable energy resources" which includes wind
8 energy. Things are quite different today. In 2006 the citizens of Washington
9 passed the Energy Independence Act, or Initiative 937 (I-937), which goes beyond
10 previous state policy encouraging the development of renewable energy, by
11 mandating the acquisition of renewable energy by the state's largest electric
12 utilities. See RCW 19.285.

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16 Previously, the reduction of greenhouse gas emissions was supported by Governor
17 Locke's decision to enter into a West Coast Governors' Global Warming Initiative
18 for the purpose of reducing greenhouse gas emissions in Washington, Oregon, and
19 California; and the legislature's passage of requirements for fossil fueled power
20 plants to mitigate a portion of their CO2 emissions. See RCW 80.70. We argued
21 that these two factors clearly pointed to greenhouse gas emissions as an important
22 concern to the state. Today, we no longer have to infer that concern. In 2008, the
23 legislature passed a law establishing significant greenhouse gas reduction targets
24 for the state. RCW 70.235 mandates that the state take actions to reduce
25 greenhouse gas emissions.
26

1 Finally, on May 21, 2009, Governor Gregoire signed Executive Order 09-05,
2 “Washington Leadership on Climate Change,” directing various state agencies to
3 take active steps to reduce the state’s greenhouse gases emissions and to support
4 the development of a clean energy and green jobs economy in Washington.
5

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7 In other words, state policies in favor of renewable energy projects have been
8 strengthened over the years and in some cases legal mandates have replaced policy
9 directives as the basis for the state’s support of renewable energy projects.
10

11 **Q. How does I-937, codified as Chapter 19.285 RCW, reinforce support for**
12 **permitting the Desert Claim project?**
13

14 A. Good question. Primarily by providing an extremely strong incentive for state
15 utilities to acquire power from the project. Under I-937, the State’s 17 largest
16 electric utilities, representing 88 percent of the state’s electricity load, are required
17 to meet minimum renewable energy targets. Specific eligible renewable energy
18 resources must be used to meet at least three percent of each utility’s electric load
19 by 2012, nine percent by 2016, and fifteen percent by 2020, barely a decade from
20 now.
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22 The definition of eligible renewable energy resource in RCW 19.285.030(10) is
23 designed to encourage the development of new state and regional generation
24 facilities. The law restricts eligible renewable resources to projects constructed
25 after March 1999, and the facility may not use new fresh water resources, i.e. new
26 hydropower. This leaves only a number of readily available renewable resources,

1 which includes wind, solar energy, geothermal energy, landfill gas, gas from
2 sewage treatment facilities, and certain types of bioenergy. Wave, ocean, and
3 tidal power are eligible resources, but not yet readily available. Only wind, solar
4 thermal and geothermal resources can be built at the scale necessary to meet the
5 aggregate I-937 requirements and wind is chief among them.

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7 In Washington, electric utilities that must comply with I-937 have chosen wind as
8 the preferred resource. Utility resource plans submitted to CTED in 2008 show
9 utilities required to meet the I-937 targets are counting on wind to cover the
10 majority of their renewable resource needs. (Exhibit 40.3) For 2013, I-937
11 utilities expect 78 percent of their renewable resources will be met with wind. For
12 2018, the plans show these utilities are expecting wind to account for 73 percent of
13 their renewable generation portfolio. The renewable resources required by I-937
14 are not small; on the order of 275 average Megawatts (MWA) by 2012 and 1,400
15 MWA by 2020. If utilities were to meet 75% of their targets with wind, this would
16 translate into 200 MWA of wind energy in 2012 and 1,050 MWA in 2020. Because
17 utility scale wind resources generally operate between 28 and 32 percent of their
18 fully rated capacity (which is the range projected for the Desert Claim project by
19 Mr. Steeb, witness #11 in the applicant's pre-filed testimony), actual installed
20 turbine capacity of over 600 MW in 2012 rising to 3,150 MW in 2020, would be
21 required.

22 According to RCW 19.285, these resources must be located in the Pacific
23 Northwest, increasing the incentive for local utilities to purchase the output of
24 projects like Desert Claim. In addition, some utilities plan to exceed their
25 requirements because wind is seen as an attractive resource both because of
26 overall production cost and resource diversity benefits. Oregon has a renewable

1 energy standard that has even higher percentage requirements than Washington's
2 (Enrolled Senate Bill 838 - 74th Oregon Legislative Assembly --2007 Regular
3 Session) The legal requirements of the two states together mean most of the high-
4 quality wind sites in the two states will need to be developed in order to meet the
5 requirements without having to build new transmission lines to more remote sites.
6

7 **Q. What are the environmental benefits of wind energy development compared**
8 **to electricity from fossil fuel sources?**

9 A. There are a number of environmental benefits when comparing wind with fossil
10 fuel generated electricity. I believe this is one of the primary reasons why
11 Washington's energy policy as expressed in RCW 43.21F.015(1) encourages
12 development and use of renewable energy resources. Key benefits include: no
13 criteria air pollutant emissions or water pollution discharges from the operation of
14 wind turbines; no need for water for power plant cooling; and relatively small and
15 largely mitigatable land use impacts. However, I do not propose to focus on these
16 areas in my testimony as they are well described in the draft environmental impact
17 statements and are covered by other witnesses. Rather I will concentrate on the
18 greenhouse gas emissions benefits of wind development.
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22 **Q. Why is the state concerned about greenhouse gases?**

23 A. Greenhouse gases are a concern because they are considered to be a primary cause
24 of global warming and climate change. The costs of climate change to the state are
25 potentially devastating, particularly, as it relates to this proceeding: declining
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1 Northwest snow packs, due to climate change, will impact the availability of our
2 hydroelectric resources for energy production. (Exhibit 40.4)
3

4 **Q. How does wind power help avoid greenhouse gas emissions?**

5 A. Wind power helps in two ways: it is an alternative to hydropower; and it does not
6 generate additional greenhouse gases. Some resources, such as natural gas-fired
7 combustion turbines, are beneficial in that they offer an alternative to hydropower,
8 but they exacerbate global warming by generating massive amounts of carbon
9 dioxide.
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12 Based on the greenhouse gas emissions reduction targets established in
13 RCW 70.235.020, one can conclude that reducing the state's carbon dioxide
14 production is one of the most important actions we can take to protect the state's
15 economy in the future.
16

17 RCW 70.235.020 establishes a timeline and targets for the reduction of in-state
18 greenhouse gas emissions as follows:

- 19
- 20 • By 2020, reduce overall emissions of greenhouse gases in the state to 1990
21 levels;
 - 22 • By 2035, reduce overall emissions of greenhouse gases in the state to
23 twenty-five percent below 1990 levels;
 - 24 • By 2050, the state will do its part to reach global climate stabilization
25 levels by reducing overall emissions to fifty percent below 1990 levels, or
26 seventy percent below the state's expected emissions that year.

1 The law required the Department of Ecology and the Department of Community,
2 Trade & Economic Development to develop a comprehensive plan to achieve the
3 goals. In December, 2008, the agencies published "Growing Washington's
4 Economy in a Carbon-Constrained World; A Comprehensive Plan to Address the
5 Challenges and Opportunities of Climate Change." (Exhibit 40.5) Development
6 of renewable energy resources is addressed in the plan as a necessary component
7 of reaching the goals. The I-937 portfolio standard was looked at directly, and
8 found to contribute 12 percent of the reductions necessary to meet the 2020
9 statutory emissions reduction targets in RCW 70.235.020. This can be looked at
10 two ways. On the one hand, it shows full implementation of the renewable
11 resource standard in I-937 does not get us very far. On the other hand, it shows
12 how important every renewable resource is. Every renewable project, especially
13 large utility-scale facilities, as long as they are appropriately sited, will be needed.
14 The Desert Claim project is one of those.

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18 **Q. What are the economic benefits of wind energy development?**

19 A. The economic benefits of wind energy development are considerable. They
20 include jobs during construction and operations, tax revenue (or reduced tax
21 burden) for county residents, and long-term stable (no risk of price increase), low-
22 cost electricity for customers of utilities that purchase its output. However, I
23 believe that others will testify to these benefits.
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1 **Q. If you are not testifying about these economic benefits of wind power, about**
2 **what economic benefits are you testifying?**

3 A. I would like to focus my comments on the kind of jobs, and the kind of economy
4 the Desert Claim project represents.
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7 Much of the state's effort to address climate change in the legislation discussed
8 above, in a number of recent executive orders, and in studies and plans of the
9 Western Climate Initiative, is foreseen to be through the development of green jobs
10 and a green economy as the foundation for achieving emissions goals, reversing
11 the course of climate change, and, as additional benefits, improving our energy
12 security (reducing reliance on foreign oil), and getting through the current
13 recession. "Jobs for the 21st Century" is a rallying call.
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16 We know clean energy, e.g. electricity generated with renewable resources, and
17 advanced energy technologies, e.g. smart grid meters and devices that will
18 transform the grid and make electric vehicles viable, have a large role to play in the
19 development of those jobs and economy.
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22 **Q. Desert Claim jobs would be green?**

23 A. Absolutely. What makes a job green is its low impact on the environment. Many
24 green jobs have nothing to do with energy, but many others do. Operating the
25 Desert Claim wind farm would have little negative impact on the environment
26 making it a green project populated with green jobs.

1 In January 2009, the state issued the nation's most comprehensive examination of
2 green jobs, *2008 Washington State Green Economy Jobs*. (Exhibit 40.6) The
3 study identified more than 2000 renewable energy jobs in the state with nearly 150
4 of those in the South Central region, which includes Kittitas County. As utilities
5 comply with the renewable energy provision of I-937 and as federal recovery act
6 funds and tax benefits for renewable energy flow into Washington state, we can
7 expect significant new jobs in this sector.
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10 **Q. You indicated previously that there were some electric system benefits from**
11 **building wind power projects. Can you expand on that?**

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14 A. Yes. Our existing electricity system in Washington and the region is highly
15 dependent on hydropower. During a good water year, approximately 70 percent of
16 the generation in Washington is from hydroelectric dams. This has been a great
17 benefit to Washington because the price of power from these facilities has been
18 very low – virtually the lowest cost electricity in the nation. The down side of this
19 is we are heavily dependent on timely precipitation and annual snow pack. We
20 must have sufficient rain and snow every single year to meet electricity demand
21 with our own resources. There is not enough reservoir capacity in the system to
22 carryover from a wet year to a dry year, and if our water deficit is greater than our
23 electricity import capacity (or imported electricity is not available) we can face a
24 shortage of electric energy in a drought year. This occurred in 2001. Stream flow
25 in the Columbia River system measured about 50 percent of normal and California
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1 was unable to guarantee sufficient import power to meet our peak winter demand.
2 As a result of less supply and higher electricity prices, the state of Washington saw
3 a large portion of its aluminum industry permanently shut down and the power we
4 were able to buy on the spot market was hugely expensive. This vulnerability is
5 due to our heavy dependence on hydropower. We have, in essence, put all our
6 electricity "eggs" in the same basket.
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9 A key solution to this vulnerability is to diversify our portfolio of generating
10 resources. CTED is on record as in support of the BP Cherry Point Cogeneration
11 Project for this purpose, as well as its high conversion efficiency due to
12 cogeneration. Construction of regional wind projects would help diversify our
13 resource portfolio away from hydropower, and add another dimension of diversity
14 beyond generation with variable priced natural gas. Each resource type has
15 characteristics which bring benefits to the system, and costs. Natural gas
16 generation, as previously stated, may be more reliable than hydropower but it is
17 more costly, and the risk of increased costs in the future is high compared to
18 hydropower or wind. Wind is relatively low cost, and like hydropower has
19 minimal risk of future cost increases because there is no cost for the fuel (wind,
20 like water, is free). Wind reliability also contrasts well when compared to
21 hydropower. Hydropower reliability is excellent on a daily basis, but can be very
22 unreliable annually. Wind can be unreliable on an hourly basis, but it will be there
23 every year, year after year.
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1 Another system benefit of the Desert Claim Wind Power Project is its proximity to
2 high voltage transmission lines. Both the Bonneville Power Administration and
3 Puget Sound Energy have transmission lines that cross the project boundary lines.
4 There is no need to construct costly new transmission lines to hook up with the
5 grid. Avoiding the construction of such associated facilities represents both cost
6 savings and reduced environmental impacts.
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9 **Q. Does that conclude your testimony at this time?**

10 A. Yes
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