

**Exhibit No. ____ (DN-1T)
Dockets UE-100467/UG-100468
Witness: David Nightingale**

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

**AVISTA CORPORATION d/b/a
AVISTA UTILITIES,**

Respondent.

**DOCKETS
UE-100467/UG-100468**

TESTIMONY OF

DAVID NIGHTINGALE

**STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION**

September 16, 2010

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1 I. INTRODUCTION

2
3 **Q. Please state your name and business address.**

4 A. My name is David Nightingale. My business address is 1300 S. Evergreen Park
5 Drive S.W., P.O. Box 47250, Olympia, WA 98504.
6

7 **Q. By whom are you employed and in what capacity?**

8 A. I am employed by the Washington Utilities and Transportation Commission as a
9 Senior Regulatory Engineering Specialist in the Regulatory Division, Energy
10 Section.
11

12 **Q. How long have you been employed by the Commission?**

13 A. I began working for the Commission in February 2009.
14

15 **Q. Would you please state your educational and professional background?**

16 A. I have a BA in Business Administration from Western Washington University and a
17 BS in Energy Engineering from the University of Washington. My engineering
18 degree program was focused on alternative energy with supplementary coursework
19 in environmental engineering. I assisted in researching residential building envelope
20 energy conservation. This research was instrumental in providing the technical
21 foundation for what became the Good Cents program and eventual updates to the
22 Washington State Energy Code. After the energy research experience I worked for
23 an engineering consulting firm based in Seattle, RW Beck, beginning in 1987. I was

1 recruited by the Washington State Department of Ecology where I worked until
2 joining the Commission in February of 2009.

3 From 1991 to the start of 2009, I worked for the Washington Department of
4 Ecology (Department of Ecology) in various capacities; as a planner, engineer,
5 technical unit supervisor, statewide technical-lead, and policy staff. My projects
6 included technical review and regulatory compliance of renewable biomass projects,
7 such as landfill gas energy projects, variously-fueled pyrolysis plants and proposals,
8 and fluidized-bed and mass-burn waste-to-energy plants (for the City of Tacoma,
9 City of Spokane and others). I was also responsible for technical review and
10 regulatory assistance for coal combustion products recycling and disposal options for
11 TransAlta's Centralia power generation plant as well as combustion products
12 disposal for Avista's Kettle Falls wood-fuel plant.

13 Since joining the Commission I have been responsible for: evaluating the
14 prudence of acquisitions for new energy resources, determining compliance with
15 greenhouse gas emissions for baseload generating resources, reviewing various
16 Integrated Resource Plans (IRPs), and working with regulated utilities to comply
17 with the new conservation and renewable energy requirements of Washington's
18 Energy Independence Act, also known as Initiative Measure No. 937 (I-937). I am
19 also the Commission representative to the Regional Technical Forum organized and
20 facilitated by the Northwest Power and Conservation Council (council) staff.

1 **II. SCOPE AND SUMMARY OF TESTIMONY**

2
3 **Q. What is the scope of your testimony?**

4 A. My testimony addresses the prudence of the acquisition of the Lancaster Power
5 Purchase Agreement (PPA) by Avista Corporation (Avista). In addition, because
6 this is a long-term financial commitment, I also address whether the plant is a
7 baseload generating facility, and whether it is in compliance with the greenhouse
8 gases (GHG) emission limits.

9
10 **Q. Can you summarize the conclusions of your testimony?**

11 A. Avista procured the Lancaster Generation Facility through a methodical process that
12 included satisfying all of the standard prudence criteria used by the Commission.
13 The Company's acquisition of this resource did not follow a conventional RFP
14 process. However, Staff is satisfied that a review of the entire circumstances shows
15 that Avista did prudently acquire the Lancaster facility. In addition, Staff's analysis
16 of the design, intent, permits, and performance of the Lancaster plant shows that the
17 Lancaster plant is a baseload electric generation plant, and that its emissions meet the
18 Washington State Greenhouse Gases (GHG) Emissions performance standards.
19 Finally, Staff's analysis of the codified statute confirms that the Commission has the
20 authority to make determinations regarding GHG emissions performance standards
21 for out-of-state baseload plants that serve electric energy to in-state end-users.

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III. DISCUSSION

A. Lancaster Power Purchase Agreement Prudence Analysis

Q. Please describe the Lancaster plant.

A. The Lancaster Generating Facility (Lancaster) is a 275 MW natural gas-fired combined-cycle combustion turbine plant located near Rathdrum, Idaho, within the northern Idaho Avista service territory. Lancaster employs a General Electric Frame 7FA gas-fired turbine and matched steam turbine, with a typical generating capacity of 245 MW and the ability to provide up to 30 MW of additional duct-firing generating capacity during peak loads.¹

Q. Please describe the criteria that the Commission uses to determine if a resource has been acquired prudently.

A. First, the Company must demonstrate that the resource is used and useful in providing service to customers in Washington.² When the resource has been shown to be used and useful for Washington customers, the Commission's standard for determining prudence is articulated in the Eleventh and Nineteenth Supplemental Orders in PSE's 1992 general rate case and other consolidated dockets.³ The Commission held, pursuant to RCW 80.04.130, that the utility has the burden of proof on prudence, and "must make an affirmative showing of the reasonableness

¹ Exhibit No. (RJL-1T) p. 4.

² See RCW 80.04.250.

³ *WUTC v. Puget Sound Power & Light*, Docket Nos. UE-920433, UE-920499, UE-921262 (consolidated) (*PSE 1992 GRC*); Eleventh Supplemental Order, Nineteenth Supplemental Order.

1 and prudence of the expenses under review.”⁴ In 2003, the Commission reaffirmed
2 the standard it applies in reviewing the prudence of power generation asset
3 acquisitions:

4 The test the Commission applies to measure prudence is what would a
5 reasonable board of directors and company management have decided
6 given what they knew or reasonably should have known to be true at
7 the time they made a decision. This test applies both to the question
8 of need and the appropriateness of the expenditures. The company
9 must establish that it adequately studied the question of whether to
10 purchase these resources and made a reasonable decision, using the
11 data and methods that a reasonable management would have used at
12 the time the decisions were made.⁵
13

14 The Commission continues to evaluate prudence considering specific factors identified in its
15 earlier decisions. In particular, the Commission requires the company to show that:

- 16 • The new resource is needed;
- 17
- 18 • The new resource fills the need determined in a cost-effective manner,
19 evaluating that resource against the standards of what other purchases
20 are available, and against the standard of what it would cost to build
21 the resource itself;
- 22
- 23 • Management kept its board of directors informed and involved the
24 board in the decision process, and;
- 25
- 26 • The company has adequate contemporaneous records that will allow
27 the Commission to evaluate its actions with respect to the decision
28 process.⁶
29
30

31 **Q. What is the significance of the “used and useful for service” requirement?**

32 A. In order for a resource to be included in rate base for ratemaking purposes, the
33 resource must be “used and useful for service” in Washington State.⁷ The

⁴ *Id.*, Eleventh Supplemental Order at 19.

⁵ *WUTC v. Puget Sound Energy, Inc.*, Docket UE-031725, Order 12, at ¶ 19 (April 7, 2004).

⁶ *PSE 1992 GRC*, Nineteenth Supplemental Order at 5-11; *PSE GRC Docket UE-090704*, Order 11, at ¶ 320; and *PacifiCorp GRC Docket UE-090205*, Order 09, at ¶ 64.

1 Commission has stated that the phrase “used and useful for service in this state”
2 means “to benefit the ratepayers of Washington, either directly (e.g., flow of power
3 from a resource to customers) and/or indirectly (e.g., reduction of cost to Washington
4 customers through exchange contracts or other tangible or intangible benefits).”⁸

5 The Commission has also stated that “the company must demonstrate tangible and
6 quantifiable benefits to Washington of resources in the system before we will include
7 the resources in rates.”⁹

8
9 **Q. Is Lancaster used and useful for service to Washington customers?**

10 A. Yes. As of January 1, 2010, Lancaster provides energy solely to Avista. Avista sells
11 the majority of its energy to customers in Washington State, with a minority of
12 power supplied to Idaho customers. Avista has complete control over the dispatch of
13 Lancaster to serve its customers under the Lancaster PPA.¹⁰ This PPA provides an
14 exclusive arrangement for the use of the Lancaster plant by Avista from January 1,
15 2010, through October 31, 2026.¹¹ Therefore, the power generated from Lancaster,
16 as a captive plant serving only the needs of the Avista electric system, is used and
17 useful for Washington customers.¹²

18
19 **Q. Was there a demonstrated need for additional resources?**

⁷ See RCW 80.04.250.

⁸ *Wash. Utilities & Transp. Comm’n v. PacifiCorp d/b/a Pacific Power & Light Co.*, Docket UE-050684, Order 04, at 21-22, ¶ 50 (April 17, 2006).

⁹ *Id.* at 27, ¶ 68.

¹⁰ Exhibit No. (RJL-3), Section B, pp. 16 and 53.

¹¹ Exhibit No. (RJL-3), Section B, p. 11.

¹² Exhibit No. (RJL-6T), p. 1.

1 A. Yes. Avista submitted its 2009 Electric Integrated Resource Plan (IRP) to the
2 Commission on August 28, 2009. This plan assumed that the Company would “gain
3 control of the output for the 270MW Lancaster Generating Facility (Rathdrum GS)
4 on January 1, 2010.”¹³ With the assumption of Lancaster being part of the
5 generation fleet, the 2009 IRP states that the Company has “adequate resources to
6 meet annual physical energy and capacity needs until 2015.”¹⁴ Further, the IRP
7 (Figure 8.4) shows by interpretation that if the Lancaster resource of approximately
8 270 MW were not acquired, the Company would be in a short capacity position for
9 both summer and winter peaking loads by 2011.¹⁵

10 A second Avista staff report found that the 2007 IRP modeling showed
11 energy deficits in the first, third and fourth quarters of 2010, although capacity
12 deficits do not occur until 2011.¹⁶ Therefore, acquiring the Lancaster PPA in 2010
13 contributes to meeting energy demand for the Company in the near term.

14
15 **Q. Does Lancaster fill the identified resource need in a cost-effective manner,**
16 **evaluating that resource against the standards of what other purchases are**
17 **available, and against the standard of what it would cost to build the resource**
18 **itself?**

19 A. Yes. Avista demonstrated that the Lancaster PPA filled its needs in a cost-effective
20 manner with a series of documents and studies. These included:

21 - Avista’s 2007 Electric IRP,

¹³ Docket UE-081613, Avista 2009 IRP, pp. 8-1.

¹⁴ *Id.* p. 8-5.

¹⁵ *Id.* p. 8-6.

¹⁶ Exhibit No. (RJL-4), Section E, p. 1.

- 1 - Two internal financial studies of the Lancaster PPA opportunity, and
- 2 - Two independent consultant studies.

3 The Company's 2007 IRP showed that the Lancaster plant was more cost-effective
4 than the Company building its own plant as a "Greenfield" project, and also lower
5 cost than recent similar plant purchases in the Northwest¹⁷.

7 **Internal Studies**

8
9 Avista's Manager of Resource Planning & Power Supply Analyses, Clint
10 Kalich,¹⁸ performed an initial internal analysis prior to the Company's decision to
11 exercise an option to enter into the Lancaster PPA.¹⁹ In looking for comparable
12 opportunities, except for the Lancaster plant, Mr. Kalich found that there were only
13 four combined-cycle combustion turbine (CCCT) plants in the Northwest that were
14 not already owned by another utility. Two of those were much larger than the IRP
15 projected need of 350 MW of CCCT power (ranging from 550 to 648 MW), and
16 none of the four plants were available.²⁰

17 Mr. Kalich analyzed the options for building a new plant, and estimated the
18 market value for potentially available existing plants.²¹ Avista's financial modeling
19 showed that the acquisition of a new plant would cost considerably more than the
20 Lancaster PPA. Furthermore, only if an existing CCCT plant were available before
21 2010 at or below approximately \$500 per kW, would there be a significant financial

¹⁷ Docket UE-081613, Avista 2009 IRP, pp. 2-21

¹⁸ Avista's Response to Staff Data Request No. 147.

¹⁹ Exhibit No. (RJL-4), Section C.

²⁰ *Id.*, Table 1, p. 2.

²¹ Exhibit No. (RJL-4), Section C, p. 3.

1 advantage for acquiring an existing CCCT, as compared with the Lancaster PPA.²²

2 Avista staff²³ wrote a second broader analysis, dated November 2, 2007,
3 regarding the potential opportunity to acquire the Lancaster resource through a long-
4 term PPA. This second internal analysis reviewed the work of Mr. Kalich, as well as
5 the recently completed 2007 IRP, and showed energy deficits in the first, third and
6 fourth quarters of 2010 and capacity deficits beginning in 2011.²⁴ It also updated the
7 2007 IRP analysis with a load estimate performed on October 25, 2007. This
8 analysis re-verified the IRP need for both energy and capacity beginning in 2011.²⁵
9 The IRP preferred resource strategy showed a need for 350 MW of CCCT resources,
10 in addition to 300 MW of wind and other renewable resources, and 87 MW of
11 conservation resources, during the first 10 years of the plan.²⁶

12 Finally, the second internal report also recapped the findings of the
13 Thorndike Landing report regarding the cost-effectiveness of the Lancaster PPA,
14 discussed in greater detail below.

15 **Independent Analyses**

16
17
18 Avista engaged the services of an independent consultant to compare the
19 Lancaster PPA option to other potential opportunities. The Thorndike Landing
20 report "Independent Valuation of Lancaster Facility Tolling Agreement"²⁷ was

²² *Id.*, p. 7.

²³ Avista's Response to Staff Data Request No. 148.

²⁴ Exhibit No. (RJL-4), Section E, p. 1.

²⁵ Exhibit No. (RJL-4), Section E, p. 3.

²⁶ *Id.*, p. 4.

²⁷ Exhibit No. (RJL-4), Section D.

1 published on October 30, 2007. The Thorndike report contained various analytical
2 approaches to valuing the Lancaster acquisition.

3 The first analysis provided a discounted cash flow calculation to value the
4 tolling contract arrangement. The second analysis provided a valuation of a facility
5 purchase scenario. Thorndike also evaluated three other similar recent transactions
6 of gas turbine plants in the Northwest, as well as similar market transactions, to
7 value the Lancaster plant. The Thorndike report concluded that the “Toll provides
8 positive value to Avista and its customers.”²⁸

9 Finally, a retrospective independent analysis was subsequently performed by
10 Navigant Consulting.²⁹ Navigant Consulting concluded, in evaluating the Lancaster
11 PPA, that:

- 12 • No similar long-term PPAs were available,
- 13 • No similar PPAs were available at lower costs,
- 14 • No other Northwest market participants were successful in procuring similar
15 long-term PPAs in the 2004-2007 time period, and
- 16
- 17 • Because of Avista’s credit rating during this time, there was a financial
18 advantage to leveraging the option to acquiring the output of Lancaster that
19 would not have been available in the open market.³⁰
- 20
- 21

22 **Q. In the decision to acquire the Lancaster PPA, did Avista management keep its**
23 **board of directors informed and involved in the decision process?**

²⁸ Exhibit (RJL-3), Section F, p. 176.

²⁹ Exhibit (RJL-4), Section F.

³⁰ Exhibit (RJL-4), Section F, pp. 4-5.

1 A. Yes. From March 2007 through February 2008, Board of Directors Finance
2 Committee and full Board of Directors were informed of the analysis and options
3 surrounding the Lancaster acquisition.³¹
4

5 **Q. Regarding the Lancaster PPA, did the Company maintain adequate**
6 **contemporaneous records that allow the Commission to evaluate its actions with**
7 **respect to the decision process?**

8 A. Yes. The Company demonstrated that they did maintain adequate contemporaneous
9 records for evaluation of their actions with respect to their decision making process.
10 This was contained primarily in the testimony of Avista's Robert Lafferty and in the
11 response to Commission Staff Data Request No. 109.
12

13 **Q. In conclusion, is Staff satisfied that Avista prudently acquired the Lancaster**
14 **Generation Facility?**

15 A: Yes. Primarily through the internal and external studies of the alternatives to the
16 Lancaster PPA, Staff is satisfied that Avista has demonstrated the prudence of this
17 PPA acquisition.
18

19 **B. Compliance with the Greenhouse Gases Emissions Performance**
20 **Standard**

21
22
23
24 **Q. What is the Greenhouse Gas (GHG) emissions performance standard?**

³¹ Staff Data Request No. 109C.

1 A. The GHG performance standard is “one thousand one hundred pounds of greenhouse
2 gases per megawatt-hour.”³² This standard must be met by an [1] “electrical
3 company” that acquires [2] “baseload electric generation” via a [3] “long-term
4 financial commitment” [4] “after June 30, 2008.”³³ As RCW 80.80.060(1) states:
5 “No electrical company may enter into a long-term financial commitment unless the
6 baseload electric generation supplied under such a long-term financial commitment
7 complies with the greenhouse gases emissions performance standard.”
8

9 **Q. Is the Lancaster generating plant subject to this standard?**

10 A. Yes. Avista qualifies as an “electrical company” because that term means “a
11 company owned by investors that meets the definition of RCW 80.04.010,”³⁴ which
12 in turn defines electric companies subject to Commission regulation. Avista
13 acquired the rights to the Lancaster plant via a “long-term financial commitment”
14 “after June 30, 2008,” and a “long-term financial commitment” includes “[a] new or
15 renewed contract for baseload electric generation with a term of five or more years
16 for the provision of retail power or wholesale power to end-use customers in this
17 state.”³⁵

18 The Lancaster plant is “baseload electric generation,” as I explain later in my
19 testimony. Therefore, I conclude that Lancaster is subject to the GHG performance
20 standard of less than 1,100 pounds per megawatt hour of energy generated.

³² RCW 80.80.040(1)(a). According to the statute, this is the applicable standard until the Washington Department of Commerce (formerly the Department of Community, Trade and Economic Development) develops a different standard, a process that begins in 2012. RCW 80.80.040(1)(b) and 80.80.050.

³³ RCW 80.80.040(1), (2).

³⁴ RCW 80.80.010(12).

³⁵ RCW 80.80.010(15)(b).

1 **Q. What is the significance of a Commission determination that a particular**
2 **acquisition is “baseload electric generation” that must comply with the GHG**
3 **emissions performance standard?**

4 A. An acquisition must be “baseload electric generation” in order to qualify for
5 automatic cost deferral so that expenses associated with the acquisition may be
6 examined by the Commission for later recovery from ratepayers. As RCW
7 80.80.060(6) states: “An electrical company may account for and defer for later
8 consideration by the commission costs incurred in connection with the long-term
9 financial commitment, including operating and maintenance costs, depreciation,
10 taxes, and cost of invested capital.”

11
12 **Q. How is “baseload electric generation” defined in the GHG emissions statute?**

13 A. “Baseload electric generation” is defined as “electric generation from a power plant
14 that is designed and intended to provide electricity at an annualized plant capacity
15 factor of at least sixty percent.”³⁶

16
17 **Q. What does “plant capacity factor” mean?**

18 A. Plant capacity factor means “the ratio of the electricity produced during a given time
19 period, measured in kilowatt-hours, to the electricity the unit could have produced if
20 it had been operated at its rated capacity during that period, expressed in kilowatt-
21 hours.”³⁷ In other words, because there are 8,760 hours in a non-leap year, a plant

³⁶ RCW 80.80.010(4).

³⁷ RCW 80.80.010(16).

1 operating at a capacity factor of at least 60 percent would operate at least 5,256 hours
2 per year (0.60 * 8,760).

3
4 **Q. Does the statute provide direction for evaluating whether a resource provides**
5 **“baseload electric generation?”**

6 A. Yes. According to the statute: “In determining whether a long-term financial
7 commitment is for baseload electric generation, the Commission shall consider:”

- 8 1. the design of the power plant; and
- 9 2. its intended use, based upon ...
 - 10 i. permits necessary for the operation of the power plant and
 - 11 ii. any other matter the commission determines is relevant under
 - 12 the circumstances.³⁸
 - 13
 - 14
 - 15

16 **Q. What do you conclude from this list of factors?**

17 A. I conclude that the statute places primary focus on the operational characteristics of
18 the plant, i.e., the design and the permits, and any similar operating characteristic
19 such as technical capability limitations or legal operating restrictions. The owner or
20 operator’s subjective intent for operating the plant is relevant, but it is not the
21 primary focus.

22
23 **Q. What else supports your conclusion?**

24 A. My conclusion is consistent with the rules that both the Energy Facility Site
25 Evaluation Council (EFSEC) and the Department of Ecology (Ecology) have
26 adopted under the GHG emissions statute. These rules define what “designed and

³⁸ RCW 80.80.060(3).

1 intended” means in the definition of the term “baseload electric generation” in RCW
2 80.80.010(4). According to these rules, “designed means originally specified by the
3 design engineers for the power plant or generating units ... installed at a power plant;
4 and intended means allowed for by the current permits for the power plant,
5 recognizing the capability of the installed equipment or intent of the owner or
6 operator of the power plant.”³⁹

7 My conclusion is also supported by the context of the GHG emissions statute
8 itself. It is apparent to me from the statute that any new fossil-fueled baseload
9 electric generation sited in this state in the near term will be a gas-fired CCCT. This
10 is because, although other fossil-fueled plants can meet the standard through use of
11 methods such as carbon sequestration, no such technology is yet available and
12 proven on a large scale project. Furthermore, the Legislature’s mandate that future
13 emissions standards are to be based on combined-cycle combustion turbines for
14 fossil-fueled baseload generation is reflected in the requirement that, every five
15 years, the Washington Department of Commerce establish future GHG emissions
16 requirements based on natural gas combined-cycle combustion turbine electric
17 generation technology.⁴⁰

18 At the same time, combined-cycle combustion turbines are a flexible
19 resource. Though they are designed with the technical capability to operate at a very
20 high annualized capacity factor, up to about 85 percent, they often do not actually
21 run at even a 60 percent capacity factor, because in practice, they are economically

³⁹ WAC 173-407-110 (Ecology) and WAC 463-85-110 (EFSEC). These rules are worded the same in part because these agencies were required to jointly develop these rules.

⁴⁰ RCW 80.80.050.

1 dispatched. And this percentage is anything but predictable as the weather, price of
2 natural gas, and other factors vary dynamically.

3 While modeling of possible future annual plant capacities of a CCCT is an
4 interesting exercise, it is highly variable and much less definitive than evaluating the
5 permit conditions and actual technical capability of the plant as designed and
6 installed. All of this suggests to me that the Legislature was primarily looking to the
7 plant's technical capabilities and permit limits in establishing the definition of
8 "baseload electric generation", and less on the subjective intent of the owner or
9 operator.

10 Finally, this approach to determining how to apply the "baseload generation"
11 concept regarding GHG compliance has been affirmed in prior cases by this
12 Commission.⁴¹

14 Design of the Lancaster Plant

15
16 **Q. Was the Lancaster plant designed to operate at an annual capacity factor of at
17 least 60 percent?**

18 A. Yes. The turbine installed at Lancaster is a modern General Electric (GE), Frame
19 7F, combined-cycle combustion turbine (CCCT). According to the PPA contract
20 specifications, the plant is required to have a minimum capacity of 70 percent.⁴²
21 Modern GE CCCT equipment has the capability to routinely meet and exceed a 60
22 percent annualized plant capacity factor. Witnesses in previous cases have testified

⁴¹ See final orders of PSE's GRC Docket UE-090704 and PacifiCorp's GRC Docket UE-090205.

⁴² See Exhibit No. (RJL-3), Section B, pp. 106, 112, and 153, and Section G, pp. 59 and 61.

1 that “combined-cycle plants...are designed to operate with Capacity Factors above
2 90 percent.”⁴³ In a previous case, another GE Frame 7F CCCT plant, the Mint
3 Farm, was documented to be capable of operating at or above a 60 percent annual
4 capacity factor according to the plant manufacturer’s turbine operating and
5 maintenance considerations document. That document characterizes an operating
6 mode called “continuous service factor” as operations where the turbine operates at
7 greater than 90 percent capacity.⁴⁴ Clearly, the same manufacturer, GE, and the
8 same Frame series, 7F, has designed and supplied the Lancaster CCCT with the
9 capability of routinely operating at over a 90 percent capacity factor, far greater than
10 the 60 percent capacity factor that would qualify as baseload electric generation.
11

12 **Intended Use Based on Necessary Permits**

13
14 **Q. What does the relevant Lancaster permit or other similar documents indicate**
15 **regarding the issue of baseload electric generation?**

16 A. The Lancaster plant must meet state and federal requirements for air quality. On
17 March 24, 1999, Rathdrum Power, LLC, sent a letter to Avista Energy stating their
18 intent to apply for an air operating permit for operating up to 8,000 hours per year,⁴⁵
19 which is 91 percent of the available hours per year.

20 The Lancaster air operating permit is issued by the Idaho Department of
21 Environmental Quality (ID DEQ). I examined the air operating permit in Mr.
22 Lafferty’s testimony as well as the current air operating permit on the ID DEQ Air

⁴³ Docket UE-090704, Odom Exhibit No. (LEO-1CT) at 29.

⁴⁴ Docket UE-090704, Odom Exhibit No. (LEO-4) at 47.

⁴⁵ Robert J Lafferty Exhibit 3, Section B, p. 122.

1 Permit website to determine the allowed annual operating hours. The maximum
2 number of operating hours per year has been consistent since at least November 2008
3 by the ID DEQ permits at 8,000 hours/yr.^{46,47} This limit does not significantly
4 restrict the ability of the plant to operate at a 60 percent annual capacity factor. I
5 also verified that this operating condition is still current on a phone discussion with
6 Darrin Pampaian, Permit Writer at ID DEQ on August 11, 2010.

7
8 **Intended Use Based on Other Relevant Factors**

9
10 **Q. Are there other factors you evaluated in considering whether Lancaster**
11 **qualifies as “baseload electric generation?”**

12 A. Yes. Avista has sufficient firm gas supply and gas transportation arrangements to
13 operate Lancaster at or above a 60 percent annual capacity factor, and the Company
14 has sufficient long-term electric transmission for Lancaster through BPA. I base
15 these conclusions on the testimony of Company witness Lafferty, specifically the
16 documentation provided in Exhibit No. (RJL-3), Sections C and D, and related
17 testimony.

18
19 **Q. What do you conclude from this evidence on the “design and intent” of**
20 **Lancaster?**

21 A. The Lancaster plant is designed and permitted to operate at or above a 60 percent
22 annualized plant capacity factor. I conclude that Lancaster qualifies as “baseload

⁴⁶ Robert J Lafferty Exhibit 5, Section C, p. 16.

⁴⁷ Avista’s Response to Staff Data Request No. 161, Attachment A, p. 15.

1 electric generation” for purposes of the GHG emissions statute. Therefore, Avista
2 was allowed by rule to defer costs associated with that plant, subject to final
3 determination of cost recovery by the Commission.⁴⁸

4
5 **Determination of Lancaster GHG Emissions Performance, Compliance,**
6 **and Extra-territorial Authority**
7
8

9 **Q. Does the Lancaster plant comply with the GHG emissions performance**
10 **standard?**

11 A. Yes. I examined Exhibit (RJL-5), Section D, and the US EPA Clean Air website
12 regarding emissions for the Acid Gas Program, to obtain actual emissions data from
13 the Lancaster plant⁴⁹ from 2006 through 2009. In each of these years I calculated the
14 emissions rate to be between 816 and 821 pounds of GHG per MWh of energy
15 produced. In addition, calculations submitted by Avista in response to Staff Data
16 Request No. 162 provided similar results. Therefore, the emission rates for the
17 Lancaster plant are fewer than 1,100 pounds of GHG emissions per megawatt hour.
18 Consequently, this plant meets the GHG emissions performance standard.

19
20 **Q. What is the authority for examining the emissions of a generating plant outside**
21 **of Washington State?**

22 A. As described above, the GHG laws apply to baseload electric generation, which
23 “means electric generation from a power plant...”⁵⁰ The definition of a power plant

⁴⁸ WAC 480-100-435(1).

⁴⁹ Identified in the U.S. EPA database as the Rathdrum Power, LLC facility number 55179.

⁵⁰ RCW 80.80.010(4).

1 is “a facility for the generation of electricity that is permitted as a single plant by a
2 jurisdiction inside or outside the state.”⁵¹ In addition, the GHG statute applies to all
3 baseload electric generation plants for which electric utilities enter into a long-term
4 financial commitment.⁵² The definition of a “long-term financial commitment”
5 includes a contract for more than five years that provides retail or wholesale power
6 “to end-users in this state,”⁵³ regardless of the point of generation. This combination
7 of statutory definitions and provisions point to the need to assure that any baseload
8 electric generation power served to Washington end-users must be generated from
9 plants that meet the GHG emissions performance standards. The Commission is
10 primarily responsible for assuring compliance with GHG emissions performance
11 standards for out-of-state baseload electric generation plants that serve Washington
12 end-user electric needs as described in RCW 80.80.

13
14 **Q. Does this conclude your testimony?**

15 **A. Yes.**
16

⁵¹ RCW 80.80.010(17).

⁵² RCW 80.80.040(1).

⁵³ RCW 80.80.010(15)(b).