

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-10_____

DIRECT TESTIMONY OF

ROBERT J. LAFFERTY

REPRESENTING AVISTA CORPORATION

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I. INTRODUCTION

Q. Please state your name, employer and business address.

A. My name is Robert J. Lafferty. I am employed as the Director of Power Supply at Avista Corporation, located at 1411 East Mission Avenue, Spokane, Washington.

Q. Would you please briefly describe your educational and professional background?

A. Yes. I received a Bachelor of Arts degree in Business Administration and a Bachelor of Science degree in Electrical Engineering from Washington State University, both in 1974. I began working as a distribution engineer for Avista in 1974 and held several different engineering positions with the Company. In 1979, I passed the Professional Engineering License examination in the state of Washington. I have held management positions in engineering, marketing, demand-side-management and energy resources. I began work in the Energy Resources Department in March 1996, and have held various positions involving the planning, acquisition and optimization of energy resources. Since March 2008, I have served as Director of Power Supply where my primary responsibilities involve management and oversight of the short- and long-term planning and acquisition of power resources for the Company.

Q. What is the scope of your testimony in this proceeding?

A. My testimony discusses the Lancaster Power Purchase Agreement and the associated natural gas transportation and electric transmission agreements, the customer benefits and prudence of this baseload resource acquisition, and the request for determination that the Lancaster Power Purchase Agreement complies with the emissions performance standard under RCW Chapter 80.80.

1 A table of contents for my testimony is as follows:

2	<u>Description</u>	<u>Page</u>
3	I. Introduction	1
4	II. Lancaster Power Purchase Agreement	4
5	III. Lancaster Prudence	13
6	IV. Lancaster Greenhouse Gas Emissions Certification	41

7
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9 **Q. Are you sponsoring any exhibits?**

10 A. Yes. I am sponsoring four exhibits: Exhibit No.__(RJL-2) (Map and picture of
11 the Lancaster Generation Facility), Exhibit No __ (RJL-3) (Lancaster Contract and Affiliate
12 Interest Documentation), Exhibit No __ (RJL-4) (Lancaster Prudence Documentation), and
13 Exhibit No __ (RJL-5) (Lancaster Emissions Performance Standard Documentation). The
14 following table identifies the various sub-parts to each exhibit:

Exhibit No.	Section	Description
RJL-2		Map and Picture of the Lancaster Generation Facility
RJL-3		Lancaster Contract and Affiliate Interest Documentation
RJL-3	A	Schematic of Lancaster Facility Ownership and PPA Assignment
RJL-3	B	Lancaster Power Purchase Agreement
RJL-3	C	Transmission Agreements
RJL-3	D	Gas Transportation Agreements
RJL-3	E	Letters, Certificates of Service and Verifications
RJL-3	F	FERC Filing Attachments
RJL-3	G	Energy Conversion Agreement with Coral Power

Exhibit	Section	Description
RJL-4		Lancaster Prudence Documentation
RJL-4	A	Documents Submitted to the SEC Regarding Avista Energy Sale
RJL-4	B	2007 Electric Integrated Resource Plan
RJL-4	C	April 2007 Lancaster PPA Evaluation Overview
RJL-4	D	Thorndike Landing Study
RJL-4	E	Lancaster PPA Acquisition Summary
RJL-4	F	Navigant Report
RJL-4	G	BPA Transmission Interconnection Documents
RJL-5		Lancaster Emissions Performance Standard Documentation
RJL-5	A	2007 IRP Sections Regarding Lancaster
RJL-5	B	2009 IRP Sections Regarding Lancaster
RJL-5	C	Final Tier 1 Operating Permit Idaho Department of Environmental Quality
RJL-5	D	Environmental Protection Agency Acid Rain Filings 2006 – 2008
RJL-5	E	Lancaster CO ₂ Equivalent Emissions Calculation Memo
RJL-5	F	Lancaster Contract Term and Expected Cost of Power

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1 **II. Lancaster Power Purchase Agreement**

2 **Q. What is the Lancaster Power Purchase Agreement?**

3 A. The Power Purchase Agreement for the Lancaster Generating Facility (Lancaster
4 PPA) is a tolling arrangement for a merchant gas-fired plant. The tolling arrangement allows the
5 Company to purchase natural gas as generation fuel, issue dispatch instructions and receive all of
6 the power output from the facility under the terms of the PPA. The plant is located in Avista's
7 service territory near Rathdrum, Idaho. Exhibit No.__(RJL-2) contains a picture of the Lancaster
8 Generating Facility and a map of its location in north Idaho.

9 The Lancaster Generating Facility is a 275 MW combined cycle combustion turbine with
10 a General Electric Frame 7FA natural gas-fired turbine that went into commercial service as a
11 merchant plant in September 2001. The plant has a base production capacity of 245 MW with 30
12 additional MW of duct-firing capability. The plant employs 20 people and had an average net
13 heat rate of 6,903 Btu/kWh in 2008.

14 Internal and independent third-party reviews both demonstrated that the Lancaster PPA is
15 cost-effective compared to other resource options under base case conditions as well as under
16 several scenarios that will be described in more detail later in my testimony. On December 7,
17 2009, the utility executed an agreement with Avista Turbine Power, LLC that transferred, at cost
18 without any markup, the controlling rights under the Lancaster PPA to the utility effective
19 January 1, 2010. A copy of this agreement is included in Exhibit No. __ (RJL-3) as part of the
20 Lancaster Contract and Affiliate Interest Documentation.

21 **Q. Could you please provide a history of the acquisition of the Lancaster PPA**
22 **by the utility?**

1 A. Yes. The opportunity to acquire the power purchase agreement (tolling) rights for
2 Lancaster beginning January 1, 2010, along with the associated gas transportation and electric
3 transmission rights, was a part of the negotiated sale of Avista Energy which had acquired the
4 rights to this tolling arrangement from Avista Turbine Power on June 15, 2000. Company
5 witness Kalich was asked in March 2007 by Avista senior management to determine whether the
6 Lancaster PPA would cost-effectively meet a long-term resource need at the utility. Mr. Kalich
7 completed an initial assessment of the cost-effectiveness and the suitability of the Lancaster PPA
8 in April 2007. The scope of this study was to determine if the Lancaster PPA, along with the
9 associated agreements for transportation of natural gas fuel and transmission of electric power
10 output, would provide long-term benefits for customers through the end of the contract's term on
11 October 31, 2026. A copy of this assessment is included in section C of Exhibit No.__(RJL-4)
12 (Lancaster Prudence Documentation) and the study is described in more detail later in my
13 testimony.

14 The April 2007 assessment concluded that such a combined-cycle combustion turbine
15 (CCCT) resource cost-effectively met the Company's long-term capacity and energy needs, were
16 the plant to be transferred to the Utility in 2009, 2010, or 2011. The Preferred Resource Strategy
17 (PRS) for the 2007 IRP indicated that a 280 MW natural gas baseload resource was needed in
18 2011. As part of the April 17, 2007 announcement of the sale of Avista Energy to Coral Energy,
19 the Company also announced that it would obtain the rights to the Lancaster PPA beginning on
20 January 1, 2010 to serve its retail customers. Please refer to section A of Exhibit No.__(RJL-4)
21 (Lancaster Prudence Documentation) for copies of excerpts from documents submitted to the
22 Securities and Exchange Commission regarding the Avista Energy sale announcement.

1 **Q. Please provide an overview of the history of the ownership of the Lancaster**
2 **Generation Facility.**

3 A. The Lancaster Generation Facility, located in Rathdrum, Idaho is owned by
4 Rathdrum Power, LLC. Avista Corporation's subsidiary, Avista Rathdrum, LLC, owned 49% of
5 the plant from December 10, 1998 until October 6, 2006. Cogentrix of Rathdrum, Inc. owned
6 the remaining 51% of the plant. Avista Rathdrum, LLC sold its entire 49% interest in Rathdrum
7 Power, LLC to Cogentrix of Rathdrum on October 6, 2006 and Congentrix of Rathdrum, Inc. has
8 maintained 100% ownership of Rathdrum Power since that time.

9 **Q. Why did Avista Corporation sell its ownership interest in the Lancaster**
10 **Generation Facility?**

11 A. Avista Corporation, through its subsidiary Avista Rathdrum, LLC sold its entire
12 49% ownership interest in the Lancaster Generation Facility Cogentrix of Rathdrum on October
13 6, 2006. Revenues associated with Avista Corporation's ownership of Lancaster, through Avista
14 Rathdrum, were from the tolling agreement with Avista Energy. The Avista Turbine Power-
15 Avista Energy PPA committed the plant to Avista Energy through October 31, 2026. The rate of
16 return that Avista Rathdrum was earning on Lancaster, through the tolling arrangement, was low,
17 and that low return would continue through October 2026. Avista Rathdrum chose to sell its
18 share of the plant and invest the funds elsewhere. The low rate of return embedded in the tolling
19 agreement is one of the reasons the Lancaster PPA is such an attractive resource for Avista
20 customers, when compared with other resource alternatives. In addition, the plant was built
21 nearly ten years ago when the cost of labor and materials was substantially lower than what they
22 have been in recent years, when Avista Utilities would have had to buy or build to meet its 2011

1 energy deficiency. Avista’s customers are now reaping the benefits of the Lancaster tolling
2 agreement that has attractive terms.

3 **Q. Please continue with your summary of the history of the ownership of**
4 **Lancaster.**

5 A. Rathdrum Power, LLC was party to a power purchase agreement (PPA) as seller
6 for the entire output of the Lancaster facility originally to Avista Energy as the purchaser. The
7 Rathdrum Power – Avista Energy PPA is dated December 10, 1998. Avista Energy’s rights and
8 obligations under that PPA were later assigned to Avista Turbine Power, Inc. under an
9 assignment and assumption agreement dated June 11, 1999 which amended the Rathdrum Power
10 – Avista Energy PPA. (See “Step 1” in schematic illustration in Exhibit No.__(RJL-3), section
11 A) This, along with subsequent amendments, will be referred to hereafter as the RP-ATP PPA.
12 See section B of Exhibit No.__(RJL-3) for documentation.

13 In connection with the sale of Avista Energy’s business to Coral Power and affiliates of
14 Coral Power in 2007 (See “Step 2” in illustration), the PPA that had been in place between
15 Avista Turbine Power and Avista Energy for the purchase of Lancaster power output was
16 terminated. In its place, Avista Turbine Power and Coral Power entered into an energy
17 conversion agreement dated June 30, 2007 (See “Step 3” in illustration). The energy conversion
18 agreement allowed Coral Power to assume Avista Turbine Power’s rights and obligations under
19 the PPA with Rathdrum Power. The energy conversion agreement with Coral Power was for a
20 limited term that expired on December 31, 2009. (Please refer to section G of Exhibit No.
21 __(RJL-3) for a copy of the energy conversion agreement with Coral Power.)

1 Upon the expiration of the energy conversion agreement on December 31, 2009, Avista
2 Turbine Power continued to be the purchasing counterparty under the RP-ATP PPA with
3 Rathdrum Power and was entitled to the electric output of the Lancaster facility. Avista
4 Corporation, dba Avista Utilities, became the purchaser under a power purchase agreement
5 (Lancaster PPA) executed December 7, 2009 and that became effective on January 1, 2010,
6 which ultimately transferred the rights and obligations under the RP-ATP PPA from Avista
7 Turbine Power to Avista Corporation, dba Avista Utilities, including entitlement to the electric
8 output of the Lancaster plant through October 31, 2026. (See section B of Exhibit No.__(RJL-3)
9 for a copy of the Power Purchase Agreement)

10 **Q. Do you anticipate any changes in the current contractual arrangement**
11 **regarding the Lancaster Facility?**

12 A. Yes. Avista Turbine Power and Avista Corporation are in the process of securing
13 a consent (“Consent”) in order to allow Avista Turbine Power to directly assign the RP-ATP-
14 PPA to Avista Corporation (d/b/a Avista Utilities). This would mean that Avista Utilities would
15 become the direct counterparty to Rathdrum Power under the RP-ATP-PPA, and Avista Utilities
16 would be able to exercise all of the rights under the RP-ATP-PPA directly. Avista Turbine
17 Power would cease to be contractually in the middle of this transaction and communications
18 between Avista Utilities and Rathdrum Power would no longer involve Avista Turbine Power as
19 intermediary. This would not change the substantive commercial terms of the existing Lancaster
20 arrangement, whereby the Utility receives the output of the facility. Avista will supplement its
21 filing with this Consent after it has been obtained.

1 **Q. What evidence has the Company provided that demonstrates that the**
 2 **Lancaster PPA was transferred at cost, without any markup, to the utility?**

3 A. Avista Turbine Power holds the underlying contract rights for tolling of the
 4 Lancaster Plant under the RP-ATP PPA. The Lancaster PPA, executed on December 7, 2009,
 5 transfers those Lancaster tolling rights held by Avista Turbine Power to the utility without
 6 marking up any cost provisions.

7 On December 7, 2009, Avista Turbine Power filed the Lancaster PPA (“December 7
 8 Filing”) with the Federal Energy Regulatory Commission (“FERC”). Avista Turbine Power
 9 explained in its December 7 filing that “Avista, as was true for Coral [Power], will pay [Avista
 10 Turbine Power] through a tolling agreement under the PPA at a rate equal to [Avista Turbine
 11 Power’s] cost under the Rathdrum PPA.”¹ FERC issued an order accepting the Lancaster PPA on
 12 December 30, 2009.² Under the standard adopted by FERC in *Boston Edison Co. Re: Edgar*
 13 *Electric Energy Co.*, 55 FERC ¶ 61,382 (1991) (“*Edgar*”) for affiliate transactions, a franchised
 14 public utility is required to demonstrate that it has chosen the lowest cost supplier and thus that it
 15 has not unduly preferred an affiliate.³ With regard to the Lancaster PPA, FERC found that *Edgar*
 16 was satisfied:

17 The affiliate sale under the Avista PPA has the same rates, terms, and conditions
 18 as the Coral Contract, for the exact same plant and service. In particular, Avista
 19 Turbine states that it will sell energy and capacity under its market-based rate
 20 authority to Avista at a rate equal to Avista Turbine’s cost under the Rathdrum
 21 PPA.⁴
 22

¹ Avista Turbine Power’s December 7, 2009 filing in FERC Docket No. ER10-390 at 6 (Attached as section F of Exhibit No.__(RJL-3)).

² *Avista Turbine Power, Inc.*, 129 FERC ¶ 61,296 (2009). Attached as section F of Exhibit No.__(RJL-3).

³ *Id.* at p. 17.

⁴ *Id.* at p. 20.

1 Accordingly, FERC found that “no abuse of the affiliate relationship is involved in the
2 Avista PPA.”⁵

3 Avista Turbine Power, for its part, had earlier acquired the rights and obligations to the
4 Rathdrum Power – Avista Energy PPA, as described earlier in my testimony. The rights and
5 obligations under that PPA, originally held by Avista Energy, were ultimately transferred to the
6 utility at cost on January 1, 2010 through the Lancaster PPA. Not only was the Lancaster PPA
7 “at cost” (without any markup), but the evidence establishes that there was no lower market price
8 available for a similar long-term capacity and energy contract or other resources available to
9 Avista in 2007, as I discuss later in my testimony.

10 The natural gas transportation contracts and the electric transmission contracts have been
11 transferred directly to the utility without any markup, which will assume their respective rights
12 and obligations and will be subject to rates based on underlying tariffs. (See sections C and D of
13 Exhibit No.__(RJL-3)).

14 **Q. Did Avista make an affiliated transaction filing for the Lancaster PPA and**
15 **the assignment of the associated natural gas transportation and electric transmission rights**
16 **as directed by the Commission in Order 10 of Dockets UE-090134 and UG-090135**
17 **(consolidated)?**

18 A. Yes. On December 8, 2009 Avista made an affiliated transaction filing with the
19 Commission in Docket No. UE-091902 and supplemented that filing on December 30, 2009.

⁵ Id. at p. 22.

1 The documents submitted in that Docket are included in this general rate case filing in Exhibit
2 No.__(RJL-3) (Lancaster Contract and Affiliate Interest Documentation).

3 **Q. Is the Lancaster PPA acquisition specifically barred by the Settlement**
4 **Stipulation establishing the Company’s Energy Recovery Mechanism (ERM) in Docket No.**
5 **UE-011595?**

6 A. No. The Lancaster acquisition by Avista Utilities does not violate the Settlement
7 Stipulation reached in Docket No. UE-011595, which states in part:

8 The company agrees that it will not enter into electric or natural gas commodity
9 transactions with Avista Energy related to Avista Utilities’ electric operations
10 until the Energy Cost Deferral Balance carries a net credit balance. This provision
11 does not preclude transactions between the two companies related to Avista
12 Utilities’ natural gas distribution business. (Emphasis added) (See Section 4e)
13

14 The language in the above referenced settlement agreement addresses electric and natural
15 gas *commodity transactions* with Avista Energy. The Lancaster plant, and the Lancaster PPA
16 arrangement, is not a “commodity” and it clearly is not a purchase of natural gas or electricity,
17 but is a contract for the operation of a gas-fired generation facility. The gas plant allows the
18 conversion of one commodity (natural gas) into another (electricity). There were no electricity or
19 natural gas transactions associated with the purchase with Avista Energy or any other entity.
20 Avista Utilities receives no commodity associated with the payments made under the Lancaster
21 PPA. In fact, Avista Utilities must purchase a commodity (natural gas) separate from the
22 Lancaster PPA and run it through the plant via the tolling arrangement in order to receive the
23 electric commodity. The transaction therefore clearly falls outside the limitations of the ERM
24 Settlement Stipulation, as was clearly recognized by Staff Witness Buckley in his prior testimony
25 in Avista’s last GRC (Docket No. UE-090134).

1 **Q. Please provide an overview of each of the contractual agreements that are**
2 **part of the utility's ultimate receipt of the rights to the Lancaster plant.**

3 A. There are three main contractual components associated with the transfer to the
4 utility of rights and obligations associated with tolling the Lancaster plant. Those include: (1) the
5 December 7, 2009 Lancaster Power Purchase Agreement (Lancaster PPA); (2) contracts for
6 natural gas transportation for the plant fuel; and (3) contracts for Bonneville Power
7 Administration (BPA) transmission to move power output from the plant. These documents are
8 included in Exhibit__(RJL-3) (Lancaster Contract and Affiliate Interest Documentation).

9 The term of the Lancaster PPA extends from January 1, 2010 through October 31, 2026.
10 In exchange for payments outlined in the Lancaster PPA, the utility has the exclusive right to fuel
11 and dispatch the Lancaster facility. Under the Lancaster PPA, Avista Utilities arranges and pays
12 for natural gas fuel and transportation to the Lancaster plant. The Company receives the right to
13 power output from the facility and must have sufficient transmission capacity reserved on the
14 BPA system to move the power output from the plant to serve customer loads. The Company
15 controls and is entitled to all electric capacity and energy output from the plant.

16 The Lancaster plant is interconnected with the Gas Transmission Northwest (GTN)
17 natural gas pipeline system. Avista Utilities received assignment of firm natural gas
18 transportation capacity on the TransCanada Alberta and TransCanada BC systems, and
19 assignment of firm natural gas transportation capacity on the GTN system on January 1, 2010.
20 The assignment of firm transportation capacity on the GTN pipeline by Shell Corporation
21 terminates on October 31, 2017. The TransCanada Alberta firm transportation capacity runs
22 from January 1, 2010 through October 31, 2012 and has evergreen rights allowing for renewal of

1 the firm capacity. The TransCanada BC firm transportation capacity runs from January 1, 2010
2 through October 31, 2017 and has evergreen rights allowing for renewal of the firm capacity.
3 These firm transportation agreements allow for deliveries of approximately 26,000 Dth/day from
4 the AECO trading hub on the Alberta system and approximately 26,000 Dth/day from either the
5 Stanfield or Malin trading hubs south of the GTN pipeline system.

6 The Lancaster plant is interconnected electrically with the Bonneville Power
7 Administration (BPA). Effective January 1, 2010, the 250 MW of BPA long-term transmission
8 rights from the Lancaster point-of-receipt to the John Day point-of-delivery were assigned to
9 Avista Utilities. There are two BPA transmission agreements, one for 150 MW and one for 100
10 MW, both of which have terms through June 30, 2026. The 150 MW contract can be terminated
11 by Avista with two years notice. The 100 MW contract does not have early termination rights.
12 The 250 MW of BPA transmission rights are necessary to move the Lancaster output to serve
13 Avista's loads, or sell the power into the market place.

14 **Q. Is the Company pursuing alternatives to optimize or otherwise reduce costs**
15 **associated with the BPA transmission agreements?**

16 A. Yes, Avista is currently engaged in a process with BPA to jointly study
17 interconnecting Avista's transmission lines to the BPA Lancaster substation, where the Lancaster
18 plant is currently interconnected. An interconnection of the Avista transmission system to the
19 BPA substation at Lancaster could only occur following power flow and reliability studies,
20 negotiation of an interconnection agreement with BPA, and design and construction of the
21 facilities. This entire process, already underway, is expected to take a minimum of two more
22 years. More details about the interconnection process are discussed later in my testimony.

1 **III. Lancaster Prudence**

2 **Q. What are the prudence standards applied by this Commission related to the**
3 **acquisition of a resource?**

4 A. The Commission articulated in PacifiCorp’s recent rate proceeding (UE-090205)
5 the four main questions that must be answered in order to decide if the acquisition of a
6 generation resource is “prudent and used and useful in providing service to customers in
7 Washington” (see Order 09, p. 23):

8
9 When examining the acquisition of new facilities, we consider whether: (1) the
10 new resources are necessary; (2) the Company evaluated and considered
11 alternatives; (3) the acquisition decision involved the Board of Directors; and (4)
12 whether the Company’s analysis and decision-making process is adequately
13 documented. In addition, new power resources must comply with all state laws
14 including the RCW 80.80 Greenhouse Gas Emissions Performance Standard.
15

16 The four main considerations regarding prudence are discussed in order below.

17
18 **1. Resource Necessity**

19 **Q. Please explain how the Company demonstrated that a new resource was**
20 **necessary?**

21 A. The Company’s 2007 IRP, developed in conjunction with the IRP Technical
22 Advisory Committee, showed that Avista enters a growing deficit period for both capacity and
23 energy on an annual basis beginning in 2011. A copy of the 2007 Electric IRP is located in
24 section B of Exhibit No. __(RJL-4). The 2007 IRP shows that annual deficit levels begin in
25 2011 at 83 aMW for energy and at 146 MW for capacity.
26

1

Illustration No. 1: 2007 IRP Load and Resource Tabulation

Position	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Energy (aMW)	121	79	33	(83)	(170)	(178)	(206)	(228)	(281)	(272)
Capacity (MW)	148	94	5	(146)	(251)	(268)	(324)	(357)	(414)	(300)

2

3 An analysis of the average first, third and fourth quarters (no second quarter during the
4 traditional hydro runoff period) also indicated deficits beginning in 2010.

5 The Company's 2007 IRP process indicated that 350 MW of additional base-load CCCT
6 capability (nameplate MW) should be included in the overall Preferred Resource Strategy (PRS)
7 for the first 10 years (2008 – 2017) of the 20-year planning horizon. The IRP process considers
8 not only the cost of certain resource options, but also their contribution to meeting other planning
9 goals such as reducing portfolio risk and meeting renewable portfolio standards. The 2007 IRP
10 evaluated numerous options available to the utility, including gas-fired CCCTs, wind plants,
11 biomass plants, and various coal-fired technologies. Given these options, the IRP identified a
12 preferred mix of future resource alternatives.

13 The resulting PRS for the first 10-year period of the 2007 IRP shows a need to add 772
14 MW of new resources consisting of the following resource types: 350 MW – Combined Cycle
15 Combustion Turbine; 300 MW - Wind Generation; 35 MW – Other Renewable; and 87 MW –
16 Conservation. Accordingly, the Lancaster CCCT fills a portion of the PRS mix.

17 These analyses determined that the Lancaster combined-cycle combustion turbine was
18 needed for utility service based on the Company's load and resource position, on an annual basis
19 beginning in 2011. The Lancaster plant also fits within the resource guidelines established
20 through the 2007 IRP development process. Furthermore, the Lancaster PPA provides the

1 Company with the ability to operate the plant in a flexible manner consistent with an owned-
2 plant and can meet a variety of needs that would not be met with a flat power purchase contract.

3 **Q. Are the capacity and energy deficits met by the acquisition of the Lancaster**
4 **PPA sustained long-term needs?**

5 A. Yes, the resource deficiencies filled by the Lancaster PPA are significant and
6 sustained long-term deficiencies. The Lancaster PPA provides a long-term firm resource to meet
7 these deficiencies, consistent with the combined-cycle gas-fired resource called for in the
8 Preferred Resource Strategy of the 2007 IRP.

9 **Q. Is it reasonable that a long-term resource like Lancaster might be acquired**
10 **one year prior to when annual resource needs are shown?**

11 A. Yes. There is a certain amount of “lumpiness” associated with many major, long-
12 term resource additions, i.e., the start date of the new resource does not always perfectly match
13 the timing and the amount of the resource need because of the available sizes of certain resources
14 and the timing of availability of favorable opportunities. For example, combined cycle
15 combustion turbines are not available in 10 MW increments that can be added as load deficits
16 increase from year-to-year. The basic size for these types of resources will add at least 250 MW
17 to the resource portfolio at one time. Therefore, this economic size factor, along with the timing
18 of favorable opportunities and the complexity of exactly timing such an addition, yields a degree
19 of “lumpiness” to such long-term baseload resource decisions. For these reasons, decisions to fill
20 long-term resource needs are determined by studying the economics and operating characteristics
21 over the life of the resource being evaluated. Those evaluations will take into account their

1 various unique characteristics, including evaluation of the timing of their acquisition on a
2 comparative basis against other resource alternatives available at that time.

3

4 **2. Evaluation and Consideration of Alternatives**

5 **Q. How did Avista evaluate and consider alternatives to the Lancaster PPA?**

6 A. First, on a planning basis and as part of the 2007 IRP process, the Company
7 considered several different baseload generation technologies to meet the long-term resource
8 needs identified. The 2007 IRP evaluated the following baseload resources:

- 9 • Combined Cycle and Simple Cycle Natural Gas-Fired projects;
- 10 • Coal (sub-critical, super-critical, ultra-critical and circulating fluidized bed);
- 11 • Integrated Gasification Combined Cycle Coal (with and without sequestration);
- 12 • Geothermal;
- 13 • Biomass;
- 14 • Market opportunities for a PPA; and
- 15 • Existing plants.

16 Chapter 6 of the 2007 IRP contains more detailed information about the cost and
17 operational assumptions behind each of the resource types⁶. The 2007 IRP determined that the
18 most cost-effective resource type to fill the need for capacity and energy was a gas-fired
19 combined-cycle combustion turbine.

20 Internal and independent third-party external analyses were performed to compare the
21 Lancaster PPA acquisition against similar resources available at the time or costs to otherwise

⁶ Even though the different coal-fired resources did not meet Washington's Emissions Performance Standard, they were studied because those resource types are available to other states in the WECC region.

1 construct a new resource. Both Avista's April 2007 Evaluation Overview and the independent
2 Thorndike Landing study concerning Lancaster will be discussed later in my testimony.

3 The Company determined, as part of the assessment and evaluation process, that based on
4 information available and knowledge of the energy market, that there were no long-term market
5 PPA opportunities (i.e., greater than 10 years duration) available, most likely due to credit and
6 risk considerations; and that no comparable existing plants were reasonably available to serve
7 Avista customer load on a firm basis at a cost lower than the Lancaster PPA. Both of these
8 conclusions were subsequently evaluated in a third-party study performed by Navigant
9 Consulting that is discussed later in this testimony.

10 **Q. Please provide more details about the April 2007 study on the Lancaster**
11 **PPA.**

12 A. Beginning in late March and concluding on April 11, 2007 Company witness
13 Kalich performed an analysis of the Lancaster PPA acquisition opportunity. That analysis
14 included an assessment of the costs associated with greenfield and brownfield CCCT plants as
15 compared to the Lancaster PPA. The analysis by Mr. Kalich was also informed by the very
16 current analysis conducted as part of preparation of Avista's 2007 IRP which had already
17 identified the need for 280 MW of CCCT baseload generation. Mr. Kalich's analysis concluded
18 that the Lancaster PPA was a very attractive resource that would effectively meet the Company's
19 long-term capacity and energy needs.

20 Subsequent to the public announcement of the sale of Avista Energy, additional review by
21 power supply staff and a completely new assessment by an independent consultant, Thorndike
22 Landing, confirmed the benefits of the Lancaster PPA from the April 2007 analysis.

1 A copy of the April 2007 Lancaster PPA Evaluation Overview is included in section C of
2 Exhibit No.__(RJL-4) (Lancaster Prudence Documentation). The study identified all of the
3 natural gas-fired combined cycle plants located in the Northwest and more specifically identified
4 four non-utility owned plants, representing 1,670 MW, other than Lancaster. None of these
5 plants, however, were known to be for sale at the time the study was completed. Acquisition of a
6 brownfield site was therefore considered unlikely. However, the study was nevertheless
7 conducted with the assumption that a brownfield site was available so that the Lancaster PPA
8 could be analyzed for cost-effectiveness against a hypothetical similar facility. Brownfield site
9 costs were chosen based on a review of the most recent transactions of CCCTs in the Pacific
10 Northwest.

11 **Q. What did the 2007 IRP, and the then-current market conditions for the long-**
12 **term firm power resources, show with regard to other resource alternatives?**

13 A. The IRP work, and all available information in the marketplace, indicated that the
14 price of Lancaster was attractive relative to other similar resource options. First, regional
15 planning documents showed the cost of new CCCT plants to be 50% higher than the Lancaster
16 PPA. Second, there were some CCCT acquisitions made around the time of the decision, and
17 Lancaster was at the low end of the regional acquisition prices. Third, there were few non-utility
18 owned CCCT plants that were not already under long-term contract, and based on the Company's
19 knowledge of the market, there were no similar plants with firm transmission available to Avista
20 at a cost lower than the Lancaster PPA.

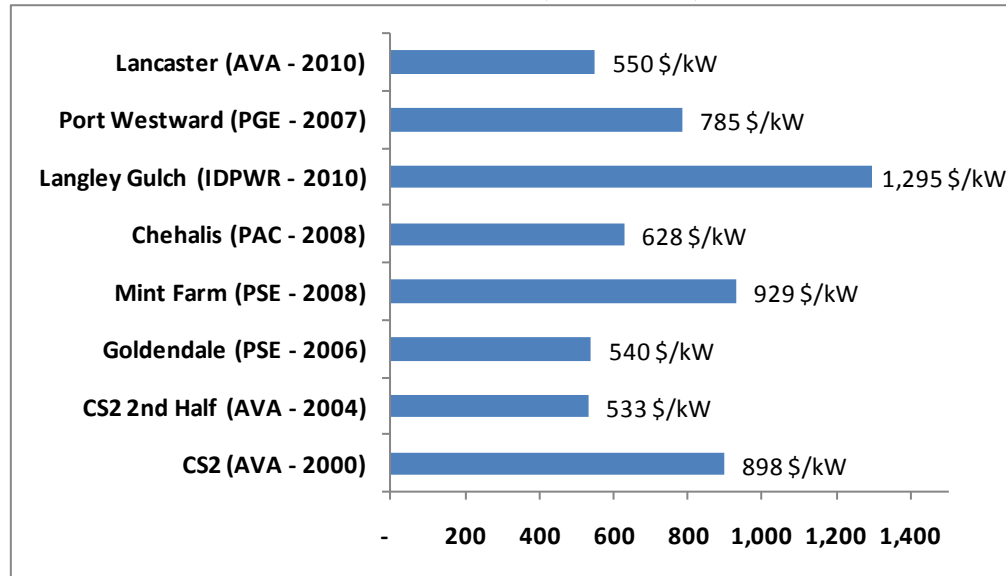
21 The Lancaster PPA is in fact among the least expensive CCCT acquisitions ever made in
22 the Pacific Northwest, as shown below in Illustration No. 2.

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**Illustration No. 2: Regional CCCT Project Acquisitions
2000 to Present (2010 \$/kW)**



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Q. What was the Company's assessment of the availability of other long-term resource alternatives when the decision was made to transfer the Lancaster PPA to the Utility?

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A. Avista Power Supply staff is regularly involved in the wholesale market and monitors the conditions and major transactions that take place. Market intelligence on the value of combined-cycle gas plants was readily available. A number of Northwest utilities had issued RFPs around the time of the Lancaster acquisition. These RFPs asked for offers of PPAs and new and existing generation plants. The results were consistent: long-term fixed-price PPAs not tied to specific generation assets, as may have been available in the market up through the 2000-2001 Energy Crisis, were not being offered in the market in 2007. Collateral requirements

1 generally requested in post-Energy Crisis power contracts have resulted in substantial credit
2 requirements applied to long-term (10 plus year) fixed-price contracts.

3 In addition, few existing baseload generating plants were offered in the marketplace and
4 those that were had prices higher than the Lancaster PPA (as I will show later in my testimony).
5 New CCCT project construction was also significantly higher in cost than brownfield projects.
6 The Lancaster opportunity was significantly lower in cost than these opportunities.

7 **Q. What third-party independent analytical reviews of the Lancaster PPA were**
8 **solicited?**

9 A. In August 2007 the Company contracted with Thorndike Landing, LLC for an
10 independent assessment of the Lancaster PPA relative to other similar baseload gas-fired
11 generation units. The Thorndike Study used four different valuation metrics and perspectives
12 including discounted cash flow analysis, valuation under a purchase scenario, identification and
13 valuation of similar assets, and a comparative review of similar market transactions in the region.
14 They also reviewed Avista's analytical processes used for the April 2007 Lancaster evaluation
15 and resource planning in general.

16 Thorndike Landing completed their study and assessment late in October 2007 and it is
17 included as section D of Exhibit No.__(RJL-4) (Lancaster Prudence Documentation). The
18 Thorndike study concluded that the Lancaster PPA was cost-effective and financially favorable
19 relative to other natural gas-fired options generally available to utilities in the Pacific Northwest
20 at the time.

21

1 **Q. Can you describe the discounted cash flow aspect of the Thorndike Landing**
 2 **study and the results of that study?**

3 A. Yes. Thorndike Landing performed a discounted cash flow analysis to determine
 4 the value of the Lancaster PPA under base, high and low case scenarios. The base case assumed
 5 that the output from Lancaster can be interconnected to the Avista transmission system at a future
 6 date and that the BPA transmission will be remarketed or otherwise optimized over the
 7 remaining term of the contract. The high case scenario included a doubling of CO₂ prices from
 8 \$8 to \$16 per ton beginning in 2012 which raised the overall cost of running this plant. The low
 9 case scenario assumed the addition of 5,000 MW of combined-cycle capacity throughout the
 10 WECC, which negatively impacts margins by providing an increased amount of surplus power.
 11 The total value of the Lancaster PPA, as dispatched against the market, was positive in all three
 12 cases modeled for the Thorndike Landing study, showing that the PPA was cost-effective for
 13 Avista. Illustration No. 3 summarizes the results of this independent evaluation. The results
 14 ranged from a PPA value of \$500,000 in the low case up to \$20.5 million in the high case.

15 **Illustration No. 3: Lancaster PPA Value vs. Market**

Description	Power Purchase Agreement Value (\$000)	Power Purchase Agreement Value (\$/kW)
Base Case	\$16,500	\$64
Low Case	\$500	\$2
High Case	\$20,500	\$78

16
 17 **Q. Can you describe the valuation under the purchase scenario section of the**
 18 **Thorndike Landing study along with the valuation of similarly-situated plants?**

1 A. Yes. Thorndike Landing performed a valuation of Lancaster under an ownership
 2 scenario which was compared to ownership values of other recent plant transactions in the
 3 region. This aspect of the study represented the present value of the difference between the
 4 variable dispatch costs, fixed O&M, insurance, and taxes for each plant compared to the project
 5 market net revenue. In this portion of the study, the variable dispatch cost excluded the cost of
 6 the PPA in the case of Lancaster or the recovery of capital or fixed costs in the case of other
 7 plants. This comparison indicated that the Lancaster project had a greater market value per
 8 kilowatt than recently constructed or transacted plants in the region. See Illustration No. 4.

9 **Illustration No. 4: Lancaster Plant Value vs. Regional CCCT Projects**

Project Name	Plant Value (\$/kW)
Lancaster	\$677
Coyote Springs 2	\$652
Port Westward	\$528
Goldendale	\$365

10

11 Even though the Company will not own the Lancaster plant, this section of the study
 12 indicates that a similar PPA or toll opportunities at one of the other regional plants would be less
 13 economically favorable to the Company than Lancaster.

14 **Q. Please discuss the aspect of the Thorndike Landing study that identified**
 15 **market activity for similar types of plants.**

16 A. The Thorndike Landing review of similarly-situated plants found seven
 17 comparable transactions that yielded an average value of \$533 per kW within the region.

1 Approximately 25 comparable transactions were found throughout the rest of the U.S. with an
2 average value of \$465 per kW. Therefore, the Lancaster value of \$677 per kW compares very
3 favorably with these transactions.

4 **Q. What was the final opinion of the Thorndike Landing study concerning the**
5 **Lancaster PPA?**

6 A. Thorndike Landing, at pages 1 – 2 of its study, “found that the Toll provides
7 positive value to Avista and its customers...and the value of the Lancaster facility appears
8 consistent with – if not greater than – the value of other resources in the market.” (See section D
9 of Exhibit No.__(RJL-4) Thorndike Landing also reviewed Avista’s analytic process and
10 valuation methodology and found at pages 15 – 16 the following. (See Section D of Exhibit No.
11 ____(RJL-4):

12 Thorndike Landing has reviewed Avista’s analytical methodology and has found
13 that Avista’s analytical process and methodology is a very contemporary approach
14 to analyzing resources. In fact, the utility industry in general has been slow, as
15 compared to other industries, to adopt risk analysis into its process and it wasn’t
16 until the power and sector crises of 2001-02 that even some utilities began to
17 incorporate risk into their processes. Today, we find that many utilities do factor
18 risk analyses into their processes, but many still do not. Additionally, Avista’s
19 process is also grounded on sound resource planning using multiple scenarios and
20 a robust vs. static process through which the company is able to assess multiple
21 scenarios and resource portfolios, not just a single resource in isolation. For these
22 reasons, we have found that Avista’s analytical process is sound and even
23 surpasses processes used by many of their peers across the industry. Therefore,
24 we have not identified any area or aspect of its process generally for which we
25 would suggest modification at this time.

26 Thorndike Landing concluded at page 19 as follows:

27 In conclusion, Thorndike Landing believes that the transaction for the Toll is
28 reasonable and that the value Avista would remit for the Toll is reasonable and
29 would result in a net benefit to Avista and its customers. Further, based on our
30 analysis and assumptions, the value of the Lancaster Facility appears to be greater

1 than that of other recently constructed or transacted facilities in the region. The
2 greater value appears to be primarily driven by one or more of the following:

- 3 • Lower electric transmission costs
4 • Lower gas transportation costs
5 • Lower gas taxes (the state of Idaho has no fuel tax)
6 • Dual sourcing of fuel (Alberta/Malin vs. Sumas).

7 **Q. Did Avista issue an RFP for resources as part of the evaluation of Lancaster?**

8 A. No. The opportunity to bring Lancaster into the utility was the result of
9 negotiations involving the sale of Avista Energy. An evaluation of the potential opportunity to
10 bring the Lancaster PPA into Avista Utilities, through the Avista Energy sale negotiation, was
11 requested by senior management in March 2007. The sale of Avista Energy was announced on
12 April 17, 2007.

13 There was a limited window of time during the negotiations for Mr. Kalich of the Power
14 Supply Department to analyze the economics and operational fit of the Lancaster PPA into
15 Avista Utility's resource portfolio. The window of time simply was not sufficient to conduct an
16 RFP process, which may take up to nine months complete.

17 Subsequent RFPs by Northwest utilities since the Lancaster decision have confirmed that
18 the Lancaster PPA is a very attractive long-term firm resource to serve our customers load.

19 **Q. Was Avista required to issue an RFP before acquiring the Lancaster PPA?**

20 A. No. WAC Chapter 480-107 requires the issuance of an RFP after the publication
21 of an IRP identifying a resource deficiency within three years of its publication. At the time of
22 the 2007 IRP filing, Avista's resource need even absent Lancaster was more than three years into
23 the future so an RFP was not required under WAC Chapter 480-107.

1 **Q. Are resource acquisitions always obtained precisely on the date identified in**
2 **the IRP?**

3 A. No, it is a common occurrence for resources to come into service on a schedule
4 that does not perfectly meet a Company's resource needs. Avista discusses the "lumpiness" of
5 resource acquisitions on page 8-8 of its 2007 IRP. Resource acquisitions are evaluated over their
6 lifetimes, not on a year-by-year basis.

7 Procuring long-term resources prior to the exact date they are needed is, in fact, not
8 unusual. PacifiCorp, under Docket No. UE-090205, was granted recovery for the recently-
9 acquired Chehalis CCCT. All parties, including Public Counsel, supported PacifiCorp's
10 acquisition of this resource nearly four years prior to its need. Moreover, the Chehalis CCCT
11 plant cost PacifiCorp 50% more than Lancaster on a per-kW basis, adjusted to 2010 dollars as
12 shown in Illustration No. 5 below. This plant was not acquired through an RFP process, and was
13 placed into rate base four years prior to need.

14 The April 2007 analysis included a reduction to the long-term valuation of Lancaster to
15 account for its acquisition one year prior to annual deficits beginning in 2011. Even with the
16 reduction, the Lancaster PPA showed positive long-term value compared to other alternatives in
17 all cases except where a brownfield project might be acquired below \$550 per kW. This analysis
18 was a conservative valuation in that it did not include the additional Lancaster PPA benefit of not
19 being exposed to the Washington state natural gas tax (the value of which will be discussed later
20 in my testimony) which is a component in brownfield projects otherwise located in Washington.

21 **Q. Are there other transactions that demonstrate the value of Lancaster?**

1 A. Yes. Illustration No. 5 below shows details about contemporaneous and more
 2 recent acquisition prices for combined-cycle gas-fired plants in the Northwest. As the illustration
 3 demonstrates, at \$550 per kW, other than Avista's acquisition of the second half of CS2,
 4 Lancaster is the least expensive and is well below the \$865 per kW average cost using year 2010
 5 total costs.

6 **Illustration No. 5: Regional CCCT Projects Acquisitions**
 7 **2000 to Present (\$/kW)**

Plant	Year	Cost	2010 Cost *	Location Adj. **	Total 2010 Cost
Coyote Springs 2	2000	668	898	-	898
Coyote Springs 2 (2nd Half)	2004	446	533	-	533
Goldendale	2006	480	540	255	795
Mint Farm	2008	876	929	255	1,184
Chehalis	2008	592	628	255	883
Langley Gulch	2010	1,295	1,295	-	1,295
Port Westward	2007	718	785	-	785
Lancaster	2010	550	550	-	550
Average					865

8 * Escalated at 3% per year from year of estimate to 2010.

9 ** Reflects present value cost of location differentials including Washington state gas tax cost, heat rate
 10 differentials, and gas source location.

11

12 Two adjustments are made to the data in Illustration No. 5. First, each transaction price is
 13 adjusted to 2010 dollars from the year of its acquisition to make a level comparison between the
 14 plants. Second, some plants incur additional location costs including a natural gas usage tax of
 15 nearly 4% that plants located in Idaho and Oregon do not incur, heat rate differentials, and gas

1 source location differences. These location adjustments add approximately \$255 per kW to the
 2 capital cost of the CCCTs identified in Illustration 5. Adjusted for located differences, the
 3 Company is not aware of another Northwest utility having procured a comparable CCCT plant
 4 for less cost, immediately prior to or after the Lancaster acquisition.

5 **Q. What were the costs of CCCTs estimated by regional planning entities at the**
 6 **time of the Lancaster acquisition?**

7 A. IRPs from other regional utilities, and the Northwest Power and Conservation
 8 Council data available at the time of the Lancaster acquisition, estimated the cost of new CCCT
 9 plants greatly above the price of the Lancaster contract. Illustration No. 6 describes these CCCT
 10 cost estimates.

11 **Illustration No. 6: Regional CCCT Projects Cost Assumptions (\$/kW)**

Source	Year	Estimate	2010 Escalated *
Avista	2007	786	859
Idaho Power	2006	693	780
Portland General Electric	2006	710	799
PacifiCorp	2006	814	916
Puget Sound Energy	2006	1050	1,182
Power Council	2000	525	706
Average			874

12 * Estimate escalated at 3% annually from year of estimate to 2010.

13 As the illustration shows, Avista estimated in its 2007 IRP that gas-fired generation
 14 would cost \$786 per kW for a plant installed in 2007. In 2010 the escalated cost is \$859 per kW.

1 The costs listed in Illustration No. 6 range from about \$700 per kW to nearly \$1,200 per kW, for
2 an average of \$874 per kW. The Lancaster plant has an equivalent price of approximately \$550
3 per kW, meaning that new CCCT plants at the time of the evaluation were expected to cost
4 approximately 50% more per-kW than Lancaster.

5 **Q. How does the Lancaster PPA acquisition in 2010 compare to the alternative**
6 **of building a new CCCT in 2011?**

7 A. The Lancaster PPA has a substantially lower cost compared to a newly
8 constructed CCCT project. Over the 17 year term of the Lancaster PPA, customers would pay,
9 on a present value basis, \$230 million less cost with the Lancaster PPA beginning in 2010
10 compared to building new CCCT plant that would go into service in 2011.

11 The Lancaster PPA revenue requirement, including fixed, and variable costs, exceeds the
12 modeled forward market value of the power generated by approximately \$12 million
13 (Washington jurisdiction) in its first year of operation in 2010. This is an expected result because
14 the forward power market does not fully value new capacity resources, and therefore we would
15 expect to see a cost differential.

16 However, Avista's acquisition of Lancaster in 2010 for approximately \$550 per kW is a
17 substantial benefit to customers compared to the alternative of building a newly-constructed
18 CCCT project at an estimated cost of more than \$1,500 per kW, as presented in Avista's 2009
19 IRP. On a first year basis, the revenue requirement of such a new CCCT brought on line in 2011
20 is expected to exceed the forward market value of the power generated by approximately \$68
21 million (Washington jurisdiction).

1 **Q. How does Lancaster compare to a new CCCT project on a cost per-MWh**
2 **basis?**

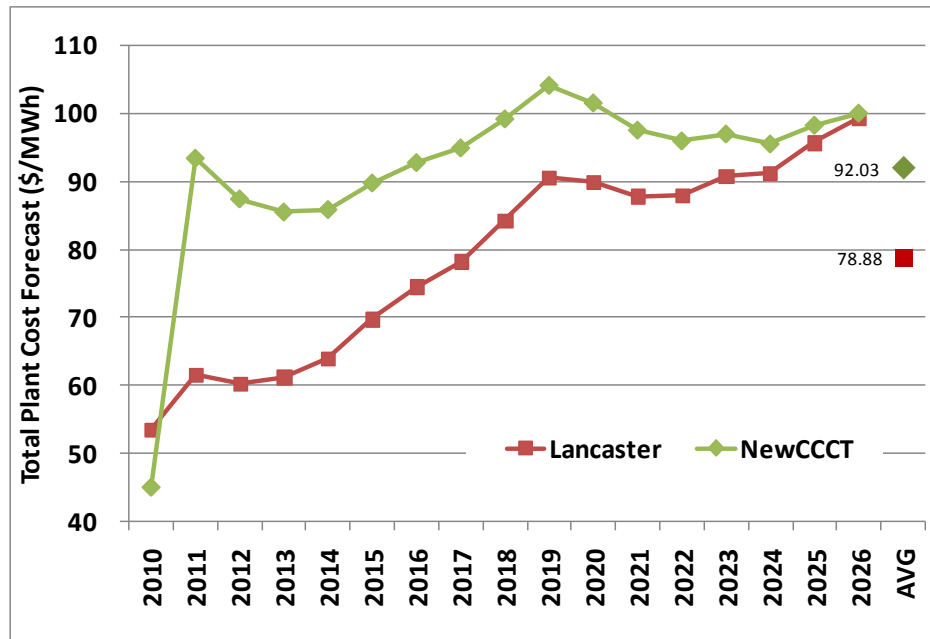
3 A. Illustration No. 7 below shows the estimated total cost per MWh of the Lancaster
4 plant beginning in 2010 compared to the estimated cost per MWh of a newly-constructed CCCT
5 going into service in 2011 using results from the 2009 IRP. The illustration shows, over the full
6 period of the Lancaster PPA from 2010 through 2026, that the average cost of Lancaster is
7 \$13.10 per MWh lower than the cost of a new CCCT. In 2010, when only Lancaster is in
8 service, the cost assigned to the new CCCT alternative is equal to the forward electric market
9 price, which is lower than the first year average cost of Lancaster. However, in 2011, the first
10 year where both plants are in service, the average cost of Lancaster is \$30 per MWh lower than
11 that of a new CCCT. Only in the last year of the Lancaster agreement do total generation costs
12 become approximately equal.

13 Illustration 7 shows that, although customers will experience higher costs in 2010 related
14 to the Lancaster PPA, the benefits to customers from Lancaster for the remaining years of the
15 PPA (2011 to 2026) dwarf the additional cost in 2010.

16

1

Illustration No. 7: Lancaster versus New CCCT Plant Costs (\$/MWh)



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3 **Q. Are there other benefits of the Lancaster PPA compared to constructing and**
 4 **owning a new CCCT plant?**

5 A. Yes, the Lancaster PPA provides several other benefits compared to a new CCCT
 6 plant. The Lancaster PPA, as a tolling arrangement, avoids normal execution risks associated
 7 with construction such as siting problems, permit issues, construction delays and overages, fuel
 8 risk, and off-take risk, ie., the plant is already in service and operating reliably. In addition, there
 9 is an Availability Adjustment Factor included in the PPA which provides some discounts to the
 10 capacity payments if the plant is not available at least 97% of the time, due to forced outages (as
 11 defined in the PPA), on a rolling twelve month bases. Details of the discount calculation are
 12 located in Appendix H of the Lancaster PPA which is available in Section B of Exhibit
 13 No.__(RJL-3).

1 **Q. Why did Avista not purchase Lancaster outright instead of taking a power**
2 **purchase agreement?**

3 A. The Lancaster plant was offered for sale in 2007 as part of a package deal with 13
4 other power plants located across the U.S., all owned by Goldman Sachs through its Cogentrix
5 subsidiary. Avista submitted a bid for the Lancaster plant, but that bid was rejected because
6 Goldman Sachs was primarily interested in selling all of the plants to a single purchaser.

7 **Q. Has the Company made other efforts to confirm its 2007 assessment that the**
8 **Lancaster PPA was the best baseload resource alternative for the utility?**

9 A. Yes, in addition to the Thorndike Landing study discussed earlier in my
10 testimony, Avista also retained Navigant Consulting to:

11 ...determine whether or not at the time 1) there was similar power resources with
12 similar price structures (e.g. long term fixed price, tolling arrangement or asset
13 purchase) that were available to Avista at a cost lower than the Lancaster PPA,
14 and 2) if Avista would have been able to meet the credit terms required for such
15 purchases (Navigant Study, p. 2).
16

17 This second analysis was commissioned to provide yet another third-party review of the
18 availability of long-term firm PPAs at the time of the Lancaster PPA decision. A copy of the
19 Navigant report is included as section F of Exhibit No.__(RJL-4).

20 **Q. What approach did Navigant take in their study?**

21 A. Navigant used publically-available information and their expertise to determine if
22 there were any power purchase agreement opportunities available in 2007 in the Pacific
23 Northwest that would have been able to provide a similar type of long-term firm resource as the
24 Lancaster PPA. They reviewed the regulatory “filings of several major wholesale market
25 participants in the PNW (other than Avista) including PacifiCorp, Puget Sound Energy (“Puget”)

1 and Portland General Electric (“PGE”). Further details about Navigant’s methodologies and
2 detailed findings are in section F of Exhibit No.__(RJL-4).

3 **Q. What did Navigant’s research find regarding the availability of other long-**
4 **term resource alternatives in 2007?**

5 A. The study had three major findings regarding PPAs:

6 1. No similar long-term unit-contingent PPAs were available at the time
7 of the Lancaster acquisition;

8 2. No similar long-term system-backed PPAs were available at the time of
9 the Lancaster acquisition; and

10 3. No similar PPAs from newly-constructed plants were available at the
11 time of the Lancaster PPA acquisition at a lower cost.

12 Regarding the lack of similar long-term unit-contingent PPAs, Navigant found that the
13 only unit-contingent, long-term PPA that was expiring at the time and could have been available
14 to the Company was the Sumas Cogeneration plant located in northwestern Washington. This
15 PPA would have been inferior to the Lancaster PPA because the plant has a higher heat rate,
16 lower dispatchability as a cogeneration plant, and a higher cost double transmission wheel (Puget
17 Sound Energy plus BPA transmission) to get the power to Avista’s system. Additionally,
18 Navigant noted the likelihood of Avista acquiring the plant was low because the plant was tied
19 up in litigation with PSE for alleged non-performance under a PURPA contract. Ultimately PSE
20 purchased the Sumas facility as part of a settlement agreement.

21 Regarding the lack of system-backed PPAs on similar terms, the only one that may have
22 been available to Avista was an expiring contract between PacifiCorp and TransAlta. However,

1 that contract would not have met the Greenhouse Gas Emissions Performance Standard under
2 RCW 80.80 because the contract was largely backed by the coal-fired Centralia plant.

3 Regarding the lack of long-term PPAs from newly constructed plants, the single long-
4 term PPA that may have been available to Avista in 2007 would have been the Grays Harbor
5 Satsop plant. This plant is significantly larger than the Lancaster PPA at 650 MW and the plant
6 output was already dedicated to other purchasers in early 2007. Additionally, fuel purchased for
7 the plant would have been subject to the Washington state natural gas use tax of 3.852% because
8 the project is located in the State of Washington

9 **Q. Were any of the other regional utilities successful in obtaining a long-term**
10 **PPA around the time of the Lancaster PPA decision?**

11 A. No, the Navigant study found that no other major market participant secured a
12 long-term PPA during the time in question. From 2004 through 2007, PacifiCorp, Portland
13 General Electric and Puget Sound Energy were all in the market and procuring power through
14 RFPs for 2010 and later. None of these companies entered into PPAs that were greater than 10
15 years in the time frame in question. All of these companies constructed or proposed their own
16 resources, purchased existing facilities, or entered into short-term PPAs of less than 10 years
17 duration.

18 **Q. What was Navigant's assessment of the credit-worthiness of Avista to enter**
19 **into a long-term PPA in 2007 for the 2010 time period?**

20 A. At page 19, Navigant found the following regarding credit and collateral
21 requirements at the time of the Lancaster PPA decision.

22 In summary, several draft form PPAs that were in use during the 2005-2008
23 period required posting of collateral by the Buyer upon a credit downgrade event

1 and/or if the PPA prices were prices that were significantly higher than then
2 forecast market prices (“over-market”). Avista was sub-investment grade during
3 mid-2007. If a seller had been willing to transact with Avista at the time, Avista
4 may have had to post approximately \$69 million in collateral for a CCCT based
5 PPA with a typical heat rate and non-fuel charges similar to the Lancaster PPA
6 assuming that the seller’s then power price forecast equaled actual reported prices
7 for the period.

8
9 **Q. Did the Navigant report find any non-price benefits or risks to the Lancaster**

10 **PPA?**

11 A. Yes, Navigant states, at page 4, that the Lancaster PPA provides the Company
12 “with the ability to manage the cost and volatility of natural gas fuel, the largest component of
13 overall power cost under the PPA.”

14 Furthermore, at page 5, Navigant found:

15 The tolling structure also provides the Purchaser with the ability to schedule and
16 dispatch Lancaster as necessary within the Design Limits to meet load and other
17 commitments. There is no “minimum-take” of energy that could result in
18 uneconomic dispatch of other Purchaser resources. Lancaster also serves as a
19 source of non-spinning reserve, spinning reserve, voltage control, regulation and
20 other ancillary service that are of value to the Purchaser.
21

22 Navigant also found that the Lancaster PPA provided a long-term power resource with
23 some mitigation of price volatility. This is due to the term of the PPA, which the industry
24 generally considers long-term if it is more than 10 years in length. The Lancaster PPA is 25
25 years in length (about 17 years are remaining on the agreement) and there is a clause providing
26 for a five year extension. Major costs under the PPA are fixed at relatively low rates and the
27 variable costs are tied to general inflation. These PPA characteristics mitigate significant
28 amounts of potential price volatility risk to Avista Utilities.

1 Ultimately, Navigant found at page 5 that “the ability to control fuel cost and dispatch are
2 ’ownership-like’ rights that have value to the Purchaser and must be considered in evaluation of
3 alternative PPA arrangements.”

4 **Q. Please summarize the BPA transmission contracts that come with the**
5 **Lancaster PPA.**

6 A. The 250 MW firm transmission contract with BPA is needed to move the
7 generation output from Lancaster to either serve customer load or sell into the wholesale market
8 for the benefit of customers. The plant’s generation capability, including the duct burner,
9 exceeds the amount of BPA firm transmission in all months. The Company will purchase
10 additional non-firm transmission for the remaining balance of the generation output. Illustration
11 No. 8 below shows estimated Lancaster generation capability across all months under average
12 temperature conditions, and under peak winter conditions represented by an ambient temperature
13 of 0 degrees Fahrenheit.

14

1

Illustration No. 8: Lancaster Generation Capability and Transmission (MW)

Month	Generation Capability w/ Duct Burner	BPA Transmission Capacity	Transmission Shortfall
Jan	290	250	40
Feb	287	250	37
Mar	284	250	34
Apr	280	250	30
May	274	250	24
Jun	269	250	19
Jul	264	250	14
Aug	265	250	15
Sep	271	250	21
Oct	279	250	29
Nov	286	250	36
Dec	289	250	39
Average	278	250	28
Peak Day*	296	250	46

2

* Based on 0 degrees Fahrenheit.

3

Q. Did the Company assess alternatives to the BPA transmission contracts that came with the Lancaster PPA?

4

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A. Yes, as explained earlier, Avista is currently engaged in a process with the BPA working toward directly interconnecting the BPA Lancaster substation with the Company's transmission system. However, the 250 MW BPA contracts are currently the only method of getting the output of Lancaster to Avista's system to serve customer loads. BPA transmission is purchased at their tariff rate, which is reasonable and in line with other transmission providers in the region. The current BPA tariff charges \$1.501/kW-month and as a comparison, Avista's current transmission rates are \$2.00/kW-month. The total fixed annual expense for the transmission will be \$4,503,000 at the current BPA transmission rate.

10

11

12

1 Avista entered into the formal Line and Load Interconnection (LLI) process that BPA
2 requires for this type of interconnection request. Details about the LLI process are included in
3 section G of Exhibit No. __(RJL-4). The current schedule on the BPA interconnection queue,
4 also located in section G of Exhibit No. __(RJL-4), shows that BPA has a projected in-service
5 date for this project of September 1, 2012. This is the planned date based on BPA's current
6 status in the LLI process and is subject to change depending in part on the results of the studies
7 that are in the process of being completed by BPA. Specific details about the actual costs of the
8 interconnection, including the negotiation of service across BPA's bus, will be forthcoming as
9 the LLI process unfolds.

10 **Q. Please review the natural gas transportation capacity contracts that were**
11 **part of the acquisition of the Lancaster PPA.**

12 A. Gas supply for Lancaster originates from two delivery points. Delivery capability
13 from Alberta is 26,388 Dth/day, and delivery from Malin is 26,388 Dth/day, for a total delivery
14 capability of 52,776 Dth/day.

15 Under average temperature conditions, Lancaster consumes approximately 48,000
16 Dth/day: 43,000 Dth/day for the combustion turbine and 5,000 Dth/day for the duct burner.
17 Illustration No. 9 shows Lancaster's expected gas consumption for each month under average
18 temperature conditions. The average consumption across all months is 47,975 Dth/day.

19 At peak generation conditions, represented by an ambient temperature of 0 degrees
20 Fahrenheit, Lancaster is estimated to consume approximately 51,400 Dth/day. This figure is in-
21 line with the Company's Coyote Springs 2 gas-fired CCCT plant which has very similar
22 characteristics (size, heat rate) to Lancaster.

1 **Illustration No. 9: Lancaster Gas Consumption and Transportation (Dth/day)**

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Month	Gas Consumption w/ Duct Burner	Gas Transport from Alberta	Gas Transport from Malin	Excess Gas Transport
Jan	49,778	26,388	26,388	2,998
Feb	49,256	26,388	26,388	3,520
Mar	48,775	26,388	26,388	4,001
Apr	48,169	26,388	26,388	4,607
May	47,347	26,388	26,388	5,429
Jun	46,638	26,388	26,388	6,138
Jul	45,961	26,388	26,388	6,815
Aug	46,110	26,388	26,388	6,666
Sep	46,920	26,388	26,388	5,856
Oct	48,044	26,388	26,388	4,732
Nov	49,098	26,388	26,388	3,678
Dec	49,606	26,388	26,388	3,170
Average	47,975	26,388	26,388	4,801
Peak Day (1)	51,397	26,388	26,388	1,379

19 * Based on 0 degrees Fahrenheit.

20

21 **3. Board of Directors Involvement**

22 **Q. Was Avista's Board of Directors involved with the acquisition of the**

23 **Lancaster PPA acquisition by Avista Utilities?**

24 A. Yes, the Company's Board of Directors was apprised of the decision to transfer

25 the rights to the Lancaster PPA from Avista Turbine Power to Avista Utilities as part of the sale

26 of Avista Energy.

27

28 **4. Documentation of Analysis and the Decision-Making Process**

29 **Q. Does the Company believe that it has met the criteria and provided the**

30 **requisite information to show that the Lancaster PPA was a prudent acquisition?**

1 A. Yes, my testimony and exhibits provide the documentation necessary to
2 demonstrate the long-term need of the Lancaster PPA and provides specific supportive details
3 regarding both Company and third-party independent analysis in support of this decision. The
4 Lancaster PPA, along with the natural gas transportation and electric transmission agreements,
5 are necessary to serve customer loads, and are less costly than other alternative resources. The
6 Board of Directors were involved in the transfer of the Lancaster PPA from Avista Turbine
7 Power to Avista Utilities at cost, and the Company has provided and explained all of the
8 analytical work that was completed related to this acquisition.

9
10 **V. LANCASTER GREENHOUSE GAS EMISSIONS CERTIFICATION**

11 **Q. Would you please explain if the Greenhouse Gases Emissions Performance**
12 **Standard detailed in RCW Chapter 80.80 and WAC 480-100-415 applies to the Lancaster**
13 **Power Purchase Agreement (PPA)?**

14 A. Yes. Even though the underlying terms and conditions of the Lancaster PPA
15 originated in 1998 with the Rathdrum Power – Avista Energy PPA, the Company believes that
16 the Lancaster PPA requires certification under Washington’s Greenhouse Gas Emissions
17 Performance Standard (EPS) because it is a new long-term contract for Avista Utilities and the
18 Lancaster PPA otherwise meets the requirements of the standard. Washington law (RCW
19 Chapter 80.80) requires that:

20
21 “Beginning July 1, 2008, the greenhouse gas emissions performance standard for
22 all baseload electric generation for which electric utilities enter into long-term
23 financial commitments on or after such date is the lower of:
24 One thousand one hundred pounds of greenhouse gases per megawatt-hour; or

1 The average available greenhouse gas emissions output as determined under RCW
2 80.80.050.” (RCW 80.80.040)

3

4 Compliance with this law requires that the Lancaster PPA must produce less than 1,100 pounds
5 of greenhouse gas emissions per MWh in order to satisfy the requirements of RCW Chapter
6 80.80.

7 While it is true that the Lancaster PPA is a contract originating in 1998, which is before
8 the start date of the emissions performance standard, it is Avista’s belief that the law applies
9 because the contract by the utility for Lancaster was executed on December 7, 2009. This would
10 be no different than the situation where a utility gets a new contract for, or purchases, an existing
11 plant, which triggers the necessity for compliance with the emissions performance standard.

12 WAC 480-100-405 states the following:

13 (1) No electrical company may enter into a long-term financial commitment after
14 June 30, 2008, for the supply of baseload generation unless such generation
15 complies with the greenhouse gases emissions performance standard. Electrical
16 companies bear the burden to prove compliance with the greenhouse gases
17 emissions performance standard under the requirements of WAC 480-100-415 or
18 as part of a general rate case. For electrical companies that fail to carry their
19 burden of proof, the commission may disallow recovery of some or all costs in
20 rates, impose penalties, or take such other action as is consistent with law.
21 Electrical companies seeking to prove compliance with the greenhouse gases
22 emissions standard as part of a general rate case must submit all of the
23 information specified in WAC 480-100-415. [WAC 480-100-405]

24

25 Since all of the electricity generated under the Lancaster PPA is coming from a single and
26 known source that is located in Idaho, the Washington Department of Ecology and the Energy
27 Facility Site Evaluation Council do not have jurisdiction over the Lancaster plant. Accordingly,
28 responsibility for determining compliance with RCW Chapter 80.80 is solely under the auspices
29 of the Washington Utilities and Transportation Commission. Furthermore, the Lancaster PPA is

1 also not an exempted renewable resource as defined in RCW 19.285.030, so the contract needs to
2 be approved under the GHG emissions performance standard.

3 **Q. What evidence does the Company have that demonstrates compliance with**
4 **RCW Chapter 80.80 in regards to the Lancaster PPA?**

5 A. Exhibit No. __(RJL-5) (Lancaster Emissions Performance Standard
6 Documentation) contains references and documents required to support the Lancaster PPA proof
7 of compliance with the greenhouse gas (GHG) emissions performance standard.

8 As directed under WAC 480-100-405, a list of the necessary documentation for the
9 determination of compliance with the EPS is contained in WAC 480-100-415. The major
10 categories included in the documentation requirements include:

- 11 • The Company’s most recent IRP as filed under WAC 480-100-238;
- 12 • For a PPA with a known generation source, the requirements under WAC 480-
13 100-415(1)(c) also include the contract, technological and operational
14 characteristics of the facility supplying power for the PPA, other “information
15 concerning the exhaust emissions characteristics of the plant(s) supporting
16 contract delivery”; and
- 17 • The contract term and expected cost of power to be acquired through the power
18 purchase agreement.

19 The required documentation is included in Exhibit No. __(RJL-5) along with the most recent
20 IRPs in section B of Exhibit No. __(RJL-4) and Exhibit No. __(RLS-2), and copies of the PPA in
21 section B of Exhibit No. __(RJL-3).

22 **Q. Is the Lancaster PPA a baseload electric generation resource?**

1 A. Yes. RCW 80.80.010 states that "*Baseload electric generation" means electric*
2 *generation from a power plant that is designed and intended to provide electricity at an*
3 *annualized plant capacity factor of at least sixty percent"* (emphasis added). Avista Utilities has
4 been using the Lancaster PPA to provide baseload electric generation to serve customer load, and
5 the CCCT facility is designed to operate and is permitted as a baseload plant operating in the
6 70% - 100% load range, as per the State of Idaho Department of Environmental Quality Air
7 permit. (This permit is included in section C of Exhibit No. __RJL-5.) Lancaster was identified
8 in the 2007 Electric IRP as the most cost-effective means of satisfying the stated need for 280
9 MW of CCCT baseload generation capacity as identified in the Company's Preferred Resource
10 Strategy. The 2009 IRP also included the Lancaster PPA as a baseload capacity resource.
11 Sections A and B of Exhibit No. __ (RJL-5) cite the relevant sections of the 2007 and 2009 IRPs,
12 respectively.

13 Actual operation of Lancaster may vary from year-to-year and may be less than 60%
14 capacity. One of the primary reasons that Lancaster will run at a lower capacity factor than 60%,
15 is that there are times when it is less expensive to buy electricity from the short-term wholesale
16 market to serve load than to purchase natural gas and run it through Lancaster to generate power.
17 Although Lancaster is not running in these instances, it is still the long-term firm resource
18 standing behind the periodic short-term purchases of wholesale electricity to serve customers.

19 **Q. What is the pertinent information concerning the operational and**
20 **technological characteristics of the Lancaster PPA?**

21 A. As explained earlier, the Lancaster PPA is served solely by the Lancaster
22 Generating Facility. This facility is a 275 MW combined cycle combustion turbine with a

1 General Electric Frame 7FA natural gas-fired turbine that went into commercial service as a
2 merchant plant in September 2001. The plant has a base production capacity of 245 MW with 30
3 additional MW of duct firing capability. Avista Utilities, through the PPA, has the rights to
4 purchase and supply fuel to the project and to receive electric generation output from the project.
5 A copy of the contract/PPA is located in section B of Exhibit No. __(RJL-3).

6 Since the Lancaster facility is not located in the State of Washington, there are no site
7 certifications or other permits from the Washington State Department of Ecology or the Energy
8 Facility Site Evaluation Council. Section C of Exhibit No. __(RJL-5) contains a copy of the
9 Final Tier 1 Operating Permit from the State of Idaho Department of Environmental Quality for
10 the Lancaster Generation Facility operating as Rathdrum Power, LLC. This permit provides
11 details regarding individual plant components and operational limits regarding emissions based
12 on Idaho state requirements. The State of Idaho does not currently have a greenhouse gas
13 emissions performance standard, and consequently CO₂ and other greenhouse gas emissions are
14 not included or referenced in the Idaho air permit.

15 **Q. What additional information is available concerning the greenhouse gas**
16 **emissions from Lancaster?**

17 A. A calculation of the actual CO₂ emissions is available from the U.S.
18 Environmental Protection Agency (EPA) as part of the annual Acid Rain Program (ARP) filing
19 for the facility. The emissions information under EPA's ARP filings from 2005 through 2008
20 are included in section D of Exhibit No. __(RJL-4).

21 **Q. What is the actual annual CO₂ emissions performance of Lancaster?**

1 A. The annual average CO₂ emissions per MWh at Lancaster has been 818 pounds of
 2 CO₂ per MWh from 2006 through 2008 based on the Unit ARP Emissions Report from the EPA,
 3 which is significantly below the 1,100 pounds of CO₂ per MWh threshold under RCW Chapter
 4 80.80. Illustration No. 10 below shows CO₂ emissions, MWhs, pounds of CO₂ per MWh by year
 5 from 2006 through 2008 and on average over the period. The 2009 Unit ARP Emissions Report
 6 is not yet available as of the date of this filing. The numbers contained in Illustration No. 10 are
 7 from calculations based on the monitored emissions in the ARP data and derived in accordance
 8 with EPA guidelines. A CO₂ equivalent calculation, based on the EPA mandatory greenhouse
 9 gas reporting standards, is also listed in the illustration to account for the nitrous oxide and
 10 methane emissions. These calculations were reviewed by Avista's emissions specialists in the
 11 Environmental Affairs Department and a memo showing the derivation of and references used in
 12 the calculations is contained in section E of Exhibit No. __(RJL-5).

13 **Illustration No. 10: Annual Lancaster Greenhouse Gas Emissions**

Year	CO₂ Tons	MWh	ARP Pounds CO₂/MWh	Calculated Pounds CO₂e/MWh
2006	428,032.4	1,048,977	816	817
2007	529,599.0	1,295,557	818	818
2008	571,182.4	1,392,331	820	821
2006-2008 Average	509,604.6	1,245,622	818	819

14
 15 **Q. What is the contract term and expected cost of power under the Lancaster**
 16 **PPA?**

1 A. Avista Utilities has all of the rights to the output of Lancaster through the PPA
2 from January 1, 2010 through October 31, 2026. The expected cost of power under the PPA and
3 how it was calculated is included in section F of Exhibit No. __(RJL-5) which are duplicates of
4 Company witness Mr. Johnson’s Exhibits WGJ-2 through WGJ-5.

5 **Q. Does this conclude your pre-filed direct testimony?**

6 A. Yes it does.