

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-200900

DOCKET NO. UG-200901

DOCKET NO. UE-200894

REBUTTAL TESTIMONY OF

JASON R. THACKSTON

REPRESENTING AVISTA CORPORATION

1 **I. INTRODUCTION**

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

3 A. My name is Jason R. Thackston. I am employed as the Senior Vice President
4 of Energy Resources and Environmental Compliance Officer at Avista Corporation, located
5 at 1411 East Mission Avenue, Spokane, Washington.

6 **Q. Have you filed direct testimony in this proceeding?**

7 A. Yes. I have filed direct testimony in this case (Exh. JRT-1T - Exh. JRT-11)
8 addressing Avista's 100% Clean Electricity goals, resource planning and power supply
9 operations, the Company's current and future resource plans, the Energy Resources Risk
10 Policy and the Rattlesnake Flat Wind Power Purchase Agreement. My direct testimony also
11 addressed the generation-related capital projects included in this case, including capital
12 additions associated with the Company's investment in Colstrip Units 3 and 4 for the periods
13 2018-2022, as well as the prudence of its SmartBurn investments in 2016 and 2017.

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

15 A. My testimony provides the Company's rebuttal concerning issues raised by
16 Staff, Sierra Club and AWEC relating to capital investments for Colstrip Units 3 and 4 and
17 involving SmartBurn investment, the Colstrip capital budget, as well as the Dry Ash System
18 project. A table of contents for my testimony is as follows:

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26 **Q. Are you sponsoring any exhibits?**

1 A. Yes, I am including the following exhibits:

- 2 • Exhibit JRT-13C (Staff-DR-133C Supplemental Confidential Attachment
- 3 A-TRC BACT Report (Redacted-Privileged Reserved));
- 4 • Exhibit JRT-14C (Staff-DR-132C-Confidential Attachment A –
- 5 SmartBurn emails, Owners Meeting Minutes, Hurdle Rate Sheets,
- 6 SmartBurn Proposal);
- 7 • Exhibit JRT-15C (Staff-DR-132C-Confidential Supplemental Attachment
- 8 A – 20210319 Supplemental emails 132 and 140.pdf);
- 9 • Exhibit JRT-16C (Staff-DR-132C-Confidential Supplemental Attachment
- 10 B – 20151105 Talen Colstrip 2 Perf Test Summary);
- 11 • Exhibit JRT-17C (Staff-DR137C Confidential Attachments.zip. – 2015
- 12 Units 3 & 4 Rev 1 Budget 9-9-14);
- 13 • Exhibit JRT-18C SC-DR-004C Supplemental;
- 14 • Exhibit JRT-19 (Direct and Rebuttal Testimony of PSE’s Ronald J. Roberts
- 15 in UE-190529 et. al. which includes PSE’s documentation for their
- 16 investment in SmartBurn on Colstrip Units 3 & 4);
- 17 • Exhibit JRT-20C – Staff-DR-157C-Confidential Attachment A – Dry
- 18 Waste Project;
- 19 • Exhibit JRT-21C –Talen’s January 18, 2021 Budget Letter to Owners;
- 20 • Exhibit JRT-22C – March 5, 2021 Dry Ash Disposal Project Budget
- 21 Approval Request;
- 22 • Exhibit JRT-23C – AVA_PAC_PSE_Response – Talen Jan 19 Ltr_01-29-
- 23 2021-Signed.pdf; and
- 24 • Exhibit JRT-24C – Dennehy – 2021 Budget Approval.pdf.
- 25

26 **Q. Would you summarize the salient points of your testimony?**

27 A. Yes, first as to SmartBurn and Colstrip:

- 28 • This issue was decided for PSE, but not for Avista. PSE did not provide the
- 29 adequate supporting documentation that Avista has. The record in this case is
- 30 a different record – one that supports the inclusion of SmartBurn in rates.
- 31 • Avista’s final decision to enter into a binding commitment to install SmartBurn
- 32 was made in 2015 (not 2012) and was based on the independent report by TRC
- 33 (TRC Environmental is a major engineering and consulting firm with specific
- 34 environmental consulting expertise), presented at the time to all Colstrip
- 35 owners.
- 36 • The TRC report concluded that, with SmartBurn, the owners would avoid the

1 risk of any later required installation of the far more expensive Selective
2 Catalytic Reduction (SCR) alternative [SmartBurn: \$26 million versus SCR:
3 \$739 million].

- 4 • Based on the documentation available at the time (2015), no one (not even
5 Staff nor the Sierra Club) could say with any certainty that SCR wouldn't be
6 required at some point in time; indeed, SCR was being employed elsewhere at
7 the time.
- 8 • Avista acted prudently to avoid the possibility of a substantial cost exposure
9 (\$739 million) associated with SCR, should it be required, with a sensible
10 investment in SmartBurn (\$26 million).
- 11 • Disallowance of the recovery of SmartBurn, which is approximately \$2.4
12 million— would require it to be written off by the Company in 2021. The
13 Commission should also bear in mind that the Company has already absorbed
14 approximately \$1.4 million of SmartBurn costs associated with the return on
15 investment and associated depreciation relating to this project that went into
16 service in 2016/2017 – but is not yet in rates. It would be especially unfair to
17 add yet another \$2.4 million write-off on top of that for a project that was
18 prudent when the decision was made.

19
20 As for Dry Ash Disposal:

- 21 • Avista and the Owners are legally required to address by July 1, 2022, by virtue
22 of the Administrative Order on Consent (AOC).
- 23 • In order for the plant to operate beyond 2022, and even get to 2025, the
24 investment must be made at this time.
- 25 • The investment, to be completed in just over one year from now, is sufficiently
26 known and measurable to be included in rates. The design, bidding and
27 contracts are complete, with construction just starting with initial foundations
28 being placed. The project will be in service in 2022.

1 As for Other Capital Invested at Colstrip:

- 2 • Unit No. 3 overhaul costs have become final and approved by Owners, after
3 considerable discussion and debate. They are known and measurable.
4

5 **II. SMARTBURN CAPITAL INVESTMENT**

6 **Q. Do the Parties take issue with the Company's SmartBurn investment?**

7 A. Yes. Both Staff and the Sierra Club propose that the Company's investment
8 in the SmartBurn technology for Colstrip be disallowed in its entirety.¹ (See Exh. DCG1-CT
9 at pg. 34 and EB1-CT at pg. 23). While Idaho's share of SmartBurn was litigated and deemed
10 prudent by the Idaho Public Utilities Commission, in this case Avista's Washington share is
11 contested, which is approximately \$2.4 million—all of which would have to be written off by
12 the Company in 2021.² The Commission should also bear in mind that the Company has
13 already absorbed approximately \$1.4 million of SmartBurn costs associated with the return
14 on investment and associated depreciation relating to this project that went into service in
15 2016/2017—but is not yet in rates. It would be especially unfair to add yet another \$2.4 million
16 write-off on top of that for a project that was prudent when the decision was made. This also
17 follows on the heels of a Colstrip write-off in 2020 of approximately \$3.3 million (Order No.
18 09, Docket Nos. UE-190334, UG-190335 and UE-190222), related to the plant being down
19 for several months due to MATS compliance issues.

20 **Q. Didn't this Commission already decide the SmartBurn issue in the**

¹ Public Counsel witness Ms. Crane at Exh. ACC-1T, p. 39, ll. 6-8 also recommends SmartBurn be disallowed.
² Ms. Andrews, in Exh. EMA-6T discusses that the electric revenue requirement impact of removing SmartBurn
would be a reduction of \$345,000. The \$2.4 million would be a reduction to electric net rate base and subsequent
write-off on the Company's books of record.

1 **recently concluded PSE case in Docket No. UE-190529 et. al.?**

2 A. Yes, it did, but only for PSE, based on the record before it at the time. In fact,
3 the Commission found that PSE had provided insufficient documentation of its decision on
4 SmartBurn to justify inclusion in rates (See Final Order 08, Docket No. UE-190529 et. al., at
5 p. 62, line 199):

6 Second, according to Staff, PSE did not produce any contemporaneous documents
7 or evidence identifying which future regulatory obligations were contemplated
8 when PSE's management decided to install SmartBurn. PSE failed to rebut this
9 allegation. Gomez further testifies that the Company should have documentation of
10 its decision as required by the Colstrip Ownership and Operation Agreement. We
11 agree. We note, however, that no such documentation exists. For these reasons, we
12 disallow the SmartBurn pro forma adjustment, which reduces the electric revenue
13 requirement by approximately \$1.1 million.
14

15 For whatever reason, PSE chose not to develop the record in support of its SmartBurn
16 decision, leaving the Commission with little choice but to disallow the investment. As I will
17 show below, Avista has remedied that deficiency in its filing and has developed a fresh record
18 upon which the Commission can now base its decision.

19 Each case, of course, has to be decided on its own record. As is evident from both this
20 rebuttal testimony and the Company's direct testimony that precedes it, the record in this case
21 should support a different determination by the Commission. It should be remembered that
22 the Commission did not decide that SmartBurn was imprudent in PSE's case—only that PSE
23 had failed to provide sufficient documentation. There is no inconsistency for the Commission
24 to have decided against PSE on this issue, for want of documentation in the record, and for
25 Avista, based on a more complete showing of prudence.

26 **Q. Will you please compare and contrast the documentation provided by PSE**
27 **and Avista on the SmartBurn issue in their respective cases?**

1 A. Yes. To begin with, PSE presented only very limited testimony on this issue
2 in its recently concluded case – consisting of brief testimony from Mr. Roberts, PSE’s
3 Director of Generation and Natural Gas Storage, copies of which have been provided as an
4 exhibit to my testimony (Exh. JRT-19). No other supporting documentation was provided by
5 PSE in support of its SmartBurn investment for Units 3 & 4.

6 **Q. Please contrast this with what has been provided by Avista in this case.**

7 A. Table No. 1 below provides for a comparative listing of supporting
8 documentation:

Table No. 1: Comparison of Supplied Documentation of SmartBurn Investment

Puget Sound Energy UE-190529 et. al.	Avista UE-200900
Direct Testimony of Ronald J. Roberts, Director of Generation and Natural Gas Storage (RJR-1T), pg. 2-18. [See, JRT-19]	Direct Testimony of Jason R. Thackston, Senior Vice President of Energy Resource and Environmental Compliance Officer (JRT-1T), pg. 55-68.
Direct Testimony Ronald J. Roberts (RJR-14T), pg. 2-11. [See, JRT-19]	Exh. JRT-10 – SmartBurn Supporting Documentation Part I – Avista Electric IRP Excerpts, pg. 1-29.
	Exh. JRT-10 – SmartBurn Supporting Documentation Part II – Four Factor Analysis, pg. 30-75.
	Exh. JRT-13C: Staff-DR-133C Supplemental Confidential Attachment A – TRC BACT, pg. 1-68.
	Exh. JRT-14C: Main file with documentation of SmartBurn emails, Owners Meeting Minutes, Hurdle Rate Sheets and SmartBurn Proposal.
	Exh. JRT-14C: Owners Meeting Minutes from 3-18-2015 approving SmartBurn investment.
	Exh. JRT-14C: 20150508_SB_Proposal_Package_PPL_Colstrip_4_Retrofit_R3
	Exh. JRT-14C: 2015-2017 U4 SmartBurn Budget Hurdle Rate Sheet
	Exh. JRT-14C: 11-16-2014 SmartBurn Email from Thomas Dempsey to Tara Moses about the 2015 capital budget for SmartBurn.
	Exh. JRT-14C: 3-12-2015 Email from Bruce Howard to Thomas Dempsey and Darrell Soyars about the TRC BACT Report.
	Exh. JRT-15C: Staff-DR-132C-Confidential Supplemental Attachment A – 20210319 Supplemental emails 132 and 140.pdf containing SmartBurn and Regional Haze emails from 2016 to present.
	Exh. JRT-16C: Staff-DR-132C-Confidential Supplemental Attachment B – 20151105 Talen Colstrip 2 Perf Test Summary, pg. 1-8.
	Exh. JRT-17C: Staff-DR-137C-Confidential Attachments.zip: 2015 Units 3 & 4 Rev 1 Budget and other files.
	Exhibit JRT-18C: SC-DR-004C Supplemental documentation about SmartBurn decision.

1 All of the documentation for Avista was previously provided to the Parties in this case, prior
2 to the filing of their response testimony.

3 After reviewing the prefiled and rebuttal testimony filed by PSE, Avista did not find
4 any contemporaneous documentation filed by PSE in support of SmartBurn. Not surprisingly,
5 the Commission, in Final Order No. 8, noted a lack of SmartBurn documentation in the PSE
6 case as a basis for its decision.

7 **Q. Can you provide some details about each of the items Avista submitted in**
8 **the SmartBurn documentation listed in Table No. 1?**

9 A. Yes. As is evident in the list of documentation supplied in the above table,
10 Avista did supply a wealth of supporting documentation concerning the Company's decision-
11 making concerning the SmartBurn investment. A brief summary of each of the pieces of the
12 SmartBurn documentation is provided below.

- 13 1. **Direct Testimony of Jason R. Thackston, Senior Vice President of Energy**
14 **Resource and Environmental Compliance Officer (JRT-1T), pg. 55-68:**
15 My original testimony covers a wide range of topics concerning SmartBurn.
16 My original testimony provided the following:
- 17 • Describes the SmartBurn capital investment project.
 - 18 • Provides an overview of selected catalytic reduction or SCR.
 - 19 • Provides an overview of the relationship between SmartBurn and SCR.
 - 20 • Provides specific SCR requirements on Colstrip Units 3 & 4 for NOx
21 reduction.
 - 22 • SmartBurn timing and costs.
 - 23 • Benefits for the timing of installing SmartBurn.
 - 24 • Timing of SmartBurn and SCR in relation to Montana's Regional Haze
25 Program.
 - 26 • PSE's 2019 Rate Case results for SmartBurn.
 - 27 • Prudence of the SmartBurn investment.
 - 28 • How SmartBurn would satisfy all or part of Colstrip Unit 3 & 4's future
29 NOx reduction requirements.
 - 30 • Need to prepare for the possibility of an SCR requirement.
 - 31 • Consideration of alternatives to SCR.
 - 32 • How SmartBurn impacts any future SCR requirements.

- The Idaho Public Utility Commission’s approval of the prudence of Avista’s SmartBurn investment in the 2017 case.
- Impact of Clean Energy Transformation Act (CETA) on SmartBurn.
- A summarization of Avista’s rationale for investing in the SmartBurn technology.

2. **Exh. JRT-10 – SmartBurn Supporting Documentation Part I – Avista Electric IRP Excerpts, pg. 1-29:** The first part of this exhibit includes excerpts of the pertinent SmartBurn and SCR-related 2013, 2015 and 2017 Avista Electric IRPs, describing the economic analysis and results of that analysis on Avista’s resource portfolio regarding Colstrip.

3. **Exhibit JRT-10 – SmartBurn Supporting Documentation Part II – Four Factor Analysis, pg. 30-75:** The second part of Exh. JRT-10 provided the Reasonable Progress Four Factor Analysis performed by Talen (the Colstrip plant operator) and Trinity Consultants in September 2019, showing progress of attainment of NOx reductions for the Regional Haze Program for Colstrip, including the then recent installation of SmartBurn on Units 3 & 4.

4. **JRT-13C: TRC - Best Available Control Technology (BACT) Report:** For Avista, the TRC BACT Report contained in Exh. JRT-13C is a key piece of contemporaneous documentation used to finalize its decision to proceed with the SmartBurn investment – and it was missing from the record in the PSE case. This report by TRC included economic analyses, comparison of NOx control technologies, and findings of their research concerning NOx reduction technologies installed at coal plants across the United States. The TRC BACT Report concluded that, if installed in advance of a federal review, SmartBurn would satisfy BACT requirements, and SCR controls would not be required on Colstrip Units 3 & 4. More details about this report will be discussed later in my testimony.

5. **Exh. JRT-14C: Main file with documentation of SmartBurn emails, Owners Meeting Minutes, Hurdle Rate Sheets and SmartBurn Proposal:** This exhibit is the file containing pertinent SmartBurn-related emails, Owners meeting minutes, Hurdle Rate Sheets, and the SmartBurn Proposal from the manufacturer of the technology. Specific files concerning key aspects of the SmartBurn investment decision contained within this main file are identified below:

- **2015 Owners Meeting Minutes:** The March 18, 2015 Owners Meeting minutes provide the written documentation of the vote by the Colstrip owners to make the financial commitment for the SmartBurn investment on Units 3 & 4. The SmartBurn investment decision is put to a vote and is unanimously approved by the Colstrip Owners. Although the contract with SmartBurn is not yet signed at this point, this is the point in time at which

1 Avista formally agreed to provide funds for the installation of SmartBurn.

- 2
- 3 • **20150508_SB_Proposal_Package_PPL_Colstrip 4_Retrofit_R3:** This
- 4 section provides contemporaneous documentation showing that the final
- 5 proposal from the SmartBurn manufacturer of the technology was not
- 6 received by the Owners until May 8, 2015 for installation on Units 3 and
- 7 4.

- 8
- 9 • **2015-2017 U4 SmartBurn Budget Hurdle Rate Sheet:** This exhibit
- 10 provides a summary description and documentation of the costs for
- 11 SmartBurn.

- 12
- 13 • **11-16-2014 SmartBurn Email from Thomas Dempsey to Tara Moses:**
- 14 This provides the email dated November 16, 2014, from Thomas Dempsey
- 15 (Avista’s Owner Colstrip Representative) to Tara Moses (Avista Internal
- 16 Accounting) containing an explanation of why SmartBurn was moved from
- 17 the 2015 Colstrip capital budget to another category called “Unidentified
- 18 Capital”. Capital projects included in Unidentified Capital are placed in
- 19 that category so they can be voted on outside of the full budget approval
- 20 process. SmartBurn was specifically removed from the main 2015 capital
- 21 budget pending the results of the TRC BACT analysis discussed above.
- 22 This email provides contemporaneous information stressing the
- 23 importance of the TRC BACT report to the Company’s decision making
- 24 process for final approval of the SmartBurn investment.

- 25
- 26 • **3-12-2015 Email from Bruce Howard to Thomas Dempsey and Darrell**
- 27 **Soyars about the TRC BACT Report:** This email from March 12, 2015,
- 28 is forwarded from Bruce Howard (Director of Environmental Affairs) to
- 29 Thomas Dempsey (Avista’s Owner Colstrip Representative) and Darrell
- 30 Soyars (Manager of Corporate Environmental Compliance) concerning the
- 31 TRC BACT Report. This email was a response from a voicemail that
- 32 Bruce Howard left with Lorna Luebbe of PSE about Avista’s and PSE’s
- 33 concurrence about the benefits of moving forward with the SmartBurn
- 34 investment because the TRC BACT report determined it to be the most
- 35 cost-effective NOx control strategy.

- 36
- 37 6. **Exh. JRT-15C: Staff-DR-132C-Confidential Supplemental Attachment A**
- 38 **– 20210319 Supplemental emails 132 and 140.pdf:** This exhibit contains a
- 39 number of emails pertaining to SmartBurn from 4/12/16 to 2/26/2021. The
- 40 emails include the discussion about the deferral of the Unit 3 installation of
- 41 SmartBurn that Talen (Project Operator) proposed after the installation of
- 42 SmartBurn was unanimously approved. This request for a deferral is discussed
- 43 later in my testimony. This exhibit also includes additional emails concerning
- 44 Regional Haze discussions and other related topics.
- 45

- 1 7. **Exh. JRT-15C: 9-24-2019 Soyars Email:** In an email from Darrell Soyars
2 (Avista Environmental) to Greg Hesler (Avista Legal) and Michael Andrea
3 (Avista Legal) dated September 24, 2019, Mr. Soyars conveys that we were
4 initially unable to locate the specific written approval for the installation of
5 SmartBurn. Avista, however, was able to ultimately locate the specific date
6 and meeting notes for this written approval (See Exh. JRT-14C).
7
8 8. **Exh. JRT-16C: Unit 2 SmartBurn Performance Test Results Summary:**
9 This 2015 report showed very favorable results for NOx control on Unit 2 and
10 provided another piece of data to aid in the decision to proceed with the
11 SmartBurn investment on Units 3 & 4.
12
13 9. **Exh. JRT-17C: Staff-DR-137C-Confidential Attachments.zip: 2015 Units**
14 **3 & 4 Rev 1 Budget and other files:** This is the final approved Colstrip Units
15 3 & 4 budget for 2015. It is the first revision of the originally proposed
16 budget. The first tab of the spreadsheet in this exhibit notes the changes from
17 the original version. Of particular note regarding SmartBurn, is the first item
18 listed on that sheet:

19
20 2015 - Capital Sustenance/Discretionary increased by
21 \$5,000,000 with Environmental decreased by
22 (\$5,000,000). The revised capital project is included in this
23 file. Please remove project 10022111, Additional NOx
24 Reduction Technology, U4 from the Revision 0 Capital
25 Project package. This change is also reflected in the revised
26 10yr Capital Budget, Rev. 1 and Capital Index 3-4 included.
27

28 This documents the decision to withhold SmartBurn until the Owner group has
29 had an opportunity to receive and review the TRC BACT analysis report. It
30 also removed the SmartBurn investment from the planning portion and capital
31 indices. At that earlier point in time, there was no approval whatsoever to
32 financially obligate any of the Colstrip partners to the purchase and installation
33 of SmartBurn on Units 3 & 4.
34

- 35 10. **Exhibit JRT-18C SC-DR-004C Supplemental:** This response highlights key
36 results from the TRC BACT Report and documents contemporaneous analysis
37 Avista used in making its final decision to use SmartBurn.

38 **Q. Is there anything you would like to add concerning the documentation**

39 **listed in Table No. 1 above?**

40 A. Yes, as is evident in the volume and quantity of documentation supplied in the

41 above table (all of which have been provided to the parties through discovery), Avista has

1 been very responsive to the need for providing supporting documentation.

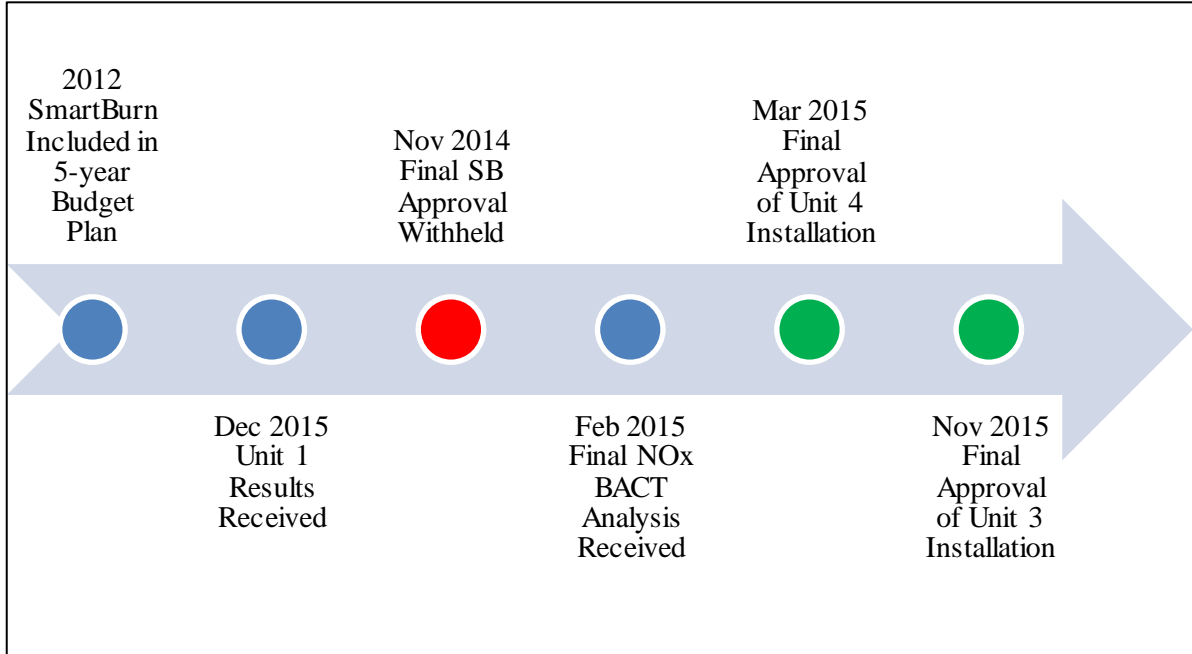
2 **Q. But it is not just the quantity of documentation that is important is it?**

3 A. Of course not. Among the items listed above, is the TRC BACT Study
4 provided in Exh. JRT-13C, prepared in 2015, which was the basis for the Colstrip parties'
5 final decision to move ahead with SmartBurn at that time. That crucial piece of evidence,
6 which I will discuss below, was, for whatever reason, simply not presented by PSE in their
7 case.

8 **Q. Can you please describe in more detail the timeline for the decision on**
9 **SmartBurn?**

10 A. Yes. Illustration No. 1 below provides a simplified timeline of events
11 beginning with the initial approval to study the installation of SmartBurn in the 2012
12 timeframe (See Exh. JRT-1T) and culminating with final approval of the installation of
13 SmartBurn on both Units 3 and 4, in 2015. The installation of SmartBurn on Unit 4 did not
14 receive final ownership approval as part of the normal 2015 Colstrip budget process because
15 the owners had not been able to review the final BACT analysis (See Exh. JRT-13C), until
16 February of 2015. Final and unanimous approval of SmartBurn occurred in March of 2015
17 for Unit 4 and November of 2015 for Unit 3. (See JRT-14C).

1 **Illustration No. 1: SmartBurn Timeline**



12 **Q. Can you address Staff’s comments about Avista requesting recovery of**
13 **SmartBurn “four separate times” (Exh. DCG-1CT, p. 3, footnote 1)?**

14 A. Yes. Avista has filed testimony regarding recovery of SmartBurn on multiple
15 occasions. The Company agrees with Staff and the other intervenors that the review of
16 SmartBurn has been a long and arduous process, unlike most other capital investments. There
17 has not been a definitive ruling concerning SmartBurn for Avista, however, because the
18 project had not met the materiality threshold in past general rate case requests and therefore,
19 was not “at issue.”

20 Final Order No.08 of Dockets UE-190529 et. al. of Puget Sound Energy’s (PSE)
21 General Rate Case (p. 58, line 189), references the final order in Avista’s 2017 General Rate
22 Case as denying the SmartBurn investment. That was incorrect. The Commission did not
23 rule on the Company’s investment in SmartBurn in that, or in the previous cases when the

1 issue was raised, because it did not meet the materiality threshold considered in each of those
2 prior cases, and was not resolved in any of the settlement discussions. Accordingly, the
3 prudence of the SmartBurn investment has never been litigated in this jurisdiction for Avista.
4 This case is the first opportunity to finally have a full review of all of the evidence provided
5 by Avista in support of its investment in SmartBurn.

6 **Q. Staff stated that Avista was using the same “worn” argument that given**
7 **what we knew at the time, an SCR would soon be required. (Exh. DCGT-1CT, p. 38)**
8 **Can you comment on this assertion?**

9 A. The TRC BACT report lists numerous different coal facilities requiring NOx
10 controls, and for many, Regional Haze compliance required installation of SCR controls.
11 Anticipation of just such a requirement to install an SCR at Colstrip was not “pure
12 speculation” as characterized by Mr. Gomez, on page 44 of DCG-1CT. Furthermore, as
13 described in more detail below, installation of SmartBurn before a federal determination of
14 additional NOx controls was the specific action that would delay or even eliminate the
15 requirement for a costly SCR because of the future expected cost threshold requirements for
16 Regional Haze.

17 **Q. Why did Avista choose to install SmartBurn before a federal**
18 **determination required additional NOx controls?**

19 A. Avista used SmartBurn to help manage our Regional Haze commitments at
20 Colstrip. As described in more detail below, doing so would delay or possibly even eliminate
21 the requirement to install a more costly SCR. This early investment in SmartBurn would save
22 customers from a substantial investment while still complying with the Regional Haze
23 Program. Additional details concerning how the mechanics of the Regional Haze Program

1 made SmartBurn an economically prudent investment ahead of a federal requirement for
2 additional NOx reductions on Units 3 & 4 are described in greater detail below, based on the
3 analysis completed in the TRC BACT Report.

4 **Q. Can you please comment on Mr. Gomez’s citation of the EPA’s 2012 FIP**
5 **findings (pg. 42-43, DCG-1CT) and its application regarding SmartBurn?**

6 A. Yes. This section of the 2012 Federal Implementation Plan (FIP) findings,
7 cited by Mr. Gomez is illustrative in that one of the five factors when determining the need
8 for additional NOx controls it mentions is “cost of compliance.” The excerpt notes that the
9 substantial gains associated with an SCR were not “sufficient” for them to impose this option
10 at that time. Cost of compliance was the key factor that the TRC BACT report evaluates
11 because the early NOx reductions achieved by SmartBurn would result in a smaller possible
12 reduction from the later installation of an SCR because of the lower starting point. This lower
13 NOx starting point at the next Regional Haze evaluation period would then drive the price of
14 the smaller incremental NOx reduction achievable by an SCR after the early installation of
15 SmartBurn to a much higher cost per unit of NOx removed. This higher incremental cost per
16 unit of a post-SmartBurn SCR requirement would result in a delayed SCR installation
17 requirement, or in the best case scenario, the elimination of an SCR requirement whatsoever
18 under a future Regional Haze Program determination. In evaluating the benefits of SmartBurn,
19 Avista considered the possibility that an SCR would not ever be required, but did not rely
20 solely on that possibility in its evaluation of the benefits of SmartBurn as originally testified
21 in JRT-1T. Additional details about the benefit of the early installation of SmartBurn are
22 discussed further in my testimony.

23 **Q. If that FIP evaluation in 2015 determined that SCR’s were not required**

1 **then, is it reasonable to assume that they would never be in the future?**

2 A. No. This is why Regional Haze analyses are run every five years. Emitters
3 are required to make Reasonable Progress over time until emissions are eventually eliminated.

4 **Q. If that is the case, why did it make sense to install SmartBurn first rather**
5 **than just wait until SCR was required?**

6 A. Avista did indeed prudently plan for the possibility that an SCR would
7 eventually have to be installed. The costs of being wrong and exposing customers to possible
8 costs of SCR were far too high. As noted on page 49 of 68 in the TRC BACT report, an SCR
9 for a single unit would cost \$369,500,000, whereas SmartBurn on a single unit would cost
10 only \$10,300,000 per unit.³ Moreover, by assuming that an SCR would eventually have to
11 be installed, the savings in capital recovery and catalyst replacement cost would more than
12 pay for SmartBurn, even if the compliance delay was for only a single five-year evaluation
13 period (Exh. JRT-18C, pg. 2-3). Furthermore, Tables 3.2b – Cost for SCR NO_x Control for
14 SmartBurn Scenario 1 (pg. 49 of 68) and 3.2d – Cost for SCR NO_x Control [SmartBurn
15 Scenario 2] (pg. 51 of 68) of the TRC BACT report listed annual urea chemical costs and their
16 dependency on the amount of NO_x emitted. As indicated in its response to the Sierra Club
17 discovery in JRT-18C, Avista determined that the savings in chemical costs alone might be
18 fully sufficient to cover the annual cost of SmartBurn, without even considering the catalyst
19 cost savings associated with delaying an SCR one or more of the five year evaluation periods.
20 Table No. 2 highlights the projected chemical cost savings with the early installation of
21 SmartBurn before an SCR.

³ For both Units 3 & 4, the total is \$739 million for SCR and \$26 million for SmartBurn.

1 **Table No. 2 – Chemical Cost Savings by Installing SmartBurn**
 2

	A	B	C	D	E	F	G	H
		Scenario	Baseline	SCR	SCR	SCR	Chemical	Chemical
		Source	lb/MMBtu	Inlet	Outlet	Fraction	Cost	Cost
				lb/MMBtu	lb/MMBtu	%	\$	Savings
								\$
I	Baseline SCR Only	Calculated Using F: SCR Fraction	0.17	0.17	0.04	100%	\$1,644,810	\$ -
II	SmartBurn Scenario 1	TRC BACT Table 3.2a pg 49/68	0.17	0.125	0.040	65%	\$1,075,453	\$569,357
III	SmartBurn Scenario 2	TRC BACT Table 3.2d pg 51/68	0.17	0.100	0.040	46%	\$759,143	\$885,667

A: Scenarios include an SCR only(I), SCR with SB to 0.125 (II), SCR with SB to 0.100 (III)
 B: Rows II & III taken from TRC BACT Report Tables- Row I calculated using column F
 C: Baseline NOx levels, TRC BACT report
 D: Modelled NOx level subsequent SmartBurn Installation, II/III TRC BACT report, I no SB
 E: Assumed Final Emissions BACT control point subsequent installation of an SCR
 F: Calculated fraction of NOx removed by SCR compared to total removed by SB+SCR
 G: II,III Chemical Costs per TRC BACT Report, I = Calculated Chemical Cost based on SCR only
 H: Calculated Chemical Cost Savings compared to SCR only installation

3
 4 Even though the TRC BACT report did not specifically consider the capital cost
 5 differences between a full-sized and a smaller SCR, the chemical cost savings differences are
 6 noted and these costs alone nearly or completely cover the annual cost of SmartBurn, which
 7 the TRC BACT report determined to be **\$884,000**.

8 **Q. Do you agree with Mr. Gomez’ assertion on page 38 of his testimony (Exh.**
 9 **DCG-1CT) that an SCR requirement “never materialized?”**

10 A. Yes, although an SCR requirement could still materialize in the future. As a
 11 threshold matter, the BACT analysis concluded that the installation of SmartBurn reduced the
 12 likelihood that an SCR mandate would ever “materialize” at Colstrip, which was the intent.

1 Nevertheless, the Regional Haze Rules remain in effect and therefore if Colstrip continues to
2 operate into the future, such controls may still be required. Remember, in 2015 when the
3 decision was made, Avista and the other owners could not reasonably have foreseen that there
4 might be an early closure before 2041, or that Parties would earlier dispose of their interests
5 in the plant. The Colstrip plant will need to comply with the Regional Haze Rules as long as
6 the plant operates, or the rules are changed. Washington’s passage of the Clean Energy
7 Transformation Act reduces the likelihood that Avista would be a participant in such a retrofit
8 project, however the possibility of haze reducing requirements will remain until the plant is
9 closed. Avista made its final decision in 2015 with the support of the other owners, because
10 we concluded that doing so was the best long-term decision for customers at the time. Avista
11 executed an agreement with SmartBurn in March 2015 given the information available to us
12 at the time, including a detailed study performed by a third-party engineer (TRC), that such
13 an installation was the most cost-effective for customers.

14 **Q. Is it true, as Mr. Gomez contends (pg. 47, Exh. DCG-1CT), that Avista**
15 **was opposed to deferring the installation of SmartBurn on Unit 3?**

16 A. Yes. Avista has, and still contends, that the installation of SmartBurn on both
17 Units 3 & 4 was still in the best interest of customers given the data available at the time.

18 **Q. Mr. Gomez contends that “other owners” wanted to postpone the**
19 **installation of SmartBurn (pg. 47, Exh. DCG-1CT). Is his interpretation of those**
20 **materials accurate?**

21 A. No. To address the issue, Avista provides the following summary of pertinent
22 communications contained within Exh. JRT-15C:

- 1 • Email from Darrell Soyars (Avista) July 21, 2016, to Dempsey et. al. (Avista) which
2 expresses dismay at the decision to postpone SmartBurn and questions Talen’s
3 reasoning.
4
- 5 • Email from Mike Mecham (Avista) to Thomas Dempsey (Avista) on July 22, 2016,
6 which notes that the deferral of SmartBurn just “happened” and it showed up as a line
7 item in a Budget to Actual report. It further notes that no prior communication or
8 request was given for this change.
9
- 10 • Email from Thomas Dempsey (Avista) on July 22, 2016, to Mike Mecham (Avista)
11 noting that Talen may be considering exiting Montana and that cuts to capital projects
12 would serve that specific interest.
13
- 14 • Email from Darrell Soyars (Avista) to Mecham/Dempsey/Howard (Avista) which
15 contends that prompt installation of SmartBurn was necessary in order to obtain a
16 favorable dataset for the 2021 Regional Haze submittal.
17
- 18 • Email from Mike Mecham (Avista) to Thomas Dempsey et. al. (Avista), noting that
19 the decision to defer SmartBurn was not discussed with Avista. (This would not have
20 been in accordance with the O&O agreement). This also notes a delay would have
21 taken us past the 2018 [Regional Haze] improvement evaluation period.
22
- 23 • Email from Arya Behbehani (Portland General Electric (PGE)) to Darrel Soyars
24 (Avista) and Lorna Luebbe (Puget) July 26, 2016, where PGE issues a statement in
25 support of the installation of SmartBurn.
26
- 27 • Email from Lorna Luebbe (Puget) to Darrell Soyars (Avista) and Arya Behbehani
28 (PGE) August 9, 2016, where Ms. Luebbe appears to be confused about the installation
29 slipping one year with the delay – this is not the case since the outage frequency at that
30 time was three years.
31

32 In summary, Exh. DCG-1CT contains a variety of responsive data regarding the Unit
33 3 installation of SmartBurn. The emails express a general concern about what appears to be
34 a unilateral attempt by Talen to remove the item from the budget. When the matter was put
35 to a vote to the committee in accordance with the O&O agreement, the decision was again
36 unanimous to proceed with the installation. (See pg. 47 of DCG-1CT.)

37 **Q. Mr. Gomez notes (Exh. DCG-CT, pg. 46) that Mr. Thackston’s prefiled**
38 **direct testimony exhibits exclude official documentation of the decision to proceed with**

1 **SmartBurn. Did Avista provide such information in pre-filed testimony, and if not, why**
2 **was it not submitted?**

3 A. Avista acknowledges that the information was not as complete as it could have
4 been when put forth in pre-filed testimony. All of the SmartBurn documentation was made
5 available to the parties, however, before they filed testimony.

6 **Q. Mr. Gomez indicates that PSE did not prove the necessity and did not**
7 **maintain adequate documentation to support the decision to install SmartBurn on**
8 **Colstrip Units 3 & 4 (page 36 of Exh. DCG-1CT), resulting in the disallowance of**
9 **SmartBurn.**

10 A. I have already discussed the inadequacy of documentation provided by PSE in
11 its case. The documentation submitted by PSE has already been shown in Table No. 1 above
12 for comparison purposes. PSE did not produce the crucial TRC BACT report. This report
13 was produced by Avista through discovery and is included as Exh. JRT-13C. The TRC BACT
14 report was a critical component in Avista's analysis and decision to approve the final
15 SmartBurn investment.

16 **Q. Why was the TRC BACT Report so important to the decision by Avista**
17 **to approve the installation of SmartBurn?**

18 A. The report was specifically commissioned by the partners at Colstrip to
19 evaluate the most cost-effective, prudent course of action with respect to compliance with the
20 Regional Haze Program. (See pp. 6 – 7 of Exh. JRT-13C.)

21 **Q. Can you please summarize the findings of the TRC BACT report?**

22 A. Yes. TRC's analysis concluded that installing SmartBurn was the most cost-
23 effective path for compliance with Regional Haze rules.

1 **Q. Was the TRC BACT report contemporaneous with the decision to make**
2 **the SmartBurn investment?**

3 A. Yes. The TRC BACT report was received in February of 2015, prior to final
4 approval of the first installation of SmartBurn on Colstrip Unit 4, and as such constitutes a
5 contemporaneous analysis of the merits of installing SmartBurn. Avista and all the other
6 Colstrip partners specifically withheld final approval of SmartBurn until after receipt of this
7 report. Even though SmartBurn was “approved” for budget planning purposes in 2012,
8 neither Avista nor any of the Colstrip owners entered into a financial commitment for the
9 installation of SmartBurn on Units 3 & 4 until after the TRC BACT report was received and
10 reviewed.

11 **Q. Mr. Gomez asserts that you testified in 2019 that SmartBurn was**
12 **approved in 2012 (Exh. DCG-1CT, pp. 41 – 42). This occurred well before the third**
13 **party TRC BACT analysis concluded that installing SmartBurn was the most cost-**
14 **effective choice. Does this mean the Company prematurely approved the installation of**
15 **SmartBurn on Units 3 and 4?**

16 A. No. During the 2012 timeframe, SmartBurn was simply approved as part of
17 the 5-year capital investment plan for Units 3 & 4, for planning purposes. That approval did
18 not financially commit the Colstrip owners to installing SmartBurn and was not the final
19 approval to proceed. Although the ownership group approved 5-year capital budgets in those
20 timeframes, and those budgets contained SmartBurn “placeholders” in the capital planning
21 portions of those budgets, final approval of SmartBurn, and a binding financial obligation for
22 the Colstrip owners, occurred in March of 2015 after the TRC BACT analysis was received.
23 To underscore the importance of the BACT analysis, while under normal circumstances, a

1 2015 installation of SmartBurn would have been approved as part of the 2015 capital budget
2 which was approved in November of 2014, the Owners specifically excluded final approval
3 of SmartBurn until March of 2015 to provide time for the completion and review of the TRC
4 BACT report.

5 **Q. Why wasn't the TRC BACT report produced earlier in these**
6 **proceedings?**

7 A. The TRC BACT Report is privileged and subject to a Joint Defense Agreement
8 among the owners. Because Avista is a party to the Joint Defense Agreement, the Company
9 did not have the authority to unilaterally waive privilege to release this document. Avista
10 had to seek and receive permission from each of the other parties to the Joint Defense
11 Agreement for their approval to release this document. After some delay by partner entities,
12 Avista finally received permission to waive the privilege and produced this document for the
13 record in Exh. JRT-13C.

14 **Q. Please explain how the BACT report determined that installation of**
15 **SmartBurn in advance of a regional ruling requiring installation of NOx controls was**
16 **the most cost-effective path forward.**

17 A. The TRC BACT Report determined that if Colstrip Units 3 & 4 were retrofitted
18 with SmartBurn in advance of a federal regional haze review, that the cost per ton removed
19 associated with the installation of an SCR would be cost prohibitive under BACT rules and
20 would therefore not be required. (See Exh. JRT-13C). The economic analysis summarized
21 in the Report includes three scenarios: SmartBurn by itself, and then two scenarios in which
22 an SCR is installed on a unit that already has SmartBurn installed. The calculation of cost,
23 per-ton of pollutant removed in the SCR scenarios is based on the incremental effect of adding

1 an SCR to a unit already outfitted with SmartBurn.

2 **Q. Why should the Commission find the investment in SmartBurn to be a**
3 **prudent investment given that no formal Regional Haze determination had been issued?**

4 A. Based on the results of the TRC BACT report, installation of SmartBurn- in
5 advance of a 5-year regional review, would likely delay, or eliminate altogether the need for
6 an enormously expensive SCR. On the other hand, waiting until a federal BACT analysis was
7 performed without the incremental reduction in emissions that SmartBurn would have
8 provided, would have likely resulted in a much higher cost SCR requirement, as discussed
9 below.

10 **Q. Please explain why an advance installation of SmartBurn would be**
11 **required to realize the scenario whereby installation of SCRs would not be required.**

12 A. It is important to understand some key elements of any BACT analysis. The
13 law requires the installation of the best available control technology except for situations
14 where the best available control technology is unreasonably expensive given the results
15 expected to be achieved by that control technology. Prior to the installation of SmartBurn,
16 the baseline NO_x level at Colstrip Units 3 & 4 was 0.17 pounds per million Btu of fuel
17 consumed. The best achievable levels of NO_x were expected to be 0.04 pounds per million
18 Btu with the installation of SCRs on both units. Installing SmartBurn was projected to reduce
19 NO_x to 0.125 pounds per million Btu. This meant that a subsequent installation of an SCR
20 would have only been able to remove a small amount of additional NO_x estimated at 0.085
21 pounds per million Btu (0.125 minus 0.04). The TRC BACT report concluded that SCRs
22 would not be required in this circumstance because of the reductions accomplished by
23 SmartBurn. See Exh. JRT-13C. Please consider the following two example scenarios as

1 summarized in the TRC BACT Report at ES-3, page 7 of 68.

2 **Scenario 1:** SmartBurn is installed in advance of a federal Regional Haze analysis and
3 the NOx levels are reduced to 0.125 lbs. per million Btu. The next occurring federal Regional
4 Haze BACT analysis would consider 0.125 lbs. per million Btu as the starting point with 0.04
5 lbs. per million Btu as the best achievable emission level. The TRC BACT analysis calculated
6 the incremental cost-per-ton removed under this scenario to be \$13,300 per ton with the SCR
7 only removing 2,900 tons NOx per year.

8 **Scenario 2:** SmartBurn is installed in advance of a federal Regional Haze analysis and
9 the NOx levels are reduced to 0.100 lbs. per million Btu. The subsequent federal Regional
10 Haze BACT analysis would consider 0.100 lbs. per million Btu as the starting point with 0.04
11 lbs. per million Btu as the best achievable emission level. The TRC BACT analysis calculated
12 the incremental cost per ton of NOx removed under this scenario to be \$18,700 per ton with
13 the SCR only removing 2,050 tons NOx per year.

14 The TRC BACT analysis report concluded that (page 31 of 68), because of the very
15 low incremental NOx removal associated with an SCR installation installed subsequent to
16 SmartBurn (scenarios 1&2), and the high cost-per-ton removed in those scenarios, that:

17 ...implementation of additional NOx control beyond the SmartBurn® low NOx
18 combustion system for Colstrip Units 3 & 4 is not warranted ... The current
19 controls, with the addition of SmartBurn® low NOx combustion system, likely
20 would constitute BACT because they fall within the post-control NOx emission
21 range of recent RBLC decisions for similar sources, and so no further NOx controls
22 should be warranted. (emphasis added)
23

24 **Q. What would the cost-per-ton of NOx removed have been under a scenario**
25 **where SmartBurn was not installed in advance of a federal Regional Haze review?**

26 A. In that scenario, NOx levels would have been reduced from 0.17 to 0.04 lbs.

1 per million Btu. The calculated cost-per-ton would have been approximately \$8,600 per ton
2 $(18,700 \times (0.100 - 0.04) / (0.17 - 0.04))$. Under this scenario, Avista expected that an SCR would
3 be determined to be BACT subsequent to a federal Regional Haze review. Indeed, Appendix
4 A of the TRC BACT report lists numerous examples of coal-fired facilities where SCRs were
5 determined to be BACT.

6 **Q. Can you comment on the Sierra Club's assertion that it does not consider**
7 **the comparison of SCR costs to SmartBurn to be a meaningful comparison and that it**
8 **would be better to compare the costs of SmartBurn against the cost of a smaller SCR?**
9 **(Exh. EB-1CT, pg. 15.)**

10 A. Yes. Avista considers the difference between a \$360 million investment in
11 SCR and \$10 million investment in SmartBurn to be a meaningful comparison. Avista and
12 the other Colstrip partners hired a third party (TRC) to perform analyses of NOx control
13 technologies. The TRC BACT Report specifically concluded that installation of SmartBurn
14 was the most cost-effective compliance path (Exh. JRT-14C pg. 27),

15 The current controls, with the addition of SmartBurn® low NOx combustion
16 system, likely would constitute BACT because they fall within the post-control
17 NOx emission range of recent RBLC decisions for similar sources, and so no
18 further NOx controls should be warranted.
19

20 The TRC BACT Report determined that SCR would not be BACT after the installation of
21 SmartBurn, so the Sierra Club's preferred analysis of SmartBurn against a smaller SCR is
22 irrelevant.

23 **Q. Does the TRC BACT report consider the cost of installing and operating**
24 **a smaller SCR?**

25 A. The BACT report determined that an SCR, of any size, would likely not be

1 required at all with the installation of SmartBurn. Table 3-2b (Exh. JRT-13C pg. 49) and
2 Table 3-2d (Exh. JRT-13C pg. 51) evaluate two SCR options based in one scenario that
3 assumes an SCR entrance level of NO_x to be 0.125 lbs/MMBtu and in the other case 0.100
4 lbs/MMBtu. The cost difference between the direct annual costs of \$3.837 million and \$3.515
5 million respectively indicate a cost of \$12.9 million per lb/MMBtu NO_x reduction ((3.837-
6 3.515) / (0.125-0.100)). The calculated direct annual cost to operate an SCR without
7 SmartBurn would be approximately \$600,000 to \$900,000 more than a system in which both
8 SmartBurn and an SCR were installed. Even though the TRC BACT report did not
9 specifically consider the capital cost differences between a full-sized and a smaller SCR, the
10 chemical cost savings differences are noted and these costs alone nearly or completely cover
11 the annual cost of SmartBurn, which the TRC BACT report determined to be \$884,000.

12 **Q. Sierra Club asserts (pg. 15, Exh. EB-1CT) that Avista did not present**
13 **evidence of a contemporaneous economic analysis of its decision making for SmartBurn.**
14 **Is its conclusion correct?**

15 A. No. A detailed contemporaneous economic analysis was included in the TRC
16 BACT report (JRT-14C, pg. 44-54).

17 **Q. Can you summarize the key findings of this economic analysis of the**
18 **SmartBurn project by TRC?**

19 A. Yes. Table 3-1a, on page 46 of Exh. JRT-14C, lists the annual cost of
20 SmartBurn as \$883,848. The table further summarizes the cost-effectiveness of SmartBurn
21 in terms of \$/ton of pollutant removed at \$575. On page 47, Table 3-1b reports similar
22 information for SmartBurn except that a higher removal efficiency is assumed. In this case,
23 the annual costs of SmartBurn are the same, but the cost-effectiveness is \$370 per ton of

1 pollutant removed. Pages 51 and 52, Table 3-2d of the financial analysis report list annual
2 costs for a scenario in which SmartBurn and an SCR are both installed. The annual costs in
3 this scenario are \$38,392,870. It is notable that chemical costs alone under this scenario are
4 \$759,143. This is important because chemical use is approximately proportional to the
5 amount of pollutant removed. The reduction in NOx attributed to the SCR as reported in
6 Table 3-2d is only 0.06 lb/mmBtu (with 0.10 as an inlet value and 0.04 as an outlet value).
7 This is important because in this scenario, SmartBurn accounts for the majority of NOx
8 removed (0.17 as an inlet value and 0.10 as an outlet value). The savings in chemical costs
9 alone under this scenario approximates the total annual cost of SmartBurn.

10 **Q. Why is the analysis presented in the TRC BACT report such an important**
11 **factor in the decision to approve SmartBurn?**

12 A. TRC's key finding in the report was that an SCR would not likely be required
13 at all if SmartBurn was installed before the next Regional Haze evaluation. This alone would
14 save Avista's customers their share of \$20.6 million versus \$739 million worth of SCRs as
15 well as all of the potentially very expensive replacement associated with the major outages
16 that such SCR installations would require. The TRC BACT report's economic findings
17 summarized in the aforementioned tables in the Report (See Exh. JRT-13C, pp. 46-47 and 51-
18 52) clearly indicated significant annual cost savings with SmartBurn installed.

19 **Q. Can you describe those other benefits of avoiding a possible SCR**
20 **installation?**

21 A. Yes. Timing and reduced chemical use were the two major benefits. Given
22 that "SmartBurn was the last available, low cost, NOx pollution emission control prior to
23 an....SCR" (JRT-1T, pg. 57), its installation would logically precede installation of an SCR.

1 By installing SmartBurn during regularly schedule outages, rather than waiting until some
2 future installation date that coincided with an SCR installation, we would avoid additional
3 expensive down-time. As noted on page 58 of my initial testimony (JRT-1T); “depending on
4 market conditions at the time of the outage, the additional cost of an extra week-long outage
5 could be approximately one-half the cost of SmartBurn itself.”

6 The second major benefit concerned the amount of ammonia use and chemical costs,
7 as already described.

8 **Q. Please summarize the Company’s key reasons for investing in SmartBurn.**

9 A. Avista and the other Colstrip partners hired a third-party expert (TRC) to help
10 determine the least cost path for compliance with Regional Haze. That study determined that
11 SmartBurn was the best choice. By installing SmartBurn up front and controlling the NOx to
12 0.125 or 0.10 lbs/MMBtu, we would fully satisfy Regional Haze requirements for the
13 foreseeable future without having to install an SCR. The Company believes it has submitted
14 the full documentation necessary to support this conclusion.

15

16 **III. TEST-YEAR AND PRO FORMA COLSTRIP CAPITAL ADDITIONS AND**
17 **O&M EXPENSE**
18

19 **Q. Do the Parties take issue with the Company’s test year Pro Forma Colstrip**
20 **capital additions and O&M expense?**

21 A. Yes. Staff, AWEC and the Sierra Club all took issue with certain aspects of
22 Colstrip capital and O&M expenses submitted in this case and described below, in addition to
23 SmartBurn. Issues include arguments of whether the Dry Ash Handling project will extend
24 overall Colstrip project life beyond 2025 and should be disallowed for this reason alone.

Table No. 3: Staff/Public Counsel vs. Avista Colstrip Capital Additions (Washington Allocated)

Row	WA Allocated	2017 SmartBurn	Test Year		Pro Forma			Total
			2018	2019	2020	2021	2022	
1	Avista as-filed	\$2,700,000	\$3,364,221	\$1,882,967	\$4,314,329	\$3,492,732	\$1,469,224	\$17,223,474
2	DR-107 (Cap Update)	\$2,700,000	\$3,364,221	\$1,882,967	\$3,397,784	\$2,498,258	\$3,337,794	\$17,181,024
3	Staff	\$0	\$3,164,738	\$1,882,967	\$2,902,540	\$204,797	\$0	\$8,155,042
4	Public Counsel	\$0	\$3,364,221	\$1,882,967	\$3,397,784	\$2,498,258	\$0	\$11,143,230

The figures in the “DR-107 (Cap update)” row 2 above match the 2018 and 2019 requests included in original testimony. Contemporaneous with the completion of the 2020 work and approval of the 2021 capital budget in January of 2021, Staff and other Parties were provided updates, as those figures became known. Staff was also provided the correct information on the Colstrip capital additions at nearly the same time Avista became aware of this information. These additions are listed as the Pro Forma values in the “DR-107 (Cap update)” row 2 of Table No. 3.

Staff and other Parties had the necessary information and documentation to evaluate and make recommendations regarding the Colstrip capital budget filing. With the ongoing work at the plant and with budgets being formulated, information was made available immediately as it became known.

Table No. 3, even though it updates Colstrip capital expenditures, still shows Staff and PC disagreement with the updated tables for each of the years.

Q. What explains the discrepancies between rows 3 (Staff) and rows 4 (Public Counsel) and the Company (as updated) (row 2)?

A. Staff and Public Counsel both removed all capital costs for SmartBurn in 2017 and the Dry Ash Disposal Project in 2022. Staff also removed the capital cost for the Colstrip

1 Unit 3 Overhaul Project in 2021. I will address the Dry Ash Disposal Project in Section IV.,
2 and the Colstrip Unit 3 Overhaul Project in Section V.

3

4 **IV. COLSTRIP DRY ASH DISPOSAL**

5 **Q. Mr. Gomez implies in his testimony (DCG-1CT, pg. 20) that Avista's lack**
6 **of full budget approval of the Dry Ash system as part of a January 15, 2021 vote is**
7 **illustrative of Avista's position on the reason why the recovery of these costs should be**
8 **denied. What is Avista's position on the status of this project?**

9 A. The Owners must meet the July 1, 2022 Dry Ash Disposal project deadline.
10 Avista acknowledges the February 19, 2021 letter from MEIC, Sierra Club, and NWF to the
11 Colstrip Owners wanting to discuss the possibility of changing the timeline for completion of
12 the Dry Ash Disposal project in exchange for a mutually agreeable shutdown schedule.

13 Avista, the other Colstrip Owners, and representatives from the other Parties met on
14 April 30, 2021, to discuss the offer letter extended by the MEIC, Sierra Club and NWF. The
15 plant Owners each expressed their different requirements related to plant shutdowns which
16 were not in line with the desired outcome from the plaintiff representatives. The result of this
17 meeting was that no agreement was reached, and no further actions are scheduled or planned
18 on this matter.

19 **Q. Does Avista agree with the implications made by Mr. Gomez regarding**
20 **the Company's position with the Dry Ash Disposal project?**

21 A. No. In Mr. Gomez's testimony he states that:

22 However, it is clear from Avista's letter that the Company has not approved
23 additional capital expenditures for Dry Ash beyond 2021, which begs the question
24 as to why the Company is seeking to include in rates \$3.3 million (see Table 1) of

1 its \$4.0 million share of Dry Ash capital costs in its 2022 pro forma. (DCG-1CT
2 pp. 14, lines 11-15)
3

4 This statement mischaracterizes Avista’s commitment to seeing this project completed
5 by July 1, 2022, as legally required. The letter referenced above by Mr. Gomez was in
6 response to a request from Talen to approve a portion of the project. The request identified in
7 the letter from Talen was not for the entire Dry Ash Disposal project. Subsequently, the
8 approval was not for the entire project, only that specific request. Avista, and the other
9 Owners have approved other partial requests made in February and March 2021. As of May
10 1, 2021, the Owners have since approved a total of \$17,251,000 for this project to cover 2021
11 expenses. We anticipate the need to make additional approvals this year. Avista’s share of
12 these expenses are reflected in our proforma adjustment for 2021.

13 **Q. What is the Company’s position concerning Mr. Gomez’s assertion (Exh.**
14 **DCG-1CT, pp. 20-21) that any expenses for the Dry Ash Project should be removed from**
15 **the case because the parties to the Administrative Order on Consent (AOC) Settlement**
16 **agreement are open to discussing an extension of the July 1, 2022 date?**

17 A. Avista disagrees again with Staff on this point. The July 1, 2022 date still
18 remains the operative deadline. Speculation of what might happen in a settlement should not
19 be a basis for denying Avista’s request for this project. The project is legally required and
20 failure to complete it as planned will cost Avista and its customers money in terms of
21 replacement power and any legal repercussions that may arise for failure to perform.

22 **Q. Does the Company agree with Mr. Gomez’s description of the Dry Ash**
23 **Disposal System as a life extending capital addition in context of the 2019 GRC Order?**

24 A. No. Again, Avista disagrees with Staff’s assessment that “the Dry Ash

1 Disposal System is a massive capital addition required for Colstrip Unit 3 and 4’s continued
2 operation well beyond December 31, 2025.” (DCG-1CT, pg. 15:18 – 20). The AOC
3 Settlement Agreement and the directive to move to dry disposal system precedes the
4 referenced GRC order by several years. Additionally, the Dry Ash Disposal System is not a
5 discretionary project as it is stipulated by the AOC Settlement Agreement. Failure to pursue
6 this project and complete it on time would place the Owners in a position of default under the
7 agreement. Finally, and most importantly, the project is required for the plant to run past July
8 1, 2022, regardless of when the plant is shut down.

9 **Q. Staff has expressed uncertainty of the final Dry Ash Disposal System cost.**
10 **What is Avista’s position on this issue?**

11 A. Avista, and the other Owners have had several sessions with Talen attempting
12 to understand the escalating expenses and what the final budget is to be. With design decisions
13 in place, and much of the equipment identified and bid, we anticipate a final budget at \$39.9
14 million (which includes contingency). Avista’s share would be approximately \$6.0 million.
15 More explanation on the budget is included later in my testimony.

16 **Q. The testimony of Mr. Gomez indicated that Staff was not satisfied with**
17 **Avista’s explanation of the Dry Ash Disposal System cost. (DCG-1CT, pg. 17) What is**
18 **Avista’s position on this issue?**

19 A. Based on the knowledge of Talen, the plant operator, and the consultants they
20 retained, a dry ash waste disposal system for a coal plant like Colstrip had not been built
21 before. While there are mining operations where this has been deployed for similar purposes,
22 the concrete-like properties of the coal ash make this problem very different. This would be
23 a “first of its kind” type of dry ash system. As a result, initial information provided to the

1 Owners reflected this preliminary knowledge, and initial estimates that were based on mining
2 applications were not necessarily reflective of what might be needed for Colstrip. One major
3 cause for the increased budget was that the more that was learned about what was needed to
4 assure that the material could be properly handled and the size of equipment, the costs were
5 better understood and estimates revised upward accordingly. Finally, testing produced
6 additional information that again better refined equipment size and function.

7 As Talen's staff continued to work with the design team, it was determined that in
8 order to meet the requirement of the AOC Settlement Agreement, the unavailability cannot
9 exceed 15 percent of any calendar year, and a redundant system would be necessary to achieve
10 this level of service. This significant change in design requirements also created a step change
11 in the project cost estimate. Finally, as the scale of the project and the equipment needs
12 became clear, specifications and bids have been prepared and, in some instances, received.
13 The current estimate of nearly \$40 million is supported by quotes, bids, and better estimates
14 based on better understanding of the final scope of the project. Other issues may still arise
15 that could cause the project estimate to increase as the project is executed.

16 **Q. Why has Avista chosen to only fund certain expenses for the Dry Ash**
17 **Disposal project?**

18 A. This project is a legal requirement that must be completed by July 1, 2022, per
19 the AOC Settlement Agreement. It is Avista's view that this project can be funded by either
20 approving overall budgets and then manage approvals as updated estimates and costs become
21 known, or we can continue with the incremental funding approach that the Owners have taken
22 to approve partial amounts as they are required in order to meet the schedule stipulated in the
23 AOC Settlement Agreement. What is critical is assuring that the project costs are being

1 managed and that the schedule will be met.

2 **Q. Can you comment on Staff's assertion (Exh. DCG-1CT, pp. 18-19) that**
3 **the studies requested by them and provided by Avista do not support the cost estimates**
4 **of the Dry Ash Disposal Project or correlate with Avista's requested capital amounts in**
5 **its pro forma?**

6 A. The studies requested were not intended to provide cost estimates. These
7 studies were used to help identify key design parameters for the system. The original filing
8 for recovery of this project in October of 2020, was based on a preliminary cost estimate. The
9 project evolved based on information included in these test reports, design decisions, better
10 equipment and material quotes, and in some cases bid information. The reasons for the
11 changes in the project budget have been discussed previously. The information subsequently
12 has been provided to the parties and represents the most current information available.

13 **Q. Do you believe that the Company's inclusion of the Dry Ash Disposal**
14 **System capital costs meets the Commission's Policy Statement regarding property that**
15 **becomes used and useful after the rate effective date?**

16 A. Yes. First, the Dry Ash Disposal Project fulfills a legal obligation with the
17 State of Montana for the Owners as required in the AOC Settlement Agreement [Exh. DCG-
18 6] made in July 2016. Failure to proceed with this project would have undesired financial and
19 legal ramifications for Avista and its customers. Not performing the Dry Ash Disposal project
20 work is simply not a viable or even legal option. Avista should be allowed to recover these
21 expenses to comply with both the legal and environmental requirements this project satisfies.

22 Second, the Dry Ash Disposal System is a known and measurable project. This has
23 been demonstrated at the time of the filing and through discovery responses that update this

1 information. Exh. JRT-20C is Avista’s response to Staff-DR-157C-Confidential Attachment
2 A which contains updated information about the Dry Ash Disposal System. The current cost
3 of the project is supported by final designs, vendor quotes, and equipment bids. The
4 installation costs are still planned for 2022 and these estimates are representative of the final
5 configuration of the Dry Ash Disposal System project.

6 Third, Staff’s recommendation also speculates that the project may not meet the July
7 1, 2022 deadline, because of the February 19, 2021 outreach by the Plaintiff group in the AOC
8 Settlement Agreement offering to discuss the possibility of dropping the dry ash requirement
9 in exchange for an undetermined, but definitive closure date for Colstrip Units 3 & 4. As
10 discussed earlier, the parties to this discussion met on April 30, 2021 and the meeting resulted
11 in no actions, and no plans or schedules for further discussions.

12 Fourth, this project is consistent with the 2019 Commission Order prohibiting the
13 Company from making life extending capital expenditures at Colstrip. This project must be
14 in place by 2022 to satisfy legal requirements, even though its usefulness does extend beyond
15 2025. This is not inconsistent with the Company’s commitment to not fund projects whose
16 principle purpose is to extend the useful life of Colstrip beyond 2025.

17 Staff also argues that Avista did not consider more cost-effective solutions or
18 retirement (Exh. DCG-1CT, pg. 28). As stated previously, this project was dictated in a legal
19 settlement requiring this specific remedy.

20 **Q. Does the Company agree with the Sierra Club’s and AWEC’s assertion**
21 **that capital additions proposed by Avista do not meet the requirements of the 2019 GRC**
22 **agreement to not support expenditures that extend the Colstrip plant’s life beyond**
23 **December 31, 2025?**

1 A. No. In both the Sierra Club’s (Exh. EB-1CT, pg. 24) and AWEC’s (Exh. BGM-
2 1T, pg. 34) testimony, there are questions about whether certain projects included in the case
3 run afoul of Avista’s 2019 GRC agreement to not support capital expenditures at Colstrip that
4 will extend the plant’s operational life beyond December 31, 2025. The projects in the 2020
5 and the recently approved 2021 budgets are necessary to repair or replace either worn out,
6 failed or sub-optimal performing equipment necessary to continue plant operations to get to
7 the year 2025. Some of the work is to simply maintain existing equipment. These are projects
8 that are needed so that the unit can run at a reasonable level of reliability and ensure that
9 emission controls are functioning properly. Avista reviewed those projects proposed by the
10 Plant Operator to identify any projects that may have been primarily for life extensions and
11 worked with the other Owners to assure that only projects that address the routine ongoing
12 capital maintenance need were included; projects whose primary purpose was to extend the
13 useful life beyond 2025 were excluded. This budget was approved by the Owners on January
14 20, 2021. The accepted budget proposal was presented in Talen’s January 18, 2021, letter to
15 the owners. (See Exh. JRT-21C.)

16 While the Dry Ash Disposal System is not needed for routine capital maintenance, it
17 is required by the July 2016 AOC Settlement Agreement, and is necessary to even operate the
18 plant beyond 2022. This is not a discretionary project, as it is stipulated by the AOC
19 Settlement Agreement. Failure to pursue this project and not complete it on time would place
20 the Owners in a position of breach. Finally, and most importantly, the project is required for
21 the plant to operate beyond July 1, 2022, regardless of when the plant is shut down.

22 The budget amount of the project is now supported by final designs, vendor quotes
23 and equipment bids. While the installation costs are still planned for 2022, these estimates

1 now represent the final configuration of the project. The final budget for the project was
2 provided in Talen's letter request of March 5, 2021 and is \$39,887,000 (Exh. JRT-22C).

3 **Q. Does Avista agree with the Sierra Club's assertion that the Company**
4 **should not be allowed to pro form those costs associated with work in 2022?**

5 A. No. The costs being pro formed into this case for 2022 are exclusively
6 associated with the Dry Ash Disposal System. This project began in 2020 and is continuing
7 in 2021 with completion by July 1, 2022, per the requirements of the AOC Settlement
8 Agreement. As described above, a firm project budget has been established and these
9 expenses are consistent with that expected budget.

10 **Q. Does the Company agree with the Sierra Club's assertion (Exh. EB-1CT,**
11 **pp. 31-32) that Avista should not be allowed to recover these costs on a prospective basis?**

12 A. No. These expenses are legally required and a firm time for completion of July
13 1, 2022, is required in the AOC. There remains no uncertainty on the timing on when these
14 Dry Ash System project expenses will occur, and they are reasonably known and should be
15 allowed on a pro forma basis to be recovered.⁴

16

17 **V. OTHER COLSTRIP CAPITAL PROJECT ISSUES**

18 **Q. Did Avista include the Unit 3 Overhaul costs for the purpose of extending**
19 **the life of Colstrip Unit 3 as Mr. Burgess contends? (Exh. EB-1CT, pg. 27.)**

20 A. No. Avista does not agree with Mr. Burgess's characterization of the Unit 3
21 outage for overhaul purposes as being done to extend the life of the plant beyond 2025. Those

⁴ As discussed by Ms. Andrews at Exh. EMA-6T all pro formed Colstrip capital additions are short-lived assets with an accelerated depreciation date of 2025, and therefore, should be given special consideration with regards to recovery through the rate effective period due to the financial impact on the Company.

1 overhaul costs are consistent with the 2019 settlement concerning the prohibition on capital
2 projects that extend the life of the Colstrip plant beyond 2025. These projects are replacing
3 worn out, failed, or sub-optimal performing equipment to maintain safe and reliable operation
4 of the plant while it is still being used to serve customer loads prior to 2025. Some of the
5 work is to maintain existing equipment. These are projects that are needed so that the unit can
6 run at a reasonable level of reliability and ensure that emission controls are functioning
7 properly.

8 **Q. Staff cites concerns about the uncertainty of the capital budget at Colstrip**
9 **as a reason to not include the Unit 3 Overhaul costs in rates. (Exh. DCG-1CT, pp. 23 –**
10 **25.) Are Staff's concerns valid?**

11 A. No. Staff's concerns with the status of the 2021 capital budget have all been
12 resolved. While the budget approval process for Colstrip this year was drawn out, the issues
13 have now been resolved. The 2021 Colstrip capital budget plan was approved and
14 documented in Talen's January 18, 2021, letter to the Owners provided in response to Staff
15 Discovery Request 127 (See Exh. JRT-21C).

16 Subsequent to the approval of the Capital Overhaul budget, on February 12, 2021, the
17 Owners approved a budget for ARO and AOC work for 2021 (See Exh. JRT-23C). Finally,
18 on March 24, 2021, the Owners approved an O&M Budget (See Exh. JRT-24C).

19 In summary, Staff's concerns about the unknown status of the Colstrip budget have all
20 been resolved. There were significant differences among the Owners concerning the budget
21 and the process took longer than usual as discussed earlier, but the Owners continued to work
22 together to develop an acceptable budget for 2021. An approved budget was achieved and
23 was reduced by \$6.6 million from what was proposed.

1 Avista is committed to working with all Owners to assure a reliable, environmentally
2 compliant and safe operation of Colstrip. At the same time, Avista is committed to not funding
3 projects that are for the primary purpose of extending the life of the plant and to otherwise
4 comply with the CETA requirement to no longer serve Washington customers with coal after
5 2025.

6 **Q. Are there fuel quality concerns that are being addressed?**

7 A. Yes. Staff noted concerns about fuel quality, including the implication that
8 Owners and Plant staff are ignoring emissions other than NO_x, (Exh. DCG-1CT, pp. 29 – 30).
9 The Owners spend considerable time reviewing numerous emission requirements, not just
10 NO_x. There is always going to be a possibility of varying quality issues with a mined
11 naturally-occurring fuel as opposed to a manufactured fuel with the ability to provide quality
12 control measures available to a manufacturing environment. The plant's combustion controls,
13 and fuel process controls have been able to manage these variations without incident.
14 Consistently, the plant has been meeting emission targets with a reasonable margin for
15 variation in fuel quality.

16 Additionally, the Owners have been monitoring fuel quality closely and have taken
17 several actions dealing with fuel quality. Owners have expressed concern with some of the
18 fuel quality variances that have been observed. The Mine has subsequently taken additional
19 efforts to supply quality fuel through the way they blend fuel, and use of different exploration
20 techniques to identify fuel quality before mining it. Finally, coordinating calls occur each
21 week - Tuesdays and Thursdays - in order to stay on top of this issue. This is a joint call with
22 Plant Owners, Owner Mine Contract Managers, Plant Staff and Mine Staff. The Owners,
23 Plant Staff and Mine Staff are all sensitive to ongoing fuel quality and the ramifications of

1 poor fuel to continued plant operation.

2 **Q. Would Avista minimize its risk by taking only minimum deliveries from**
3 **Colstrip?**

4 A. No. Mr. Gomez suggested in his testimony (DCG-1CT, pg. 31) that Avista
5 could unilaterally minimize its risk at Colstrip by only taking its operating minimum for each
6 unit. Running the units at minimum loads would only create additional expenses that Avista
7 would still be obligated to meet. The Owners & Operators (O&O) agreement does not provide
8 for a pro-rata sharing of these expenses. Owners would still be billed based on their ownership
9 share and base plant operations and maintenance would remain unchanged. Capital
10 expenditures would also remain the same and Avista would still be obligated for its share of
11 the expenses, but those expenses would be spread out over fewer MWhs.

12 Another drawback to this option is that the heat rate, or efficiency, of the units at these
13 lower outputs is much poorer than at full output. This presents a higher operational cost to
14 customers than operating at full load. These increased incremental costs are in addition to any
15 consideration of the cost of replacement power to meet the lower level of Colstrip generation
16 at contract minimums.

17 **Q. Does this conclude your rebuttal testimony?**

18 A. Yes it does.