Exhibit No. EB-1CT Docket No. UE-200900, UG200901, UE-200894 AVISTA GENERAL RATE CASE Witness: Ed Burgess

#### BEFORE THE WASHINGTON UTILITIES AND TRANSPORATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

DOCKETS UE-200900, UG-200901, UE-200894 (*Consolidated*)

v.

AVISTA CORPORATION d/b/a AVISTA UTILITIES,

Respondent.

#### PREFILED RESPONSE TESTIMONY OF ED BURGESS

ON BEHALF OF SIERRA CLUB

#### Confidential per protective order - REDACTED VERSION

April 21, 2021

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#### EXHIBIT LIST

Exhibit EB-2:	Curriculum Vitae of Ed Burgess
Exhibit EB-3:	Avista Second Supplemental response to Staff Data Request 107, 3.19 Attachment C Revised (excerpt)
Exhibit EB-4C:	Avista Confidential response to Staff Data Request 132C, Confidential Supplemental Attach. A (excerpts)
Exhibit EB-5:	Avista response to Sierra Club Discovery Request 004
Exhibit EB-6C:	Avista Confidential Supplemental response to Sierra Club Discovery Request 004
Exhibit EB-7C:	Avista Confidential response to Staff Data Request 132C, Confidential Attach. A, 20150318 Colstrip Units 34 Final March Owners Meeting Minutes.pdf

#### 1 I. SUMMARY OF FINDINGS AND RECOMMENDATIONS

2	Q.	Please provide a summary of your testimony.
3	А.	My testimony examines the capital additions associated with the Colstrip power plant that
4		Avista proposes to recover through retail rates in this General Rate Case ("GRC").
5	Q.	Please provide a summary of your findings.
6	А.	My findings can be summarized as follows:
7		1. There are significant inconsistencies between what Avista provided in its direct
8		testimony regarding SmartBurn and what information Avista subsequently claims to
9		have informed its decision to install Smart Burn in the "decision timeframe."
10		2. Given that the Washington Utilities and Transportation Commission ("UTC" or
11		"Commission") recently disallowed SmartBurn costs for Puget Sound Energy
12		("PSE"), there is insufficient new evidence presented to suggest that the UTC should
13		act any differently in Avista's case.
14		3. Avista seeks to recover a significant portion of forward-looking capital additions for
15		the Colstrip power plant through a pro forma adjustment.
16		4. The proposed pro forma adjustment includes excessive capital additions that do not
17		appear to be reasonable, including:
18		a. 2020 capital additions projected at the time of Avista's application (October
19		2020) that exceed actual 2020 recorded capital additions;
20		b. Unit 3 overhaul costs that could be considered Operations and Maintenance
21		("O&M") expenses versus capital additions; and

1		c. Speculative Dry Ash Waste Disposal costs.
2	Q.	Please provide a summary of your recommendations.
3	A.	My findings can be summarized as follows:
4		1. The Commission should determine that the capital costs associated with SmartBurn
5		were incurred imprudently and should thus be excluded from retail rate recovery;
6		2. The Colstrip Pro Forma adjustment be modified to reflect actual 2020 capital
7		additions consistent with Staff DR 107 Supplemental $2 - 3.19$ Attachment C Revised,
8		an excerpt of which is provided as Exhibit EB-2;
9		3. The Colstrip Pro Forma adjustment should be modified to classify a larger share of
10		the Unit 3 overhaul costs as O&M, rather than capital additions;
11		4. The Commission should determine that any 2021 costs for Dry Ash Removal are
12		fully refundable to Avista customers if subsequent evaluation determines these costs
13		to be imprudent; and
14		5. The Colstrip Pro Forma adjustment should be modified to exclude all costs associated
15		with Dry Ash Removal in 2022. Instead, these costs should be evaluated in the next
16		GRC.
17 <b>I</b>	I.	INTRODUCTION
18	Q.	Please state your name, title, and business address.
19	A.	My name is Ed Burgess. I am a Senior Director at Strategen Consulting. My business
20		address is 2150 Allston Way, Suite 400, Berkeley, California 94704.
21		

#### Q. Please summarize your professional and educational background.

2 A. I am a leader on Strategen's consulting team and oversee much of the firm's utility-3 focused practice for governmental clients, non-governmental organizations, and trade 4 associations. Strategen's team is globally recognized for its expertise in the electric 5 power sector on issues relating to resource planning, transmission planning, renewable 6 energy, energy storage, utility rate design and program design, and utility business 7 models and strategy. During my time at Strategen, I have managed or supported projects 8 for numerous client engagements related to these issues. Before joining Strategen in 9 2015, I worked as an independent consultant in Arizona and regularly appeared before 10 the Arizona Corporation Commission. I also worked for Arizona State University where I 11 helped launch their Utility of the Future initiative as well as the Energy Policy Innovation 12 Council. I have a Professional Science Master's degree in Solar Energy Engineering and 13 Commercialization from Arizona State University as well as a Master of Science in 14 Sustainability, also from Arizona State. I also have a Bachelor of Arts degree in 15 Chemistry from Princeton University. A full resume is attached in Exhibit EB-2. 16 On whose behalf are you testifying? **O**. 17 A. I am testifying on behalf of the Sierra Club.

18

**Q**.

#### What is the purpose of your testimony?

A. The purpose of my testimony is to examine Avista's proposed recovery of capital costs
associated with its ownership share of the Colstrip power plant and provide
recommended changes to the Company's proposal. There are two main categories of
capital costs that I examine: 1) costs associated with the installation of SmartBurn at

- Colstrip Units 3 and 4, and 2) costs included in Avista's proposed pro forma adjustment
   for capital additions from 2020 through 2022.
- 3 Q. Have you ever testified before this Commission?
- 4 A. No.

### 5 Q. Are you generally familiar with electric utilities, and related policy and regulatory 6 issues around the Western U.S.?

7 A. Yes. I have participated in a variety of activities, projects, and policy forums related to 8 the power system in the West. To provide a few recent examples, I have conducted 9 multiple research projects for the Western Interstate Energy Board. I have participated in 10 technical stakeholder processes at the Western Electricity Coordinating Council and 11 WestConnect. I helped the State of Arizona complete a technical assessment (including 12 power system modeling) of U.S. EPA's Clean Power Plan. I have also engaged in several 13 resource planning and grid modeling projects in Arizona, Nevada, and Colorado. For a 14 recent client project, I conducted a detailed review and comparison of PacifiCorp's retail 15 rate components across its six jurisdictions. I also recently testified before the Public 16 Utility Commission of Oregon on PacifiCorp's proposed 2021 Transition Adjustment 17 Mechanism, and before the California Public Utilities Commission on PacifiCorp's 18 proposed 2020 and 2021 Energy Cost Adjustment Clause.

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#### Q. Have you ever testified before any other state regulatory body?

A. Yes. I have testified before the Massachusetts Department of Public Utilities on behalf of
the Massachusetts Attorney General's Office ("AGO") at the evidentiary hearings for
D.P.U. 18-150 and D.P.U. 17-140. I have also supported the AGO as a technical
consultant in other cases including D.P.U. 17-05, D.P.U. 17-13, D.P.U. 15-155, and

1		D.P.U. 17-146. I have also testified before the South Carolina Public Service
2		Commission on behalf of the South Carolina Solar Business Alliance in evidentiary
3		hearings for 2019-186-E, 2019-185-E, and 2019-184-E. I provided written testimony to
4		the Indiana Utility Regulatory Commission on behalf of the Citizens Action Coalition
5		and Earthjustice on coal fuel costs in two proceedings related to Duke Energy's Fuel
6		Adjustment Clause (IURC Cause No. 38707 FAC 123 S1 and FAC 125). I also recently
7		provided testimony to the Nevada Public Utilities Commission on NV Energy's
8		Integrated Resource Plan in (Docket No. 20-07023). Additionally, I have represented
9		numerous clients by drafting written testimony, drafting written comments, presenting
10		oral comments and participating in technical workshops on a wide range of proceedings
11		at Public Utilities Commissions in Arizona, California, District of Columbia, Maryland,
12		Minnesota, Nevada, New Hampshire, New York, North Carolina, Ohio, Oregon,
13		Pennsylvania, at the Federal Energy Regulatory Commission, and at the California
14		Independent System Operator.
15	Q.	How is your testimony organized?
16	A.	My testimony is organized into two main sections. The first addresses SmartBurn and the
17		second addresses the 2020-2022 pro forma adjustment.
18 <b>I</b>	11.	SMARTBURN
19	1.	Overview
20	Q.	Please briefly describe the SmartBurn project for Colstrip Units 3 & 4.
21	A.	According to Avista, SmartBurn optimizes the combustion process in coal-fired
22		generation plants, and thus reduces the pollutants that are produced during combustion.

1		One such pollutant, nitrogen oxide ("NOx"), is a haze-inducing pollutant regulated under
2		the Regional Haze Rule.
3		Without a requirement for emissions reductions from the Environmental Protection
4		Agency ("EPA"), Avista, along with the other Colstrip owners, chose to install
5		SmartBurn in Colstrip Units 3 and 4. The Company argues that this was done in an
6		attempt to reduce the amount of NOx being formed during coal combustion. This
7		potential reduction could subsequently reduce the size and cost of a post combustion
8		technology, such as Selective Catalytic Reduction ("SCR"), that might later be required
9		to control NOx emissions.
10	Q.	When was SmartBurn installed?
11	A.	The decision to include SmartBurn in Colstrip's capital budget first occurred in 2012 and
12		final approval of the first installation occurred in March 2015. SmartBurn in Unit 4 was
13		installed in 2016. The installation on Unit 3 was completed in 2017. <sup>1</sup>
14	Q.	What was the cost of the SmartBurn installation in Colstrip Units 3 & 4?
15	A.	Avista's share of the final cost for both units was \$4.2 million, or \$2.74 million for
16		
		Washington. <sup>2</sup>
17	Q.	Washington. <sup>2</sup> Please describe the general Regional Haze Rule requirements.
17 18	<b>Q.</b> A.	
		Please describe the general Regional Haze Rule requirements.

<sup>&</sup>lt;sup>1</sup> Exh. JRT-10, Avista IRP Excerpts and Four Factor Analysis at 40. <sup>2</sup> Exh. JRT-1T, Direct Testimony of Jason R. Thackston at 58:3-5 [hereinafter "Thackston Direct"].

1		retrofit technology ("BART") requirements but were considered as part of the FIP's
2		"long-term strategy" to achieve reasonable progress toward the Clean Air Act's ("CAA")
3		visibility goal. EPA did not require any NOx or Sulfur Dioxide ("SO2") emissions
4		reductions from Colstrip Units 3 & 4 in the 2012 FIP, and stated that "[w]hether
5		additional emission reductions from reasonable progress sources, including Colstrip Units
6		3 and 4, are necessary will be re-evaluated in subsequent planning periods." 77 Fed. Reg.
7		57,864, 57,902 (Sept. 18, 2012).
8		The Regional Haze Rule's second planning period for regional haze controls covers
9		2018-2028 and originally called for states to submit State Implementation Plans ("SIPs")
10		for EPA review and approval by July 31, 2018. However, EPA finalized a rule change on
11		January 10, 2017 delaying the SIP deadline until July 31, 2021.
12		When a state submits a SIP it does not automatically impose any new emissions limits on
13		a source. Rather, EPA will consider the SIP in the process of a rulemaking that can take a
14		year or more. At the end of this rulemaking process, EPA will issue a final rule
15		approving the SIP or imposing a FIP that includes final emissions limits and a
16		compliance deadline. In contrast to BART controls, reasonable progress controls do not
17		have a statutory or regulatory deadline apart from being designed to reduce emissions by
18		the end of the planning period (i.e., 2028).
19	Q.	Please provide a brief overview of the SmartBurn decision making process and
20		timeline as it relates to Regional Haze Rule requirements.
21	A.	As I already stated, in the Montana FIP for Regional Haze (September 2012), EPA
22		concluded that additional emission controls were not needed for Colstrip units 3 & 4 at

1		that time. In May 2016, EPA originally proposed the delay of the SIP review period from
2		2018 to 2021. <sup>3</sup> At the same time and despite the lack of a legal requirement, SmartBurn
3		was installed at Unit 4. Based on EPA's proposed delay, Talen
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5		4
6		
7		<sup>5</sup> The Smartburn project was eventually completed in 2017.
8	Q.	Can you describe the evolution of Avista's considerations around the need for SCR
9		installation at Colstrip?
10	A.	The Regional Haze program sets a goal of zero in 2064 and uses a "glide path" and
11		reasonable progress goals to define the compliance trajectory. A key component of the
12		Regional Haze Rule is the requirement to install and operate the BART for qualifying
13		older, existing sources of visibility impairing pollutants during the initial planning period
14		(2007-2018). Since Colstrip Units 3 and 4 were constructed after 1977, they were not
15		subject to the BART requirements but were considered as part of the FIP's "long-term
16		strategy" to achieve reasonable progress toward the CAA's visibility goal. However,
17		according to Avista, the notion that SCRs would be needed at Units 3 and 4 to comply
18		with subsequent requirements of the Regional Haze Program was an expectation since the

<sup>&</sup>lt;sup>3</sup> 81 Fed. Reg. 26,943, 26,944 (May 4, 2016).
<sup>4</sup> See Avista Confidential response to Staff Data Request 132C, Confidential Supplemental Attach. A, email from Darrell Soyars dated Thursday, July 21, 2016 4:06:28 PM (excerpts of Avista Confidential response to Staff Data Request 132C, Confidential Supplemental Attach. A attached as Exh. EB-4C). <sup>5</sup> For example, *see id.*, email from Mike Mecham dated Friday, July 22, 2016 8:37:22 AM.

1		2011 Integrated Resource Plan ("IRP"). <sup>6</sup> Avista's 2013 Electric IRP projected that SCR
2		installation on Colstrip Units 3 and 4 could be required in 2027, and the Company ran
3		scenarios to understand the implications of the SCR investment at that time. <sup>7</sup> SCR was
4		also a point of discussion in the Company's IRPs in 2015, 2017, and 2019.8 However,
5		more recently, the change in resource economics rendering coal units as some of the most
6		expensive plants in the generation fleet, as well as the passage of Washington's Clean
7		Energy Transformation Act ("CETA") are now pointing to a much earlier plant closure
8		(compared to what was anticipated in earlier years), and thus SCR is not expected to be
9		required prior to potential plant retirement or exit dates. <sup>9</sup> Based on this, the installation of
10		an SCR is not modeled in Avista's 2021 Electric IRP because the plant is expected to
11		cease operations before that equipment is necessary to meet the requirements of the
12		Regional Haze glide path. <sup>10</sup>
13	Q.	Has Avista publicly indicated that it may be beneficial to exit Colstrip prior to the

### installation of SCRs or any other regional haze requirements?

Yes. Mr. Thackston's direct testimony included a quotation from the Avista 2020 IRP 15 A. stating that "... Avista's analysis of Colstrip in this IRP (Chapter 12) indicates retiring 16 the plant for Idaho customers in 2025 rather than 2035 is the economic choice."<sup>11</sup> More 17 recently, Avista's 2021 IRP was filed with the Idaho Public Utilities Commission, and 18

- <sup>8</sup> *Id*. at 63:22-23. <sup>9</sup> *Id*. at 54:25-29.
- <sup>10</sup> *Id.* at 53:8-10.

<sup>&</sup>lt;sup>6</sup> Exh. JRT-1T, Thackston Direct at 57:5-9.

<sup>&</sup>lt;sup>7</sup> *Id.* at 58:9-10.

<sup>&</sup>lt;sup>11</sup> *Id.* at 49:21-23 (citing Avista's 2020 IRP at 12-2).

1		stated the following: "Avista's most economic decision based on modeling in this IRP
2		would be exiting both Units 3 and 4 as soon as possible." <sup>12</sup> Thus, despite the closure
3		complications due to co-ownership, the Company has been planning an early exit from
4		the plant at least since the preparation of its 2020 IRP. If Avista had
5		, then the project
6		almost surely would have been canceled entirely.
7	Q.	Was SmartBurn ever required either for SCR installation or by EPA Regional Haze
8		Rule requirements?
9	A.	No, SmartBurn was neither directly required by EPA's Regional Haze Rule, nor
10		indirectly required by a potential future SCR installation requirement. In the past, Avista
11		had expressed its view that SCR could ultimately be required in the 2027 timeframe, but
12		there was never such an expectation for SmartBurn to be required. Avista decided to
13		install SmartBurn based on the assumption that SmartBurn would potentially reduce the
14		cost of a hypothetical future SCR requirement. <sup>13</sup> According to Avista witness, Mr.
15		Thackston "[t]he installation of SmartBurn on Units 3 and 4 was a strategic decision to
16		meet expected and ongoing economic and regulatory purposes that are not well-defined
17		and subject to change."14 Anticipating that Colstrip Units 3 and 4 could be ordered to
18		install SCR during the expected 2017 review period (which was ultimately delayed to
19		2021), the Colstrip Owners voluntarily installed the SmartBurn technology to attempt to

<sup>&</sup>lt;sup>12</sup> Avista 2021 Electric Integrated Resource Plan at 11-5, Docket No. AVU-E-21-04 (Idaho Pub. Utils. Comm'n Mar. 31, 2021), *available at*https://puc.idaho.gov/Fileroom/PublicFiles/ELEC/AVU/AVUE2104/CaseFiles/20210331Avista%202021
%20Electric%20IRP.pdf.
<sup>13</sup> Exh. JRT-1T, Thackston Direct at 62:10-12.
<sup>14</sup> Id. at 59:9-11.

1		reduce the formation of NOx in the combustion zone. However, based on my review of
2		the Company's testimony, workpapers, and discovery responses, I have concluded that
3		the benefits of this decision were not quantified during the 2012 decision timeframe to
4		determine whether the investment was prudent and in the best interest of Avista
5		ratepayers. This is true especially given the uncertainty around the Regional Haze
6		requirements that Avista itself acknowledges and EPA's 2012 Montana FIP conclusion
7		that additional controls for Reasonable Progress were not appropriate at that time. <sup>15</sup>
8	Q.	In your view, was there any urgency to install SmartBurn to reduce emissions prior
9		to the second planning period of the Regional Haze Rule (i.e. before 2018)?
10	A.	No. The Regional Haze Rule's second planning period (2018-2028) originally called for
11		states to submit SIPs for EPA's review and approval by July 31, 2018. In May 2016, EPA
12		initially proposed the delay of the review period. EPA finalized this rule change on
13		January 10, 2017, which formally extended the SIP-submission deadline to July 31,
14		2021. <sup>16</sup> Regardless of the SIP deadlines, the state's submission of a SIP does not
15		automatically impose new emissions limits on a source. Instead, EPA will consider the
16		SIP in a rulemaking that generally takes a year or longer. EPA's final rule approving the
17		SIP or imposing a FIP includes such final emissions limits and a compliance
18		deadline. Unlike BART controls, there is no statutory or regulatory deadline for
19		reasonable progress controls in the long-term strategy, other than they should be designed
20		to achieve emissions reductions by the end of the planning period (i.e., 2028). Therefore,
21		a plant owner's decision to install controls before the 2028 deadline is strictly voluntary.

<sup>&</sup>lt;sup>15</sup> 77 Fed. Reg. 57,863 (Oct. 8, 2012) (codified at 40 C.F.R. § 52). <sup>16</sup> 81 Fed. Reg. 26,943, 26,944 (May 4, 2016).

1 2 2. **Previous UTC Decisions on SmartBurn** 3 Has the Commission evaluated Avista's investment in SmartBurn for Colstrip Units **Q**. 4 3 & 4 prior to this proceeding? Yes, Avista has requested SmartBurn cost recovery in rates in four separate GRCs, 5 A. starting in the 2016 GRC which the Commission rejected,<sup>17</sup> then in 2017, 2019, and now 6 7 in this proceeding. 8 In 2017, the Commission evaluated Avista's decision to invest in SmartBurn in Colstrip 9 Units 3 & 4 in its 2017 GRC. According to the Commission's final Order, the Commission concurred with Staff's assessment that Avista had provided insufficient 10 11 information related to its investments at Colstrip Units 3 and 4. The Company's rebuttal arguments did not dispel the concerns that:<sup>18</sup> 12 • the investment did not appear to have been required by any state or federal laws; 13 • any future compliance obligations that the Smart Burn investment might have 14 15 helped mitigate were purely speculative; and • it was unclear whether the decision by the Colstrip owners to proactively take on 16 17 future assumed compliance obligations reflected retirements of other coal units in

<sup>&</sup>lt;sup>17</sup> Order 06, Docket Nos. UE-160228 & UG-160229 (Wash. Utils. & Transp. Comm'n Dec. 15, 2016), *available at* 

https://apiproxy.utc.wa.gov/cases/GetDocument?docID=2156&year=2016&docketNumber=160228. Note that the final order in this case did not specifically address or reject SmartBurn-related costs, but rather the order rejected Avista's proposed rate increase overall.

 <sup>&</sup>lt;sup>18</sup> Order 07 at 68 ¶ 204, Docket Nos. UE-170485 & UG-170486 (Wash. Utils. & Transp. Comm'n Apr. 26, 2018), *available at*

https://apiproxy.utc.wa.gov/cases/GetDocument?docID=1814&year=2017&docketNumber=170485.

1		the region that might reduce any compliance obligations for Colstrip Units 3 and
2		4.
3		In 2019 again, according to the Partial Multiparty Settlement Stipulation, the costs
4		associated with the installation of SmartBurn for Colstrip Units 3 and 4 were not included
5		in rate base, and their prudence review was left for the next GRC (i.e., this proceeding). <sup>19</sup>
6	Q.	Has the Commission disallowed cost recovery of the SmartBurn investment for any
7		of the other owners?
8	A.	Yes. In July of 2020, the Commission ruled that Puget Sound Energy ("PSE") was not
9		allowed to recover costs associated with the installation of SmartBurn technology at the
10		Colstrip plant. The Commission found that costs related to PSE's SmartBurn investment
11		were not prudently incurred based on the Company's failure to maintain
12		contemporaneous documentation of its decision making, and thus disallowed recovery of
13		\$7.2 million in plant costs related to SmartBurn. <sup>20</sup>
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<sup>&</sup>lt;sup>19</sup> Partial Multiparty Settlement Stipulation, Docket Nos. UE-190334, UG-190335 & UE-190222 (Wash. Utils. & Transp. Comm'n Nov. 21, 2019), *available at* 

https://apiproxy.utc.wa.gov/cases/GetDocument?docID=385&year=2019&docketNumber=190222 [hereinafter "Partial Multiparty Settlement Stipulation"]. <sup>20</sup> Order 8 at 61-62, Docket Nos. UE-190529 et al. (Wash. Utils. & Transp. Comm'n July 8, 2020),

<sup>&</sup>lt;sup>20</sup> Order 8 at 61-62, Docket Nos. UE-190529 et al. (Wash. Utils. & Transp. Comm'n July 8, 2020), *available at* 

https://apiproxy.utc.wa.gov/cases/GetDocument?docID=5926&year=2019&docketNumber=190529.

1	3.	Evaluation of New Information Presented by Avista in this Proceeding
2	Q.	Are there new or substantially different factors that the Commission should include
3		in its evaluation of the SmartBurn investment cost recovery for Avista in this
4		proceeding?
5	Α.	I do not believe so. In his direct testimony, Mr. Thackston argues that there is additional
6		information provided in this case regarding the Company's decision to install
7		SmartBurn. <sup>21</sup> Unfortunately, I do not agree that Avista provided substantially different
8		information in its testimony in this case. In my opinion, the new information provided
9		simply raises more questions and doubts about Avista's decision-making process and
10		timeline of events that led to SmartBurn. Avista states that prudency of an investment
11		should not be based solely on whether it was required by law. While I do not dispute this,
12		I still find the SmartBurn investment to be imprudent based on the lack of
13		contemporaneous analysis from Avista and the lack of demonstrated ratepayer benefits
14		from the other plant owners.
15	Q.	Please describe the additional information that Avista presents and requests the
16		Commission to evaluate.
17	A.	According to Avista witness, Mr. Thackston, the decision to invest in SmartBurn was the
18		first step in mitigating the cost of any future requirement to install SCR. Specifically, Mr.
19		Thackston mentions that "it was assumed that SmartBurn would reduce the operational
20		cost of future SCR compliance through the reduction of ammonia needed to operate a
21		smaller, optimal sized unit. As shown in Exh. JRT-10, Part 1, pg. 4, Avista's share of any

<sup>&</sup>lt;sup>21</sup> Exh. JRT-1T, Thackston Direct at 61:14-18.

1	future SCR capital costs were estimated to be \$105 million and \$565,000 annually.
2	Compare this to Avista's share of SmartBurn capital costs of approximately \$4.2 million
3	(Avista)."

#### Q. Do you find this information persuasive?

"business as usual" approach.

A. No. Comparing the costs of these two technologies is not meaningful without additional
context of how each performs relative to prevailing emissions requirements (assuming
such requirements were to come into existence). It would have been much more
informative to compare the cost of SmartBurn against the cost savings of installing and
operating a smaller sized SCR. However, there is no evidence that Avista conducted such
an analysis.

Q. Has Avista presented evidence of a contemporaneous economic analysis of its
 decision making for SmartBurn?

A. No. Avista claims that "the Colstrip Owners proactively installed the SmartBurn
technology to reduce the formation of NOx in the combustion zone for two major
benefits: (1) Make proactive and verifiable NOx reduction and, (2) Optimize the size,
scope and ammonia use of any future SCR installation." However, Avista admits that
"pricing for a reduce[d] [sic] sized SCR was not obtained"<sup>22</sup>, indicating that the expected
benefits of SmartBurn were not adequately quantified against the expected costs under a

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<sup>&</sup>lt;sup>22</sup> Avista response to Sierra Club Discovery Request 004C Supplemental (attached as Exh. BE-5).

1	Q.	Has Avista presented any analysis supporting its decision to install SmartBurn?
2	А.	In its response to Staff 133, Avista states that it is in possession of a document titled
3		"PPL-Colstrip Units 34 2015 BACT Report NOx PM2 5 2-19-15.pdf", which is a Best
4		Available Control Technology "BACT" analysis that was conducted by TRC
5		Environmental. This document evaluated BACT for particulates and NOx and, according
6		to Avista, included analysis that informed Avista's decision to approve SmartBurn.
7	Q.	When and by whom was the BACT analysis conducted?
8	A.	The BACT analysis regarding SmartBurn was conducted in February 2015 by TRC
9		Environmental and at the direction of Baker Botts, LLP, in its role as legal counsel for
10		PPL Montana and the owners of Colstrip in connection with prior environmental
11		litigation.
12	Q.	Are you convinced that the BACT analysis was a critical factor in Avista's initial
13		decision to install SmartBurn?
14	А.	No. Although the BACT analysis was available one month prior to plant owners' final
15		approval of SmartBurn in March 2015, Mr. Thackston emphasizes in at least eight places
16		in his testimony that the decision to install Smart Burn was made in 2012 rather than
17		2015. <sup>23</sup> To quote the witness, "[t]he decision to install SmartBurn occurred in 2012, so
18		the information and expectations at that time need to be considered when evaluating this
19		capital spending decision". Thus, according to Avista, 2012 was the critical timeframe
20		when SmartBurn was being considered. However, the BACT analysis was produced in

<sup>&</sup>lt;sup>23</sup> Exh. JRT-1T, Thackston Direct at 57:15, 58:7, 59:11, 62:5, 63: 19, 65:2, 66:11 & 21.



<sup>&</sup>lt;sup>24</sup> See Exh. JRT-1T, Direct Testimony of Jason R. Thackston, Docket No. UE-190334 (Wash. Utils. & Transp. Comm'n Apr. 30, 2019), available at

https://apiproxy.utc.wa.gov/cases/GetDocument?docID=3267&year=2019&docketNumber=190334.

<sup>&</sup>lt;sup>25</sup> See Exh. EB-4C (e.g., email from Darrell Soyars dated Tuesday, Sept. 24, 2019 4:46:18 PM., and Attach. Colstrip RH slides).

1 Q. Notwithstanding these inconsistencies in timing, does the 2015 BACT analysis 2 provide a clear economic justification for SmartBurn? No. While the analysis does claim that SmartBurn could 3 A. future SCR 4 needs, this is only relevant if there was a requirement to install SCR in the first place and that such a requirement permitted SmartBurn Neither of these facts 5 6 were obviously true in the 2012-2015 decision timeframe. Additionally, in response to 7 discovery request SC 004, Avista claims that "[b]ased on chemical rates shown in the 8 BACT analysis, Avista estimated that SmartBurn would reduce annual chemical costs in the range of \$500,000-\$800,000."<sup>26</sup> Similarly, these operating cost reductions would only 9 be relevant if SCR was ultimately required. Moreover, even if SCR were ultimately 10 11 required, Avista has not provided any workpapers or other contemporaneous documents 12 for how it determined the \$500,000-\$800,000 in estimated annual savings in the 2012-13 2015 timeframe. Avista did state that <sup>27</sup> however, it is worth noting that the TRC 14 Document did not explicitly include these values, nor did the report provide a 15 comparative analysis of the cost of SCR without SmartBurn. Finally, these savings 16 17 estimates appear to be misleading since they do not include any O&M costs for 18 SmartBurn itself. For example, email records from Avista show that SmartBurn has an 19 estimated O&M cost of approximately which could partially offset the SCR O&M savings Avista estimated.<sup>28</sup> 20

<sup>&</sup>lt;sup>26</sup> Exh. BE-5, Avista response to Sierra Club Discovery Request 004.

<sup>&</sup>lt;sup>27</sup> Avista Confidential Supplemental response to Sierra Club Discovery Request 004 (attached as Exh. BE-6C).

<sup>&</sup>lt;sup>28</sup> Exh. EB-4C, email from Darrell Soyars dated Tuesday, Sept. 24, 2019 4:46:18 PM., Attach. Colstrip RH slides at slide 6.

1	Q.	Do you have other reasons to suspect that future reduction in SCR-related costs was
2		not a genuine rationale for Avista and the Colstrip owners' decision to install
3		SmartBurn?
4	A.	Yes. If Avista truly believed the conclusions of the 2015 BACT analysis—specifically
5		—then I would have expected
6		them to incorporate these findings into their subsequent filings in the 2015 and 2017 IRP
7		proceedings and other contemporaneous documents. However, Avista did not do so.
8		More specifically, Avista claims that the 2015 BACT analysis justified SmartBurn since
9		·· · · · · · · · · · · · · · · · · · ·
10		However, Avista's own planning efforts afterwards continued
11		to assume a full SCR installation would be required at Colstrip and included no
12		discussion of SmartBurn as an alternative or mitigating factor. For example, in the
13		August 2015 IRP, Avista stated "IRP modeling assumes that a default control system of a
14		selective catalytic reduction (SCR) will be required by the end of 2026, but the specific
15		target date or control type is unknown at this time." <sup>30</sup> As such, there is no indication that
16		Avista considered SmartBurn to be a legitimate alternative scenario or mitigating factor
17		for future NOx reduction needs at Colstrip.
18		

 <sup>&</sup>lt;sup>29</sup> Exh. BE-6C, Avista Confidential Supplemental response to Sierra Club Discovery Request 004.
 <sup>30</sup> Avista Utilities, 2015 Integrated Resource Plan at 12-4 (Aug. 31, 2015), available at https://www.myavista.com/about-us/integrated-resource-planning.

1	Q.	Has Avista provided any corroborating evidence to prove that the February 2015
2		BACT analysis factored into the Company's March 2015 approval of SmartBurn?
3	A.	No. Avista provided meeting minutes from the March 2015 Colstrip owners meeting
4		which have virtually no details
5		. <sup>31</sup> Additionally, Avista has provided no email records, meeting materials, or
6		other evidence from the 2012-2015 timeframe leading up to SmartBurn's final approval
7		in March 2015.
8	Q.	In addition to your timeline concerns, do you have any additional concerns about
9		inconsistencies between the 2015 BACT analysis and Avista's testimony in this case?
10	A.	Yes. As mentioned, the 2015 BACT analysis concludes
11		. This comes in stark contrast with Mr. Thackston's
12		direct testimony that Avista never believed or intended for SmartBurn to satisfy all future
13		NOx emissions reduction requirements at Colstrip.32 According to Mr. Thackston, "[a]t
14		the time of the SmartBurn installations, Talen and Avista believed that a SCR would be
15		required around the 2027 timeframe. Talen, as the plant operator, analyzed Regional
16		Haze requirements and determined that a final NOx Regional Haze solution would have
17		required both Smart Burn and a SCR to meet expected NOx requirements." <sup>33</sup> The
18		significant inconsistency of the two statements makes me question what Avista truly
19		believed at the time regarding future SCR requirements. It is also worth pointing out that
20		after EPA's proposal in 2016 to delay the next review period to 2021, Talen as plant

 <sup>&</sup>lt;sup>31</sup> Avista Confidential response to Staff Data Request 132C, Confidential Attach. A, 20150318 Colstrip Units 34 Final March Owners Meeting Minutes.pdf (attached as Exh. EB-7C).
 <sup>32</sup> Exh. JRT-1T, Thackston Direct at 63:7-10 (emphasis added).
 <sup>33</sup> Id. at 67:21-24.



<sup>&</sup>lt;sup>34</sup> Exh. EB-4C, email from Tom Dempsey dated Wednesday, Aug. 17, 2016 8:47:55 PM.

#### 1 Q. Does the BACT analysis contribute to a stronger record than the one developed for 2 the PSE SmartBurn cost recovery? 3 A. My understanding is that the BACT analysis was developed under the instruction of PPL 4 Montana and was available to all owners. It is not an analysis undertaken independently 5 by Avista and does not indicate any additional due diligence that the Company conducted 6 on top of what other owners, including PSE, had agreed to. As such, I do not believe that 7 it merits the Commission's deviation from its prior decision on the prudency of the PSE 8 SmartBurn investment at Colstrip. 9 Q. Based on the information that Avista has provided, do you think the decision to 10 install SmartBurn was prudent? 11 No. None of the information provided here changes the prior determination of the A. 12 Commission that the SmartBurn investment was not prudent or sufficiently analyzed at 13 the time that it was made. 14 4. **Emissions Performance** 15 Q. Can you comment on SmartBurn's actual performance after it was installed? 16 A. Yes. Although not directly relevant to the prudency question, SmartBurn has performed 17 significantly worse than anticipated and delivered no benefits to ratepayers. While BACT

- 18 was projecting a reduction of the NOx emission rate, historical evidence
- 19 indicates only a negligible reduction.

Table 1<sup>35</sup>

NOx	Emissions in Colstrip U	nits
Unit 3	Pre-installation period (Jan 2014- April 2017)	Post-installation period (July 2017-Dec. 2020)
NOx emissions rate (tons/MWh)		
NOx Emission rate reduction %		%
Unit 4	Pre-installation period (Jan 2014- April 2016)	Post-installation period (July 2016-Dec. 2020)
NOx emissions rate (tons/MWh)		
NOx Emission rate reduction %		%

2 Q. What is your conclusion about Avista's decision to install SmartBurn on Colstrip
3 Units 3&4?

4 A. SmartBurn costs were not prudently incurred and not to the best interest of ratepayers.

5 Avista has failed to meet its evidentiary burden that SmartBurn was a prudent investment.

6 Specifically, SmartBurn was not required by EPA, and Avista has not been able to

7 provide any documentation of a prudency analysis conducted prior to the SmartBurn

8 decision.

9 Q. What is your recommendation about the cost recovery of the SmartBurn investment

10 for Avista?

11 A. I recommend the Commission uphold its prior decisions to disallow recovery of capital

12 costs associated with SmartBurn.

<sup>&</sup>lt;sup>35</sup> Calculations performed using data from Avista Confidential response to Sierra Club Discovery Request 002C, Confidential Attach. A (document available upon request).

### 1 IV.ANALYSIS OF COLSTRIP CAPITAL COST ADDITIONS INCLUDED IN THE2PRO FORMA ADJUSTMENT

- 3 Q. Does Avista's proposed revenue requirement include a pro forma adjustment for
  4 capital additions associated with the Colstrip power plant?
- A. Yes. Avista proposes to include a pro forma adjustment to account for known and
  anticipated Colstrip capital additions occurring in 2020, 2021, and 2022.

#### 7 Q. Do you have any general concerns about these pro forma costs?

- A. Yes, I have a few general concerns. First, I am concerned about any capital additions in
  the Colstrip plant that could ultimately be considered life-extending regardless of whether
  Avista continues to participate in the plant after 2025. Second, most of the pro forma
  adjustments Avista has proposed are primarily intended to recover costs incurred in 2020
  or 2021. However, for Colstrip, Avista includes a significant amount of 2022 capital
  additions. In my opinion, 2022 is far enough into the future that it carries much greater
  uncertainty and requires greater scrutiny for pro forma treatment.
- Q. Can you describe what capital additions are included in the Colstrip pro forma and
   what Avista expects their costs to be?

17 A. Yes. As Mr. Thackston detailed in Table No. 7 of his testimony, this includes

- 18 approximately \$10 million in 2020 capital additions, \$8.1 million in 2021 capital
- additions, and \$3.4 million in 2022 capital additions (or about \$21.5 million total). Of
- 20 this, Avista's Washington share would be about \$6.6 million in 2020, \$5.3 million in
- 21 2021, and \$2.2 million in 2022 (or about \$14 million total). As detailed in Ms. Andrews

1		testimony, <sup>36</sup> the Avista proposal to include a Colstrip pro forma would increase the
2		company's plant in service by about \$12.4 million which corresponds to an increase of
3		about \$9.5 million in the company's rate base after accounting for accumulated
4		depreciation ("A/D") and accumulated deferred federal income taxes ("ADFIT"). <sup>37</sup>
5	Q.	Can you provide more detail on the 2020 capital additions?
6	A.	Yes. I understand these to be capital additions that were either already completed or were
7		expected by the end of the 2020 calendar year, including the overhaul of Unit 4. Since
8		Avista's filing was made in October 2020, a full accounting of 2020 capital additions was
9		not available at the time.
10	Q.	Are there any revisions that should be made to Avista's proposed pro forma
11		adjustment based on the actual 2020 capital additions that are now known today?
12	А.	Yes. As shown in Staff DR 107 Supplemental 2 – 3.19 Attachment C Revised, the actual
13		capital additions recorded by Avista in 2020 amount to only \$5.2 million, or about 52%
14		of the \$10 million that the Company had projected in direct testimony.
15	Q.	Can you provide more detail on the proposed 2021-2022 capital additions?

<sup>&</sup>lt;sup>36</sup> Workpapers to the Direct Testimony of Elizabeth M. Andrews, 200900-200901-Andrews 3.19 E-Colstrip Cap and Reg Amort.pdf.
<sup>37</sup> It is not readily apparent to me why there seems to be an inconsistency between the capital additions in Mr. Thackston's testimony (~\$14 million) and Ms. Andrews testimony (~\$12 million).

1		1. Ongoing capital costs that are necessary for Units 3 and 4 to continue to serve
2		Washington customers through 2025. A large portion of these costs include the
3		planned overhaul of Unit 3 in 2021.
4		2. New capital costs to manage water and waste beyond the operating life of Units 3
5		and 4. This includes a significant investment in the design and construction of a
6		major new dry ash waste disposal system to handle coal combustion residuals.
7	Q.	Do the 2021 capital additions included in Avista's proposed Colstrip pro forma
8		match what has actually been approved by the plant owners?
9	A.	No. As show in Staff DR 107 Supplemental 2 – Attachment D Revised, Avista's share of
10		the 2021 capital additions approved as of February 4, 2021 amounted to about \$3.8
11		million, or about \$2.5 million for Washington customers. This is only about 47% of the
12		\$8.1 million that the Company had projected in direct testimony.
13	Q.	Is it possible that the plant owners will approve other capital additions in 2021 that
14		would increase Avista's costs above \$3.8 million?
15	A.	It is certainly possible, however I don't think it would be appropriate to include those
16		additions in the Colstrip pro forma adjustment (or otherwise recover them through retail
17		rates set in this case) at this time given that those additions are somewhat speculative.
18		Additionally, as demonstrated above regarding the 2020 capital additions, Avista has
19		overestimated capital additions in the recent past. Thus, there is good reason to believe
20		Avista may be overestimating costs for 2021 as well.
21		

#### 1 **O**. What do these \$3.8 million in 2021 capital additions currently approved by plant 2 owners reflect? 3 A. My understanding is that the vast majority of these capital costs are related to the planned 4 Unit 3 overhaul planned to be completed by June 2021. This total also includes a smaller 5 amount of costs (~\$0.6 million) associated with steel purchased as a component of the 6 Dry Waste Disposal system to be installed in 2022. 7 Do you have concerns about including this \$3.8 million in approved capital **O**. 8 additions in the Colstrip pro forma adjustment? 9 A. I do have some concerns. While I recognize that some costs may be necessary simply to 10 keep Unit 3 operational from 2022-2025 and to address safety issues, I'm also cognizant 11 that these investments could allow Unit 3 to operate well into the future, even if it is no 12 longer serving Washington customers. Investments that keep coal generation operational 13 beyond 2025 are counter to the 2019 Avista rate case settlement, Washington's Clean Energy Transformation Act ("CETA"), and other policy goals.<sup>38</sup> 14 15 Furthermore, I'm also cognizant that Avista has an inherent incentive to seek increased 16 capital additions at the plant in final 2021-2025 period as a means to increase its authorized return based on capital spending. Mr. Thackston does state the following 17 regarding the plant operator's (Talen's) incentives: "[t]he compensation structure for the 18 19 plant operator is cost-based and does not include any rate of return based on the capital spending at the plant."<sup>39</sup> However, although it is not the plant operator, Avista does earn 20

<sup>&</sup>lt;sup>38</sup> Partial Multiparty Settlement Stipulation, *supra* note 19.

<sup>&</sup>lt;sup>39</sup> Exh. JRT-1T, Thackston Direct at 46:21-23.

1		a rate of return on such capital spending. Thus, the Company might seek to influence the
2		outcome of the plant owner's decisions. This is consistent with what Mr. Thackston
3		clearly stated in his direct testimony: "the Company nevertheless actively exercises its
4		ownership rights while projects are being discussed."40 An example of this practice was
5		well-documented in the email records provided as part of Staff-DR-132C Confidential
6		Supplemental – Attachment A,
7		
8	Q.	Do you think the \$0.6 million in capital additions associated with steel for the Dry
9		Waste Removal system should be excluded from the Colstrip pro forma
10		adjustment?
11	A.	No. I recognize that some elements of such a large capital project may require some lead
12		time and I am not opposed to the timely cost recovery of such elements. However, given
13		the early stage of this project and lack of sufficient detail, I believe these steel-related
14		costs should be subject to a customer refund if they or other elements of the project are
15		determined to have been incurred imprudently.
16	Q.	Do you think the costs associated with the Unit 3 overhaul should be excluded from
17		the Colstrip pro forma adjustment?
18	A.	Not necessarily. However, given the fact that the useful life of these investments is so
19		short from a Washington ratepayer perspective (i.e. less than 4 years), I question whether
20		all of these costs need be treated as capital additions and whether some could instead be
21		treated as one-time fixed O&M expenses. For example, in Staff DR 107 Supplemental 2

<sup>&</sup>lt;sup>40</sup> *Id.* at 46:20-21.

1		– 3.19 Attachment D, Avista includes a column to allocate between O&M and Capital.
2		Some major items have allocations of 60% O&M or more, including the
3		Turbine/Generator Base Overhaul. However, most line items are presumed to be 100%
4		capital. I think it would be beneficial if a greater share of these costs to be allocated as
5		O&M.
6	Q.	Can you explain the pros and cons of allocating more of these costs to O&M from a
7		customer's perspective?
8	A.	Yes. This would be advantageous to ratepayers because it would reduce the incentive for
9		Avista to pursue any unnecessary or potentially life-extending capital investments at
10		Colstrip during the remaining 4 years of its inclusion in WA rates. Avoiding these
11		unnecessary additions would decrease overall costs to WA customers. Additionally, this
12		would reduce the nominal amount of costs to ratepayers since capital financing costs
13		would no longer be required.
14		The main disadvantage would be that the costs would be incurred in a single year, rather
15		than spread across four years and thus could lead to a temporary increase in retail rates
16		during a single year.
17	Q.	Have you estimated what this temporary rate increase might look like if all 2021
18		Colstrip-related costs were expensed rather than capitalized?
19	A.	Yes. Using a simple approximation, I estimate that if Washington's share of the \$3.8
20		million in approved 2021 Colstrip costs were expensed instead of capitalized, it would
21		lead to a 0.50% increase in the revenue requirement for the first year, and a 0.21%
22		decrease in each subsequent year through 2025, relative to what Avista has proposed.

1	Q.	Do the 2022 capital additions included in Avista's proposed Colstrip pro forma
2		match what has actually been approved by the plant owners?
3	A.	No. Avista's initial proposal was to include \$3.4 million in 2022 Colstrip capital
4		additions, which was subsequently increased to \$5.1 million as shown in Staff DR 107
5		Supplemental 2. This entire amount appears to be linked to Avista's portion of \$33.9
6		million in unapproved Design/Build costs associated a new Dry Waste Disposal System.
7	Q.	Have Avista's cost estimates for this Dry Ash Waste Disposal project been consistent
8		in this proceeding?
9	А.	No. In Mr. Thackston's testimony he states that "[t]he total project cost is expected to be
10		approximately \$16 million." <sup>41</sup> Meanwhile, in Staff DR 107 Supplemental 2 – Attachment
11		D, the project costs are estimated to be $37.9$ million. Moreover, in SC DR 011C –
12		Confidential Attachment B, the Company estimated the capital costs of the project to be
13		
14	Q.	Has Avista presented detailed plans for this Dry Ash Waste Disposal project that
15		give you sufficient confidence in their cost estimates?
16	A.	Not to my knowledge. I would add that this is a major new investment and that much
17		more detail needs to be provided before it is included in any kind of pro forma adjustment
18		or other form of pre-approved rate recovery.
19		

 $<sup>^{41}</sup>$  *Id.* at 106:13.

## Q. Do you believe there is any urgency for Avista to include these costs in its pro forma in this GRC?

A. No. I believe that Avista will be well-positioned to request recovery of these costs in its
next GRC should the Dry Waste Disposal system be constructed. While I believe timely
cost recovery is important, this is too significant of a cost to determine prudency based on
the very little information that was given. Furthermore, there may be ways to eliminate or
reduce the overall scope of this project through an accelerated plant closure date.

# Q. Do you think that the July 2022 compliance date for the Montana AOC Settlement on coal combustion residuals ("CCR") is justification to begin recovering these costs

10 **now on a prospective basis?** 

No. Importantly, the signatories to the Montana Administrative Order on Consent 11 A. 12 ("AOC") Settlement agreement that established the July 2022 compliance deadline 13 included the Montana Environmental Information Center, Sierra Club, and National 14 Wildlife Federation. These same entities recently sent a letter to the Colstrip co-owners 15 on February 19, 2021 offering to discuss the possibility of an elongated timeline for the 16 costly conversion to dry-ash disposal by July 1, 2022. According to Avista's response to 17 DR SC 012, it appears that the Company is still gathering information about this 18 opportunity for delay and that "it does not make sense to speculate on the potential cost-19 benefit analysis" associated with this opportunity. Thus based on the company's own 20 assessment, it is too premature at this stage to make any determinations of what the costs 21 and associated benefits of an altered timeline might be. Similarly, I believe it is too

1		premature to include any costs would be incurred in 2022 or assume any definitive
2		timeline for the purposes of ratemaking in this case.
3 '	V.	RECOMMENDATIONS
4	Q.	Can you provide a summary of your recommendations?
5	A.	Yes. I recommend the following changes be made to Avista's proposal in this case:
6		1. The Commission should determine that the capital costs associated with SmartBurn
7		were incurred imprudently and should thus be excluded from retail rate recovery.
8		2. The Colstrip Pro Forma adjustment be modified to reflect actual 2020 capital
9		additions consistent with Staff DR 107 Supplemental.
10		3. The Colstrip Pro Forma adjustment should be modified to classify a larger share of
11		the Unit 3 overhaul costs as O&M, rather than capital additions.
12		4. The Commission should determine that any 2021 costs for Dry Ash Removal are
13		fully refundable to Avista customers if subsequent evaluation determines these costs
14		to be imprudent.
15		5. The Colstrip Pro Forma adjustment should be modified to exclude all costs associated
16		with Dry Ash Removal in 2022. Instead, these costs should be evaluated in the next
17		GRC.
18	Q.	Does this conclude your testimony?
19	A.	Yes.