Exh. AEW-1T
Docket Nos. UE-190334, UG-190335, UE-190222
Witness: Amy E. Wheeless

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION

COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, Complainant, v. AVISTA CORPORATION d/b/a AVISTA UTILITIES, Respondent.	DOCKET NOS. UE-190334, UG-190335, UE-190222 (*Consolidated)*

RESPONSE TESTIMONY OF

AMY E. WHEELESS

ON BEHALF OF

NW ENERGY COALITION

October 3, 2019

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Amy Wheeless. I am a Policy Associate at the NW Energy Coalition (NWEC or the Coalition). My business address is 811 1st Ave, Suite 305, Seattle, WA 98104.

Q. Please describe your background and experience.

A. I have bachelor's degrees in Chemistry and Political Science from North Carolina State University and a Master's in Public Administration from the University of Washington. I have worked at consultancies on environmental policy, process facilitation, program evaluation, and industry research, as well as specifically on energy efficiency and clean energy program development. I have been employed by the NWEC since 2017, working on energy policy and program work in Washington State and regionally. I have not provided formal written testimony before the Washington Utilities and Transportation Commission (UTC or Commission), but I have provided verbal and written comments in various dockets related to energy efficiency targets and programming and integrated resource planning. I also provided written and verbal comments before the Commission regarding Avista's natural gas line extension methodology and proposed extension of its line extension allowance program pilot in Docket UG-180920.

Q. On whose behalf are you appearing in this proceeding?

A. I am testifying as a witness for the NWEC.

Q. How is your testimony organized?

A. My testimony will focus on Avista Utilities' (Avista or the Company) line extension methodology for natural gas and how it has changed since 2014. I will discuss the

changes in natural gas use and customers in Avista's Washington territory. Finally, I will provide recommendations for how the Company should change its methodology and steps the Commission should further take on this issue.

II. GAS LINE EXTENSION ALLOWANCES AND METHODOLOGY

Q. What is a utility line extension allowance?

A. A utility line extension allowance, sometimes called a "construction allowance," is the amount of funding a utility will provide toward extending distribution services to a new customer. In the case of a gas utility, it is how much funding a utility contributes toward the construction of distribution infrastructure for a new natural gas customer. Any remainder between the cost of construction and the line extension allowance is left to the customer to provide; this customer funding is also called the "customer contribution" or "contribution in aid of construction."

Q. Are there rules or laws in Washington State regarding natural gas utility line extensions?

A. Yes, there is a rule in the Washington Administrative Code (WAC), though it is brief:

> *WAC 480-90-033*
>
> *Distribution line extension tariff.*
>
> *Each gas utility must file, as a part of its tariff, a distribution line extension rule setting forth the conditions under which it will extend its facilities to make service available to an applicant.*[1]

Q. How does Avista calculate natural gas line extensions for its residential customers in Washington?

A. Avista uses the "perpetual net present value" (PNPV) methodology to calculate line extensions. To implement this methodology, the Company's uses its grossed up rate of return and basic charge revenue to result in an allowance:

[1] WAC 480-90-033.

Basic Charge Revenue / Grossed Up Rate of Return = Allowance

And

*Basic Charge Revenue = (Fixed Charge*12) + Decoupled Revenue per Customer*

Grossed Up Rate of Return is the pre-tax cost of capital. Avista's submitted workpapers in UG-180648 shows the calculations for how the Company reaches these figures, with the third tab, "Grossed Up ROR" showing the calculation of what makes up the Grossed Up Rate of Return.[2]

Q. What is Avista's current natural gas line extension allowance for its residential customers?

A. Avista's current Grossed Up Rate of Return is 9.15% and the basic charge revenue for residential customers is $428, or equal to its fixed charge, $9.50, times 12 months, plus the decoupled revenue per customer of $314 (rounded). $428 divided by 9.15% equals $4,678 (rounded). That is the allowance listed in Avista's current tariff for natural gas line extension in Washington, Schedule 151, and supported by workpapers I noted before.[3]

Q. Under the general rate case filing proposed by Avista in this Docket, what would the new line extension allowance be?

A. The Company provided the proposed Basic Charge Revenue for new natural gas customers in a response to Staff data request. For new natural gas customers, it would be $480 (rounded).[4]

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[2] *See In re Tariff WN U-29 Schedule 151 Revisions,* WUTC Docket No. UG-180648, Initial Filing (July 27, 2018).

[3] *Id.;* Exh. AEW-2 (Avista Response to NWEC Data Request No. 19, Attachment A (Washington Line Extension Tariff)).

[4] Exh. AEW-3 at Tab "Proposed RPC," Cell E31 (Avista Response to Staff Data Request No. 89).

The Grossed Up Rate of Return is a calculation based on a few factors, including two that are proposed in this Rate Case: the cost of capital and the natural gas revenue conversion factor. I have provided an exhibit based on the workpapers that Avista submitted in UG-180648 and updated with the proposed cost of capital[5] and the proposed natural gas revenue conversion factor[6] to arrive at 9.24% for the proposed Grossed Up Rate of Return.[7]

Based on this information, I have calculated the potential new line extension allowance under the proposal in this docket to be $480 / 9.24% or $5,195 (rounded), using the PNPV methodology.

Q. Has Avista always used this line extension methodology?

A. No. Avista proposed this new methodology as a pilot in UG-152394, which the Commission approved on a three-year term beginning March 1, 2016.[8] The Company petitioned to make the methodology permanent in UG-180920 and the Commission granted this petition.[9]

Q. What was Avista's previous methodology for calculating line extension construction allowances for residential customers in Washington?

A. Prior to UG-152394 and UG-180920, Avista used a methodology that provided an allowance equal to three times the estimated annual revenue from the customer. For

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5 Thies, Exh. MTT-1T at 15, Table No. 3 (Direct Testimony of Mark T. Thies).

6 Andrews, Exh. EMA-3 at 4 (Direct Testimony of Elizabeth M Andrews).

7 Exh. AEW-4 (Calculation of Grossed Up Rate of Return with Proposed Rate Case Figures).

8 *See In re Petition of Avista Corp for an Order Authorizing Approval of Changes to the Company's Natural Gas Line Extension Tariff and Accounting Ratemaking Treatment,* WUTC Docket No. UG-152394, Order 01 (Feb. 25, 2016).

9 *See In re Petition of Avista Corp. for an Accounting Order Authorizing Approval of Changes to the Company's Natural Gas Line Extension Tariff and Associated Accounting and Ratemaking Treatment,* WUTC Docket No. UG-180920, Order 01 (Feb. 28, 2019).

example, if a customer was estimated to provide $640 in annual revenue, the line extension allowance would be three times $640 equals $1,920.[10]

Q. What prompted Avista to make the change from its previous methodology to the current one?

A. In 2014, the Washington State legislature considered a bill, HB 2177, that would have directed the UTC to conduct a process that allows customers and utilities to bring forth proposals for the financing and building of natural gas infrastructure, with a particular focus on rural and underserved areas.[11] The bill did not pass the full legislature, but did pass the House, and the sponsoring State representative requested that the UTC open a docket to fulfill the spirit of the bill. In response, the UTC opened a collaborative docket, UG-143616, to "discuss the need for natural gas distribution infrastructure expansion, and investigate the options available to implement such expansion."[12] As a commenter in this docket, Avista provided information about current practice and raised the idea of changing the line extension methodology as one strategy for lowering the barriers for new customers to join the natural gas system.[13] The Company subsequently brought forward a petition in UG-

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[10] *See In re Avista Corp Petition for an Order Authorizing Approval of Changes to the Company's Natural Gas Line Extension Tariff and Accounting Ratemaking Treatment,* WUTC Docket No. UG-152394, Open Meeting Memo (Feb. 25, 2016).

[11] *See* Washington State Engrossed House Bill 2177, Filed February 5, 2014 (available at http://lawfilesext.leg.wa.gov/biennium/2013-14/Pdf/Bills/House%20Bills/2177-S.E.pdf)

[12] *See In re Investigation of Natural Gas Distribution Infrastructure Expansion,* WUTC Docket No. UG-143616, Notice of Workshop and Opportunity to Comment (Oct. 6, 2014).

[13] Exh. AEW-5 (Avista Response to NWEC Data Request No. 20, Attachment D).

152394 to pilot this methodology and referenced UG-143616 and the discussions therein as the Company's impetus.[14]

Q. In UG-143616, did the Commission issue a policy statement or other guidance regarding the need and implementation for natural gas distribution infrastructure expansion?

A. No, the Commission did not.

Q. In UG-152394, were there other program components that Avista requested to pilot?

A. Avista proposed and the UTC approved a pilot that changed Avista's accounting methodology for calculating the line extension to the PNPV methodology and allowed any excess of the customer allowance to be rebated to customers for the purchase of high-efficiency gas water or space heating equipment (the Line Extension Allowance Program, or "LEAP," pilot).[15] The LEAP pilot was not continued after its three-year term, but as I noted, the line extension methodology was made permanent in UG-180920. In this petition, Avista also requested a limited waiver of WAC 480-90-223(1), regarding promotional advertising, but subsequently removed that request before the petition was approved by the Commission.[16]

Q. What reason did Avista give for proposing the change in line extension methodology in its initial pilot petition?

A. In its initial petition on the change, regarding all of the proposed changes, Avista stated:

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[14] *See In re Avista Corp Petition for an Order Authorizing Approval of Changes to the Company's Natural Gas Line Extension Tariff and Accounting Ratemaking Treatment,* WUTC Docket No. UG-152394, Initial Filing (Dec. 16, 2015).

[15] *Id.*

[16] *See In re Avista Corp Petition for an Order Authorizing Approval of Changes to the Company's Natural Gas Line Extension Tariff and Accounting Ratemaking Treatment,* WUTC Docket No. UG-152394, Replacement Page (Feb. 12, 2016).

> Avista believes that the proposed changes discussed below will help to expand natural gas distribution infrastructure to address environmental concerns associated with emissions, and further promote the efficient end-use of natural gas. Avista proposes that the changes be approved on a temporary basis (pilot period), with a subsequent review to determine the effectiveness of the changes.[17]

Specific to the line extension methodology change, Avista stated:

> Avista believes that changes in the methodology used to calculate the Company's line extension tariff will increase the likelihood that natural gas mains will be more accessible, and that customers will be more inclined to connect to the system.[18]

Q. What reasons did Avista give to make the PNPV methodology permanent?

A. In their initial filing in UG-180920, Avista stated:

> The Company believes that the PNPV methodology will continue to provide further natural gas hookups through an economically supported formula. Commission staff found that the PNPV methodology "allows the Company to make natural gas service more accessible to single family residences in its service territory." At the same time, the line extension allowance will continue to be easier for customers to understand, for the Company to administer, and for the Commission to audit, given that just a few Commission-approved inputs are used in the calculation.[19]

Further in the petition, Avista also noted:

> Finally, the allowance methodology is similar to what the Commission has approved, on an ongoing (non-pilot basis) for Cascade Natural Gas and Puget Sound Energy (subsequent to the Commission approving Avista's on a pilot basis).[20]

Q. Was an internal or external evaluation conducted of the pilot line extension methodology prior to the Commission approving it as a permanent method?

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17 *See* WUTC Docket No. UG-152394, Initial Filing.

18 *Id.*

19 *See In re Petition of Avista Corp. for an Accounting Order Authorizing Approval of Changes to the Company's Natural Gas Line Extension Tariff and Associated Accounting and Ratemaking Treatment,* WUTC Docket No. UG-180920, Initial Filing (Nov. 9, 2018) (footnotes omitted).

20 *Id.*

A. To the best of my knowledge, neither the Company nor the UTC specifically reviewed the pilot of using the line extension methodology change to determine the effectiveness of the change.

Q. Did any parties in docket UG-152394 or UG-180920 analyze the impact of this line extension policy on non-participating customers during the pilot phase or prior to making it permanent?

A. To the best of my knowledge, no parties analyzed the impact of the change on non-participating customers.

Q. Why did Avista choose the PNPV methodology for calculating line extension allowances?

A. In the Company's petition in UG-152394 and in the collaborative docket, UG-143616, Avista referenced a paper by the National Regulatory Research Institute (NRRI), "Line Extensions for Natural Gas: Regulatory Considerations," published in February 2013.[21]

Q. Is this paper publicly available?

A. Yes, it is published by the National Regulatory Research Institute, an arm of the National Association of Regulatory Utility Commissioners. The paper can be found on their website.[22]

Q. Have you read this paper?

A. Yes.

Q. In sum, what is the paper about?

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[21] *See* WUTC Docket No. UG-152394, Initial Filing; *See also* Exh. AEW-5 (*In re Investigation of Natural Gas Distribution Infrastructure Expansion,* Docket No. UG-143616, Comments of Avista Utilities (Sept. 17, 2015)).

[22] Ken Costello, *National Regulatory Research Institute, "Line Extensions for Natural Gas: Regulatory Considerations*, January, 2013 (available at https://pubs.naruc.org/pub/FA86B6C6-E91D-FF76-882F-04081293B088).

A. The paper references the growing demand for natural gas due to low gas prices and notes that a factor for energy consumers considering switching to natural gas is the line extension policies of utilities. The paper provides an overview of line extension considerations and prompts utility commissions to consider revising line extension policies in light of private and public benefits of switching to natural gas.

Q. Does the paper discuss benefits of switching from electricity to natural gas?

No. Though the paper mentions a few examples of public utility commissions referencing electric to gas fuel switching, the author explicitly notes that, "[t]his paper focuses on fuel switching from oil and propane to natural gas that requires gas-line extensions," with a further footnote that "[f]uel switching can include electricity and activities that do not involve the expansion of gas lines. These cases fall outside the scope of this paper."[23]

Q. What does the NRRI paper say about the PNPV method?

A. The paper examines different economic tests for line extensions, including those that compare the expected revenues from new customers with the utility's incremental costs of serving that customer. The paper defines the perpetual net present value method as:

> The maximum level of "economical" investment equals the annual distribution margin divided by the required rate of return. The assumption is that the recovery period approaches infinity. If, for example, the average new customer contributes $300 annually to the utility's distribution margin and the utility's required rate of return is 10 percent, the utility would consider spending $3,000 per new customer to be economical.[24]

[23] *Id.* at 2.
[24] *Id*. at 20.

In sum, as Avista noted in a presentation in the collaboration docket, use of this methodology "[r]eflects the fact that once hooked up, service will be permanent."[25]

Q. What was the reasoning provided by the UTC in approving this methodology change for Avista?

In UG-152394, Order 01 states "[w]e agree with Staff that Avista's revised gas line extension allowance methodology is appropriate. The change in methodology will better ensure that the Company is acquiring new customers who will aid in lowering fixed costs recovered from existing customers."[26] The Staff memo in support of the change states, "[s]taff supports using this methodology because it produces the maximum line extension allowance that is economically-viable for the company… The benefit of this methodology is that it is simple to calculate, and uses figures that are established by the commission during a rate case."[27]

Q. Are you aware of other gas utilities that use this method for calculating line extension in Washington State?

A. Yes, in Washington State, Puget Sound Energy and Cascade Natural Gas petitioned to use this method and were allowed to move forward with this change on a permanent basis. These changes were subsequent to Avista's petition for the pilot but prior to the PNPV method becoming the permanent line extension method for Avista. Prior to these changes, Puget Sound Energy and Cascade Natural Gas used methodologies that based line extension allowance on a calculation with expected customer revenue.[28]

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25 Exh. AEW-6, at 6 (Avista Response to NWEC Data Request No. 20, Attachment E).
26 *See* WUTC Docket No. UG-152394, Order 01.
27 *See* WUTC Docket No. UG-152394, Open Meeting Memo.
28 *See In re Cascade Natural Gas Advice Filing re Extension of Distribution Facilities*, WUTC Docket No. UG-160967; *see also In Puget Sound Energy Advice Filing re (Line Extension Policy) Natural Gas Tariff Filing*, WUTC Docket No. UG-161268.

Q. Were the Commission's reasons for approving the change for Cascade Natural Gas and Puget Sound Energy similar to the reasoning for approving Avista's change?

A. Both Cascade Natural Gas's and Puget Sound Energy's line extension methodology changes were on the Commission's "No Action Agenda," so the petitions for these changes took effect with no action from the Commission. The Staff memos about these changes recommended that the Commission take no action on these petitions for similar reasons as for Avista's change—the PNPV methodology is the maximum line extension allowance that is economically-viable for the company and it is simple to calculate.

In the case of Puget Sound Energy, the staff memo further states: "PSE's proposal aligns its natural gas line extension policies with the current policies of other investor owned utilities in Washington. Further, it implements the recommendations discussed in Docket UG-143616 and encourages more widespread adoption of natural gas throughout PSE's service territory."

Q. Are you aware of other gas utilities in the United States that use this PNPV method?

A. I have not done a comprehensive study, but I have seen a few examples of gas utilities that use a present value calculation with a discrete timeframe (e.g., 30 or 40 years). For example, Washington Gas Light Company in the District of Columbia uses a present value calculation with a 30-year economic life; utility contributions to a customer are limited to 80% of this calculation.[29] I have not, in my research, seen a gas utility that uses the PNPV other than the three gas utilities in Washington.

[29] Washington Gas Light Company Rate Schedules and General Service Provisions for Gas Service in the District of Columbia (available at https://www.washingtongas.com/-/media/d1be3e9e1ee34a19bcbb97849f9cc9e1.pdf).

Q. How does Avista calculate line extension construction allowances in the other states that it provides natural gas service?

A. In Idaho, Avista currently uses a line extension methodology that more closely mirrors the previous one in Washington State—that is, customers are evaluated on their expected annual revenue and provided an allowance based on three times that annual revenue.[30] In Oregon, Avista also currently uses a similar expected revenue-based methodology for extension of gas mains.[31] However, there is a separate tariff rule related to extensions from the main:

> Upon application, the Company will furnish and install at its own expense a service pipe of suitable capacity from its gas main to the property line of property abutting upon any public street, highway, alley, lane or road along which it already has or will install street mains, and will install, at its own expense, a further extension of 40 feet on the private property, or as much of such extension as may be necessary to reach a meter location that is satisfactory to the Company.[32]

III. CHANGES IN GAS USE IN AVISTA'S SERVICE TERRITORY

Q. What has been the recent change in gas use in Avista's service territory and drivers for the change?

A. Per Avista's response to a staff data request regarding customer growth, Dr. Grant Forsyth provided some information on recent natural gas growth and background on drivers on the growth in Avista's service territory:

> Population growth is also a key driver for natural gas customer growth; however, the growth rate of natural gas typically will exceed the population growth. This positive spread between customer growth and population growth reflects existing homes and business adding gas (retrofits) at the same time new housing and businesses are adding gas. Therefore in the absence of retrofits, gas customer growth would be very similar to population growth. From 2005 to 2018, annual average population in our natural gas service

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30 Exh. AEW-7 (Avista Response to NWEC Data Request No. 19, Attachment B (Idaho Line Extension Tariff)).

31 Exh. AEW-8 (Avista Response to NWEC Data Request No. 19, Attachment C (Oregon Line Extension Tariff)).

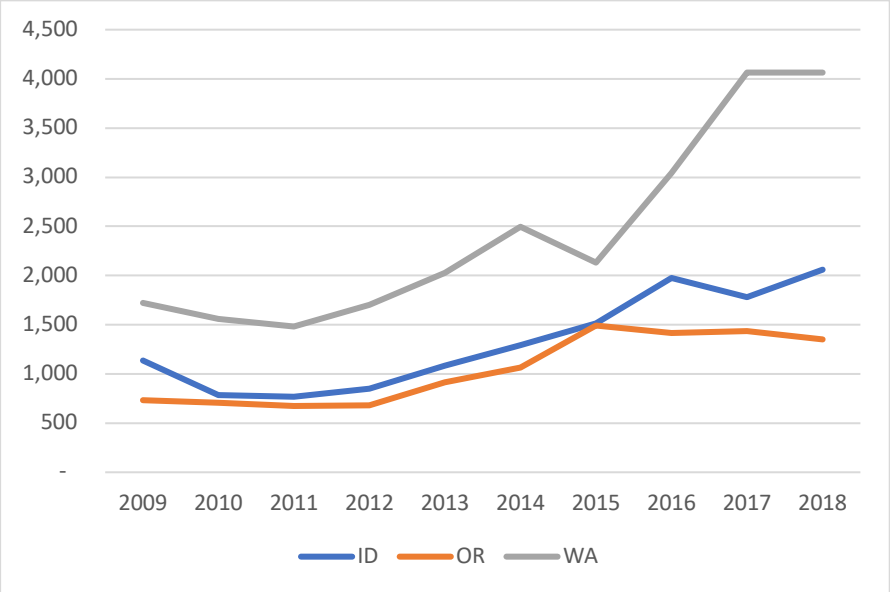
32 Exh. AEW-9 (Avista Response to NWEC Data Request No. 42).

territory (Washington, Idaho, and Washington [*sic – Oregon is the other state with gas service]*) was 1% while natural gas customer growth was 1.6%.[33]

Q. Where Avista provides gas service, how many new residential customers have connected to the natural gas system over time using the line extension allowance?

A. Based on Avista response to data requests, I have developed a graph (Figure 1) showing new residential customers connected to the system between 2009 and 2018 in the three states that Avista provides gas service. The base data is available in Exhibits AEW-11, 12, and 13 and I have provided a new exhibit that consolidates the data from the states for residential customers.[34]

Figure 1. Residential Customers Connected to Natural Gas, 2009-2018



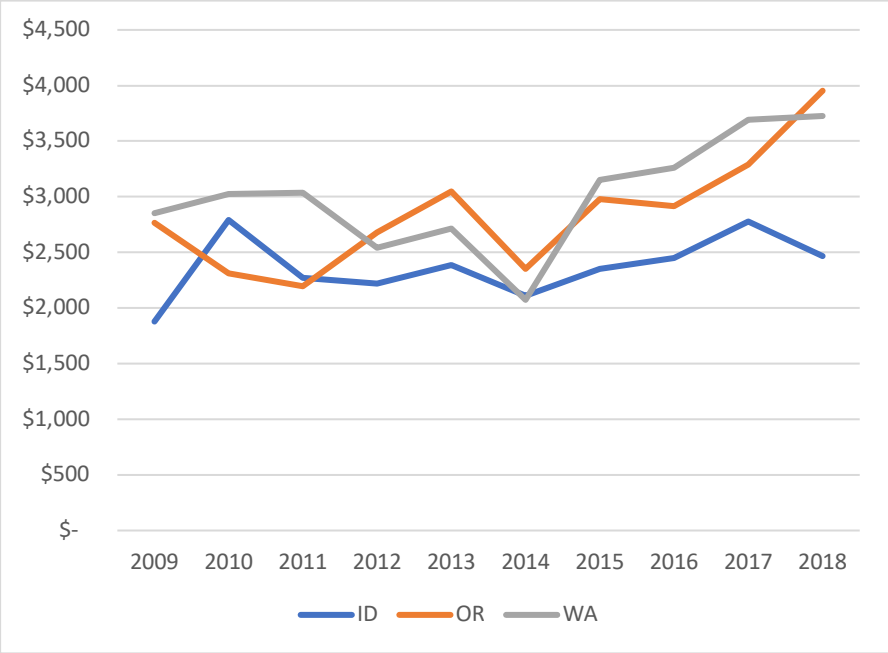
Q. Where Avista provides gas service, what has been the average line extension allowance over time for residential customers?

A. Based on Avista's response to data requests, I have developed a graph (Figure 2) showing average line extension allowance amounts used by residential customers each year between 2009 and 2018 in the three states that Avista provides gas service.

[33] Exh. AEW-10 (Avista Response to Staff Data Request No. 086).
[34] Exh. AEW-14 (Summary of Residential Line Extension Data, 2009-2018).

The base data is available in Exhibits AEW-11, 12, and 13 and I have provided a new exhibit that consolidates the data from the states for residential customers.[35]

Figure 2. Average Line Extension Allowance, Net of Contributions, 2009-2018

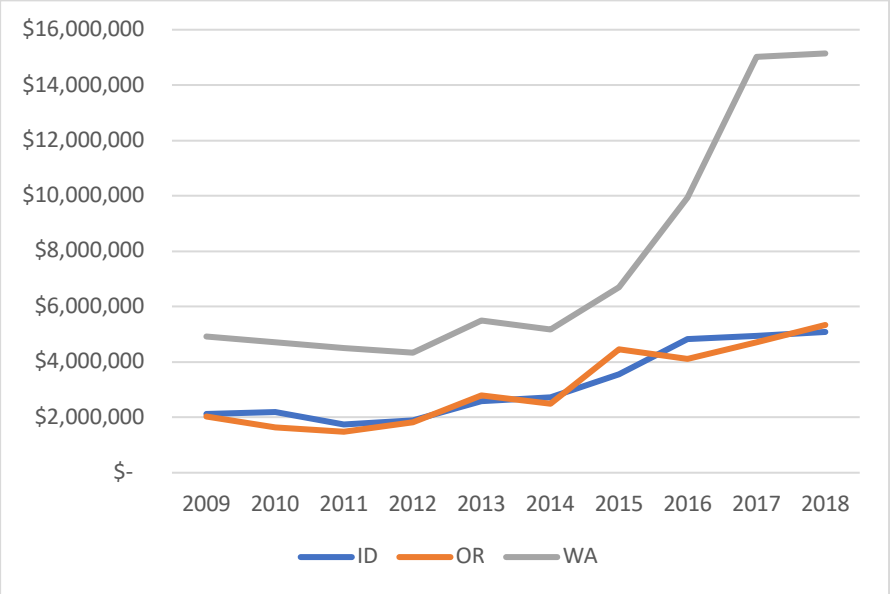


Q. Where Avista provides gas service, what has been the annual line extension allowance funding over time for residential customers?

A. Based on Avista's response to data requests, I have developed a graph (Figure 3) showing the annual funding for line extension for residential customers between 2008 and 2019 in the three states that Avista provides gas service. The base data is available in Exhibits AEW-11, 12, and 13 and I have provided a new exhibit that consolidates the data from the states for residential customers.[36]

[35] *Id.*
[36] *Id.*

Figure 3. Annual Dollars Spent, Net of Contributions, on Line Extension Allowances, 2009-2018



Q. Do you believe that this change to the PNPV methodology in Washington has led to an increase in fuel conversions to natural gas?

A. Considering the lack of an evaluation of the methodology, which would have presumably examined questions like that in detail, it is somewhat difficult to determine. However, as the graphs and data I provide show, the more marked uptick in new natural gas residential customers using the line extension allowance in Washington since 2015, compared to Idaho and Oregon (Figure 1) would seem to indicate that the new line extension methodology has played at least some role in encouraging further conversions to natural gas.

Q. Are there other factors that could be influencing the increase in fuel conversions in Washington?

Yes, as the Company notes, there are other factors that could influence an increase in conversions to natural gas, including population growth, the Company's LEAP pilot, and low natural gas prices.[37] In addition, the Company has had fuel conversion

[37] Exh. AEW-15 (Avista Response to NWEC Data Request No. 22).

incentives for those who switch from electric resistance space and water heating to natural gas, and these incentives increased in amount in 2014.[38] All of these factors combined have likely contributed to an increase in fuel conversions in Avista's service territory in Washington.

IV. RECOMMENDATIONS FOR LINE EXTENSION ALLOWANCES

Q. Do you dispute that the PNPV method is simpler or easier to calculate than Avista's previous methodology?

A. No, I do not dispute that it is an easier to calculate for the Company and for the Commission.

Q. Do you dispute that there are environmental benefits of switching from other fuels to natural gas?

A. I think there are environmental and economic benefits for switching from oil heating or wood heating to natural gas heating, but that these same and additional benefits can exist for switching from these heating sources to electric heating with heat pumps.[39] In addition, many of the customers switching to natural gas in recent years have been existing Avista electric customers. According to Avista's "Report on the Line Extension Allowance Program (LEAP) Pilot," 4,215 customers converted to natural gas (retrofit) between March 2016 and August 2018, and of those, 3,590 (85%) were existing Avista electric customers.[40]

Q. Do you think that Avista should be pursuing policies to aggressively expand new gas hook-ups and/or conversions from electric to natural gas service?

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38 *See In re Avista Corp. Revisions to Tariff WN U-28, Schedule 90, Elec. Energy Efficiency Programs,* WUTC Docket No. UE-143081, Initial Filing (Aug. 8, 2014).

39 For example, see Rocky Mountain Institute, *The Economics of Electrifying Buildings*, 2018 (available at https://rmi.org/wp-content/uploads/2018/06/RMI_Economics_of_Electrifying_Buildings_2018.pdf).

40 Exh. AEW-16, at 26 (Response to NWEC Data Request No. 23, Attachment B).

I think it is time to start questioning the rationale for rapidly expanding the natural gas customer base, and, certainly, to rethink the idea of incentivizing switching from electric to natural gas service. My reasoning has multiple considerations.

First, natural gas customers are currently subjected to a number of risks associated with the cost and feasibility of gas service. Natural gas prices are notoriously volatile, and though prices have been low in recent years, there is no guarantee that prices will remain low over an extended period of time. New gas customers are subjected to increased risk due to the dependence on one single fuel.

Second, new electric heating and water heating technologies are improving in efficiency and cost. For example, there are cold-climate heat pumps available on the market, that can work well until 5 degrees Fahrenheit, and the Northeast Energy Efficiency Partnerships (NEEP) has developed a specification to identify these heat pumps that work in colder climates.[41] In addition, a recent Southwest Energy Efficiency Project (SWEEP) study found that, even in the varied climates and utility fuel mixes of cities in the intermountain west and southwest—the same climate zones as Avista—the use of a ductless heat pump was less emissions-intensive than the use of a combination gas furnace and central air conditioner.[42] The bottom line is that natural gas service may not be the least cost and least risk choice for customers selecting new equipment.

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41 Northeast Energy Efficiency Partnerships, "Cold Climate Air Source Heat Pump List" (available at https://ashp.neep.org/#!/).

42 Southwest Energy Efficiency Project, *Benefits of Heat Pumps for Homes in the Southwest*, June 2018 (available at http://www.swenergy.org/Data/Sites/1/media/documents/publications/documents/heat-pump-study-final-2018-06-18-small-file.pdf).

Third, one of the original premises of encouraging more expansion of natural gas infrastructure was that use of electricity was more emissions intensive than heating space or water with direct use of natural gas. However, in 2019, Washington State passed the Clean Energy Transformation Act, SB 5116, which Wendy Gerlitz summarizes in her testimony.[43] This legislation will require transformation in the electric sector and, thus, the idea that natural gas use will be more environmentally friendly than electric use should be strongly questioned.

Fourth, growing national and international concerns about climate change are driving increasing public policy efforts to both price greenhouse gas emissions from fossil fuels and even a growing effort to outright ban fossil fuel usage. For example, a number of municipalities in California have banned new gas hook-ups to residential and some commercial buildings.[44] In Washington State, the City of Seattle has a proposed ordinance that would ban all gas hook-ups in all new construction and direct city agencies to develop recommendations regarding limiting expansions of gas lines in existing buildings.[45] This policy context raises concerns about locking in a commitment to increase or accelerate natural gas service to new customers, which commits customers to natural gas equipment and infrastructure for long periods of time.

Q. Are there risks to using this methodology for existing customers?

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43 Gerlitz, WMG-1T (Response Testimony of Wendy M. Gerlitz).

44 Lauren Sommer, *San Francisco Proposed Natural Gas Ban, Following Other Bay Area Cities*, Sept. 24, 2019 (available at https://www.kqed.org/science/1945656/trade-in-your-gas-stove-to-save-the-planet-berkeley-bans-natural-gas).

45 Seattle City Council, *Healthy Homes, Healthy Buildings* (Accessed Oct. 2, 2019) (available at https://www.seattle.gov/council/meet-the-council/mike-obrien/healthy-homes-healthy-buildings).

A. As Avista notes in a memo in UG-143616, there could be an impact on existing customers "if a new customer's usage is less than expected."[46]

Additionally, the risks that I discuss above pertaining to the economics and political viability of long-term support for natural gas service call into question whether significant line extension allowances are still a prudent use of customer dollars. Perhaps more importantly, these same trends specifically call into question the premise of the PNPV line extension methodology: that the revenue recovery period approaches infinity. For example, if a customer was only expected to stay on the system for 15 years, the calculation of expected revenue would be the present value of the Basic Charge Revenue over 15 years at the Grossed Up Rate of Return, rather than a perpetual net present value:

$$\textit{Present Value} = (\textit{Basic Charge Revenue}) / (1 + \textit{Grossed Up ROR})^{15\ \textit{years}}$$

Or using the current values:

$$\text{Present Value} = \$428 / (1 + .0915)^{15\ \text{years}} = \$3{,}419$$

In this example, the present value of the new customer to the system is less than the average line extension allowance used in Washington in 2018.[47] If the average customer were to leave the system sooner than 15 years, the present value of adding that new customer would be even lower.

In the end, a reasonable utility, based on the information known at this time, should not have such an overly generous line extension policy.

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[46] Exh. AEW-5 at 5.

[47] Per Exh. AEW-11, the average line extension allowance used by a residential customer in Washington in 2018 was $3,726. At the proposed values in this rate case, the present value of a customer on the system for 15 years would be $3,815, or slightly above the average cost from 2018.

Q. What is your recommendation to the Commission in regards to Avista's natural gas line extension methodology?

A. The Commission should order that Avista revert to the previous line extension methodology in Washington, which was based on the expected revenue of a given customer. This methodology was more cautious on the expected revenue of a new given customer, and thus reduces the risk of existing natural gas customers significantly subsidizing new gas customers.

Q. Do you have any other recommendations?

A. Yes, we think that the Commission should re-open UG-143616 or open a new collaborative docket to revisit the need for policies to push expansion of the natural gas system. Given policy changes in Washington State and the policy landscape nationwide, there are real conversations needed about the future viability of natural gas infrastructure, how to adequately consider whether investments will remain used/useful over the life of assets, and other related issues. In addition, the pilot for the PNPV methodology change was never fully evaluated before it was made permanent for Avista, Puget Sound Energy, and Cascade Natural Gas.

Q. Are you objecting to only Avista's change to the PNPV methodology?

A. Because we believe this is an appropriate rate case issue, we are challenging Avista's use of this mechanism in this Docket. We plan to pursue similar objections in appropriate venues for other utilities that use this methodology.

V. CONCLUSION

Q. Does this conclude your testimony?

A. Yes.