BEFORE THE WASHINGTON

UTILITIES & TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

AVISTA CORPORATION

Respondent.

DOCKETS UE-170485 & UG-170486 (*Consolidated*)

RESPONSE TESTIMONY OF RACHEL S. WILSON (RSW-1CT)

ON BEHALF OF

PUBLIC COUNSEL UNIT

October 27, 2017

CONFIDENTIAL PER PROTECTIVE ORDER
IN DOCKETS UE-170485 AND UG-170486

(Confidential Information Is Shaded Gray)

RESPONSE TESTIMONY OF RACHEL S. WILSON (RSW-1CT)

DOCKETS UE-170485 & UG-170486 (*Consolidated*)

TABLE OF CONTENTS

Page

FIGURES

RESPONSE TESTIMONY OF RACHEL S. WILSON (RSW-1CT)

DOCKETS UE-170485 & UG-170486 (*Consolidated*)

EXHIBITS LIST

Exhibit RSW-2	Curriculum Vitae of Rachel S. Wilson
Exhibit RSW-3	Avista's Response to Staff Data Request No. 202
Exhibit RSW-4	Avista's Response to Staff Data Request No. 203
Exhibit RSW-5	Figure 1 from Supplemental Direct Testimony of Clint Kalich
Exhibit RSW-6	"History of Electricity and Electricity Futures" Article
Exhibit RSW-7	Kalich Workpaper, "Forward to Aurora Mid-C Price Comparison_2016.xlsx" Supporting Figure 1
Exhibit RSW-8	List of Western EIM Participants
Exhibit RSW-9	Avista's Response to Public Counsel Data Request No. 2
Exhibit RSW-10	Avista's Response to Public Counsel Data Request No. 3

I. INTRODUCTION / SUMMARY

Q: Please state your name and business address.

A: My name is Rachel Wilson. My business address is 485 Massachusetts Avenue, Suite 2, Cambridge, Massachusetts 02139.

Q: By whom are you employed and in what capacity?

A: I am a Senior Associate with Synapse Energy Economics, Incorporated (Synapse). Synapse is a research and consulting firm specializing in energy and environmental issues, including electric generation, transmission and distribution system reliability, ratemaking and rate design, electric industry restructuring and market power, electricity market prices, stranded costs, efficiency, renewable energy, environmental quality, and nuclear power. Synapse's clients include state consumer advocates, public utilities commission staff, attorneys general, environmental organizations, federal government agencies, and utilities.

Q: On whose behalf are you testifying?

A: I am testifying on behalf of the Public Counsel Unit of the Washington Attorney General's Office (Public Counsel).

Q: Please describe your professional qualifications.

A: I have 10 years of experience working within the energy planning sector, including work on: integrated resource planning; the economics of regulatory compliance; electric system dispatch; and valuation of environmental externalities from power plants. I am skilled in the use of optimization and electricity dispatch models to perform modeling analyses of electric power systems and have direct experience running the Strategist,

PROMOD IV, PROSYM/Market Analytics, PLEXOS, and PCI Gentrader models. I have reviewed input and output data for many other industry models, including AURORA$_{XMP}$.

I have provided consulting services for a variety of clients, including the U.S. Environmental Protection Agency, the National Association of State Utility Consumer Advocates, the California Division of Ratepayer Advocates, California Energy Commission, the Massachusetts Department of Energy Resources, the Nova Scotia Utility and Review Board, BC Hydro, the Regulatory Assistance Project, West Virginia Consumer Advocate Division, Vermont Department of Public Service, Iowa Utilities Board, Iowa Office of the Consumer Advocate, Southern Environmental Law Center, Sierra Club, Earthjustice, Natural Resources Defense Council, and Citizens Action Coalition.

I have given testimony in electricity planning and general rate case dockets in Minnesota, Kentucky, Indiana, Michigan, Oklahoma, Missouri, Virginia, and Texas. In addition, I have supplied analysis or comments to clients on electricity planning in dockets in West Virginia, Iowa, Vermont, Nova Scotia, and British Columbia.

I hold a Master of Environmental Management from Yale University and a Bachelor of Arts in Environment, Economics, and Politics from Claremont McKenna College in Claremont, California.

A copy of my current resume is attached as Exhibit RSW-2.

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

A**:** My testimony examines and evaluates Avista Corporation's (Avista or the Company) pro forma net power supply expense calculation in the context of the requested increase to its authorized baseline under the Energy Recovery Mechanism (ERM), and discusses whether Avista's modeling approach and resulting value for the proposed rate period are reasonable.

Q: Please describe the documents you reviewed in developing your opinions on Avista's net power supply expenses.

A**:** I focused my review on the testimonies and supporting workpapers of Avista witnesses Mr. William G. Johnson and Mr. Clint G. Kalich. I also reviewed inputs to and outputs from the AURORA$_{XMP}$ model in spreadsheet format. I did not view the input and output data within the model's interface, nor did I perform any of my own modeling in this case. Pursuant to WAC 480-07-400(1)(c)(iii), and consistent with the practice of other intervenors, Public Counsel requested that Avista re-run its model with alternate assumptions and inputs. Additionally, I reviewed responses to data requests propounded by Public Counsel and other parties.

Q: What exhibits are you sponsoring in this proceeding?

A**:** I am sponsoring the following exhibits:

Exhibit RSW-2	Curriculum Vitae of Rachel S. Wilson
Exhibit RSW-3	Avista's Response to Staff Data Request No. 202
Exhibit RSW-4	Avista's Response to Staff Data Request No. 203
Exhibit RSW-5	Figure 1 from Supplemental Direct Testimony of Clint Kalich
Exhibit RSW-6	"History of Electricity and Electricity Futures" Article

Exhibit RSW-7	Kalich Workpaper, "Forward to Aurora Mid-C Price Comparison_2016.xlsx" Supporting Figure 1
Exhibit RSW-8	List of Western EIM Participants
Exhibit RSW-9	Avista's Response to Public Counsel Data Request No. 2
Exhibit RSW-10	Avista's Response to Public Counsel Data Request No. 3

II. SUMMARY OF TESTIMONY AND CONCLUSIONS

Q: In your opinion, is Avista's request for an increase in net power supply expenses reasonable?

A: No, Avista's proposal does not appear to be reasonable. Since 2011, Avista has requested a change to its authorized baseline and, except for 2013, realized actual net power supply expenses that were below that baseline. I believe that this overearning results from the use of the forecasted average Mid-Columbia (Mid-C) energy futures as "target prices" for the AURORA$_{XMP}$ model, and the adjustments required to certain of the model input variables to achieve those target prices. The required adjustments to dispatch margins and regional loads increase thermal generation above the levels that might be expected, incurring additional and unnecessary costs that flow through to ratepayers.

I recommend that the Commission deny Avista's requested adjustment to its authorized baseline for net power supply costs until updated modeling has been provided that presents a return to fundamentals-based production cost modeling. I also recommend that the Energy Recovery Mechanism be allowed to function as a mechanism to capture variability in projected and actual costs and be given the opportunity to balance

over time. Finally, I recommend that Avista more fully explore the possibility of participating in the Western Energy Imbalance Market (EIM).

III. AVISTA'S POWER COST MODELING

Q: What is Avista requesting with respect to power supply expenses in this docket?

A: The Company has requested an increase of $16,004,000 in power supply cost from the level in current base rates for the Washington-allocated increased expense in the May 2018 through April 2019 pro forma period.[1]

Q: How does Avista determine its pro forma net power supply expense?

A: Avista uses a two-step process in calculating its pro forma net power supply expense.[2] In the first step, the Company takes an average of the monthly on- and off-peak energy futures contracts traded on the Intercontinental Exchange (ICE) at the Mid-C hub between May 1, 2018, and April 30, 2019, with settle dates between December 8, 2016, and March 3, 2017. Avista then runs the AURORA$_{XMP}$ model for the pro forma year using its base input assumptions, for 80 different historical hydro years, with the goal of matching the monthly average on- and off-peak AURORA$_{XMP}$ energy prices to the average of the Mid-C energy futures. The average of the AURORA$_{XMP}$ outputs—generation, electricity price, purchases/sales, etc.—is calculated for the 80 historical hydro scenarios.

In the second step, Avista witness Mr. William G. Johnson values the average dispatched energy quantities from the AURORA$_{XMP}$ model at their contract prices, and

[1] Direct Testimony of William G. Johnson, Exh. WGJ-1T at 3, Table 1.
[2] Supplemental Testimony of Clint G. Kalich, Exh. CGK-3T at 6:1-12.

calculates the costs of physical and financial natural gas contracts.[3] The combined costs resulting from the AURORA$_{XMP}$ model and Mr. Johnson's valuation are Avista's net power supply expense.

Q: Does Avista make any adjustments to the AURORA$_{XMP}$ model to match modeled electricity prices to ICE futures?

A: As I understand it, Avista makes four primary adjustments to its modeling in order to match the modeled forecast to the average of energy futures: resource dispatch margins, congestion and transmission costs, Northwest hydro shaping factors, and Northwest loads.[4] The congestion/transmission costs and Northwest hydro shaping factors are adjustments based on Avista's historic experience,[5] while the adjustments made to the resource dispatch margins and Northwest load are arrived at through an iterative process with the goal of matching AURORA$_{XMP}$'s average price output to the Mid-C futures forecast. Avista selects a starting value of 5 percent for the resource dispatch margin and iterates until average modeled prices match forward prices.[6] If average modeled prices do not sufficiently match forward prices via this adjustment, Avista then makes changes to Northwest loads using the same type of iterative process to achieve the desired result.[7]

Q: Is this a methodology that has been used by Avista in previous general rate cases?

[3] Direct Testimony of Clint G. Kalich, Exh. CGK-1T at 6:10-12.
[4] Kalich, Exh. CGK-3T at 10:1-6.
[5] Kalich, Exh. CGK-3T at 10-11.
[6] Exh. RSW-3, Avista's Response to Staff Data Request No. 202.
[7] Exh. RSW-4, Avista's Response to Staff Data Request No. 203.

A**:** Yes. I have not reviewed all of Avista's rate case filings, but I understand that the Company employed a similar methodology in recent filings made in 2015[8] and 2016.[9]

Q: Historically, have actual power supply expenses tracked with authorized expenses—those forecasted by Avista in its general rate filings?

A**:** No. Since 2011, credit deferral balances in the ERM have been compounding, demonstrating that Avista's projections of power costs, and thus the approved authorized baselines, have been too high. Except for 2013, actual costs have been lower than authorized costs on an annual basis, as shown in Figure 1 of Mr. Kalich's Supplemental Testimony.[10] In 2017, costs to-date have also been lower than the authorized level.[11]

Q: Has the Company explained the cause of the deviation shown in Exhibit RSW-5 between authorized/forecasted net power supply expenses and actual net power supply expenses?

A**:** No. Avista does provide some explanation as to the reasons behind the requested increase in net power expenses compared to the current authorized level, stating that over 80 percent of the change in power supply expenses relative to the baseline is due to the expiration of the exchange contract with Portland General Electric.[12] The Company does not explain why actual net power supply costs have been lower than the baseline in recent years.

[8] *WUTC v. Avista Corp.*, Dockets UE-150204 and UG-150205.
[9] *WUTC v. Avista Corp.*, Docket No. UE-160228 and UG-160229.
[10] Kalich, Exh. CGK-3T at 29, Figure 1 (provided as Exhibit RSW-5).
[11] *WUTC v. Avista Corp*., Docket UE-011595, Monthly Power Cost Deferral Report (Sept. 15, 2017).
[12] Kalich, Exh. CGK-3T at 3:1-3.

Q: Does this pattern of actual net power supply costs coming in under the authorized baseline seem problematic to you?

A: Yes. Avista has come before the Commission to request a change (often an increase) to the authorized baseline every year since 2011. In establishing the ERM, the Commission and the utility recognized that actual power supply expenses will deviate from the authorized baseline, and the ERM is the mechanism by which that variability should be managed year to year. Instead of allowing the ERM to function in this manner, however, Avista requests changes to the authorized baseline each year.

The years in which Avista's actual expenses were below the authorized baseline were relatively stable with respect to water availability and natural gas prices, which indicates to me that there is an issue with Avista's input assumptions and/or forecasts, or that the modeling is flawed in some way.

Q: Conversely, could Avista's continued ability to keep actual power costs below the authorized baseline be viewed as positive?

A: In part, yes, and the Company certainly deserves credit for managing its day-to-day operations in such a way that its power supply costs are minimized. However, the authorized baseline represents the cost burden that is shouldered by Avista ratepayers, and they have been consistently overpaying in recent years. Put simply, the baseline in any given year in the recent past has consistently overestimated actual power costs.

Under the structure of the ERM, the Company retains the first $4 million of net power supply cost below the authorized level. For the next $6 million, the Company retains 25 percent and defers 75 percent as a customer rebate. For any amount above $10

million, 90 percent is deferred as a potential rebate to customers.[13] The structure of the ERM thus provides some incentive for the Company to err in the direction of overearning in its forecasted power supply expenses.

IV. USE OF AVERAGE MID-C ENERGY FUTURES IN AURORA$_{XMP}$

Q: Are you able to discern the reason(s) for the discrepancy between authorized/forecasted and actual net power supply expenses?

A: Based on my review of the AURORA$_{XMP}$ data, I believe that the discrepancy is related primarily to the way in which Avista uses the average Mid-C futures prices as "target prices" for Avista's AURORA$_{XMP}$ results. Typically, when a utility runs a dispatch model, it takes its "knowns" and the modeling software uses that information to generate an hourly nodal price for electricity. "Known" data includes the variables that can be reasonably forecasted based on available information, such as load, unit operating characteristics and costs, etc.

Avista, however, conducts the process in reverse when it takes Mid-C futures as its "known," and makes arbitrary adjustments to the dispatch price of its units and regional electric loads to generate prices that closely match the Mid-C futures. Prices from any dispatch model should represent the least-cost solution in a modeled region: the energy prices and quantities output by the model allow the input energy demand to be met at the lowest cost. Mid-C futures, on the other hand, need not result in any physical delivery of electricity. Rather, these electricity futures are financial instruments used by

[13] *In re: Avista Corp. Energy Recovery Mechanism Annual Filing to Review Deferrals for Calendar Year 2016*, Docket UE-170218, Order 01 (Jun. 29, 2017).

various producers and consumers to manage short-term price risk in the electricity markets.

Generators and retailers might use futures to hedge their risk, setting a selling price for electricity that they intend to produce so that they will earn the amount specified in the contract even if prices fall. Consumers might do the opposite to hedge risk, and set a fixed purchase price for a specific amount of electricity. A third entity, speculators, also trades futures contracts hoping to profit from miscalculations of electricity companies and movements in the price of electricity, and accepting the risk that the hedgers are trying to avoid with the goal of generating a profit.[14]

Q: Is it appropriate to use Mid-C prices as target prices for AURORA$_{XMP}$?

A: No. There are other differences, in addition to the one mentioned above, that make Mid-C futures inappropriate as target prices for AURORA$_{XMP}$. In Avista's modeling, AURORA$_{XMP}$ runs 80 different hydro scenarios with varying amounts of hydro output, taking the average of the resulting price and energy quantities for use in the net power supply cost calculations. Mid-C energy futures prices are set based on actual expectations about what future electricity prices will, and should, look like at some future date given current, specific expectations about the market. While market participants cannot say with certainty what hydro output will look like in May 2018, their expectation is informed by current conditions. This is not the case with AURORA$_{XMP}$.

[14] Cory Wagner, *History of Electricity and Electricity Futures*, Futures Knowledge (Aug. 13, 2014), http://www.futuresknowledge.com/futures/energy/history-of-electricity-and-electricity-futures/. A copy is included in Exhibit RSW-6.

More importantly, Mid-C energy futures represent the positions of various market participants and their desire to maximize their revenues, as described above. The goal of $AURORA_{XMP}$ is to determine a generation pattern that produces the lowest set of hourly electricity prices under various constraints, but the prices at the Mid-C hub are the result of profit-maximizing behaviors. Many of these trades will not result in actual delivery of energy, and thus the average Mid-C price is not representative of actual bilateral sales in the region.

Finally, Mid-C futures contracts can be traded many years into the future. As one might expect, it is much more accurate to forecast conditions (and prices) that will occur tomorrow than those that will occur a year into the future. As a result, the volume of trades and number of MWh traded for a specific month often increases as that month gets closer, which can give a more accurate picture of electricity prices.

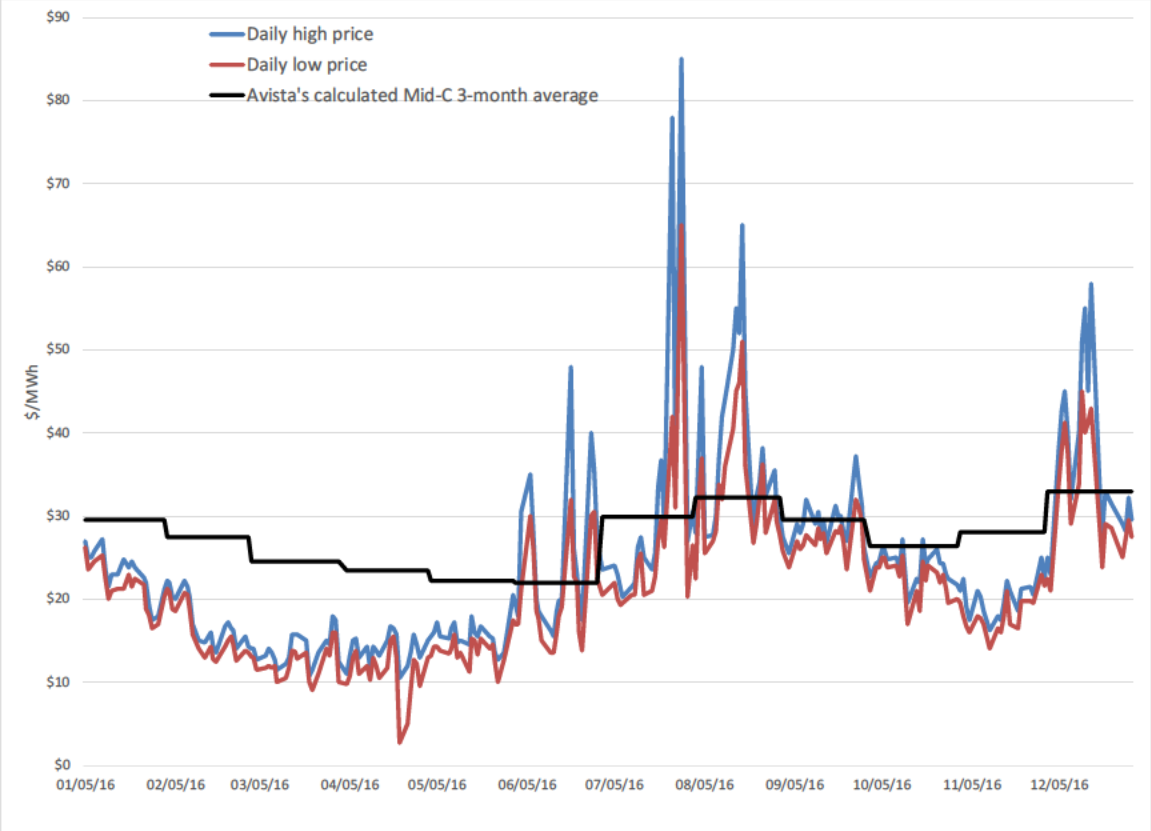
Q: What effect might the use of Mid-C futures have on the Company's modeling?

A: Mid-C futures prices are liquid, but unlike those output by $AURORA_{XMP}$, they are not hourly. Instead, Mid-C futures from ICE are divided into two periods: 1) peak, which is hours 7-22 on Monday through Saturday; and 2) off-peak, which is hours 1-6 and 23-24 on Monday through Saturday and all hours on Sunday.[15] Given the range of hours, there can be considerable variability during ICE's peak period, and I do not believe that this real variability is captured by Avista's use of Mid-C energy futures in its modeling. Figure 1 shows the three-month average Mid-C price forecast from ICE used by Avista in

[15] Hour 1 occurs at midnight on a given day. Hour 7 would thus occur at 6 am, and Hour 22 would occur at 9 pm.

its 2015 general rate case filing compared to actual wholesale prices at the Mid-C hub during the peak period.

Figure 1. Actual Wholesale On-Peak Prices (Daily High and Daily Low) at the Mid-C Hub versus the Projected 3-Month Average On-Peak Price Used In Modeling, 2016[16]



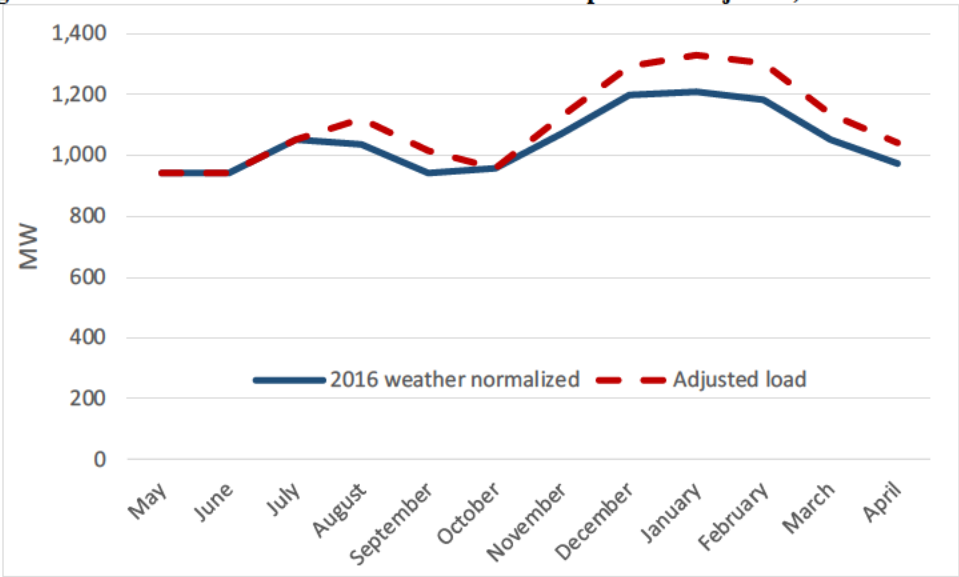
If the real variability over the hours and days in a month is not captured through the Company's matching of AURORA$_{XMP}$ prices to the average of Mid-C futures, the potential for market sales and purchases cannot be properly forecasted by the model.

Q: Why would this approach overstate net power costs if Avista uses the AURORA$_{XMP}$ model to match Mid-C futures prices?

[16] Avista's calculated 3-month Mid-C average price is from "Forward to Aurora Mid-C Price Comparison_2016.xlsx". Exh. RSW-7. Historical data are from the Electric Information Administration, *Wholesale Electricity and Natural Gas Market Data* (Oct. 26, 2017), https://www.eia.gov/electricity/wholesale/.

A: In order to get the AURORA$_{XMP}$ prices to match Mid-C futures, the Company had to make certain adjustments. Specifically, Avista increased the loads in Washington, Oregon, Idaho, and Montana by zero to 10 percent, depending on the month. Often the largest percentage increases were applied in the months that already have higher loads, with December loads increasing by eight percent and January and February loads each increasing by 10 percent.[17] Figure 2, below, shows Avista's 2016 weather normalized load compared to the Company's adjusted load.

Figure 2. Avista 2016 Weather Normalized Load Compared to Adjusted, Modeled Load[18]



In a typical dispatch stack, generating resources with the lowest operating costs are dispatched first, and higher-cost resources are dispatched as load increases. During peak times, the highest cost generating units are often dispatched to meet electric demand. Increasing that load by up to 10 percent in all the states mentioned above will

[17] Supplemental Testimony of Clint G. Kalich. Page 11, Table 3
[18] Direct Testimony of Clint G. Kalich, Page 9, Table 2 and Supplemental Testimony of Clint G. Kalich, Page 11, Table 3

cause the model to increase the dispatch of the highest cost generating resources, both in Avista's territory and in the region as a whole.

The AURORA$_{XMP}$ model is not configured to handle such a dramatic short-term increase in load. Electric utilities build generating resources in order to maintain a reserve margin, which gives them a buffer against unexpected increases in peak load. If utilities expected that loads were indeed going to be eight to 10 percent higher in peak months, additional generating resources would be built or contracted to meet those regional load increases. These new resources might be a mix of things with lower variables costs, like renewables and natural gas combined-cycle units, or even more efficient peaking gas combustion turbines. Yet in Avista's AURORA$_{XMP}$ modeling, loads increase suddenly without the benefit of these additional low-cost generating resources. Thus, the most expensive resources in the region will be called upon, at higher levels than would otherwise be expected, to meet these greater-than-expected loads at a significantly higher cost to the utility.

Q: How might the variability in hydro output in the model effect on these results?

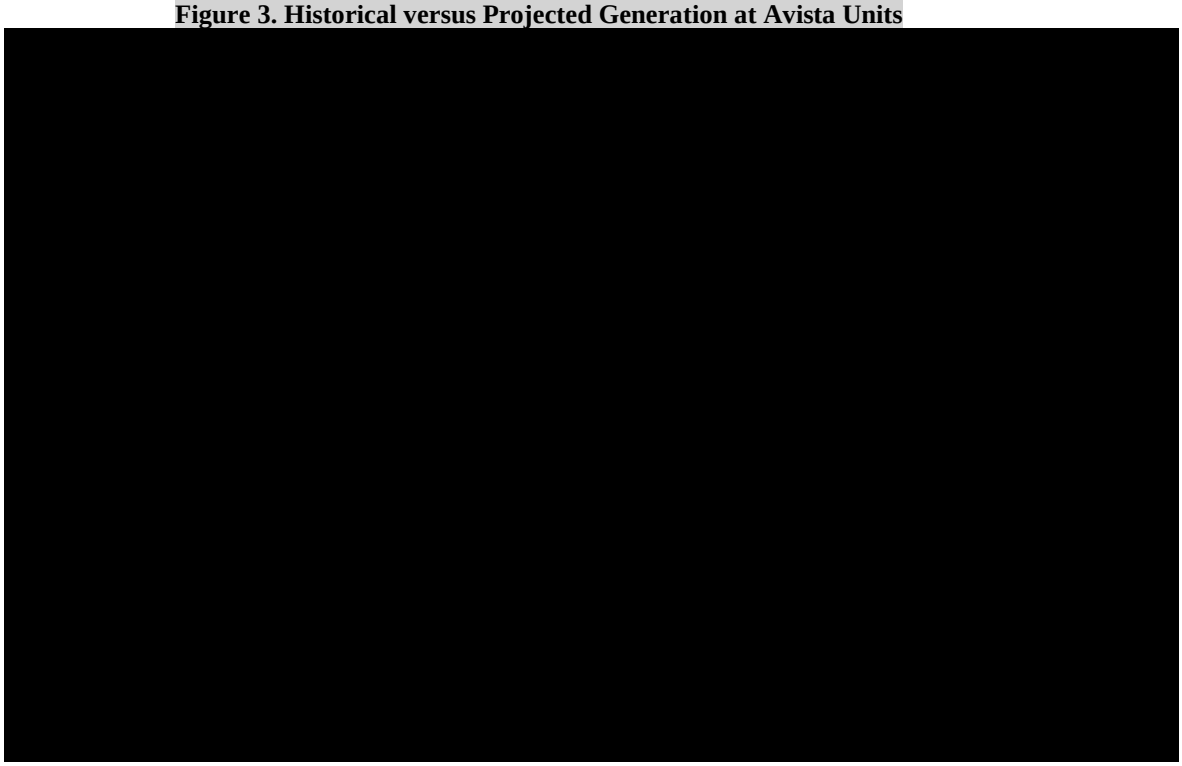
A**:** Avista's AURORA$_{XMP}$ modeling considers 80 different hydro years, some of which have much lower hydro generation. In those years, thermal units already need to operate more in order to account for the decreased volumes of hydro generation. When Avista increases loads by as much as 10 percent, the effect on thermal generators is even more dramatic and costly. I suspect that the scenarios with low hydro output are skewing the Company's results higher due to abnormally high thermal generation in the region, and lack of available energy for purchase between utilities.

****CONFIDENTIAL PER PROTECTIVE ORDER IN DOCKETS UE-170485 and UG-170486****

Q: Is there evidence in Avista's modeling results demonstrating that higher cost resources are generating more than they otherwise might?

A: Yes. As shown in **Confidential Figure 3**, below, total forecasted generation is higher in the pro forma year than it has been in any of the four historical years from 2013 to 2016. I did not include data for 2017 in this Figure because the year is not yet complete.

Figure 3. Historical versus Projected Generation at Avista Units



Hydro generation in the pro forma year is the second highest of all the years shown, behind only 2014 hydro output. Nonetheless, the smallest of Avista's natural gas-fired peaking resources are operating considerably more than they have in previous years. Those values are small relative to Avista's other resources and are difficult to see in Figure 3. **Confidential Figure 4** shows the generation from the gas-fired peaking units on a standalone basis.

****CONFIDENTIAL PER PROTECTIVE ORDER IN DOCKETS UE-170485 and UG-170486****

Figure 4. Historical versus Projected Generation from Avista's Natural Gas-fired Peaking Units

In his Supplemental Testimony, Mr. Kalich states, "In lower hydro years thermal facilities are operated more frequently to take advantage of higher market prices. In high water years, these same resources operate less because their value in the marketplace is lower."[19] The modeled results from AURORA$_{XMP}$ go against this logic when compared to actual generation from previous years. Under the modeled results, we have a higher hydro output (relative to 2013 to 2016) as shown in Confidential Figure 3, yet thermal facilities are operating more frequently. I believe these results are a direct result from Avista's modeled increases to load, as the more expensive thermal units are called upon to serve that additional energy demand.

Q: What is the effect of Avista's net power cost methodology on ERM balances?

A: The purpose of the ERM is to capture the variability in hydro output that can and does affect Avista's power supply expenses. When appropriately used, AURORA$_{XMP}$ attempts

[19] Kalich, Exh. CGK-3T at 29:5-7.

to capture that variability through its inclusion and consideration of the most recent 80 historical hydro years in determining hourly generation volumes and electricity prices. In the long run, then, the annual over-collection and under-collection in the ERM should balance.

However, Avista has come to the Commission almost every year since 2004 with a general rate case, and the authorized baseline has been adjusted in each rate case since the ERM's inception, except for 2016. Because its filings occur approximately a year before the requested increase would go into effect, and because Avista indexes its modeling to Mid-C energy futures prices, the Company has some expectation about what hydro generation will actually look like in the pro forma year. This removes some of the hydro uncertainty that the ERM is designed to capture, and suggests that ERM balances will move in one direction rather than balancing over the long-term.

V. CONCLUSIONS AND RECOMMENDATIONS

Q: Please summarize your conclusions.

A: Avista's modeling methodology has led to a sustained overestimate of annual power supply costs, as evidenced by the compounding of credit deferral balances in the ERM. This overestimate is driven by the use of Mid-C energy futures as target prices for the AURORA$_{XMP}$ model, and the adjustments made within the model to meet these targets.

Q: What is your recommendation with respect to net power costs?

A: I recommend that the Commission deny Avista's requested increase in net power supply expenses given the lack of evidence that it is needed. Avista has attributed over 80 percent of the requested increase to the expiration of the PGE contract; however

according to the Monthly Power Cost deferral reports for 2017, Avista's actual power costs are still below the current authorized baseline even without these revenues.

Additionally, Avista's actual net power costs have been below the authorized baseline in all years since 2011, except for 2013. The adjustment to power costs should be denied until the Company provides updated modeling in support of power supply expense calculations.

Q: What should the Commission require from updated power cost modeling?

A: At a minimum, the Commission can require Avista to provide the reasoning behind its overearnings in the relevant historical years from 2011 through 2016. This may include backward-looking validation of the AURORA$_{XMP}$ model, where Avista compares modeled results from AURORA$_{XMP}$ to actual prices at Mid-C, and/or using evidence from its own purchases and sales, to discern the causes behind deviations in actuals from forecasts. Avista may want to then calibrate the model, making adjustments based on historical data (rather than the current iterative process used by the Company) with the goal of more accurately matching forecasted net power supply expenses to actuals.

Q: How should Avista utilize the AURORA$_{XMP}$ modeling to more accurately reflect projected costs of power supply expenses for the pro forma year?

A**:** Avista should return to a fundamentals-based approach to production cost modeling. While they should not oversimplify their representation of the system, they also should not have to introduce "factors" and "adders" that are not based on the fundamentals of electric sector market patterns. As one approach, for example, they could utilize the Mid-C forward prices to serve as benchmark prices against which their own system

would either export (if prices are high) or import (if prices are low). They should reflect their own resources and loads as accurately as they are currently known, with projected dispatch costs for thermal resources reflective of projected gas and coal prices, and actual variable O&M only. The 80 years of hydro data can still be used to gauge possible outcomes under different hydro conditions, but only to reflect their own hydro resources. The presence of the Mid-C price benchmark effectively serves as a single signal and representation of all market activity in the Pacific Northwest outside of Avista, including expectations of hydro conditions going forward to the pro forma year.

Q: What are your recommendations regarding the ERM?

A: I would recommend that, following updated and more accurate modeling, the ERM be allowed to function as intended—to capture the variability between modeled and actual power supply costs. Parties should recognize that actual costs will deviate from the authorized baseline, but the intention of the ERM is that those deviations balance over time.

Q: Do you have any final recommendations?

A: Lastly, I would recommend that Avista more fully explore the possibility of joining the Western Energy Imbalance Market, which is a real-time wholesale energy market in which participants can buy and sell energy when needed. Many of Avista's neighboring utilities are active participants in the EIM (PacifiCorp, Puget Sound Energy, and Portland General Electric) or have plans to participate in 2018 and 2019 (Idaho Power Company

and Seattle City Light).[20] Avista points out that studies by other utilities have shown annual benefits ranging from $3-5 million, and that there may be risks of **not** participating in the market.[21]

There is the potential that the existence of the EIM could affect the bilateral trading market, as participating utilities needing to purchase or sell can do that in real-time through the EIM rather than engaging in bilateral trades. This would have a direct effect on Avista's ability to engage in bilateral trading, which makes up a component of the Company's net power supply expenses, if it were unable to find partners in the marketplace. The Company has not yet seen a significant change,[22] but as additional utilities join, these impacts may become more significant.

Avista is currently working on a cost-benefit analysis of participation in the EIM.[23] I recommend that the Company fully evaluate this as an option, particularly given the participation of its neighbor utilities. Benefits realized from participation in the EIM can and should flow through to customers as part of the calculation of net power supply expenses.

Q: Does this conclude your testimony?

A: Yes.

[20] Exh. RSW-8, Western EIM Participants List, https://www.westerneim.com/Pages/About/default.aspx (last visited Oct. 26, 2017).
[21] Exh. RSW-9, Avista's Response to Public Counsel Data Request No. 002.
[22] *Id*.
[23] Exh. RSW-10, Avista's Response to Public Counsel Data Request No 003.