Exh. GDF-3T

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-220053

DOCKET NO. UG-220054

DOCKET NO. UE-210854

(consolidated)

REBUTTAL TESTIMONY OF

GRANT D. FORSYTH

REPRESENTING AVISTA CORPORATION

Q. Please state your name, present position with Avista Corporation, and business address.

A. My name is Dr. Grant D. Forsyth. I am employed by Avista as its Chief Economist. My business address is 1411 E. Mission Avenue, Spokane, Washington.

Q. Have you previously provided testimony in this consolidated case?

A. Yes. My direct testimony and exhibits in this proceeding described the methodology used to generate growth rates for certain regulatory balances. The current calculated growth rates provided in my direct testimony were used to produce the electric and natural gas revenue requirement for Rate Year 2 of the Company's Two-Year Rate Plan, as a cross-check or statistical analysis for comparison to the Company's Rate Year 2 pro forma analysis. My direct testimony also discussed inflationary impacts on growth rates.

Q. What is the scope of your rebuttal testimony?

A. My rebuttal testimony is in response to the general testimony of Public Counsel Witness Dahl, who provides a "current economic climate" as a lens for which the Commission may view Avista's general rate case.[1] Further, I will provide rebuttal to Public Counsel Witness Coppola's testimony as it specifically relates to Miscellaneous O&M Expenses, and show that his reliance on Consumer Price Index (CPI) is misplaced.[2]

Q. Public Counsel Witness Dahl provides testimony on the "Current Economic Climate".[3] As the Chief Economist for Avista, what is your response to that section of testimony?

A. Witness Dahl discusses two studies regarding the relationship between

[1] Exh. CJD-1T, pp. 9-15.
[2] Exh. SC-1CT, pp. 33-36.
[3] Exh. CJD-1T, pp 9-15.

inflation and corporate profits.[4] The two studies purportedly find a positive relationship between inflation and corporate profitability. Witness Dahl notes that the study issued by the Economic Policy Institute (EPI) finds that recent corporate profitability, compared to the past, "have accounted for a disproportionately large share of current inflation."[5] The study suggests that companies are using the current spell of high inflation to expand profits far beyond labor and other input costs via market power. EPI's report notes that:

> It is unlikely that either the extent of corporate greed or even the power of corporations generally has increased during the past two years. Instead, the already-excessive power of corporations has been channeled into raising prices rather than the more traditional form it has taken in recent decades: suppressing wages.

Likewise, the second report from the Federal Reserve Bank of New York ("NY Fed") discusses the statistical relationship between profits and inflation, but most importantly is predicated on the following premise: "Have changes in market power increased corporations' ability to raise prices?"

Without spending time responding to all of the components of both studies, the key point that the Commission should take from these referenced studies is that they are heavily weighted towards firms with market power and limited or no price regulation. Said differently, those firms have the flexibility to exercise market power (raise price). That is the exact opposite condition for fully regulated electric and natural gas utilities like Avista who do not have market power and cannot change its pricing on its own. Significant state and federal regulations are designed specifically to prevent a utility from changing the prices it charges customers without first going through an extensive regulatory process, like this general rate

[4] Exh. CJD-1T. p. 12-13 – Reports from Economic Policy Institute (starting p. 12, line 6) and Federal Reserve Bank of New York (page 13, lines 2-5).
[5] Exh. CJD-1T, p. 12, ln. 6.

case. This process prevents utilities from exercising precisely the kind of market power Witness Dahl is concerned about.

In fact, this regulatory constraint is reflected in the NY Fed report.[6] This study shows that utilities had one of the weakest profit performances compared to the other 3-digit NAICS industries examined (utilities being NAICS 221), and what appears to be the lowest performance compared to other industries in the near neighborhood of its PPI inflation. The utilities weak performance is not surprising given the lag between when inflation materializes, and the ability to incorporate regulatorily permissible cost increases into rates.

Q. Is it your contention that reference to corporate profits and Avista's rate case are irrelevant?

A. Yes. Company witnesses Mr. Ehrbar and Ms. Andrews provide more information on the actual earned returns for Avista's Washington operations. It is those returns that are well below Commission-authorized, and while Witness Dahl's testimony on corporate profits makes for good sound bites, they are not germane to Avista's general rate case here in the State of Washington.

Q. Turning now to the testimony of Public Counsel Witness Coppola, would you address Witness Copolla's reliance on CPI as an indicator of forecasted inflation rates?[7]

A. The Consumer Price Index ("CPI") is specific to retail prices paid by U.S. urban households; that is it reflects prices associated with retail business-to-household

[6] Mathias Andler and Anna Kovner, July 13, 2022. "Do Corporate Profits Increase When Inflation Increases?" *Liberty Street Economics Federal Reserve bank of New York* at: https://libertystreeteconomics.newyorkfed.org/2022/07/do-corporate-profits-increase-when-inflation-increases/.

[7] Exh. SC-1CT, p. 34, ln. 20 – p. 35, ln. 2.

transactions in urban areas.[8] In comparison, when Avista purchases inputs to run its operations, these purchases largely reflect business-to-business transactions relative to our position in the production process that moves goods and services to "final demand" goods and services. Price behavior before the final demand stage can differ from what is observed in the business-to-business transactions that occur along the path to final demand goods and services. In the current regulatory model, it is input inflation (i.e., price changes of inputs purchased by the Company), and not consumer inflation, that will affect the Company's costs and ultimately flow into general rate requests.

Q. Given that CPI is not the best measure of O&M inflation pressures, can the Company provide a better indicator of inflation pressures?

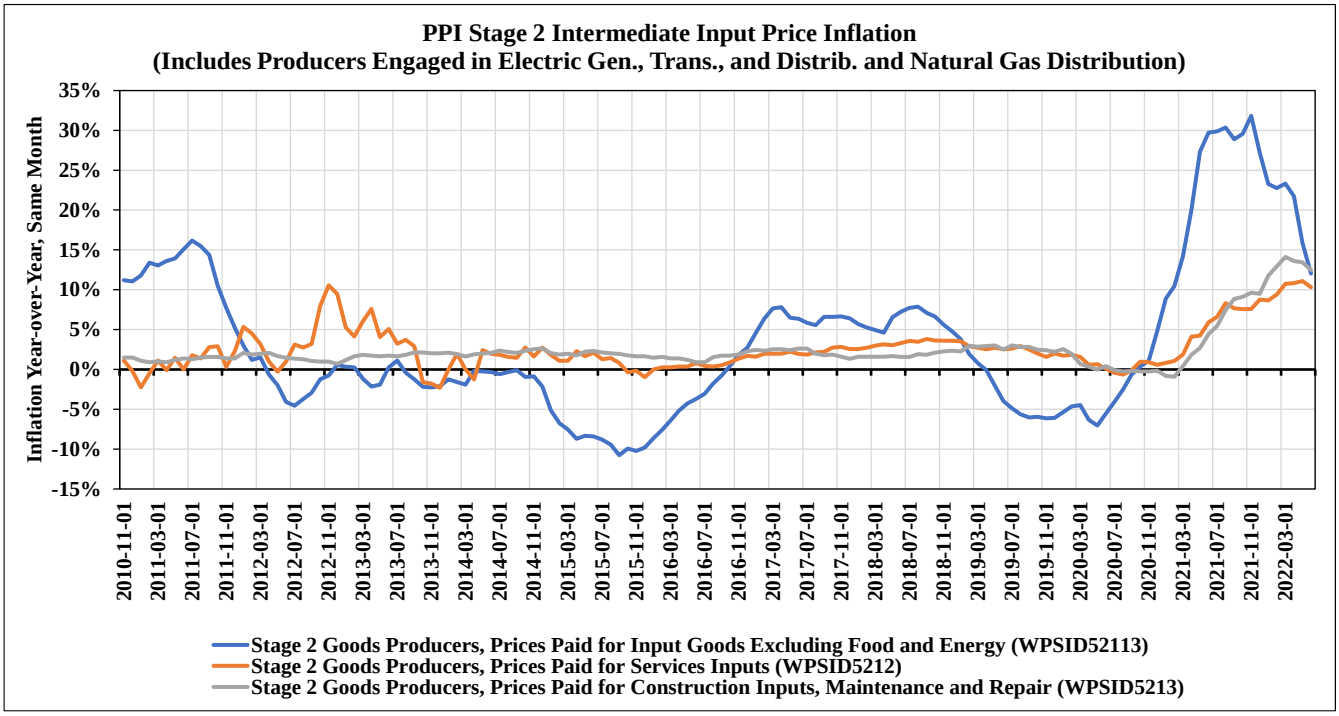
A. Yes. The BLS produces a version of the Producer Price Index (PPI) that reflects the input prices for producer groups at different stages of production. They are called "Intermediate Demand by Production Flow Indexes" (IDPFI). The IDPFI are one part of the intermediate demand indexes that track price changes for goods, services, and construction products sold to businesses as inputs to production, excluding capital investment.[9] The IDPFI are divided into four stages of intermediate production.

Companies like Avista are classified within Stage 2—this stage includes (among other industries) producers related to generation, transmission, distribution and natural gas

[8] The BLS provides an overview of the CPI at https://www.bls.gov/cpi/overview.htm.
[9] See for the most recent PPI release https://www.bls.gov/news.release/ppi.toc.htm. Once there, choose the link "Technical Notes." According the BLS, "The system includes two parallel treatments of intermediate demand. The first treatment organizes intermediate demand commodities by type. The second organizes intermediate demand commodities into production stages, with the explicit goal of developing a forward-flow model of production and price change." The second type is discussed in this testimony. Because capital goods (including finished buildings) are considered final demand goods, they are excluded from the intermediate demand indexes.

distribution.[10] Figure No. 1 shows year-over-year, same month input inflation for stage 2 goods-producers for three types of sub-indexes[11]: (1) Goods, Excluding Food and Energy, (2) Services, and (3) Construction.

Figure 1: PPI Stage 2 Intermediate Input Inflation, November 2011 to June 2022.



[10] The BLS producer composition at each stage can be seen in Appendix B at https://www.bls.gov/ppi/notices/2015/ppi-updates-commodity-weight-allocations-for-the-final-demand-intermediate-demand-aggregation-structure.htm#appendix-b.

[11] The base index data used for Figure 2 was retrieved from the FRED data base at the Federal Reserve Bank of St. Louis. The FRED data links are:

(1) U.S. Bureau of Labor Statistics, Producer Price Index by Commodity: Intermediate Demand by Production Flow: Inputs to Stage 2 Goods Producers, Goods Excluding Foods and Energy [WPSID52113], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/WPSID52113.

(2) U.S. Bureau of Labor Statistics, Producer Price Index by Commodity: Intermediate Demand by Production Flow: Inputs to Stage 2 Goods Producers, Services [WPSID5212], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/WPSID5212.

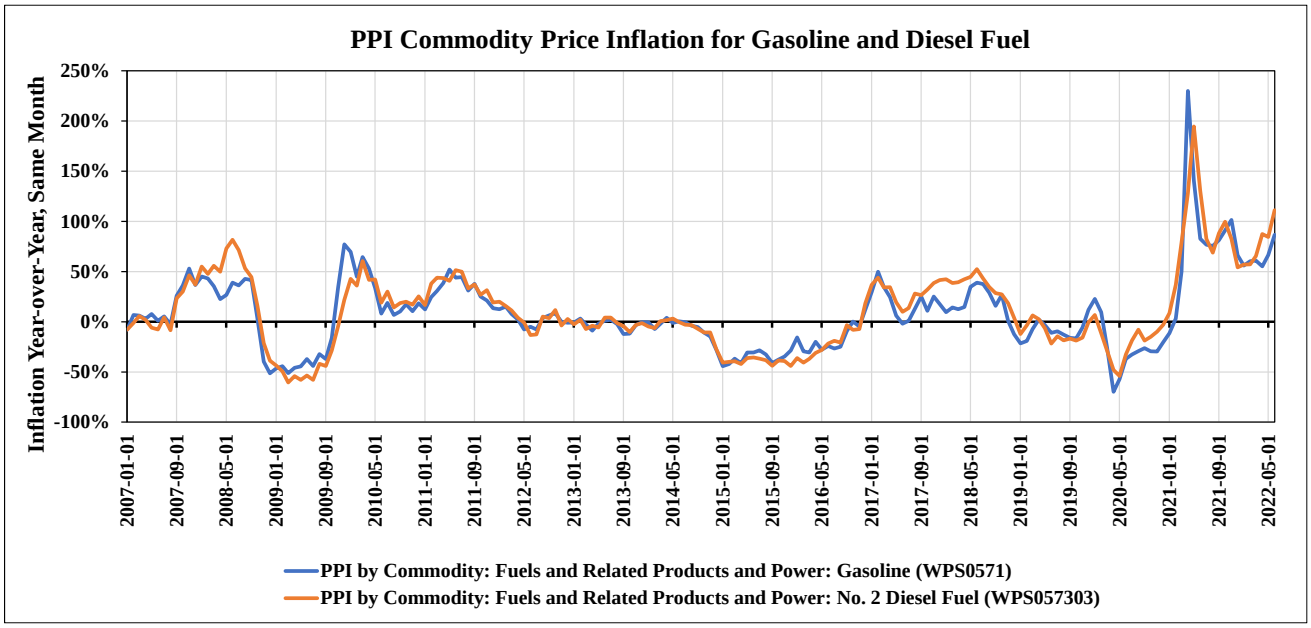
(3) U.S. Bureau of Labor Statistics, Producer Price Index by Commodity: Intermediate Demand by Production Flow: Inputs to Stage 2 Goods Producers, Construction [WPSID5213], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/WPSID5213.

That data has been seasonally adjusted by the Bureau of Labor Statistics. The year-over-year, same month inflation rate is calculated by the Company and is the percentage change between months 12-months apart. For example, the April 2022 services inflation rate in the Figure 1 is the percentage in the service index between April 2022 and April 2021. In this example, the percentage change (inflation) is calculated as (April 2022 Index/April 2021 Index) -1. Because the index series start in November 2009, the year-over-year inflation numbers start in November 2010.

Q. Is there a measure than captures changes in fuel prices facing the Company?

A. Yes. The PPI provides price indexes for gasoline and diesel prices, which are shown in Figure No. 2.[12]

Figure 2: PPI Inflation for Vehicle Fuel, January 2007-June 2022



Q. What do Figure Nos. 1 and 2 say about the input inflation related to O&M expenditures?

A. Figure Nos. 1 and 2 show that U.S. has entered a period of highly elevated inflation impacting a broad range of inputs related to Stage 2 goods producers. The data presented in Figure Nos. 1 and 2 clearly show that Stage 2 producer inflation has been higher

[12] The base index data used for Figure 3 was retrieved from the FRED data base at the Federal Reserve Bank of St. Louis. The FRED data links are:
(1) U.S. Bureau of Labor Statistics, Producer Price Index by Commodity: Fuels and Related Products and Power: Gasoline [WPS0571], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/WPS0571.
(2) U.S. Bureau of Labor Statistics, Producer Price Index by Commodity: Fuels and Related Products and Power: No. 2 Diesel Fuel [WPS057303], retrieved from FRED, Federal Reserve Bank of St. Louis; https://fred.stlouisfed.org/series/WPS057303.

than consumer inflation over the same period and significantly above the 7% growth adjustment requested by the Company. Referring to the data in Figure No. 1, in the first half of 2022 (through June), year-over-year inflation associated with goods inputs (excluding food and energy), service inputs, and construction inputs averaged approximately 20%, 10%, and 13%, respectively. It suggests that the Company should expect significant upward pressure on O&M expenditures to continue for a period of time. Referring to Figure No. 2, the U.S. has entered a period of highly elevated inflation impacting vehicle fuel costs. In 2021 and the first half of 2022 (through June), year-over-year price increases of regular gasoline were 67% and 65%, respectively. In 2021 and the first half of 2022 (through June), No. 2 diesel price increases averaged 80% and 78%, respectively.[13] The data presented in Figure Nos. 1 and 2 show that recent producer inflation has been frequently higher than consumer inflation over the same period and above the 7% range requested by the Company as an adjustment to certain O&M expenses.

Q. Does Avista believe the Federal Reserve's interest rate increases will lower inflation?

A. Yes, but with a significant lag. The Federal Reserve's interest rate increases will put downward pressure on inflation, but with a long lag between the rate increases and changes in the inflation rate. The lag between a monetary policy change and changes to economic activity is called the, "transmission lag." The Federal Reserve notes:

> It can take a fairly long time for a monetary policy action to affect the economy and inflation. And the lags can vary a lot, too. For example, the major effects on output can take anywhere from three months to two years. And the effects

[13] The 2021 annual rate of inflation is calculated by first taking the calendar average of the monthly index value for 2020 and 2021 and then calculating the percentage change in those annual average index values. The half year rate is calculated in a similar way; that is, by averaging the first six months of 2021 and the first six months of 2022 and calculating the percentage change.

> on inflation tend to involve even longer lags, **perhaps one to three years**, or more.[14] (emphasis added)

In the context of current Federal Reserve policy towards higher interest rates (i.e., lower money supply growth), GDP growth will likely slow significantly before the inflation slows. This means that the inflation pressures currently being experienced by the Company will not return to pre-2021 levels quickly. That is, inflation will likely show a significant amount of persistence following the Federal Reserve's move to increases interest rates by slowing the growth rate in the money supply.

Q. Is academic research consistent with the Federal Reserve's own statements about the lag between monetary policy changes and changes in economic activity?

A. Yes. The academic work on the lag between changes in monetary policy and economic activity was first examined in detail by Milton Friedman and Anna J. Schwartz in the 1960s and early 1970s.[15] Subsequent research, with more advanced econometric methods, has largely confirmed Friedman and Schwartz's findings that lags between changes in monetary policy and economic activity are often "long and variable."[16] One of the most recent papers on the transmission lag between monetary policy changes and inflation was published

[14] See https://www.frbsf.org/education/teacher-resources/us-monetary-policy-introduction/real-interest-rates-economy/ under the heading

[15] Milton Friedman provides a summary of the key issues in a letter to the American Economic Association, "Have Monetary Policies Failed?" by Milton Friedman, *American Economic Review* 62, May 1972, pp. 11-18. This paper can be accessed at https://miltonfriedman.hoover.org/objects/57323. A much more detailed presentation of their early work can be found in the National Bureau of Economic Research (NBER) book, *Money in Historical Perspective*, edited by Anna J. Schwartz; see chapter, "Money and Business Cycles" (by Milton Friedman and Anna J. Schwartz). https://www.nber.org/system/files/chapters/c7496/c7496.pdf.

[16] For example, Nicoletta Batini and Edward Nelson, 2002. "The Lag from Monetary Policy Actions to Inflation: Friedman Revisited." *Bank of England, External MPC Unit Discussion Paper No. 6*. https://www.bankofengland.co.uk/external-mpc-discussion-paper/2001/the-lag-from-monetary-policy-actions-to-inflation-friedman-revisited.

in 2013.[17] Using the results of 67 previous econometric studies, this 2013 study found that developed countries, like the U.S., have notably longer monetary policy transmission lags than developing countries. The authors suggest that:

> The key result of our meta-analysis is that a higher degree of financial development translates into slower transmission of monetary policy. The finding can be interpreted in the following way. If financial institutions lack opportunities to protect themselves against unexpected monetary policy actions (due to either low levels of capitalization or low sophistication of financial instruments provided by the undeveloped financial system), they need to react immediately to monetary policy shocks, thus speeding up the transmission. In financially developed countries, in contrast, financial institutions have more opportunities to hedge against surprises in monetary policy stance, **causing greater delays in the transmission of monetary policy shocks**. (p. 63) (emphasis added)

This study found, depending on the econometric modeling used, the U.S. has a transmission lag in the neighborhood of 23 to 40 months. In other words, it can take 23 to 40 months after a significant change in monetary policy before the maximum impact on inflation is observed. This means the Company, like other actors in the economy, will likely have to manage above average inflation pressures for the next 2 to 3 years.

Q. In conclusion, is Witness Coppola's use of forecasted inflation rates of 4.2 percent for 2021, 3.7 percent for 2022, 2.4 percent for 2023, and 2.3 percent for 2024 relevant or appropriate?[18]

A. No. Stage-of-production PPI inflation, and not CPI inflation, are more relevant to Avista, given the Company is in the production chain and is not an urban residential household. Those PPI indicators suggest a much higher, and more persistent, level of inflation

[17] Tomas Havranek and Marek Rusnak, 2013. "Transmission Lags of Monetary Policy: A Meta-Analysis," *International Journal of Central Banking*, vol. 9(4), pp. 39-76, December. https://ideas.repec.org/a/ijc/ijcjou/y2013q4a2.html.
[18] Exh. SC-1CT, p. 34, ll. 21-22.

affecting the Company's O&M costs throughout the Rate Plan. As testified to by Company witness Mr. Ehrbar, those inflationary pressures will present real challenges to the Company, even under the terms of the Settlement.

Q. Does this conclude your rebuttal testimony?

A. Yes.