

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. U-170970

EXH. DH-7

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WASHINGTON AND NORTHERN IDAHO DISTRICT COUNCIL OF LABORERS



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VIA: Electronic Mail

David Danner
Executive Director and Secretary
Washington Utilities & Transportation Commission
1300 S. Evergreen Park Drive S. W.
P.O. Box 47250
Olympia, Washington 98504-7250

Re: Comments of Avista Utilities - Docket No. UG-120715

Dear Mr. Danner,

On May 18, 2012, the Washington Utilities and Transportation Commission (Commission) filed with the Code Reviser a Preproposal Statement of Inquiry (CR-101) to examine whether companies subject to the Commission's jurisdiction should do more to enhance the safety of their natural gas distribution systems and, if so, to develop appropriate requirements or incentives to accomplish that goal. The Commission issued a notice and is seeking written comments from interested persons on issues related to enhancing pipeline safety.

The Company appreciates the opportunity to provide comments on the "Commission Investigation into the Need to Enhance the Safety of Natural Gas Distribution Systems, Docket UG-120715." The Company's response is provided below:

Commission Question:**I. Pipeline Replacement Programs**

- A. For each company, what are the types of pipe that are currently in service that need to be replaced to enhance the safety of the company’s natural gas distribution system (e.g., pre-1986 polyethylene pipe, wrapped steel main, and wrapped steel services)? For each type of pipe identified, please provide the following information:
- A. A description of the pipe;
 - B. The nature and quantification of the safety risks associated with the pipe;
 - C. The extent to which the pipe is deployed in the company’s natural gas distribution system;
 - D. The actions the company is currently taking to replace the pipe;
 - E. The company’s future plans to replace the pipe, and
 - F. An estimate of the cost and time required to replace the pipe.

Avista Response:**Aldyl A Pipe Replacement Program (Avista Protocol)**

Avista Utilities (Avista) is undertaking a planned twenty-year program to systematically remove and replace select portions of the DuPont Aldyl A medium density polyethylene pipe in its natural gas distribution system. A summary report of this program, titled “Proposed Protocol for Managing Select Aldyl A Pipe in Avista’s Natural Gas System,” is available upon request.

Nature of the Safety Risk - Early vintages of Aldyl A pipe produced for natural gas service from the 1960s through the early 1980s, including much of the same vintage polyethylene pipe manufactured by other companies, is subject to “premature brittle-like cracking.” This failure process results from a premature loss of „ductility“ or flexibility in the pipe material, a fundamentally-important property of polyethylene piping. This loss in ductility allows small cracks to form on the inner wall of the pipe that eventually propagate through the pipe wall, resulting in failure. Unfortunately, early tests did not diagnose these failures as resulting from

this loss in ductility, so the phenomenon was poorly understood for many years. This tendency for brittle-like cracking renders the pipe more susceptible to failure over time than newer-generation polyethylene pipe, and this tendency to fail increases with time.

Investigation of the Safety Risk - As part of an investigation in 2008 of an incident in Odessa, Washington involving personal injuries, Avista analyzed recent leak survey records in its Washington jurisdiction to better understand leaks in its Aldyl A piping. Following that initial review, Avista went on to conduct several specific evaluations of the Aldyl A pipe in its system. Avista used newly-available asset management tools to conduct these assessments, including its recently-implemented Distribution Integrity Management approach for identifying and analyzing potential risks to its Aldyl A piping. Integrity Management is suited for just such an analysis, having the capability to determine potential patterns in the overall health of a piping system that might not have been otherwise evident through conventional data review. These analyses revealed that portions of the Aldyl A pipe on Avista's system are at-risk of approaching a level of reliability that is unacceptable and in need of remediation. Avista refers to these portions as "Priority Aldyl A piping."

Priority Aldyl A Pipe Deployed in Avista's System - Avista has approximately 2,000 miles of Aldyl A main pipe in its system, installed between 1968 and the early 1990s. Aldyl A is approximately 17% of the main pipe in the system. Of the 2,000 miles, approximately 714 miles is Priority Aldyl A main pipe (pre-1973 and pre-1984 vintages), ranging in size from 1 ¼ to 4 inches. Approximately 335 miles of Priority Aldyl A main are located in Avista's Washington jurisdiction.

Avista's Actions to Manage Priority Aldyl A Pipe - Avista believes the decision to formulate a management protocol for its priority Aldyl A piping is both timely and prudent, based on the results of its Aldyl A pipe studies and the principles of Distribution Integrity Management. It's also consistent with the prior federal bulletins on this subject and the recent Call to Action of Secretary LaHood, and with the decisions of utilities that have implemented similar pipe-replacement programs. Finally, given the significant amounts of priority Aldyl A pipe in Avista's system, we believe that commencing a protocol now provides greater opportunity to manage these facilities in a prudent and cost-effective manner.

Under guidance of the Protocol, Avista replaced several thousand feet of Priority Aldyl A main pipe in 2011. In the largest effort, Avista removed all 32,000 feet of the pre-1984 Aldyl A main pipe from the gas system in Odessa. Two smaller projects removed another 7,000 feet of this priority pipe elsewhere. Together, these three projects had a capital cost of approximately \$2.7 million. For 2012, Avista has mobilized a major replacement project in Davenport, Washington, slated to replace approximately 8 miles of Aldyl A main. This effort, along with several smaller projects, is expected to total \$5.3 million.

Avista's Future Plans - Under the Avista Protocol, the Company is planning to replace all of its Priority Aldyl A pipe over the next twenty years. Though the underlying assumptions will be continually re-evaluated, and the prioritization of projects may change over time, Avista is planning to spend approximately \$10 million each year (subject to inflation) across all three of its natural gas jurisdictions. Avista estimates that approximately half this amount will be spent in Washington over the life of the program.

Avista's Isolated Steel Identification and Replacement Program

Avista is also currently engaged in an "identification & replacement program" related to isolated steel pipe in its natural gas system. The genesis of this program was an agreement between Avista and the Safety Staff of the UTC, aimed at the eliminating the risk associated with sections of isolated steel that were "cathodically unprotected" or otherwise unknown to Avista (Docket PG-100049). The program objective is to find and document any isolated steel sections, including isolated risers, and to replace every section within a specified time after its identification.

Nature of the Safety Risk – Steel pipe that is cathodically unprotected is subject to corrosion at varying degrees, depending on pipe coating, type and condition, soil type and acidity, ground moisture, the presence of foreign utilities, and other factors. Corrosion causes the loss of metal from the pipe wall, which can result over time in a gas leak. This program will locate and remove any steel sections that could be subject to such corrosion.

Avista's Current Actions - The method for identifying sections of isolated steel involves surveying the system at systematic points. Avista has approximately 144,000 points to survey, the results of which will define the actual quantity of isolated steel to be removed. To date, more than 17,800 points have been tested, resulting in the discovery of 2,007 isolated segments. Of these, 1,831 had localized cathodic protection and 176 were unprotected (174 of the 176 had been replaced by March 30, 2012).

Avista's Future Plans for Isolated Steel - As noted, the program duration is for ten years. The estimated cost for the full 10-year program is \$12.4 million. Avista expects annual spending amounts to be greater early in the program, and then to decrease gradually toward the ten-year horizon. Accordingly, expected program costs for 2012 are \$2.6 million, with an annual average of \$1.2 million over the course of the program. Annual spending will also vary with the actual number of isolated steel segments located during the systematic testing each year.

Commission Question:

I. Pipeline Replacement Programs

- A. Please provide a detailed explanation of the impediments, if any, to replacing pipe that needs to be replaced to enhance the safety of each company's natural gas distribution system, including but not limited to the following.
1. Cost recovery;
 2. Shortage of personnel or equipment, and
 3. Access, e.g., rights-of-way or government permitting issues.

Avista Response:

The federal mandate for Distribution Integrity Management Planning is driving an increase in major projects for distribution pipeline replacement across the natural gas industry. This, coupled with the recent boom in shale extraction and large-scale oil and gas field projects, has limited the availability of qualified workers. Local contractors supporting distribution pipeline companies, like Avista, are losing qualified workers to these boom projects, including operators, fitters and

inspectors. Avista experienced this impact in April when its contractor lost several qualified workers to the projects in South Dakota, just as we were preparing to start work in Davenport.

Longer-term commitments with contractors may be required in order to implement the volume of anticipated pipe replacement projects. In addition, contractors will lose qualified employees in the winter months unless the commitment is made to provide year-round employment. It will be in our interest to ensure these contract crews remain trained and qualified, and have the incentive to continue providing support for our major gas-replacement programs.

Avista has gained valuable experience in its recent pipe-replacement projects. The access-related challenges we expect to manage during the course of our pipe-replacement projects are as follows:

- Local Road-Cut Moratoria – can limit areas available for replacement due to time limits on pavement cutting, and significantly increase costs.
- Franchise Agreement - requirements, including timely notice, and right-of-way access, can significantly restrict the ability to perform work in a manner that diverges from an original project plan.
- Agency Public Works - review and approval process adds time to the project lifecycle and can impact the work schedule.
- Encroachment Permits – procurement adds time to the project lifecycle and can impact the planned work schedule.
- State Stormwater Pollution Prevention Plans – compliance adds time to the project lifecycle and can affect the anticipated work schedule.
- Local Work Restrictions – sometimes related to „community events“ or school zones, for example, can impact the ability to complete a project within a seasonal work cycle.
- Municipal Activity Restrictions - on volume of equipment, project noise and crew intensity will limit expected production. Avista’s upcoming replacement project in the community of Talent, Oregon, will be constrained by the limitation that only two crews can be working in town at any given time, impacting project efficiencies and extending project lifecycles.

- Municipal Public Works – the availability of field utility locating can be a limitation.
- Pavement Cut Restoration - some requirements are onerous and very costly, particularly in Oregon, where cutting a 2-foot wide section of paving can require replacement of the full traffic lane. The result is pavement restoration costs that are 4-5 times what is actually necessary, quickly depleting project funds.
- Inspection Process/Protocol – a smooth process is critical to efficient field production.

Commission Question:

I. Pipeline Replacement Programs

B. Risk Assessment and Methodology

1. Describe and summarize the risk assessment methodology used by the Company to evaluate pipeline infrastructure.
2. What are some of the key assumptions used in such methodology, which may change over time, and what process is used to update these?
3. What are some of the important criteria, such as high consequence areas (HCAs), and how are they used as criteria in development (of) the priority schedule for pipe replacement schedules?
4. How often do you update the risk assessment methodology?

Avista Response:

Avista's Distribution Integrity Management Plan

The Pipeline and Hazardous Materials Safety Administration published a final rule establishing Distribution Integrity Management requirements for gas distribution pipeline operators in December 2009, providing them until August 2011, to write and implement their Distribution Integrity Management Plans. Among other objectives, the program was intended to overcome two key weaknesses in pipeline safety management that were identified in the National Transportation Safety Board's 1998 bulletin: 1) correct weaknesses in federal regulations,

particularly in the Office of Pipeline Safety, by establishing true measurement criteria for establishing safety compliance, and 2) establish systematic protocols for pipeline data collection, analysis, and interpretation, that helps ensure accurate integrity assessment and appropriate remediation.

The concept of Integrity Management grew out of a demonstration project of the Office of Pipeline Safety designed to test whether allowing operators the flexibility to allocate safety resources through risk management was effective in improving pipeline safety and reliability. Integrity management requires natural gas distribution companies, like Avista, to write and implement Integrity Management Programs (IMPs) to assess, evaluate, repair and validate the integrity of pipeline segments. The program contains the following elements:

- Develop Knowledge Base
- Identify Threats
- Evaluate and Rank Risks
- Identify and Implement Measures to Address Risks
- Measure Performance, Monitor Results, and Evaluate Effectiveness
- Periodically Evaluate and Improve Program
- Report Results

The Integrity Management approach uses historical leak data and other facility information, along with the input of subject-matter experts, to identify hazards to a gas system. These hazards are then analyzed to predict the likelihood and consequences of failure. Each hazard is then ranked by priority, followed by the development of a plan to reduce or remove those risks as deemed necessary.

Risk Assessment Methodology - Avista's Integrity Management approach provides the analytical tools that integrate key knowledge and information needed to effectively assess risks and prioritize remediation activities based on the potential risk. In the prioritization process, each segment of pipe in Avista's system is assigned a relative risk ranking, based on the following criteria:

- age
- pipe material
- soil conditions
- construction methods
- maintenance history

This information is then loaded into Avista’s GIS database containing the gas system maps. These maps contain a “layer” of grid squares (50 feet per side) that correspond with sections of the subject pipe. Each square is known as a “raster” and each raster contains all of the risk-related information that was loaded into the GIS system, as associated with the pipe at that precise geographic location.

Next, the software integrates the historic leak information for the subject pipe on Avista’s system with the risk data associated with each of the pipe segments, and predicts the geographic areas (via the risk rasters) where pipe failures are expected to be greatest. In the last step, the software integrates the results for expected failures with information for each risk raster that identifies the potential consequence of a leak on that segment (i.e. the proximity of that raster to buildings and people, and the population density/sensitivity of those structures). The end result is a color-coding of the rasters that provides a visual picture of where on the gas system that both the potential likelihood of a leak, and the potential consequence of a leak, are greatest. This approach provides Avista with a comprehensive and objective means of identifying a subject pipe that has the highest priority for replacement.

Key Assumptions - The assumptions for the risks around Aldyl A have been developed over a period of study and information gathering. Information from industry sources, including DuPont’s advice and expert opinion, the federal advisories issued relating to the nature of the material, the observation of developments occurring nationally in similarly-situated utilities, and, most importantly, the Distribution Integrity Management documentation and understanding of Avista’s own data trends has led to the conclusions found in the Priority Aldyl A Replacement Protocol.

As noted above, major elements of Distribution Integrity Management are to “Measure Performance, Monitor Results, and Evaluate Effectiveness” as well as “Periodically Evaluate and Improve Program.” Avista will judge the effectiveness (measure the performance) of its Priority Aldyl A replacement program by continually monitoring the leak rates for these facilities. If the program is effective, the overall leak rate for Priority Aldyl A is expected to decrease over time, demonstrating that facilities are being removed in a timely manner before they can present a safety risk. Avista will adjust its assumptions based on the leak rates for the remaining in-service facilities and use this information to update its protocol as necessary to ensure the continued prudent management of this risk. Avista intends to update its models at least annually, including assessments of the Aldyl A material failure phenomenon. Additionally, as new geospatial information becomes available, such as data on pavement coverage and traffic density, Avista anticipates including these factors in its analysis, and this will require further updates.

Commission Question:

II. Interim Cost Recovery Mechanism

- A. Would allowing the company to recover its pipeline replacement costs sooner than those costs are recoverable through traditional ratemaking principles provide a financial incentive to expedite such replacement? If so, please describe in detail how an interim cost recovery mechanism would result in accelerated pipeline replacement.

Avista Response:

Avista’s planned twenty-year schedule to replace certain vintages of Aldyl A natural gas pipe, as an example, is the product of a proactive and systematic approach that provides for the safety of our customers and the reliability of our system, at a cost that is prudent and in the interest of our customers. Avista will make the necessary investments to remain on this schedule, unless our ongoing analysis and re-evaluation of risk data were to suggest a different course. The investments we have made, and are planning to make, are appropriate, timely and prudent. The investments are being made because it is the right thing to do, and have not been dependent, conditioned or contingent upon timely recovery of costs, or the presence or absence of a financial incentive. That being said, in other filings before this Commission we have demonstrated that

Avista is not receiving timely recovery of new capital investment, including new investment in natural gas pipe. With the use of “historical test-year” ratemaking in Washington there can be a two-year lag, or longer, from the time the new investment is made, and the time the new investment is reflected in rate base in retail rates. Avista believes the timely recovery of prudently-incurred investments should not be viewed as a „reward or incentive“ for proper management of its business, but as a basic, equitable principle of regulated cost recovery.

Commission Question:

II. Interim Cost Recovery Mechanism

- B. If an expedited cost recovery mechanism is proposed, should it replace the Commission’s conventional regulatory cost recovery structure for all pipeline replacement projects, or should it be limited to certain circumstances? Examples of such circumstances include, but are not limited to, discretionary projects, capital spending in excess of a pre-determined amount, and special projects.

Avista Response:

If the Commission were to employ a cost recovery mechanism separate from a general rate case, the mechanism could be a replacement for the cost recovery in, or could work in conjunction with, the general rate case process. Some examples are provided in Avista’s response to II. C., below. All of Avista’s new capital investment, including that for natural gas pipe, is made because it is a necessary part of owning and operating the utility to provide safe reliable service to customers, and maintaining a high level of customer satisfaction. Timely recovery of all prudent utility investments is appropriate, and necessary, if the utility is to be afforded an opportunity to actually earn the return determined by the Commission to be reasonable.

Commission Question:**II. Interim Cost Recovery Mechanism**

C. What is an appropriate interim cost recovery mechanism, and how should it be structured? Please describe in detail how each of the following interim cost recovery alternatives could be implemented in a manner that would provide a financial incentive to accelerate pipeline replacement and would result in a rate that is fair, just, reasonable, and sufficient:

1. A deferred accounting mechanism, such as, but not limited to, one comparable to the mechanism authorized in RCW 80.80.060(6);
2. A ratepayer surcharge/expense mechanism to be used exclusively for pipeline replacements;
3. Some combination of 1 and 2 above;
4. An attrition adjustment mechanism;
5. Pilot program or permanent mechanism (if a pilot program is approved, how long would it need to be in effect to accomplish the priority pipe replacements identified in response to question I.A.); or
6. Other.

Avista Response:

Avista's response is provided within the following context:

1. Avista's primary natural gas pipe replacement program is Aldyl A, where the Company is currently planning to invest approximately \$10 million per year on a system basis for 20 years. The Washington jurisdictional share is roughly \$5 million/year, which would result in an incremental annual revenue requirement in the neighborhood of \$700,000.
2. As we explained in our response to II. A. above, Avista will make the necessary investments to remain on the Aldyl A replacement schedule, unless our ongoing analysis

and re-evaluation of risk data were to suggest a different course. A Commission directive to replace the pipe at an accelerated pace would change our plan. A change in the method of cost recovery would not.

3. Based on the above, Avista requests that, as the Commission considers new mechanisms, it consider a mechanism or mechanisms that would address not only the timely recovery of new investment in natural gas pipe, but also other necessary utility investment that is being made, which is also not being reflected in retail rates in a timely manner. As discussed below, the use of an attrition adjustment will answer this need.

Attrition Adjustment Mechanism

Avista supports the use of an Attrition Adjustment Mechanism to address the timely recovery of new natural gas pipe investment, and this mechanism could, at the same time, address the timely recovery of other necessary new rate base additions. An Attrition Adjustment would be proposed by a utility in a general rate case based on a trend analysis (Attrition Study) of utility investment, operating expenses and utility revenue over time. Avista has proposed such an attrition adjustment in its pending general rate case filing, Docket Nos. UE-120436 and UG-120437. In testimony filed with the Commission in December 2011, Commission Staff witness Ken Elgin indicated that an Attrition Adjustment may be an appropriate solution:

“The circumstances facing utilities today are quite similar to those of the late 1970’s and early 1980’s: growing investments, high costs, and changes in revenues. Each of these broad categories of the ratemaking formula fits squarely within the scope of a credible attrition study.” (Page 72 of Elgin Testimony in Docket Nos. UE-111048/UG-111049, dated December 7, 2011)

Deferred Accounting with a Return

Avista agrees with the comments of Commissioner Jones, in Paragraph 67 of Order 07 in Docket No. UG-110723, that the use of deferred accounting with a return has been commonly used by the Commission, and would be a reasonable solution to provide timely recovery of new rate base investment. Deferred amounts would be considered and evaluated for inclusion in base rates in

the utility's next rate case. This approach has been used in the past, is simple, and provides opportunity for prudence review of the costs during a general rate proceeding.

Pro forma Adjustments in a General Rate Case

Avista believes the Commission has the authority under existing state law and its own rules to approve appropriate rate-making adjustments to provide for the opportunity to recover the planned costs with a return during the prospective rate period. This approach has been frequently used by the Commission where reasonable cost estimates are available during the rate case for the activity in the prospective rate period.

Surcharge/Expense Mechanism (Tracker)

A form of Surcharge/Expense Mechanism has also been used by the Commission in the past. If this type of mechanism were to be adopted, Avista would propose that the revenue requirement associated with the new plant investment be deferred for later recovery until the new plant investment is included in base retail rates. Any deferred amounts would be surcharged to customers and recovered over a 12-month period, beginning the year after the new investment is included in base retail rates. The prudence of the costs would be addressed in the general rate case.

With regard to the length of time the mechanism (e.g., tracker or deferral mechanism) should be in place, Avista recommends that any such mechanism adopted by the Commission be in place for a minimum of three years. In Avista's general rate case filing following the three-year period, Avista would include a proposal to continue, continue with modifications, or terminate the mechanism, and all other parties would have the opportunity to make their own recommendations to the Commission.

Commission Question:**II. Interim Cost Recovery Mechanism****D. Process**

1. What should the role of the Commission’s pipeline safety staff be at stages in this process, including risk assessment methodology review, review of priority replacement, and budget review?
2. Does the Company envision any issues about the use of sharing of confidential information? What procedures should the Commission impose to protect any confidential information?
3. Depending on the type of mechanism, must the filing be synchronized with other filing dates, such as the PGA (purchased gas adjustment)?
4. If the proposal is to include an annual budget for priority pipe replacement, when should it be submitted? How much time should the Commission staff be given to review the plan and budget?
5. If the mechanism calls for an annual plan or budget and for Commission review of such plan or budget, by what process should the Commission undertake those functions? Would an open meeting process suffice, or should the process be more formal?

Role of the Commission’s Pipeline Safety Staff - It is ultimately the responsibility of the utility’s management to provide safe and reliable service. That role should not be abdicated to other interested parties. Nevertheless, Avista welcomes review by the Commission’s pipeline safety staff of risk assessment methodologies, priority replacement and anticipated budgets. This should be advisory in nature only, with the safety staff being provided sufficient time to review information and provide meaningful comment. This would be an informal process, the scope of which would depend, over time, on the nature of the anticipated work. There should not be “process” around this “process.”

Confidential Information - Avista does not anticipate issues concerning the sharing of information, with the possible exception of information pertaining to the location of critical

infrastructure or release of proprietary contractor bidding information. This can be handled on a case-by-case basis, by invoking the statutory procedures already in place for the protection of such information.

Coordination of Filings - Should a deferred accounting mechanism or tracker be implemented, the recovery of any deferrals should be synchronized with the Company's next general rate case (See, e.g., RCW 80.80.060 (6)), at which time the Commission can address whether recovery of such costs is appropriate.

Annual Plan and Budget - Avista's preferred approach of addressing pipe replacement cost recovery either through an attrition adjustment or through deferred accounting does not envision the need for an annual plan or budget to be reviewed or approved by the Commission.

Conclusion

Avista appreciates the opportunity to submit these comments and looks forward to participating in the scheduled workshops to address these vital concerns. If you have any questions regarding this information, please contact Larry LaBolle at 509-495-4710 or by email at larry.labolle@avistacorp.com.

Sincerely,



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