Exhibit No. ___(DFK-1T)

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-12_____

DOCKET NO. UG-12_____

DIRECT TESTIMONY OF

DON F. KOPCZYNSKI

REPRESENTING AVISTA CORPORATION

I. INTRODUCTION

Q. Please state your name, employer and business address.

A. My name is Don F. Kopczynski and I am employed as the Vice President of Customer Solutions for Avista Utilities, at 1411 East Mission Avenue, Spokane, Washington.

Q. Would you briefly describe your educational background and professional experience?

A. Yes. Prior to joining the Company in 1979, I earned a Bachelor of Science Degree in Engineering from the University of Idaho. I have also earned a Master's Degree in Engineering from Washington State University, a Master's Degree in Organizational Leadership from Gonzaga University, and a Master's Degree in Business Administration from Whitworth University. Over the past 32 years I have spent approximately 18 years in Energy Delivery, managing Engineering, various aspects of Operations, and Customer Service. In addition, I spent three years managing the Energy Resources Department, including Power Supply, Generation and Production, and Natural Gas Supply. I have worked in the areas of Corporate Business Analysis and Development, and served in a variety of leadership roles in subsidiary operations for Avista Corp. I was appointed General Manager of Energy Delivery in 2003 and Vice President in 2004. My current position is Vice President of Customer Solutions. I serve on several boards, including the Washington State Electrical Board, Northwest Gas Association, American Gas Association, and the Washington State University Advisory Boards.

Q. What is the scope of your testimony?

A. I will provide an overview of the Company's electric and natural gas energy delivery facilities and operations. I will describe Avista's three Smart Grid projects that have

received grants through the Department of Energy (DOE). I will also explain some of our efforts to control costs, increase efficiency, improve customer service, and the replacement of the Company's legacy customer information system (CIS), as well as summarize Avista's customer support programs in Washington. Finally, I will address the Company's plans to replace Aldyl A piping in our natural gas distribution system. A table of the contents for my testimony is as follows:

Q. Are you sponsoring any exhibits in this proceeding?

A. Yes. I am sponsoring Exhibit No.__(DFK-2) which shows the detailed usage and number of customers for each customer class and Exhibit No.___(DFK-3) which is the Company's "Proposed Protocol for Managing Select Aldyl A Pipe in Avista Utilities' Natural Gas System" report.

II. OVERVIEW OF AVISTA'S ENERGY DELIVERY SERVICE

Q. Please describe Avista Utilities' electric and natural gas utility operations.

A. Avista Utilities operates a vertically-integrated electric system in Washington and Idaho. In addition to the hydroelectric and thermal generating resources described by Company witness Mr. Lafferty, the Company has approximately 18,300 miles of primary and secondary electric distribution lines. Avista has an electric transmission system of 685 miles of 230 kV line and 1,535 miles of 115 kV line.

Avista owns and maintains a total of 7,650 miles of natural gas distribution lines, and is served off of the Williams Northwest and Gas Transmission Northwest (GTN) pipelines. A map showing the Company's electric and natural gas service area in Washington, Idaho and Oregon is provided by Company witness Mr. Morris in Exhibit No. ___(SLM-3).

As detailed in the Company's 2011 electric Integrated Resource Plan[1], Avista expects retail electric sales growth to average 1.6% annually for the next ten years and 1.6% over the next twenty years in Avista's service territory, primarily due to increased population and business growth. In 2011, Avista had 2,693 new electric residential customer connections[2] and 2,433 for 2010.

Also, based on Avista's 2009 natural gas Integrated Resource Plan[3], in Washington/Idaho/Oregon the number of natural gas customers were projected to increase at an average annual rate of 2.2%, with demand growing at a compounded average annual rate of

[1] A copy of the Company's 2011 Electric IRP has been provided by Mr. Lafferty as Exhibit No.__(RJL-2).
[2] A new customer connection as defined by Avista is when a customer receives a bill for the first time at a particular premises/location.
[3] A copy of the Company's 2009 Natural Gas IRP has been provided by Company witness Mr. Christie at Exhibit No.__(KJC-2).

1.0%. New natural gas customer connections for all customer classifications were 2,693 in 2010 and 3,400 in 2011.

Q. How many customers are served by Avista Utilities in Washington?

A. Of the Company's 360,450 electric and 320,741 natural gas customers (as of December 31, 2011), 236,623 and 149,161, respectively, were Washington customers. Avista's largest electric customer in Washington is the Inland Empire Paper facility.

Q. Please describe the Company's operations centers that support electric and natural gas customers in Washington.

A. The Company has construction offices in Spokane, Colville, Chewelah, Othello, Ritzville, Pullman, Clarkston, Deer Park, and Davenport. Avista's four customer contact centers in Spokane, Washington, Coeur d'Alene and Lewiston, Idaho, and Medford, Oregon, are networked, allowing the full pool of regular and part-time employees to respond to customer calls in all jurisdictions.

III. DISTRIBUTION OPERATIONS

Q. What construction and maintenance programs does the Company have in place to maintain electric and natural gas facilities?

A. The Company utilizes seasonal and regular crews for electric and natural gas construction, including new and reconstructed lines, damage repair, and connecting new customers. The Company employs contract crews and temporary and part-time employees to meet customer needs during the peak construction season. The Company also has several maintenance programs to maintain the reliability of our electric and natural gas infrastructure. On the electric side, this includes the Company's Asset Management Program (including wood

pole inspection and replacement), vegetation management, electric transmission line inspection and upgrades.

Q. Please describe any ongoing maintenance plans for the Company's natural gas operations?

A. Our natural gas operations department performs necessary maintenance, as required by the US Department of Transportation Pipeline Safety Regulations, 49 CFR, Part 192. Ongoing maintenance focuses on valve and regulator stations, atmospheric corrosion protection, and leak surveys. The following is further detail regarding the natural gas maintenance programs the Company has, or is in the process of implementing:

1. **Isolated Steel Replacement Program.** The Company is obligated to maintain all below-ground steel pipelines in accordance with 49 CFR§192.455 External Corrosion Control: Buried or Submerged Pipelines Installed After July 31, 1971. The Company has implemented a special cathodic protection program for the purpose of finding, as practicable, all isolated steel in its natural gas piping systems. The method for finding the isolated steel will be by full-interrupted current surveys. This test method will enable Avista personnel the opportunity to record both "on" and "instant off" pipe-to-soil (p/s) voltage potential readings on the pipe in all cathodic protection zones in the Company's gas systems in Washington, Idaho, and Oregon. In addition to these surveys, the Company will review its Geographic Information System database and other information as necessary to determine the probable locations of any isolated steel. The program is scheduled to survey the gas cathodic protection zones through 2016.

   Capital work for riser replacements and isolated steel pipe remediation will continue until all risers are removed and all isolated steel is removed, tied in with existing steel piping systems, or permanently bonded into the system with a test point container. All work must be completed by 2021, per the requirements of a Settlement Agreement with the Washington Utilities and Transportation Commission (UTC) (ref. Docket No. PG-100049).

   The capital costs for Washington's portion of this project in 2012 and 2013 are planned to be $1.2 million ($1.7 system) and $2 million ($2.8 system), respectively.

2. **Increased Leak Survey of Aldyl-A Pipe.** Avista, as part of a Settlement Agreement with the UTC (ref. Docket PG-082253), will perform annual leak surveys of certain Aldyl-A mains installed prior to 1987. These surveys are in addition to existing leak survey requirements and shall be performed in each of the three years following approval of the Settlement, and periodically thereafter as warranted, after consultation with UTC Staff. The Company will also begin doing such additional surveys in Washington, Idaho, and Oregon.

3. **Atmospheric Testing Program.** Atmospheric Testing is an inspection program to find conditions in the Company's system that could lead to corrosion issues on customer meter sets. This "Atmospheric Corrosion" inspection program is a federally mandated program that requires the Company to inspect all above-ground steel pipe at a frequency not to exceed three years.

   The Company completes this testing in each State over a three year period, rotating through one State per year. Washington is next up in 2012, at a cost of $525,000. The Company is requesting to recover Washington's cost over a 3 year period, one-third per year, and therefore Ms. Andrews has pro formed approximately 1/3 of the atmospheric O&M expense within her adjustments.

IV. ALDYL A PIPE REPLACEMENT

Q. What is Avista's plan related to its Aldyl A polyethylene pipe?

A. The Company is undertaking a twenty-year program to systematically remove from service and replace select portions of the DuPont Aldyl A medium density polyethylene pipe in its natural gas distribution system in the States of Washington, Oregon and Idaho. None of the subject pipe is "high pressure main pipe," but rather, consists of distribution mains at maximum operating pressures of 60 psi and pipe diameters ranging from 1¼ to 4 inches. Also, as part of this program, Avista will replace the connections on Aldyl A service piping, ½ and ¾ inch diameters, when it is tapped to steel main piping.

Q. Why is the Company initiating this replacement program?

A. In recent years, Avista experienced two incidents on its natural gas system that prompted increased attention on the part of the Commission and the Company on the long-term

reliability of Aldyl A pipe. Results of the investigations, which were aided by new tools developed for Avista's Distribution Integrity Management Plan (DIMP), corroborated reports for similar Aldyl A piping around the Country, and supported the development of a protocol for the management of this natural gas pipe.

Q. Has the Company developed a proposed protocol for managing the Aldyl A Pipe in its system?

A. Yes, attached as Exhibit No.___(DFK-3), is a copy of the protocol, which will be discussed below.

Q. What is the history of Aldyl A pipe?

A. Along with other manufacturers, DuPont began to use polyethylene resins to produce plastic piping for the natural gas industry, first marketed in 1965 under the name "Aldyl A." Avista began installing Aldyl A piping in its natural gas system in 1968 and continued its use until 1990 when DuPont sold its Aldyl A production to Uponor. (See, Exhibit No.___(DFK-3), at p.14).

In 1982, and again in 1986, DuPont sent letters to its natural gas customers, noting a reported low frequency of leaks resulting from 'brittle cracking' in Aldyl A pipe manufactured prior to 1973, occurring specifically where the pipe was in "point contact with rocks." The 1986 letter focused on results of newly-developed testing methods that showed Aldyl A pipe manufactured prior to 1973 had certain limitations that were described as a reduction in pipe service life caused by "rock impingement" or pressure from rock points directly on the pipe, and the use of 'squeeze-off' practices. (Id., at p.19)

DuPont made significant improvements in its resin formulations during the 1980's, which significantly increased the resistance of Aldyl A pipe to brittle cracking as well as improving the overall long-term integrity of Aldyl A pipe.

Q. Did regulatory agencies respond to the reports of brittle cracking in early (pre-1973) Aldyl A pipe?

A. Yes. In April 1998, the National Transportation Safety Board published a comprehensive safety bulletin describing its investigation of natural gas pipeline accidents involving polyethylene service pipe that had cracked in a "brittle-like" manner. The bulletin focused on three objectives based primarily on investigations of early plastic pipe manufactured by Century Utility Products (Century), produced from Union Carbide resin. But the report also concluded that, in addition to the Century pipe, much of the polyethylene pipe produced for gas service from the 1960s through the early 1980s may be susceptible to brittle cracking and premature failure, further noting that vulnerability of this material to premature failure could represent a serious potential hazard to public safety. (Id., at p.8)

The report concluded that early testing methods tended to overrate the long-term durability of polyethylene pipe, that brittle cracking was a complex problem that had not been effectively communicated to pipeline operators, and finally, that effective pipeline monitoring programs were challenging to design and implement, and that regulatory requirements lacked necessary measurable performance criteria. (Id., at p.11)

The 1998 bulletin was followed by additional advisories written by the Pipeline and Hazardous Materials Safety Administration in 1999, 2002 and 2007. These bulletins reiterated the findings of the 1998 report, as well as specifically adding pre-1973 DuPont Aldyl A piping

and Delrin® insert tap tees to the list of piping products shown to exhibit brittle cracking. (Id., at p.12)

Q. Did this string of federal advisories contribute to any changes in the industry?

A. Yes. In December 2009, the Pipeline and Hazardous Materials Safety Administration published its final rule establishing 'Integrity Management' requirements for gas distribution pipeline operators. Under the rule, pipeline operators (such as Avista) were given until August 2011 to write and implement a Distribution Integrity Management Plan for their natural gas systems.

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 (above): 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.

Q. What types of failures has the Company documented regarding its Aldyl A pipe?

A. As part of the investigation of a natural gas incident that occurred in Odessa, Washington in late 2008, the staff of the UTC asked Avista to review five years of leak-survey records to evaluate the 'modes' or types of material failure of Aldyl A pipe in its system, as well as to forecast the long-term reliability of this piping material. The results showed that Aldyl A pipe had failed from four predominant causes: 1) cracks in the service 'tee' fitting, either in the

body of the fitting, in the cap, or where service pipe is attached to the plastic main pipe; 2) cracks in the service pipe where it attaches to the tee on steel main pipe; 3) cracks caused by rock pressure or previous squeeze-off points; and 4) settlement of main piping. (Id., at p.17)

Q. Were the numbers of failures and leaks in Avista's Aldyl A piping excessive?

A. No they weren't, at least as initially compared with the total number of leaks observed on the system. The five years of leak survey data included nearly 17,000 individual leaks of all types, including 153 that resulted from cracking of Aldyl A pipe across Avista's three-state service area. Looking simply at Aldyl A leaks as part of the aggregate of all system leaks, one might conclude that Aldyl A pipe failures pose a limited potential for hazard relative to the threat of other system leaks. Different types of leaks, however, can have a dramatically different potential to pose a hazard, and a thorough understanding of this difference is one of the most important outcomes of an effective Distribution Integrity Management Plan.

Q. Are Aldyl A leaks significant, even when occurring at relatively low rates?

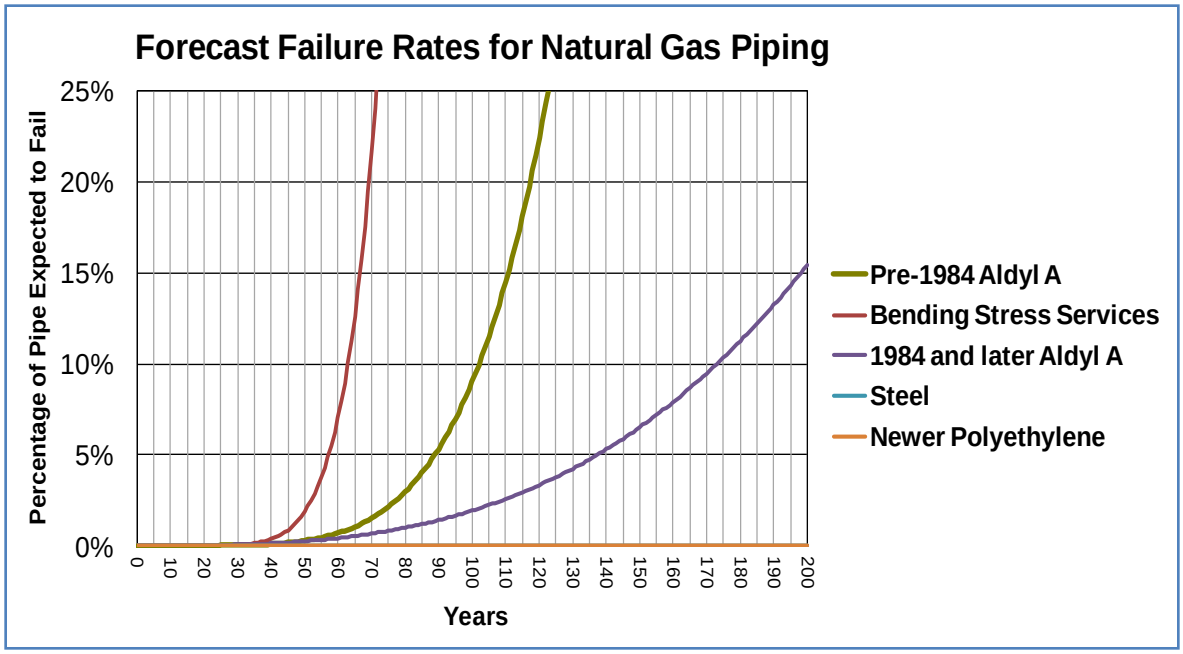
A. Yes, they can be. As an illustration of the significance of different types of natural gas leaks, the five years of leak-survey data included over 2,000 leaks associated with the failure of gas system equipment, such as in valves, fittings and meters. The vast majority of this equipment is located either above ground or in locations that allow free-venting of leaked gas into the atmosphere. Because the gas from these leaks is quickly dissipated, and because they are usually reported very quickly, equipment leaks have a low potential to result in a harmful incident. By contrast, leaks in Aldyl A piping occur almost entirely underground, out of sight, giving leaked gas the potential to move underground and into buildings before it can be

identified and reported. Of the 2,000 equipment leaks, none resulted in harmful incidents, while two of the 153 Aldyl A leaks did.

Q. What other analysis did Avista complete in evaluating the long-term reliability of its Aldyl A piping?

A. Avista's Asset Management Group performed "reliability modeling" of Aldyl A pipe in its system to assess its long-term performance. Reliability analysis comes from the discipline of 'reliability engineering' and is a foundational asset management tool that provides a forecast or prediction of the future performance of a piece of equipment (pipe, in this instance). The model integrates pipe age and failure and repair data to produce a reliability curve that represents how quickly the rest of the pipe is at risk of failing, shown as the percentage of failures expected each year over time. For this investigation, Avista compared the expected reliability of Aldyl A main pipe manufactured before 1984, and Aldyl A service pipe attached to steel main pipe, to the forecast reliability of newer plastic and steel main pipe. Results of the forecast modeling, for the pipe classes evaluated, are shown in the graph below in Figure 1. (See also, Exhibit No.___(DFK-3), p.23)

Figure 1. The expected failure rates for several classes of pipe in Avista's system, as forecast by Availability Workbench Modeling. The "Steel" curve is obscured by the "Newer Polyethylene" curve, both of which are essentially flat lines.



Q. Can you please put the reliability modeling results for the Aldyl A piping into perspective?

A. Yes. First, the expected failure rates for the Aldyl A piping begin to rise rapidly after 40 to 70 years in service, and they are all significantly greater than the rates for steel and newer polyethylene piping. And, since the weighted average age for Aldyl A pipe in Avista's system is already 32 years, the model suggests that within 10 to 30 years from now, annual failure rates for these materials could reach 1 percent.

Q. What would be the significance of Aldyl A material failures occurring at one percent annually?

A. Using the pre-1984 Aldyl A main pipe in Washington State as an example, a one-percent failure rate translates to about 350 leaks per year. To put that failure rate into perspective, the 113 Aldyl A leaks Avista documented in Washington over the past five years equals an average of 22.6 leaks per year, two of which resulted in injury and property incidents,

and dozens more that were categorized as hazardous leaks[4], timely repaired. The critical point in this analysis is the understanding that failures in buried natural gas piping can be prudently managed only when they are occurring at very low rates. Otherwise new leaks in the system occur too frequently to be detected by even annual leak surveys of the entire system, resulting in an increase in the likelihood of hazardous leaks and the potential for harmful incidents.

Q. Would you forecast Aldyl A piping to have increasing rates of failure?

A. Yes. Every pipeline operator strives to install and maintain a safe, reliable and cost-effective system. While the goal is complete system integrity, it is impossible to avoid having any leaks, especially on large systems such as Avista's, with over 12,000 miles of mains and several hundred thousand services. While leaks are inherent, however, there are circumstances where the expected failure rate of a pipe material reaches a point where that piping can no longer be prudently managed. The reliability modeling demonstrates that such is the case for portions of the Aldyl A pipe in Avista's system, and accordingly, we have determined these classes to be at-risk of quickly approaching a level of reliability that is unacceptable and in need of remediation. It's for this reason that Avista refers to these pipe classes as "Priority Aldyl A piping".

Q. Specifically, what are the classifications of Aldyl A pipe that Avista is managing as "Priority Aldyl A"?

A. Avista's priority Aldyl A piping includes:

1. Aldyl A gas services tapped to steel main pipe – remediation of the Aldyl A service pipe at the point of attachment to the steel 'tee'.

[4] The Pipeline and Hazardous Materials Safety Administration defines a "hazardous leak" as an unintentional release of gas that represents an existing or probable hazard to persons or property and requires immediate repair or continuous action until the conditions are no longer hazardous.

2. Aldyl A main pipe manufactured before 1973 (pre-1973 Aldyl A).
3. Aldyl A main pipe manufactured before 1984 (pre-1984 Aldyl A).

Avista's system contains approximately 730 miles of Aldyl A main pipe (pre-1973 and pre-1984) and 16,000 Aldyl A services tapped to steel mains. Under the protocol, the priority main pipe will be removed from service and replaced over the course of the program, and the 'point of connection' between the polyethylene service piping and the tees on steel main will be replaced. Avista believes the decision to formulate a management program for its priority Aldyl A pipe is both timely and prudent, and is consistent with results of our leak investigations, the principles of Distribution Integrity Management, the prior federal bulletins on this subject, and with decisions of similarly-situated utilities that have implemented similar pipe-replacement programs. Finally, given the significant amounts of priority Aldyl A pipe on Avista's system, commencing a pipe-replacement protocol now provides us with greater opportunity to manage this process in an efficient and prudent manner.

Q. Why has Avista chosen not to replace its Aldyl A service pipe at the same time as its mains?

A. Small-diameter (less than 1¼ inches) Aldyl A "service" piping is often treated or managed differently than larger-diameter Aldyl A pipe of the same vintage because it has been shown to be more resistant to cracking due to its greater flexibility. Consistent with this characteristic, Avista has not documented any trends in the failure of its Aldyl A service piping, to date, apart from cracking at the connection with the tee on steel main pipe. Consequently, Avista is proposing to manage its Aldyl A service pipe "in place" and to employ its Distribution Integrity Management Plan to carefully track and analyze future leaks occurring in Aldyl A

service piping, to document any potential changes in its reliability that might warrant a different approach.

Q. What determines how quickly Avista will replace its priority Aldyl A piping?

A. Determining the appropriate length of time over which to replace the Priority Aldyl A pipe involves the optimization of many factors. The goal to ensure the program shields our customers from unnecessary risk, while at the same time protecting them from the burden of unnecessary costs.

Q. Why did the Company elect to carry this pipeline replacement program out over 20 years?

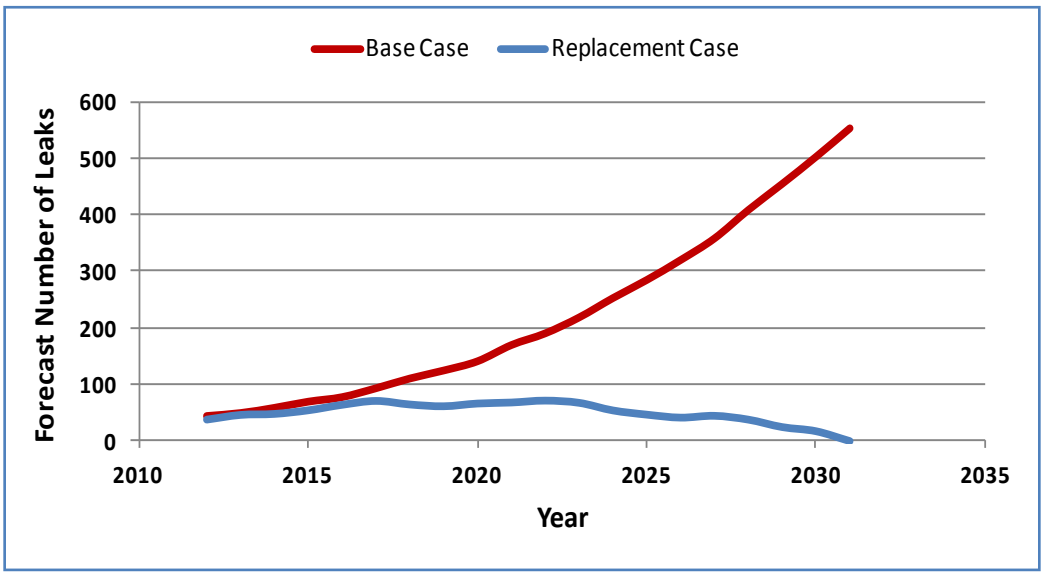
A. Avista modeled various time horizons for the replacement program, up to a timeline of 30 years, and determined a replacement horizon in the range of twenty years to represent an optimum timeframe for removing and replacing its priority Aldyl A pipe. Shortening the timeline was found to have increasing cost impacts on customers but with little improvement in the numbers of expected Aldyl A failures. Lengthening the timeline past twenty years, however, was found to result in a substantial increase in the number of expected material failures. A replacement timeline of 25 years, for example, resulted in more than a doubling of the number of leaks expected when compared with the 20 year horizon.

Q. What happens to the number of expected leaks, compared with today, under a twenty-year replacement program?

A. Under the 20 year program, the number of material failures each year is expected to increase slightly until 2017, at which time the cumulative effect of piping being replaced since

2012 begins to offset the failure count and then drive it toward zero over the remaining course of the program. The forecast results are shown below in Figure 2.

Figure 2. Expected numbers of material failures in Avista's priority Aldyl A piping in two cases: Replacement Case - piping replaced over a twenty year horizon in the manner proposed by Avista in this report, and Base Case – assumed that priority piping was not remediated under any program.



By employing the new Distribution Integrity Management Plan to prioritize where on the system the Aldyl A pipe is replaced first, Avista will be able to manage the forecast leaks in a way that significantly reduces their potential occurrence in areas that could result in harm. By removing and replacing Aldyl A pipe in a prioritized fashion, Avista believes it can prudently manage the expected number of leaks, with the goal to avoid harmful incidents, and at a reasonable rate impact for our customers.

Q. What is the principle behind the prioritization process?

A. As stated above, the goal of prioritization is to minimize the potential for leaks in areas where they could pose harm. By way of illustration, a leak occurring in a vacant field will pose little, if any, hazard until it is detected and repaired. By contrast, a leak in the proximity of neighborhoods or businesses has a much greater potential for hazard. Avista's Distribution Integrity Management Plan provides the software and information necessary to focus priority on replacement of Aldyl A pipe that has both a high probability of leaking, and is located in populated areas.

Q. What are the steps in the prioritization process?

A. In prioritizing pipe for replacement, segments of Aldyl A pipe in Avista's system are first assigned a relative risk ranking under the protocols of Distribution Integrity Management. This ranking is based on factors such as pipe age, material, soil conditions, construction methods, and maintenance and leak history. This information is then added to Avista's database containing geographic maps of the gas system. The result is an inventory of the risk-related information associated with the Aldyl A pipe, at every geographic location in the system.

Next, the software uses historic leak-survey data and the risk information associated with the segments of Aldyl A pipe, to predict those pipe segments in the system where numbers of failures are expected to be the greatest in the coming year.

In the final step, the software integrates the results for expected pipe failures with information that characterizes the potential consequence of a leak for every pipe segment (i.e. the proximity to buildings and people, and the population density/sensitivity of those structures).

The result is a visual portrayal of those areas on the gas system where both the potential likelihood of a leak, and the potential consequence of a leak, is greatest. This approach provides Avista with a comprehensive and objective means of identifying Aldyl A pipe that has the highest priority for removal and replacement.

Q. How does Avista determine the sequence of work among projects with the same or similar priority rankings?

A. A key factor lies in how the prioritized pipe is geographically distributed in Avista's system. While there are limited portions of the natural gas system that are composed predominantly of priority Aldyl A main pipe, which has been prioritized for replacement, it's much more common for the prioritized pipe to occur in small, disparate and non-contiguous portions of the system. This is especially true for Aldyl A services tapped to steel main pipe. The complex patterns of distribution of different pipe materials throughout the system, including priority Aldyl A, are a function of the timing of when Avista's natural gas mains were extended, when new services were ultimately installed to homes along the mains, and what materials were being purchased at those times, or were already in the existing pipe inventory. The actual distribution of priority Aldyl A pipe that has been prioritized for replacement has a direct bearing on how readily those portions of the piping can be grouped into an effective replacement project. The result is that more priority pipe can be removed and replaced, for a given amount of effort, in an area where that pipe is more predominant, compared with an area where the prioritized segments are small and widely distributed across an area. This is one of the ways Avista determines the order of projects across the system that have the same or similar priority rankings. Some of the additional factors considered in project sequencing, include the length of

the construction season, permitting requirements, the availability of crews and equipment and how the labor and equipment resources for a project compliment those needed for other gas work in an area.

Q. Could the 20-year replacement time change as the work proceeds?

A. Yes. The current proposal for a 20-year replacement program represents an optimization based on the information we have available today. Any number of factors could change, as the work proceeds over the first few years and could result in a 'new' optimum time horizon. Avista will be collecting new leak survey and other information each year, and will continue to use its Asset Management models to further refine expected trends and potential consequences, making program adjustments as appropriate.

Q. How does Avista plan to accomplish this work?

A. This project represents a major undertaking, even when spread over a 20-year horizon. Each year, the deployment of equipment and inspection and construction personnel will have to be adjusted across our three-State service area in response to the sites identified for highest-priority pipe replacement in any given year. Avista is planning to coordinate with contractors to complete much of the physical construction, and since this project represents a long-term commitment, it is expected that the pool of contractors bidding for this work will be substantial. We expect this interest and activity to result in advantageous pricing and flexibility of field labor. There will also be a need to increase Avista's internal staffing to manage the flow of information, quality assurance, mapping, and related project documentation. Finally, the pipe replacement activities themselves will often have disruptive effects on our customers and others.

Avista will carefully coordinate customer and community communications and notifications in an effort to minimize the effects of any disruptions.

Q What are the expected capital costs associated with this program?

A. Avista's analysis and planning effort is projecting capital costs of approximately $10 million annually, across all its natural gas jurisdictions, from 2013 – 2032. Actual costs will vary somewhat depending on the prioritization of piping to be replaced each year, among other factors. In addition, the calculated amounts will also be subject to annual inflation. For its Washington jurisdiction, Avista is planning to invest approximately $3.5 million ($5 million system) in capital on this program in 2012, and $4.25 million ($8.25 million system) in 2013, allowing for effective planning with contractors, hiring Avista staff, and developing a solid project management foundation for the duration of the program. In addition, there is also approximately $2.5 million in capital included in the Company's 2011 test period.

V. SMART GRID INITIATIVES

Q. Please provide an overview of the Company's Smart Grid projects.

A. Avista is investing in grid modernization or "Smart Grid" technology with the aid of three federal grants promoting the development of grid modernization applications. These grants provide the Company the opportunity to accelerate its investment in grid modernization training and grid improvement. The following is a discussion of the programs.

The five year, $20 million Smart Grid Investment Grant (SGIG) covers investment in the Spokane area grid improvement project. This project includes upgrades to 59 circuits, and 14 substations, that serve 110,000 electric customers. Avista, itself is contributing $22 million to

this project to automate the system. This $42 million project will enable Avista to remotely control and operate the distribution system through a series of wireless controls and fiber communication between switches, reclosers, capacitor banks, and voltage regulators.

Avista is also a partner in the regional Smart Grid Demonstration Project (SGDP). Avista is using an $18.9 million government grant to employ grid modernization technology in Pullman, Washington, as part of the Pacific Northwest Smart Grid Demonstration Project. Avista is contributing $15.7 million to the Pullman project and other partners are contributing an additional $4.0 million. The partners are Itron, Hewlett Packard, Washington State University, and Spirae[5]. This project encompasses thirteen circuits, three substations, and includes the same network automation provided in the Spokane project. In addition to distribution automation, the project, however, involves replacement of 13,000 electric and 5,000 natural gas meters with digital meters equipped with two-way wireless communication. It will also involve a customer pilot program that will provide customers in-home energy consumption data, establish and test regional demand response signals and help the utility understand customer experience, satisfaction, and program participation.

[5] Itron is a leading provider of energy and water resource management solutions for nearly 8,000 utilities around the world. They offer end-to-end solutions that include electricity, natural gas, water and thermal energy measurement and control technology; communications systems; software; and professional services.

Hewlett Packard (HP) is a technology company that operates in more than 170 countries around the world. They provide infrastructure and business offerings that span from handheld devices to some of the world's most powerful supercomputer installations.

Washington State University (WSU) conducts transformational research and provides world-class education to more than 26,000 undergraduate, graduate, and professional students in Pullman, Washington.

Spirae is dedicated to incorporating renewable and distributed energy into the power grid. The Spirae team includes many of the world's foremost authorities on power grid modeling and simulation, control system engineering, wind power and distributed energy.

Avista is partnering with several utilities and colleges in the region to develop a smart grid work force training program over the next three years. Avista received $1.3 million of a $5 million DOE grant for this aspect of the project. Over the three year project period (2010-2013), Avista plans to:

- Upgrade the Jack Stewart Training Center with a substation and distribution training facility for smart grid technology;
- Update Avista training programs for apprentices, journeymen and pre-line school students to incorporate smart grid technology; and
- Develop several online curriculum offerings to be shared by utilities and colleges in Washington, Oregon, Idaho, Montana and Utah.

Avista has a commitment to ensuring its highly-skilled workforce continues to be prepared to operate and maintain our energy delivery system as technology changes. A focus on workforce training for the future provides our employees with up-to-date knowledge and skills, so that we can meet our customers' energy needs reliably and responsibly, now and in the future.

Q. Can you please provide the current progress on the Spokane Smart Circuit and Pullman Demonstration projects?

A. Yes. The Spokane Smart Circuit project is in the third year of construction. Avista personnel have completed the installation of 380 line devices and 29 miles of primary conductor. This work took over 200,000 lineman hours and was completed with no safety incidents. Substation crews have completed upgrading 10 of the 14 substations in the project. The work in 2012 will complete the substation construction and will focus on the integration of the new intelligent devices into the control system.

Once construction is completed, the project will enter a reporting phase to the Department of Energy (DOE). Reporting through a smart grid data clearing house will identify smart grid impacts that will help DOE assess program effectiveness.

The photo below shows the configuration of an S&C[6] Scadamate. S&C's Scadamate is one of the intelligent switches that Avista has used in the Smart Grid Investment Grant project. These devices are able to provide real time power system information to the control software and are remotely operable (photo taken in 2011):

The Pullman Smart Grid Demonstration Project is in its second year of construction. Avista personnel have completed the installation of 65 line devices and 1.5 miles of primary conductor. In addition, contractor crews have installed approximately 13,000 digital electric meters and 5,000 natural gas "Encoder Receiver Transmitters" (ERT's) to Pullman customers. Substation crews have completed upgrading all three substations in the project. The work in

[6] S&C Electric Company is a global provider of equipment and services for electric power systems. The company designs and manufactures switching and protection products for electric power transmission and distribution.

2012 will focus on the installation and integration of new intelligent transformers, line devices, and substation controls into the control system.

The Company plans to rollout a web portal in the second quarter of 2012 that will allow 6500 targeted customers in Pullman access to their energy data. The remaining 6500 customers will not be offered the web portal as a part of a control group, in an effort to achieve valid customer statistics around web portal effectiveness. These control and target groups have been selected randomly. Additionally, by the fourth quarter of 2012, a subgroup of up to 1500 volunteer customers will receive advanced thermostats that can provide in-home, near real-time (5 minute), energy consumption feedback.

The project will enter a demonstration phase that will begin in January 2013 and end in January 2015. Reporting in the final six months of 2014 will help with program assessment in the areas of system efficiencies, transactive control signal, reliability and customer behavior.

Q. What are the expected benefits to modernizing Avista's grid?

A. Smart grid technology is designed to improve the power grid's reliability and performance by optimizing the push and pull from supply and demand. Electricity generators, suppliers and consumers are all part of the equation and need to understand the value they receive from these investments. Ultimately, these projects will move the region and nation closer to establishing a more efficient and effective electricity infrastructure that's expected to help contain costs, reduce emissions, incorporate more wind power and other types of renewable energy, increase power grid reliability, and provide greater flexibility for consumers. The following are among the associated benefits and efficiencies:

- **Reliability:** Currently, like most utilities, Avista receives notification of an outage by receipt of a customer call or from a substation breaker alarm. Dispatchers are unable to identify affected outage areas without these alarms and customer calls. After notification, additional time is required by field personnel to determine the cause and extent of the outage. Operational engineers use the field information to develop switching plans to reroute power and restore customers. Servicemen and line crews are dispatched to manually operate line devices to implement the plans. The two smart grid projects (SGIG and SGDP) leverage a new Distribution Management System (DMS) that can use real time load and fault information supplied by intelligent field devices to identify the disrupted sections of a line. Automated isolation and two-phases of restoration are initiated when a fault results in a circuit breaker operation and subsequent lock-out. The two phases of restoration are completed first, in an operation upstream of the fault, followed by an operation downstream of the fault that is executed either manually or automatically. This described fault isolation and restoration can occur without customer notification, field crew validation or manual field operation of line devices. Once the faulted sections have been isolated, dispatchers can work on identifying repair requirements with operational crews. The result is a substantial reduction in customer outage minutes experienced.

- **Energy Efficiency:** Avista is increasing system efficiency by actively managing reactive power flows and reducing voltage regulator settings on its distribution circuits. Historically, Avista has regulated voltage on a circuit with a voltage regulator on each phase. These voltage regulators are set every few years or once a low voltage complaint is received. For reactive power compensation, Avista has traditionally used fixed capacitor banks to help manage the Volt-Ampere Reactive (VAR) flows. Circuits with large motor loads could have a switchable bank to help manage the large varying reactive load. The DMS will implement a voltage optimization scheme that can use switchable capacitor banks to manage VAR flows in a real-time manner. As these capacitors are turned on through the course of the day, the DMS will monitor the voltage levels on the

circuit and use the voltage regulators to keep the voltage at the required voltage level. This lower voltage will help consumer appliances run at an optimal efficiency level. By managing the reactive power flows, Avista's feeder losses will be lower as well, resulting in more efficient operations.

- **Operational Efficiency:** The SGIG and SGDP projects also provide for operational efficiencies to be realized. The ability to remotely operate devices reduces the need for field personnel to physically drive to and subsequently operate a field device. Field devices constantly provide detailed electrical measurements that can be leveraged by personnel to enhance the planning of new or the maintenance or replacement of existing facilities. Device status and condition are also provided by field devices which make it possible to implement condition-based maintenance programs. Weather events sometimes warrant modification of the protection schemes that employ fuses. Remote capability is now included to alter these schemes when appropriate. Advanced Meter Infrastructure (AMI) meters installed as a part of SGDP provide the ability to connect/reconnect customers. This capability results in quicker customer connects and reconnects, less field visits by electric serviceman, reduced vehicle miles, and enhanced employee safety. AMI meters also allow for real-time assessment of power outages. Avista receives a fair number of power outage calls from customers that, upon a visit by a serviceman, are determined to be tripped circuit breakers within the home and not an Avista power outage. This situation can be detected and the resolution provided to the customer over the phone. For Avista power outage scenarios, AMI meters provide notification as well as confirmation of power outage situations. During large weather events, power outage knowledge at an individual meter allows for quick assessment of service outage problems once the larger circuit issues are resolved, resulting in reduced efforts required by linemen, servicemen and assessment personnel. Finally, AMI meters, in combination with smart transformers, provide for an understanding of customer power quality, energy diversion and service efficiency.

- **Interoperability:** One of the most important aspects of Avista's Smart Circuit deployment is the approach of interoperability. Outside of the DMS, one of the core enabling technologies of smart grid technologies is the communication network. Done correctly, this network can support multiple applications throughout the life of the infrastructure. Avista's goal is to install communication devices and software that allow products to be integrated from a spectrum of vendors. Once the wireless network is deployed in Spokane, the intent is that future applications could use the infrastructure without having to deploy a second or third network along with the current network management. Avista is using Tropos Networks® wireless radio network to communicate to intelligent end devices and to Itron Openway® meter collectors. It was also important that the DMS and device controller installed be vendor neutral. That way, the system could integrate the best available technology. Not only do the communications need to be neutral, the DMS needs the ability to enable multiple applications, for example; automatic restoration, active power flow management, distributed energy resources and other applications. In order to accomplish the smart grid goals Avista concluded that a centralized DMS that could utilize the existing Outage Management System feeder topology model would be the most effective approach. The DMS would have to be able to convert existing database information and integrate with the Outage Management System in order to ensure an up-to-date, real-time operational model. Avista is installing Efecac's Advanced Control System as the DMS.

- **New Standards:** The devices that are being used for the projects needed to be field tested to validate the installation plan. Line crews and engineers ordered test devices and then set them up at the Company's training facility. Each of the devices were installed and then the designers and construction crews discussed the logistics of the work. A key result of testing was that it can be more efficient to "kit" certain components of the devices prior to field installation. That way, when the time comes to install the device in the field, the line crews do not have to spend time in the field assembling them. In addition to the "kitting," the line operations group had a training manual assembled that

went over the details of the installation of the equipment. The manual uses images and standards drawings to help the line crews effectively install these new devices. The crews were introduced to the manual in a half-day training session where they could ask questions of the design and test staff.

- **Network Topology:** Outside of the construction design and implementation, another philosophical change is around network design and topology. Traditionally, Avista would have associated each of the devices with a substation field network. With the implementation of the automation application, field devices will change which substation they are associated with regularly. Therefore, it no longer makes sense to associate field devices with a particular substation; they need to network and communicate regardless of which substation they are initially installed on.

- **New Resources:** Implementing a distribution automation system will impact multiple business areas. One of the biggest impacts to distribution dispatch staff is that they will now have access to remotely controlled devices and will need to interact with an automated system. Traditionally, the SCADA group and system operators were the staff that had to manage these sorts of systems. Additionally cyber security has required new talent to handle the expansion of traditional network architecture in the field. Avista has been working on Critical Infrastructure Protection (CIP) compliance issues for years and has growing experience managing security from that transmission/SCADA perspective. In order to manage security requirements for the new system, personnel must have both traditional network expertise and also an understanding of SCADA and transmission operations security. Avista chose to focus on strong corporate infrastructure technology skills and provide training on the operational technology. Avista also needed to develop new policies and procedures and train workers on the new system. In order to leverage existing knowledge, Avista partnered with SAIC[7] to develop a long-term strategy for securing both the internal and external systems. The third business area impacted is

[7] SAIC is a platform-independent provider of scientific, engineering and systems integration services.

construction. Each of the traditional areas of construction now has technologies that overlap the traditional areas of work.

As discussed above, smart grid deployments require collaboration across many lines of business. Early on in the smart grid projects, Avista created a steering group with senior leadership from each of the business areas impacted by the projects. This group is updated weekly on project status and issues so they can help the project management group resolve issues around budget, resources and technical issues. Keeping leaders informed helps assist with timely decision-making, which in turn reduces risk to implementing the project. In addition, the utility has communicated regularly with internal stakeholders, community members and state regulatory staff.

Q. What type of communication has the Company done with its customers, as it relates to the Spokane and Pullman projects?

A. The Company has been committed to customer outreach and engagement in an effort to build awareness and understanding of Smart Grid facts, costs and benefits. Securing customer acceptance of smart grid technologies and energy awareness will depend on education and outreach to Avista customers. Avista is committed to a coordinated, comprehensive education effort, in easy-to-understand terms, to help customers with the following:

- Understand the elements and benefits of the Smart Grid; and
- Understand how to take advantage of the new technology to manage energy use more efficiently.
- Provide advanced notice of activities, such as new meter change out and roll-out of the advanced meter web-portal.

As of March 2012, there have been several news release announcements regarding Avista's participation in smart grid. In addition, there are overviews and frequently asked questions of each Smart Grid project on www.avistautilities.com, with links to other Smart Grid reference sites. The Company has also included feature articles on its Smart Grid Projects in the customer newsletter "Connections"; hosted customer meetings to provide an introduction to smart grid technology; and included updates about Smart Grid Projects through its social media channels.

Direct communication with Pullman customers regarding the Smart Grid Demonstration Project includes periodic project updates via letters, small group meetings and local news coverage of the project. During the deployment of advanced meters in 2011, the Company sent a letter in advance of installation to explain the meter exchange process and what to expect. Door hangers were also created to notify customers of the advanced meter installation.

The Company also developed case studies about the advanced meter installation which were posted on the website and used as handouts at various customer meetings. A survey was conducted following meter installation to assess customers' awareness of meter exchange communication and level of satisfaction with the advanced meter installation process. Seventy-one percent (71%) of the customers surveyed recall receiving a letter in the mail prior to the installation. Nearly three quarters of the survey respondents said they were 'very satisfied' with the installation process. As smart grid communications are developed, they are sent to a customer advisory group for review and input prior to production and distribution to all Pullman customers.

Q. Are there energy savings associated with the modernization of Avista's grid? If so, how will the Company evaluate, measure and verify the energy savings?

A. Yes. Targets for distribution energy efficiency capture first year energy savings consistent with the end-use energy efficiency protocols used in the Company's Biennial Conservation Plan (BCP)[8]. Conservation Voltage Reduction (CVR) makes up 83 percent of the loss savings. Avista will capture the first year energy savings entirely in the year when the assets are placed in service. The Evaluation, Measurement and Verification (EM&V) process will focus on the 12-month period extending forward from the date assets are placed in service. For compliance purposes, Avista will have third-party verified values calculated using applicable parts of the Regional Technical Forum's (RTF) Automated CVR Protocol No. 1, Voltage Optimization Protocol, or any other protocol recognized by the RTF for purposes of meeting its targets established in the BCP. Avista has also engaged Washington State University to provide a recommended approach to EM&V through an in-depth analysis of available and/or potential methodologies.

Q. What capital costs are associated with the Smart Grid projects?

A. The capital costs associated with the Smart Grid projects included in the Company's 2011 test period are approximately $11 million. In addition, approximately $13 million in capital will be spent in 2012 related to the Spokane, Pullman and Workforce Training projects and approximately $1.5 million in capital related to the Pullman and Workforce Training projects will be spent in 2013.

[8] Biennial Conservation Target Plan as per RCW 19.285.040 and WAC 480-109-010, filed with and approved by the UTC in Docket No. UE-111882, Order No. 01.

VI. CUSTOMER SERVICE INFORMATION SYSTEM REPLACEMENT

Q. Please summarize Avista's plans regarding its Customer Information System?

A. Avista's legacy customer information system (CIS) has served the Company and our customers well for over 20 years. Integrating commercial, off-the-shelf software and other internally developed systems into the CIS over time has fortified the technology foundation that helped Avista receive national awards and consistently high customer-satisfaction ratings.

When Avista's CIS platform was developed 20 years ago, however, there were no smart phones or iPads. Home computers were uncommon and customers did not expect to be involved in energy choices. Just as we are upgrading our transmission and distribution system and investing in smart grid technology, we need to now invest in a new CIS system that can interface with these new systems and technologies, and investing in a new CIS system is part of Avista's strategy to invest wisely in technology. The new CIS system will be a standard industry application, and be less costly to manage and upgrade in the future.

Replacing Avista's CIS system is a significant decision that will impact all aspects of the Company's operations. Linking into the CIS system are many current Company systems. These include billing, outage management, work and asset management, automated phone system, construction design, enterprise business intelligence, supply chain and financial systems. Also linking into CIS system are electric and natural gas meter applications, and the *avistautilities.com* website for managing customer transactions.

Another example of operation support is Avista's investments in developing a smarter grid. To achieve these objectives, Avista's CIS system may include the ability to accommodate not only smart grid technology, but also may incorporate:

- Automated meter information;
- Energy efficiency programs
- Real-time billing;
- On-bill financing;
- Automated notifications based on customer preferences;
- Customer relationship management capabilities; and
- Multi-channel, self-service options.

Q. Has the Company selected a vendor for this project?

A. No. The four-year, multi-million dollar project will occur in three phases, the Procurement phase, the Installation phase, and the Stabilization phase. We are currently in the Procurement phase, with a goal of selecting our vendors within the next couple months. We will begin the Installation phase in July of 2012, and are anticipating it will take 20-24 months to complete the full implementation.

Q. Are there any costs associated with the CIS replacement in this request?

A. There are no capital costs associated with the replacement project included in this case, however, there are approximately $895,000 of expenses related to labor costs and professional services contracts included in the 2011 test year.

The Company is committed to moving forward with replacing its aging CIS system with an off-the shelf application that will allow for the most cost-effective implementation. This will provide the Company with industry-standard software and a solution that will keep pace with

Avista's evolving energy business. The replacement will eliminate the challenges of maintaining an out-of-date customized system.

VII. COST CONTROL AND EFFICIENCY EFFORTS

Q. What actions or specific measures has the Company undertaken to control costs and mitigate the requested rate increase?

A. We continue to pay particular attention to limiting the growth in our costs, while meeting important reliability and environmental compliance requirements, and preserving a high level of customer satisfaction.

As Mr. Morris explained in his testimony, in 2010, the Company enlisted the help of Booz & Company to work with us on what we refer to as Performance Excellence. They brought with them industry knowledge, expertise and a phased-approach. Phase 1 involved assessing and identifying Avista's top opportunities to better align our resources so we can run our business more efficiently, and be better prepared to meet customers' future needs for energy and energy information. Through this initial assessment phase we discovered that many of our processes were already efficient, but the outside, third-party, best practices perspectives brought in by Booz & Company has provided us the opportunity to identify areas where we can fine-tune our practices and further mitigate increased costs to our customers. In Phase 2 we are designing processes to capture these opportunities. One example of these opportunities is within our Fleet Department. Fleet utilization is really focused on ensuring that we have the right mix of vehicles at the right place and the right time. It is the Company's goal to reduce fleet by five percent over the next three years (sixty vehicles). To date, we have turned in 25 vehicles that were not

replaced.

Another example is in our Supply Chain. We spend hundreds of millions of dollars every year on goods and services, everything from poles and pipes, trucks and transformers or software and services (professional, technical and construction). By changing our buying strategies, we could achieve significant savings each year. By focusing on standardization and specifications that provide the best fit and function at a reasonable cost, we make certain that we buy the right materials to do a job. Rigorous processes allow us to use the optimal buying strategy for each area of spend. When it makes sense to buy in bulk, we can take advantage of lower costs. Think Costco! It's more cost effective to buy two jars of peanut butter at Costco, compared to one jar at 7-Eleven. You pay a premium for convenience. The same is true for the materials and services we buy to run our business. At home, if you save money on one item, you can allocate those savings toward something else. That's also true for our business. The money we save by changing what we buy, how we buy it and who we buy it from will be used to pay for projects that we might not otherwise be able to fund. This will become more important as we invest in smart technology and other equipment to meet our future business needs.

The measures listed below are among some of the other actions we have taken to mitigate the impact of increased costs on our customers:

1. **Mobile Dispatch – Electric.** In December 2010, the implementation of wireless laptop computers with mobile maps (Mobile Dispatch) was deployed to approximately one-half of Avista electric servicemen. Mobile dispatch was previously implemented in June 2006 to all Avista natural gas servicemen. Mobile Dispatch automatically dispatches work orders to Avista servicemen throughout the day through wireless technology to laptop computers mounted in Avista service trucks. Prior to Mobile Dispatch, orders were created in Avista's work management system and printed at the local construction offices. Employees in each office would sort, assign and dispatch (via phone, pager, fax or in person) orders each morning.

The field employees would work with the orders and call in the completed work periodically throughout the day or simply turn-in the stack of completed orders at the end of the day. The completed orders were manually completed by employees who entered the information regarding the order back into the work management system. The paper processes made it difficult to track the status of individual orders and fieldworkers throughout each day. It was also very difficult for the dispatchers to keep up with the volume of paper being sent out each morning, changes to the orders that occurred during the day, and completed orders returned at the end of the shift.

Mobile Dispatch has automated the order creation, modification and completion process. With the new technology, orders are created in the work management system and are automatically dispatched to the correct field worker based on the order's Latitude/Longitude position and the person assigned to work orders in that area. Once a field employee has been identified, the order is sent through wireless technology to the laptop computer mounted in Avista's service truck. The order is then reviewed by the employee for specific information needed to complete the work. The order status is transmitted back to the dispatch center, as the employee indicates they are en route, on-site, and/or have completed the work. The completed order is transmitted back to the work management system where it is closed automatically. Dispatchers have complete information for each order and a field employee's status. They have the ability to manage and redistribute work by simply dragging and dropping orders from one field employee to another. The orders instantly move from the originally-assigned laptop to the newly-assigned laptop.

2. **ARCOS automated crew call-out.** In November of 2009, Avista replaced its semi-automated process of calling gas and electric servicemen into work for after-hours emergencies with a web-based system called ARCOS. Faster calls, e-mail, texting and paging functionality with real-time employee availability and crew tracking are a few of the key features of the new system. The result has been a significant reduction in the time it takes a dispatcher to call field personnel, allowing more time to assess and analyze outages and trouble orders.

3. **Keyhole Technology.** This process helps us cost-effectively expose underground pipes to perform some of our natural gas repair and maintenance work without cutting into and excavating concrete. Keyhole technology allows the Company to work on underground facilities through an 18 inch-diameter hole in a street's pavement. When the job is done, the street is restored by putting the pavement core back into place with no waste from asphalt mixing. Cost reductions also come from eliminating the need for a backhoe and asphalt hot-patch crew or replacing concrete.

4. **Remote Installation/Removal of Hot Line Holds.** A Hot Line Hold (HLH) is a temporary relay setting that a feeder breaker/recloser is placed into whenever utility personnel are working on or in the proximity of energized power lines. This setting prevents the normal reclosing of breakers so that in the event of contact with the wire,

the device will open and remain de-energized. The application of the setting has traditionally been a physical/manual push button operation of a switch at the station breaker along with the physical tagging for notification and identification purposes. Historically, Avista has utilized the Distribution SCADA system and a device within our substations called the 43H switch to remove the Hot Line Hold upon completion of work done by crews out in the field. Field personnel would then be required to travel to the substation to remove the tag from the breaker. The Company's new procedure allows Avista to return the breaker to normal operation in a timely manner through updated software and hardware that allows the work to be done by a dispatcher located at the Avista main office.

5. **Wild Life Guards.** Avista has installed wildlife guards, targeting 60 feeders most affected by wildlife as part of the Company's Wood Pole Management program. This project has reduced the number of squirrel related outages across the system by 350 events annually and has provided approximately $386,000 in avoided outage benefits over the past three years.

6. **The Natural Gas Periodic Meter Change (PMC) Program.** Current rules require utilities to change out between 2- 4% of its meters each year to measure for billing accuracy. This process requires a serviceman to remove an existing meter, installed at a premise, and then bring it to be tested by the Company's meter shop. In order to be more efficient, with this new program, each time a serviceman responds to a service call, they evaluate the potential for the customers meter to be replaced and thereby eliminating a special trip to remove a customer's meter. This program has saved approximately $385,000 over the past two years.

Q. What other cost-management measures has the Company undertaken?

A. Avista's efforts to control its costs have not been prompted solely by the most recent downturn in the economy. We have continually revisited our costs and operating practices over time in order to mitigate price increases for our customers. Other measures we have taken include the following:

1. Avista approved a lower capital budget than was requested by the Company's Engineering and Operations personnel. The original capital projects request for approval in 2012 consisted of projects totaling over $269 million. The Capital Prioritization Committee reduced the list of recommended projects by $19 million to the $250 million capital budget approved by the Board. In addition, the Company

prioritized O & M facility maintenance and improvement projects and removed projects that could be delayed without safety or operational concerns.

2. Retirees are now picking up the full premium increases on the health insurance coverage. A few years ago retirees under age 65 were paying 10% of the health insurance premiums and now they pay 50% on average.

3. The Defined Benefit Pension Plan's benefit formulas were reduced (approximately 23%) for all non-union new hires effective January 1, 2006 and forward, and all new union hires effective January 1, 2011.

4. Avista continues to operate under a hiring restriction which requires approval by the Chairman, CEO and President, President of the Utility, CFO, and Sr. VP for Human Resources for all replacement or new hire positions.

5. The Company has increased shift coverage company-wide for natural gas and electric servicemen for after (normal) hours calls. This provides for more prompt call response at lower cost (straight time versus overtime).

These programs are examples of the extensive efforts by Avista to identify and implement efficiency measures and/or productivity improvements while continuing to provide quality service to customers.

Q. What improvements have been made in the area of customer service?

A. Avista also has a number of ongoing process improvement measures related to customer service that have provided savings and efficiencies as described below.

1. Avista's Customer Service Analyst Team constantly challenges themselves to find ways to improve the business without compromising customer satisfaction. Initiatives such as automated address corrections[9] prior to bill printing and automated address returns with the US Postal Service, reviewing collection notice parameters, implementing e-mail management processes, improving system response time, designing a comprehensive screen view, e-bill promotions and other miscellaneous improvements resulted in over $1 million of productivity savings from 2004-2011. Examples included within the $1 million in savings include options that give customers more choices such as:

a. E-bill – 86,501 customers enrolled – Savings $.46 per bill per month.

[9] This process validates address formats for conformance with USPS regulations and makes corrections to avoid the cost associated with address corrections.

b. Web payment process – reduced company cost from $.80 to $.10 per transaction – 60,000 transactions per month.

2. **Enterprise Voice Portal (EVP) System**. In mid-2009, Avista implemented its new EVP System. The new EVP system replaced the Company's old Integrated Voice Response (IVR) system, installed in 1997, which was no longer being supported by the vendor. The new EVP system handled 708,000 customer calls in 2011 (approximate offset of 36 Full Time Equivalent employees). This was 46.1% of the total inbound calls into Avista. The new EVP system has several new features that will increase customer self service capabilities and improve customer satisfaction, including the ability to generate customized, automated outbound calling campaigns. In 2011, over 30,000 customers were contacted using this automated system, with messages ranging from planned maintenance that may interrupt their electrical service, to important information about their account - reducing the need for more expensive customer contact options, such as mailed postcards, door to door visits, or manual calling by customer service employees. The avoided labor savings from the IVR/EVP system from 1998 through 2011 represents a total cumulative savings of approximately $23 million.

3. **Construction workbench**. On-line tool installed September 2010. This tool is aimed primarily at contractors and developers to request new or updated Avista services online. It automatically creates and sends job tickets to an Avista service worker's Blackberry or Smartphone. A Contractor can initiate a construction order on-line any time allowing them additional flexibility in scheduling and avoiding the requirement to contact the Customer Service Design technician during normal business hours.

4. **Energy conservation and efficiency improvements at Avista Facilities.** The Company actively practices energy conservation and efficiency in our buildings and facilities. The focus of these efforts is to reduce energy consumption and manage energy costs while providing comfort to building occupants. In 2010, Avista began benchmarking facility energy use to continuously improve performance. Over the last few years Avista has made great strides to improve energy efficiency and reduce annual energy usage in own facilities through a number of different projects. Some of these projects include:

   - Lighting retrofit projects in a number of areas to reduce kWh usage and take advantage of more efficient lighting fixtures;
   - Replacing aging HVAC systems to improve energy efficiency and take advantage of the controls that new technology offers;
   - Upgrading to high efficiency windows providing better insulation and helping to reduce heat gain in the summer months.
   - Reconstruction of office space to meet Leadership in Energy and Environmental Design (LEED) standards.

VIII. CUSTOMER SUPPORT PROGRAMS

Q. What customer support programs does Avista provide for its customers in Washington.

A. Avista Utilities offers a number of programs for its Washington customers, such as the Low-Income Rate Assistance Program (LIRAP), energy efficiency programs, Project Share for emergency assistance to customers, a Customer Assistance Referral and Evaluation Service (CARES) program, senior programs, level pay plans, and payment arrangements. Through these programs the Company works to build lasting ways to ease the burden of energy costs for customers that have the greatest need.

To assist our customers' in their ability to pay, the Company focuses on actions and programs in four primary areas: 1) advocacy for and support of energy assistance programs providing direct financial assistance; 2) low income and senior outreach programs; 3) energy efficiency and energy conservation education; and 4) support of community programs that increase customers' ability to pay basic costs of living.

Q. What is the Company's Low Income Rate Assistance Program, or LIRAP?

A. The Low-Income Rate Assistance Program, proposed by the Company and approved by the Washington Commission in 2001, collected approximately $6.3 million (natural gas and electric combined) during the last full program year (May 2010 – September 2011) through electric and natural gas tariff surcharges on Schedules 91 and 191 in Washington. These funds are distributed by community action agencies in a manner similar to the Federal and State-sponsored Low Income Home Energy Assistance Program (LIHEAP). The purpose of the

LIRAP program is to reduce the energy cost burden among those customers least able to pay energy bills.

In the 2010/2011 heating season 37,624 Washington customers received approximately $12 million in various forms of energy assistance (Federal LIHEAP program, LIRAP, Project Share, and local community funds).

Q. Is the Company proposing any structural changes to LIRAP?

A. The Company is not proposing to make modifications to LIRAP at this time. However, the Company is cognizant that, while the funding from the LIRAP surcharge is distributed to qualifying customers through direct bill assistance (i.e., grants), there are some stakeholders who believe that the funding from LIRAP should be used to fund a low income discount rate. PacifiCorp currently offers such a discount rate in Washington, while Puget Sound Energy operates their low-income rate assistance program in a manner similar to that of Avista.

Q. Why didn't the Company propose the change from direct bill assistance to a rate discount in this docket?

A. The Company believes that the issue of the administration of low-income rate assistance should be addressed in a broader, state-wide context, with all of the affected parties – the Commission, utilities, low-income advocates, etc. – having a forum to discuss their ideas and proposals. To do so on a utility-by-utility basis seemingly would be inefficient and may not lead to the best results given that most of the issues for the utilities are similar. In short, Avista feels that any such low-income rate assistance discussions should be conducted through Commission directed workshops.

Q. Please describe the recent results of the Company's Project Share efforts?

A. Project Share is a community-funded program Avista sponsors to provide one-time emergency support to families in the Company's region. Avista customers and shareholders help support the fund with voluntary contributions that are distributed through local community action agencies to customers in need. Grants are available to those in need without regard to their heating source. As of December 2011, Avista Utilities' customers donated $302,505 on a system-wide basis, of which $183,393 was directed to Washington Community Action Agencies. In addition, the Company contributed $138,200 to Project Share for the benefit of Washington customers in 2011.

Q. What other bill-assistance programs does the Company offer?

A. In an effort to assist and educate customers about options such as Comfort Level Billing, and Payment Arrangements, we developed a campaign encouraging customers to learn about and enroll in the various bill assistance options available to them. This campaign was launched in March 2009 in both Washington and Idaho. It explained how Comfort Level Billing helps smooth out the seasonal highs and lows of customers' energy usage and provides the customer the option to pay the same bill amount each month of the year. This allows customers to more easily budget for energy bills and avoid higher winter bills. This program has been well-received by participating customers. Roughly 47,967 or 18%, of Washington electric and natural gas customers are on Comfort Level Billing.

In addition, the Company's Contact Center Representatives work with customers to set up payment arrangements to pay energy bills, and choose a preferred due date. In 2011, 59,600 Washington customers were provided with over 124,607 such payment arrangements.

Q. Please summarize Avista's CARES program.

A. In Washington, Avista is currently working with over 3,199 special needs customers in the CARES program. Specially-trained representatives provide referrals to area agencies and churches for customers with special needs for help with housing, utilities, medical assistance, etc. One of the benefits we have in utilizing CARES representatives is the ability to evaluate each customer, based on their specific need and to educate them on what assistance is available within the community that meets those individual needs. A goal of the program is to enable customers to manage not only their Avista bill, but other bills and needs as well.

Q. Does the Company have other programs to serve its customers?

A. Yes. The following are examples of outreach programs that are available to customers:

1. **Low-Income Work Bench**: The "Avista Energy Assistant" is a web-based, self-service tool which enables Community Action Agencies (CAA) to access usage history and credit and collection information needed to qualify customers for energy assistance grants. The Avista Energy Assistant was designed in partnership with local Community Action Agencies and was successfully deployed in the fall of 2009. Both the CAAs and Avista benefit from this new program. The CAAs no longer have to call Avista for the information needed to help our customers. With the customer's permission, they are able to access the information they need, as well as, enter a grant promise on the customer's Avista account. In many cases, the CAAs are able to stop collection activity by entering the grant promise, serving our customers in a timely manner and saving CAAs the time of calling the Company. The CAAs have all reported positive feedback regarding Avista's Energy Assistant.

2. **Gatekeepers Program:** Avista has implemented the Gatekeepers Program, a program that trains field personnel to be aware of signs that a customer may be having difficulty with daily living tasks (e.g. paper or mail not collected). The CARES representatives conduct training of company-wide field personnel who come into contact with residential customers on a regular basis. In the event employees identify a customer having difficulty, the employee is asked to notify the CARES representatives who would contact appropriate community resources for assistance.

3. **Senior Energy Outreach:** Avista has developed specific strategic outreach efforts to reach our more vulnerable and fixed income customers (seniors and disabled customers) with bill paying assistance and energy efficiency information that emphasizes comfort and safety.

4. **Senior Publications:** Avista has created a one-page advertisement that has been placed in senior resource directories and targeted senior publications to reach seniors with information about energy efficiency, Comfort Level Billing, Avista CARES and energy assistance. A brochure with the same information has also been created for distribution through senior meal delivery programs and other senior home-care programs.

5. **Senior Energy Workshops:** With the help of additional workshop presenters, 31 Senior Energy Workshops were held during the 2010/2011 heating season. Over 1500 seniors were reached and were given Senior Energy Efficiency kits along with learning about low-cost/no-cost ways to reduce energy use. Each kit contains energy-saving items such as compact fluorescent light bulbs, plastic window covering, draft stoppers for exterior light switches and outlets, v-seal for drafty doors and a polar fleece lap blanket. The Company approaches talking with seniors about reducing their energy use very respectfully and carefully to assure health, safety and comfort. We discuss lifestyle changes that could be made and steps to take before turning the thermostat up, and not keeping the thermostat too low.

6. **Every Little Bit House:** In partnership with KREM television, fifteen and thirty second vignettes were developed that cover low-cost and no-cost ways to save energy at home. The goal of the vignettes is to help limited income seniors and other vulnerable populations with their energy bills by providing home energy conservation education. The vignettes provide helpful energy conservation tips, information on community resources and ways for customers to manage their energy bills.

7. **Energy Fairs:** In 2011, Avista initiated and hosted three Energy Fairs – one in Spokane, Washington, one in Clarkston, Washington and another one in Coeur d'Alene, Idaho. The fairs provided information and demonstrations on energy assistance, energy efficiency and home weatherization to limited income families and senior citizens. Nearly 900 people attended the three fairs. The Energy Fairs provide an environment for customers to learn about billing options and energy assistance, while offering them tips and tools to use to help manage their limited financial resources.

Q. How does the Company plan to help mitigate this proposed rate increase to its most vulnerable customers?

A. Avista is committed to reducing the burden of energy prices for our customers most affected by rising energy prices, including low income individuals and families, seniors, disabled and vulnerable customers. The Company proposes to increase the Low-Income Rate Assistance program funding for electric and natural gas service by a percentage amount equal to the percentage base rate increase granted in this case for residential customers. The additional funding would be provided through the DSM tariff rider, Schedules 91 and 191. Avista is also committed to working with Commission Staff and interested parties to address the cost-effectiveness of low-income weatherization programs.

Q. Please provide a brief overview of Avista's approach to Demand Side Management (DSM).

A. Avista is in its 35th year of providing energy efficiency services. The Company's approach to energy efficiency is based on two key principles. The first is to pursue all cost-effective kilowatt-hours and therms by offering financial incentives for most energy saving measures with a simple financial payback of over one year and up to thirteen years. The second key principle is to use the most effective "mechanism" to deliver energy efficiency services to customers. These mechanisms are varied and include 1) prescriptive programs (or "standard offers" such as high efficiency appliance rebates); 2) site-specific or "customized" analyses at customer premises; 3) "market transformational," or regional efforts with other utilities through the Northwest Energy Efficiency Alliance (NEEA); 4) low-income weatherization services

through local Community Action Agencies; 5) low-cost/no-cost advice through a multi-channel communication effort; and 6) support for cost-effective appliance standards and building codes.

The Company's offerings include over 300 measures that are packaged into over 30 programs for customer convenience. As part of Avista's Integrated Resource Planning (IRP) efforts, over 3,000 measures are considered and then examined for cost-effectiveness. The Company's comprehensive energy efficiency outreach, the "Every Little Bit" communications campaign, continues to inform customers of the availability of these services.

Q. Has the Company requested the review of energy efficiency costs in this filing?

A. No. Per Order No. 05 in Docket Nos. UE-110876 and UG-110877 (consolidated), review of the prudence and cost-effectiveness of expenditures for 2010 and 2011 will take place outside of this general rate case.

Q. Can you please describe how the Company measures customer satisfaction, and how important it is to Avista?

A. Yes, our customer satisfaction is very important to Avista. We measure satisfaction by doing a quarterly survey we refer to as "Voice of the Customer" (VOC). The purpose of the VOC Survey is to measure and track customer satisfaction for Avista Utilities' "contact" customers – customers who have contact with Avista through the Call Center and/or work performed through an Avista construction office.

Customers are asked to rate the importance of several key service attributes. They are then asked to rate Avista's performance with respect to the same attributes (time for connection to a representative, representative being courteous and friendly, representative being

knowledgeable, being informed of job status, leaving property in condition found, etc.) Customers are also asked to rate their satisfaction with the overall service received from Avista Utilities. Customer verbatim comments are also captured and recorded.

Our most recent fourth quarter 2011 customer survey results show an overall customer satisfaction rating of 95% in our Washington, Idaho, and Oregon operating divisions. This rating reflects a positive experience for customers who have contacted Avista related to the customer service they received.

Q. Does this conclude your pre-filed direct testimony?

A. Yes.