DAVID J. MEYER
VICE PRESIDENT, GENERAL COUNSEL, REGULATORY &
GOVERNMENTAL AFFAIRS
AVISTA CORPORATION
P.O. BOX 3727
1411 EAST MISSION AVENUE
SPOKANE, WASHINGTON 99220-3727
TELEPHONE: (509) 495-4316
FACSIMILE: (509) 495-8851

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION OF AVISTA CORPORATION FOR THE AUTHORITY TO INCREASE ITS RATES AND CHARGES FOR ELECTRIC AND NATURAL GAS SERVICE TO ELECTRIC AND NATURAL GAS CUSTOMERS IN THE STATE OF IDAHO	CASE NO. AVU-E-08-01 CASE NO. AVU-G-08-01 DIRECT TESTIMONY OF GREG A. PAULSON

FOR AVISTA CORPORATION

(ELECTRIC AND NATURAL GAS)

I. INTRODUCTION

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

A. My name is Greg A. Paulson and I am employed as the Manager of Customer Service, Analytics and Technology, for Avista Utilities, at 1411 East Mission Avenue, Spokane, Washington.

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

A. I am a 1991 graduate of Montana State University with a degree in Mechanical Engineering. I completed Washington State University's Project Management Certificate program in 2007. I joined the Company in 2004. In the past 4 years I have performed duties as a Metering Automation Engineer and project manager for the Company's Idaho Advanced Meter Reading (AMR) project. I have recently accepted the position of Manager of Customer Service.

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

A. My testimony will describe implementation of AMR for Avista's customers in the State of Idaho. The Company requests recovery of capital expenditures related to the deployment of AMR in Idaho. Per Commission Order No. 30229, I will address the status of the current AMR program, cost

recovery proposal, time of use capability and demand response.

Q. Are you sponsoring any exhibits in this proceeding?

A. Yes. I am sponsoring Exhibit No. 12, Schedules 1 and 2, which were prepared under my direction.

Q. Please provide a list of acronyms/definitions that pertain to the verbiage contained within this testimony.

A. The following is a list of acronyms and their definitions contained within this testimony:

AMR - Advanced Meter Reading - The components necessary to read a meter remotely using technology to retrieve meter-reading data through a handheld device, a mobile collection system, or a one-way communication network.

AMI - Advanced Metering Infrastructure - Industry terminology to better reflect the transition from AMR to systems with expanded capabilities of two-way communication networks. AMI systems measure, collect, and analyze energy usage information from advanced metering devices through various communication media. The infrastructure includes hardware, software, communications equipment, customer associated systems and data management software.

Mobile Collection System - Mobile Wireless Unit used to collect consumption readings from electric and natural gas meters.

Manual Meter-Reading System - The software package and handheld equipment that facilitates a manual meter reading process. This consists of the handheld devices that are used to collect the existing meter-reading data and the software to feed the information to the Customer Service System.

PLC - Power-Line-Carrier - A system by which communications are transmitted and received over distribution level power lines.

Radio-Based Technology - A system by which communications are transmitted and received via radio frequencies.

TWACS™ - Two-Way Automated Communication System - The AMR system Avista installed in lower electric meter density areas of our service territory. The system uses power-line-carrier technology to communicate with the meter.

II. BACKGROUND

Q. What was the Company's proposal for AMR in its last general rate proceeding?

A. In 2004, in the Company's last general rate case filed with the Idaho Public Utilities Commission (IPUC), Case Nos. AVU-E-04-01 and AVU-G-04-01, the Company proposed to install AMR devices on all Idaho electric and natural gas meters over a four-year period commencing January 2005. The project included the installation of additional electronics for existing meters as well as other communication infrastructure, and finally computer hardware and software investment.

Due primarily to the multi-year nature of this project, the Company proposed to treat the AMR investment costs in the following manner: All capital investment would follow Avista's standard capitalization policy and would be capitalized to a regulatory asset, FERC account

182, and remain there until the entire AMR project became operational, or used and useful. At completion, the project would be placed into the appropriate FERC plant accounts, depreciation would begin and the investment would receive appropriate rate base treatment in regulatory filings.

In the IPUC's Order No. 29602, in Case Nos. AVU-E-04-01 and AVU-G-04-01, dated October 8, 2004, at page 51, the Commission supported the Company's plans to install AMR and authorized the Company-requested deferral accounting treatment requested by the Company for its related investment.

III. PROJECT SUMMARY

Q. What is the current status of the Company's AMR in Idaho?

A. In 2005, the Company began a four-year project to convert all natural gas and electric meters to AMR in the State of Idaho. As of this filing, nearly 180,000 natural gas and electric meters have been automated. Over 139,000 natural gas and electric meters were automated using radio-based technology and 40,000 were automated utilizing power line carrier (PLC) technology. Currently, approximately 27,000 electric and natural gas meters utilizing radio-based technology are read automatically by a radio-based

network and 112,000 are read through a mobile collection system. Of the 112,000 meters that are being read on the mobile collection system, all electric and the majority of the natural gas meters will be converted to a radio-based network in 2008. There are a small number of natural gas meters that reside in areas where Avista does not have electric service or reside in the PLC areas that will continue to be read by the mobile collection system. Electric meters on the PLC system are read automatically, and do not require a meter reader or mobile unit to collect the meter reading. Exhibit No. 12, Schedule 1 is a map of the Company's Idaho AMR installations.

Q. Please explain how the mobile collection system works.

A. The mobile collection system works by having a meter reader drive an automobile equipped with a wireless mobile collection system that gathers consumption data from radio-based meters. A mobile collection system can gather up to 10,000 reads per day in dense areas. In contrast, traditional meter reading would typically read between 500 - 700 meters per day in this same area. Although the mobile collection system does not provide interval data, it does offer the benefits of increased operational efficiencies and enhanced employee safety.

Q. Please describe the Company's meter deployment of AMR in Idaho.

A. Prior to beginning the deployment of the Idaho AMR project the Company solicited a competitive bid for contract installations of electric and gas meters. Tru-Check was the successful bidder, and had previously been awarded the installation contract for an AMR project that the Company conducted in its Oregon service territory. Tru-Check was responsible for installation of more than 95% of the meters associated with the project. Meters with special requirements such as commercial and three phase meters were handled by the Company. Tru-Check provided onsite project managers and hired installers from the local areas. Installers were put through extensive training and then were evaluated through Tru-Check's quality assurance plan. Tru-Check provided a service to handle any claims made by customers during the installation process. To date only one commission complaint was received associated with the project that installed over 180,000 meters.

Q. How did you communicate the meter change with customers?

A. A comprehensive communication plan was developed internally and shared with the IPUC Staff for review prior to implementation.

Q. Please summarize the Company's perspective on AMR and AMI.

A. As the Company has progressed with its four-year deployment of AMR in our Idaho service territory, there have been many advances in the AMR industry, as well as increased interest in Advanced Metering Infrastructure (AMI)[1] from utilities across the nation. Many large utilities across the nation are deploying pilot AMI systems and working on proposals for large scale deployment of AMI systems. There are a number of utilities that are still focused on deployment of AMR systems because of the value proposition represented by AMR systems. AMI systems tend to be more capital intensive and the corresponding benefits of these systems are continuing to develop. In conjunction with the focus on AMI systems, the functionality of AMR systems continue to be enhanced and offer additional functionality. An example is the progression from a drive-by reading system to a network system that provides the

[1] ***Definition of Advanced Metering Infrastructure (as defined by Utility AMI group)***
An advanced metering infrastructure is a comprehensive, integrated collection of devices, networks, computer systems, protocols and organizational processes dedicated to distributing highly accurate information about customer electricity and / or gas usage throughout the power utility and back to the customers themselves. Such an infrastructure is considered "advanced" because it not only gathers customer data automatically but does so securely, reliably, and in a timely fashion while adhering to published, open standards and permitting simple, automated upgrading and expansion. A well-deployed advanced metering infrastructure enables a variety of utility applications to be performed more accurately and efficiently including time-differentiated tariffs, demand response, outage detection, theft detection, network optimization, and market operations.

means to read the meters more frequently than once per month.

Q. What technology or type of AMR devices did the Company install for its electric meter system?

A. The Company utilized a combination of AMR technologies in its Idaho service territory commonly known as a "hybrid" AMR system. We installed radio-based technology in areas with higher meter densities, and a PLC based technology in areas with lower densities. We continue to use telephone-based technologies for selected industrial accounts. A number of factors determined where each technology was utilized including geography, distribution configuration, installation costs and the presence of natural gas. All electric meter technologies have the capability to provide hourly or more frequent interval data. Meters utilizing a radio-based technology were initially read monthly through a mobile device. In selected areas (Sandpoint and Moscow) we have installed a fixed radio communication network to fully evaluate the network technology and the future uses of the interval data available from the system. The Company will continue the deployment of this fixed radio communication network in the remaining areas of Idaho currently being read by the mobile collection system in 2008 with the exception of a small number of natural gas meters as mentioned previously. The

PLC electric meters that were installed are also capable of providing interval data and are also being evaluated for future uses of the interval data.

Q. What technology or type of AMR devices did the Company install for its natural gas meter system?

A. The Company installed radio-based technology on all natural gas meters and they are being read monthly by a mobile device. Since natural gas meter installations are inherently different than electric meter installations, some options available for electric meters were not economically viable or applicable for natural gas meters. This is particularly true in rural areas where it would require the deployment of two separate technologies. By installing radio-based endpoints and reading the meters by a mobile device, the identified savings in meter reading expenses can be realized. Where practical, natural gas meters will be read by the fixed radio communication network.

Q. What other AMR systems did the Company review prior to selecting the deployed technology?

A. Prior to the initiation of the Idaho AMR project, Avista had evaluated several advanced metering systems. Avista had installed over 74,000 radio and 350 PLC based AMR devices throughout Washington, Oregon and California including 1,700 within the State of Idaho. Our supplier

for radio-based equipment had been Itron, based in Liberty Lake, Washington. We had utilized Hunt Technologies for PLC based technology.

Due to the past performance of the Itron radio-based equipment and the ability of their systems to be deployed in a drive-by environment that could later be converted to a fixed radio-based network, their equipment was selected for the higher meter density areas of our service territory. For the lower meter density areas of our service territory we evaluated PLC technology and selected Aclara's TWACS™ system.

IV. AMR FUNCTIONS AND BENEFITS

Q. Describe the benefits that were realized by the Company and its customers due to the implementation of AMR.

A. From 1995 to 2003, meter reading expenses in Idaho increased an average of 4.8% each year. In addition to direct meter reading savings compared to manual meter reading, this technology provides the foundation for later adoption of retail electric energy pricing that may vary by hour of the day or day of the week. This type of pricing can ultimately be used to provide customers economic incentives to curtail usage during critical energy periods. The electric meter equipment Avista installed will provide interval metering data, as well as indications of tampering