

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-08 _____

DOCKET NO. UG-08 _____

EXHIBIT NO. ____ (DFK-2)

DON F. KOPCZYNSKI

REPRESENTING AVISTA CORPORATION

1 **SYSTEMS IMPROVEMENTS & EFFICIENCIES**

2 Avista Utilities is continually evaluating potential system improvements and efficiency
3 measures. The Company has undertaken a number of improvements and efficiency initiatives
4 throughout our utility that are focused on either increasing customer service and satisfaction, or
5 reducing costs to the company. Detailed below are examples of these programs:

- 6 A. Integrated Voice Response (IVR)
7 B. Outage Management
8 C. Mobile Dispatch
9 D. Web Redesign
10 E. Every Little Bit Energy Efficiency Campaign
11 F. Bill Print and Mail Outsourcing
12 G. Transmission and Distribution System Efficiencies
13 H. Design Locates
14 I. Regional Infrastructure Efficiency Plan
15 J. Craft Training
16 K. Asset Management
17

18 **A. Interactive Voice Response System (IVR)** - Avista's Interactive Voice Response
19 System (IVR) has been in service since November 1997. Currently, nearly 40% of customer
20 calls are handled by the IVR for self-service, which includes outage reporting and messaging,
21 accepting payments, making payment arrangements, hearing account information and other
22 information such as pay station, and heating assistance locations. In 2007, the IVR was updated
23 to allow customers to use the system to conduct other business, such as electronic payments
24 (over 115,346 in 2007) and obtaining account balances (over 118,534 in 2007) and payment
25 arrangements (over 75,416 in 2007).

26 Four years ago, Nortel (manufacturer of Avista's IVR) announced the end of the
27 operating system. Therefore, the technology is now obsolete and new functionality will be
28 difficult or impossible to add to the current platform. The hardware was over 10 years old as of

1 November 2007. Avista needs to refresh this technology as a way to guarantee the continued
2 ability for customers to self-serve. New functionality includes the ability for customers to sign
3 up for Comfort Level Billing (CLB) and Automated Payment Service (APS) along with
4 Restoration Call Backs to customers.

5 The Company is collaborating with Intervoice, a leading IVR manufacturer on a new
6 platform that will offer customers additional functionality as the current IVR, and will use Voice
7 Recognition as the main interface between customers and machine. Touch-tone entry will still
8 be available, however. The new IVR system is currently scheduled to be available for customers
9 by the third quarter of 2008. The budget for the IVR project is approximately \$1.7 million
10 (system), and is included in our rate request. This system will continue to allow us to have fewer
11 customer service representatives on staff, which results in lower labor costs. These lower labor
12 costs are reflected in the 2007 test period.

13 **B. Outage Management** - Avista's Outage Management System, completed in
14 December, 2004, is an application utilizing the Company's Geographic Information System (GIS
15 mapping system). It allows Avista's distribution facilities to be linked to individual customer
16 service points in a computer based model. The connectivity within the model allows for
17 predictive analysis tools to determine outage areas, affected system devices and customers
18 experiencing an outage. This system substantially reduced the time necessary to restore service
19 to customers during the December 2006 wind storm, resulting in better customer satisfaction,
20 less overtime for crews, and better coordination of restoration efforts across the Company's
21 service territory.

22 Customers can report outages quickly by calling Avista's contact center or speaking to
23 the Company's IVR. All customer calls are plotted in the GIS mapping system and tied to

1 outage incidents, dramatically reducing the chance they would be missed or forgotten.
2 Prediction of the probable outage device allows all commonly affected customers to be
3 associated with an incident tied to the outage device, dramatically reducing the number of
4 incidents that must be managed by the dispatcher. Quick identification of affected customers
5 reduces outage time.

6 Customer outages are quickly identified geographically through the GIS mapping system.
7 Crews and other resources can be assigned and managed at the incident level and can be
8 dispatched directly to the problem, reducing the outage time. Accurate outage data is collected
9 for all incidents providing feedback to improve reliability. Outage statistics such as CAIDI and
10 SAIFI are gathered in real time to indicate the severity of major events and assist in resource
11 planning. The system is also capable of handling customer callbacks to validate restoration has
12 been successful.

13 Avista's GIS system forms the data foundation of the outage management application.
14 The GIS establishes a network model of the electric distribution system which mimics the near
15 real-time status of the actual distribution network. All switching actions are represented as soon
16 as the field switching is complete to maintain currency and accuracy.

17 A design application called the Construction Design Tool (CDT) was installed in 2007.
18 This application allows semi-automated designs and eliminates some field travel by designers.
19 This system relies on unit assemblies and their associated costs to create design scenarios for
20 selection by the designer optimizing the use of standard materials; increasing customer
21 satisfaction, reducing design and permitting time and increasing system effectiveness and
22 utilization saving time in each design.

1 The GIS model provides the data necessary to analyze system characteristics for system
2 planning studies which dictate how system modifications will proceed. Planning models are now
3 able to represent current system configurations whereas in the past it would be easy for the
4 models to become badly out-of-date, due to the large manual effort required to keep them
5 current. System planners and engineers now spend the majority of their time planning instead of
6 managing paper maps and re-creating computer models.

7 The GIS is tightly integrated with Avista's Customer and Work Management systems to
8 providing a clear understanding of where customers receive our products, how much product the
9 customer uses and what type of facility exists or is required to deliver our product. Day-today
10 maintenance and operating activities rely heavily on the GIS for current system configuration
11 and utilization.

12 The Mobile Dispatch implementation relies on the GIS system to provide accurate
13 representations of existing facility and land features. Facility and customer information is
14 provided for routing and facility identification. Documentation is provided by automated
15 updating of the GIS model from the field which eliminates back office labor for map updates and
16 insures currency of the data.

17 Finally, the very sophisticated GIS connectivity model gives Avista a distinct advantage
18 by providing the necessary foundation for the deployment of SmartGRID technologies in the
19 near or long term future.

20 C. Mobile Dispatch - In June 2006, the implementation of wireless laptop
21 computers with mobile maps (Mobile Dispatch) was deployed to all Avista gas servicemen.
22 Mobile Dispatch automatically dispatches work orders to Avista servicemen throughout the day
23 through wireless technology to laptop computers mounted in Avista service trucks. Prior to

1 Mobile Dispatch, orders were created in Avista's work management system and printed at the
2 local construction offices. Employees in each office would sort, assign and dispatch (via phone,
3 pager, fax or in person) orders each morning. The field employees would work with the orders
4 and call in the completed work periodically throughout the day or simply turn-in the stack of
5 completed orders at the end of the day. The completed orders were manually completed by
6 employees who entered the information regarding the order back into the work management
7 system.

8 The paper processes made it nearly impossible to track the status of individual orders and
9 fieldworkers throughout each day. It was also very difficult for the Dispatchers to keep up with
10 the volume of paper being sent out each morning, changes to the orders that occurred during the
11 day, and completed orders returned at the end of the shift.

12 Mobile Dispatch has automated the order creation, modification and completion process.
13 With the new technology, orders are created in the work management system and are
14 automatically dispatched to the correct field worker based on the order's Latitude/Longitude
15 position and the person assigned to work orders in that area. Once a field employee has been
16 identified, the order is sent through wireless technology to the laptop computer mounted in
17 Avista's service truck. The order is then reviewed by the employee for specific information
18 needed to complete the work. The order status is transmitted back to the dispatch center, as the
19 employee indicates they are en route, on-site, and/or have completed the work. The completed
20 order is transmitted back to the work management system where it is closed automatically.

21 Dispatchers have complete information for each order and a field employee's status.
22 They have the ability to manage and redistribute work by simply dragging and dropping orders

1 from one field employee to another. The orders instantly move from the originally-assigned
2 laptop to the newly-assigned laptop.

3 The Company has proformed into this case \$140,000 in annual savings associated with
4 the reduction in employees as further described by Company witness Ms. Andrews.

5 **D. Web Site Redesign** - Web Redesign was a project launched in July 2005 to
6 rebuild the Avista Utilities website. This project included visual design and user interface,
7 customer transaction automation and technology platform reliability/scalability/flexibility. The
8 Company's primary goal is to achieve a 10% reduction in the call center's total call volume
9 while increasing customer satisfaction. Avista transformed the website to provide meaningful
10 and timely information with powerful self-service tools that will help customers make informed
11 energy management choices. Official rollout of the redesigned website was in January 2008 at a
12 total cost of \$2.9 million. These costs have been included in the Company's 2008 capital
13 expenditures pro formed in this case.

14 **E. Every Little Bit Energy Efficiency Campaign** - The Company understands that
15 rising energy costs have put added pressure on customers. With this in mind, Avista is
16 committed to increasing customer and community awareness about wise energy use. Promoting
17 the wise and efficient use of energy resources has taken on added importance locally, nationally
18 and globally, and it is our goal to build customer awareness around energy usage, energy
19 efficiency practices, and to direct them to the resources and tools we have available to assist
20 them. To ensure we did this appropriately, Avista conducted a baseline research study to
21 determine how we could best affect customer usage habits.

22 Armed with this data, Avista created the "Every Little Bit" campaign. We were able to
23 show customers that "every little bit" does add up and can make a difference in their energy

1 usage. We focused this initial campaign on low-cost and no-cost measures, with information on
2 rebates and energy efficiency. The initial campaign, launched in September 2007 is the
3 beginning of a long-term effort aimed at making customers more efficient in their use of energy.
4 This project is funded under the Company's DSM tariff rider.

5 **F. Bill Print and Mail Service Outsource** - Avista's bill printing and mail services
6 were outsourced to Regulus, the second largest first class mailer in the United States. The project
7 objectives were to move bill printing, inserting and mailing offsite and to leverage core
8 competencies of the provider. It will also serve to promote disaster recovery, ensure daily print
9 volume flexibility and scalability, reduce costs for bill print, inserting and mailing, and serve to
10 maximize technology.

11 Avista's primary objective was to achieve disaster recovery. Avista needed a back-up
12 system to ensure day-to-day business operations. Furthermore, customers expect to receive their
13 billing statements in a timely manner in order to avoid delayed payments, unintended collections
14 and shut-offs. Through a third-party provider, Avista has available five alternative printing sites
15 and at each site there are redundant systems for equipment breakdowns. Avista has invested in
16 dedicated data lines to both the primary print site in Napa, CA, and to the alternative site in
17 Charlotte, SC. In the event that those lines were not available, Avista would access lines vendors
18 other sites.

19 Avista has obtained USPS postage expertise to maximize its postage costs. Under the
20 Regulus contract, Avista expects to pay approximately 12 cents per piece. That is down from 17
21 cents under the former provider. The 12 cents per piece does not include the capital costs to
22 implement the project. Furthermore, the Vendor has USPS postal personnel onsite to ensure that
23 the mailings meet USPS requirements and can be delivered in the fastest means possible.

1 As part of the project, Avista redesigned its bills, letters and notices making them easier-
2 to-read and understand, thereby reducing call center call volumes. The bill also provides flexible
3 space for providing improved communications to customers.

4 **G. Transmission and Distribution System Efficiencies** - Avista is developing
5 innovative programs to locate and quantify energy losses across our transmission and distribution
6 system. The efficiencies programs will review the energy savings associated with a wide range
7 of system improvements from feeder balancing to conservation voltage reduction. The energy
8 savings associated with each program will be assembled into an energy portfolio identifying the
9 relative cost per kWh of savings. This portfolio will be used to prioritize projects in order to
10 focus improvements on programs with the greatest benefit.

11 Another consideration for the efficiencies programs is the development of an
12 implementation strategy which bundles efficiencies projects with operational programs. The
13 efficiencies program to replace older less efficient transformers with new more efficient
14 transformers may be bundled with the redesign or replacement of secondary districts since a
15 strong correlation exists between old transformers feeding large secondary districts. By
16 combining these two programs, Avista can accomplish the following two program goals: 1)
17 Coordinate crew time “touch the pole just once” and 2) Optimize energy savings.

18
19 Finally, as efficiencies programs are implemented, Avista is interested in accruing the
20 energy savings across its system. Consequently, Avista is establishing work processes and
21 information systems to track these savings when programs are implemented. For example, to
22 account for the energy savings from the replacement of an old vintage transformer with a new
23 transformer, the tracking system will capture the replacement date, the relative transformer

1 losses, and the load profile. By tracking the reduction in losses across our transmission and
2 distribution system, Avista can verify the life cycle cost benefit of the system improvement.

3 **H. Design Locates** - Avista is working through collaborative efforts with the City of
4 Spokane in a pilot program to coordinate design locates as part of the City's construction design
5 process. The goal of this pilot is to have utility locators provide locates for the Company's
6 existing facilities before the city projects are designed in order to avoid potentially costly facility
7 relocation. Cost savings will be measured throughout the construction year. The measurements
8 will be used to evaluate whether the process should be extended in conjunction with other
9 jurisdictions throughout the Avista service territory.

10 **I. Regional Infrastructure Efficiency Plan** - Spokane's Joint Utilities
11 Coordination Council was formed to bring together regional municipalities, utility companies,
12 telecommunication providers, sewer, water and railroad to coordinate construction activities on
13 an annual basis. Avista, in partnership with the City of Spokane, hosts this meeting every
14 February, just prior to the beginning of the construction project season. Municipalities and
15 utilities share their project plans and schedules so as to increase the coordination and mitigate the
16 risk of unknown projects. The Joint Utilities Coordination Council has resulted in greater
17 coordination and efficiencies across the entire Spokane region.

18 **J. Craft Training** - Craft training department has developed over 50 different on-
19 line training classes for our natural gas, electric and generation apprentice and qualification
20 programs. In 2007, the natural gas department alone was able to cut a full day from the annual
21 natural gas refresher training for 250 employees. The new learning network also gives us a
22 delivery and record keeping system that allows the Company to plan, schedule and document our
23 training programs and requirements.

1 **K. Asset Management Program** - Avista has assigned two full-time engineers to
2 the formal Asset Management program. These individuals are responsible for gathering
3 information, prioritizing work and executing efforts to best meet the Asset Management mission.
4 The engineers utilize a statistical Reliability Centered Maintenance (RCM) software package to
5 analyze data. This software allows detailed analysis of the impacts of increased or decreased
6 reliability based on system configuration and component reliability.