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IDANO PUELLO UTILITIES COMMUSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE APPLICATION) CASE NO. AVU-E-13-OqOF AVISTA CORPORATION FOR A) CASE NO. AVU-G-13-OPFINDING OF PRUDENCE FOR 2010-2012) EXPENDITURES ASSOCIATED WITH) PROVIDING ELECTRIC AND NATURAL GAS) DIRECT TESTIMONY ENERGY EFFICIENCY SERVICE IN THE) STATE OF IDAHO

OF CHRIS D. DRAKE

FOR AVISTA CORPORATION

))

(ELECTRIC AND NATURAL GAS)

1

I. INTRODUCTION

2 Q. Please state your name, employer and business 3 address.

4 My name is Chris Drake. I am employed by Avista Α. 5 Manager of Demand Side Management (DSM) Program as 6 business address is East Delivery. My 1411 Mission 7 Avenue, Spokane, Washington.

Q. Would you please describe your education and
9 business experience?

A. I graduated from Gonzaga University in 1992 with
a Bachelor of Arts degree in Communications. I completed
my Project Management certificate in 2005 from Washington
State University and Gonzaga University.

14 I joined the Company in 1996 in the Hydro Licensing 15 and Safety Department. In 1999 I accepted a program 16 coordinator position and later became a program manager within the Marketing Department in 2000. 17 After the 2001 18 energy crisis, I assumed responsibilities for the majority 19 of the residential portfolio that included prescriptive 20 rebate offerings and later became responsible for the Low 21 Income Weatherization program. I began my current position in August of 2010. I am responsible for design and
 implementation of in-house and third-party implemented
 program delivery which includes Avista's prescriptive
 residential and some commercial and industrial DSM program
 offerings.

6 Prior to joining Avista, I served as an Infantry 7 officer in the United States Army from 1992 until 1996, 8 finishing my service as the battalion logistics officer 9 deployed to Panama.

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

A. I will provide an overview of the Company's DSM program offerings available to Idaho customers in the 2010-2012 program years. I will also respond to the results from the third-party evaluation, measurement and verification (EM&V) memo specific to non-residential process evaluation.

18 Q. Are you sponsoring any exhibits to be introduced 19 in this proceeding?

20 A. Yes. I am sponsoring Exhibit No. 2, Schedules 1 21 and 2. Schedule 1 illustrates programs offered during

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2010-2012, along with program descriptions, eligibility 1 2 significant requirements, incentive amounts and 3 implementation changes made during this time period. Also 4 included in this schedule are total savings, costeffectiveness, non-energy benefits when applicable, net-5 6 to-gross values, discount rates, total expenditures by incentives and non-incentive utility cost, and a list of 7 8 measures with energy savings, and measure lives.¹ Schedule 9 2 is the Cadmus 2012 Process Evaluation Memorandum dated 10 August 2, 2013.

11

II. OVERVIEW

Q. Would you please provide a brief overview of
Avista's DSM programs?

14 Yes. Avista's core objective has historically Α. 15 been to provide customers with cost-effective energy 16 efficiency services. Avista is in its 35th year of doing 17 Avista's approach is to use the most effective so. 18 deliver energy efficiency "mechanism" to services to 19 customers. These mechanisms are varied and include: 1)

¹ Labor is included within non-incentive utility cost. DSM labor is charged at a multi-state and fuel level, rather than a program level, and allocated to the individual states. The "labor" distinction or coding is dropped during this allocation process. For purposes of Exhibit No. 2, Schedule 1, non-incentive utility cost expense is allocated based on an avoided cost.

1 prescriptive programs (or "standard offers" such as high 2 efficiency appliance rebates); 2) site-specific or 3 "customized" analyses at customer premises; 3) "market 4 transformational," or regional, efforts with other 5 utilities through NEEA; 4) low-income energy efficiency 6 services through local Community Action Agencies; 5) low-7 cost/no-cost advice through a multi-channel communication 8 effort; and 6) support for cost-effective appliance 9 standards and building codes. I will be describing all of 10 these program delivery mechanisms as they apply to 11 residential, nonresidential and low-income customers later 12 in my testimony.

Q. How does Avista make available its DSM program
offerings and educate customers about energy savings?

15 Avista continually provides opportunities for Α. 16 customers to learn about low cost/no cost ways to manage 17 their home and business energy usage. The "Every Little 18 Bit" Campaign has been the primary driver of this effort. 19 We also provide tips through the Avista Utilities website, 20 on billboards, as well as radio and television spots 21 throughout both the heating and cooling seasons. Α

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1 variety of tips are provided throughout the year to help 2 encourage efficient use of space heating and cooling, 3 appliances and electronics as well as linking to and 4 promoting related rebate opportunities as applicable. The 5 campaign is reinforced by website tools and information 6 including a comprehensive online Home Energy Analyzer 7 where customers can see a representation of how their 8 energy is being used and sign up for savings plans that 9 fit their lifestyles. Similar broad-based techniques are 10 used for both residential and nonresidential.

11 In addition, both residential and nonresidential 12 customers have access to direct outreach activities. 13 Avista offers energy fairs for residential customers, with 14 emphasis given to low-income customers. Direct outreach 15 for nonresidential customers is delivered through account 16 executives and efficiency engineers who provide on-site 17 information regarding energy savings opportunities and 18 available program information.

19

III. DSM PROGRAM OVERVIEW

20 Q. Please describe the <u>residential</u> DSM program and 21 offerings provided in 2010 through 2012.

The Company's residential portfolio provides a 1 Α. 2 variety of measures, through different delivery channels, 3 offering energy efficiency improvement opportunities to 4 Avista customers. The majority of the residential 5 portfolio is implemented through prescriptive rebates and 6 processed in-house by Avista. New construction and 7 existing residential homes (up to four-plex) that heat 8 with Avista electric or natural gas, select from a list of 9 energy efficiency measures with rebates for consideration 10 of installation in their homes. Customers must purchase 11 and install the equipment or qualifying energy efficiency 12 measure and submit а rebate application with the 13 appropriate documentation within 90 days of installation in order to receive an incentive. 14

15 In the 2010-2012 program years Avista offered the 16 following <u>residential</u> programs to Idaho electric and/or 17 natural gas customers noted in Illustration 1:

- 18
- 19
- 20
- 21

1 Illustration No. 1:

2	RESIDENTIAL
3	High Efficiency Furnace/Boiler
4	High Efficiency Heat Pump
5	Ductless Heat Pump
6	Air Conditioner Replacement
7	High Efficiency Variable Speed Motor
8	High Efficiency Tanked and Tankless Water Heater
9	Space Heat Conversion (Direct Use of Natural Gas)
10	Water Heat Conversion (Direct Use of Natural Gas)
11	Multifamily Natural Gas Market Transformation (Direct
12	Use of Natural Gas)
13	Ceiling, Attic, Floor, Wall Insulation
14	Window Replacement
15	Fireplace Damper
16	ENERGY STAR [®] Homes
17	ENERGY STAR [®] Appliances
18	CFL (and CFL Recycling) Promotions
19	"Second" Refrigerator/Freezer Recycling Program
20	Community Events and Workshops
21	Low-cost/no-cost information
22	On-line Home Energy Audits and Analysis
23	Simple Steps Smart Savings (CFLs and Showerheads)
24	CFL Direct Mail
25	
26	The residential programs shown above are primarily
27	standard offerings, otherwise known as prescriptive
28	programs.
29	Idaho residential customers also received Avista-
30	sponsored programs in the form of manufacturer buy-downs
31	for compact fluorescent lighting and low-flow showerhead
32	measures. These products have a lower retail price point

Drake, Di 7 Avista Corporation at the time of purchase and are usually part of a
 regional, multi-state program offering.

Q. Please describe the <u>nonresidential</u> DSM offerings
provided during this time.

5 Α. Within the nonresidential segment, programs are 6 offered to retail electric and natural gas customers 7 through a combination of prescriptive rebates and site 8 specific assessments. Prescriptive rebates are geared 9 toward relatively uniform measures, applications and 10 This delivery method energy savings. reduces 11 implementation expense while simplifying participation for both customers and trade allies. 12 The site specific 13 offerings are available for all other efficiency measures 14 situations, and applications. In these each energy 15 efficiency project is individually analyzed based on the measure being installed and considers other variables that 16 17 may be present in the building or in the process 18 operation.

19 below includes Illustration No. 2 a list of 20 nonresidential rebates available for electric and/or 21 natural gas customers in the 2010-2012 program years:

1 Illustration No. 2:

2	NONRESIDENTIAL (COMMERCIAL & INDUSTRIAL)
3	EnergySmart Grocer
4	Power Management for PC Networks
5	Premium Efficiency Motors
6	Food Service Equipment
7	Commercial HVAC Variable Frequency Drives
8	Retro-Commissioning
9	Commercial Clothes Washers
10	Vending Machine Controllers
11	Lighting and Controls
12	Green Motors Rewind Program
13	Commercial Natural Gas HVAC
14	Commercial Windows and Insulation
15	Standby Generator Block Heater
16	Demand Controlled Ventilation
17	Steam Trap Repair/Replacement
18	LEED Certification
19	Refrigerated Warehouse Program
20	Side Stream Filtration
21	LED Traffic Signals
22	Electric to Natural Gas Water Heater Conversion
23	Program
24	Site Specific Offerings in Various End Uses
25	

Avista offers site-specific incentives for commercial 26 and industrial customers for custom projects. The site-27 28 specific program provides incentives on cost-effective 29 commercial and industrial energy efficiency measures that 30 meet required simple payback and life measure requirements. This is implemented through on-site audits 31 and analyses, customized project evaluation, and dual fuel 32 33 incentive calculators for energy savings generated specific to the customer's premise or process ("project").
Incentives were offered for any measure that had greater
than a one-year and less than an eight-year simple payback
for lighting measures or less than a thirteen-year simple
payback for non-lighting measures.

Q. How does Avista address energy efficiency
programs for low-income customers?

8 The residential low-income program is comprised Α. 9 primarily of site-specific offerings delivered by local 10 Community Action Agencies (CAA) to benefit income-11 qualified, residential customers. Avista contracts with 12 agencies to utilize existing infrastructure currently in 13 place as a result of delivering the Federal Weatherization 14 Assistance and Low Income Home Energy Assistance Programs 15 (LIHEAP). The customer intake process includes potential 16 consideration of participation for energy assistance and other income-qualified programs that can also serve as 17 18 referrals for weatherization services.

19 Low-income efficiency measures are similar to 20 measures offered under the traditional residential 21 prescriptive programs.

1 The program targeted to low-income customers is 2 provided by the Community Action Partnership of Lewiston. The agency receives a set amount of funding each year to 3 make energy efficiency improvements to income-qualified 4 5 homes that are heated by Avista electric or natural gas services (natural gas funding for low- income programs was 6 suspended at the end of 2012). These improvements may 7 include upgrades to heating and water heating equipment, 8 9 ceiling, wall and floor insulation, replacement of windows, doors, and conversions from electric heating to 10 11 natural gas heating.

12 Q. Have you reviewed the Staff's comments in the 13 Commission's inquiry into cost-effectiveness and funding 14 of low income weatherization and energy conservation 15 programs?

16 Α. Yes. In the "Inquiry into Cost-effectiveness 17 and Funding of Low Income,"² the Commission initiated workshops to provide a forum for the exploration of issues 18 cost-effectiveness 19 related the of low-income to 20 weatherization in Idaho. The Company replied with comments

² Case No. GNR-E-12-01

filed December 7, 2012 and January 4, 2013 to the
 Commission Staff's draft report supporting Staff's
 recommendations related to Avista.

4 Subsequently, the Company has identified more 5 opportunities to provide programs related to the direct use of natural gas for Idaho low-income customers through 6 the CAA, such as electric to natural gas space and water 7 heater conversions. Natural gas fuel conversion tends to 8 9 be a more cost-effective measure with higher TRC results.

10 The Company believes if more of these measures were 11 implemented by the CAAs, it would improve cost-12 effectiveness for the overall low-income portfolio.

13 The 2012 results included the effects of recent efforts to identify electric to natural gas conversions 14 15 along with several non-energy benefits being applied in 16 addition to the dollar-for-dollar non-energy benefit 17 assumed for health and human safety. These contributed to 18 a successful TRC of 1.07 for the electric low-income program.³ 19

³ Natural gas low-income was less than 1.0 TRC; all natural gas DSM programs are currently suspended in Idaho.

Q. In light of declining electric avoided costs, what program modifications do you anticipate making to assist with the low-income programs' continued costeffectiveness?

5 Α. The 2012 low-income weatherization electric 6 programs were cost-effective. As stated earlier, 2012 did 7 include the additional emphasis on electric to natural gas 8 conversions that the agency is continuing to pursue. 9 While the most recent year was cost-effective, whether 10 enough conversions can be identified and completed to 11 offset lower avoided costs continues to be a challenge.

12 The delivery of low-income programs by the Community13 Action Agency is an important area of management focus.

Q. Please provide an overview of the two new
programs launched in 2011 and 2012.

16 Α. Among several new program offerings, in 2011, 17 Avista distributed via US Postal Service boxes of energy 18 efficient compact fluorescent light (CFL) bulbs to all 19 residential and small commercial customers on an "opt-out" 20 basis. total, 745,456 bulbs In (93,182 boxes) were 21 distributed to Idaho residential and small commercial customers with verified first-year savings of 13,290 MWh⁴.
 Subsequent process evaluation conducted by a third-party
 demonstrated high satisfaction with the program as well as
 a high level of awareness of energy efficiency programs.

5 During 2012, the Company leveraged regional and 6 national efforts to accelerate the conversion of T12 7 fluorescent lighting fixtures to higher efficiency T8 8 fixtures. Avista's conversion program was specifically 9 designed to target the replacement of existing operational 10 fixtures. T12 The program featured a prescriptive 11 incentive available for a limited period of time, an 12 application process specific to the needs of this program 13 and a coordinated outreach program focusing the customers 14 attention on the need to take action by a pre-specified 15 The program required customers to submit their deadline. 16 rebate applications between January 1, 2012 and December 17 31, 2012.

18 Customer participation significantly exceeded 19 expectations with a total of 1,500 rebates being issued

⁴ These verified savings are higher than the Regional Technical Forum's (RTF) deemed 15 kWh/year/mailed CFL based on Cadmus independent analysis of room distribution, residential and small commercial run-times, in-service rate, etc.

during this time with an estimated savings of 15 million 1 kWhs. Participation was heavily weighted towards the last 2 month of that program, indicating the value of the pre-3 deadline and further defining 4 specified program а 5 potentially replicable approach to replace-before-burnout efficiency opportunities in the future. 6

7

IV. EVALUATION, MEASUREMENT AND VERIFICATION

9

8

10 Q. Would you please describe the engagement of 11 Cadmus for Avista's evaluation, measurement, and 12 verification (EM&V)?

A central component of Avista's 13 EM&V Α. Yes. Framework and Annual EM&V Plan is independent, or third-14 15 party, verification of the Company's claimed efficiency retained, after a competitive 16 savings. Cadmus was 17 Request-for-Proposal process, to perform impact and 18 Impact evaluation independently process evaluations. estimates and/or measures realized savings at the customer 19 20 premises through a variety of means, including metering equipment, billing analyses and quantitative methods. 21 22 Process evaluations examine potential for program delivery improvements based on participant and nonparticipant
 surveys, among other means.

3 With regard to the impact evaluation, what is a ο. 4 realization rate and how does this affect claimed savings? 5 Energy efficiency savings are estimated based Α. 6 on the per-measure or unit (e.g., T-8 commercial lighting, 7 ENERGY STAR[®] Dishwashers, or ceiling insulation) accepted 8 value multiplied by the number of units installed. 9 Thereafter, the number of units installed is verified for 10 accuracy and proper installation and the actual savings 11 value per measure and operation can be tested by data 12 loggers, billing analysis and other analytical means. If 13 the realized or verified savings estimate per measure are 14 confirmed without change and if the number of 15 installations, upon verification, are found to be properly 16 installed and equal to those claimed, then the realization 17 If the actual savings level per measure is rate is 100%. 18 less or if the installed units are less, then the 19 realization rate would be less.

As noted in the Cadmus' memo at page 18, Avista's
 realization rate showed significant improvement from 2011
 to 2012.

Q. The Cadmus' 2012 Process Evaluation Memorandum
dated August 2, 2013, makes a series of recommendations
regarding process improvements to Avista's DSM programs.
What is the Company's response to these recommendations?

8 Α. First, the purpose of a process evaluation is 9 for continued program improvement. The Company has 10 historically reviewed and modified its DSM programs for improved use of customer funds and better service to 11 12 customers. Cadmus' approach is to provide real-time 13 feedback to allow for continuous improvements and course needed. 14 I address specific areas corrections as for 15 modification to Avista's systems later in my testimony.

16 Q. Do you agree with Cadmus' conclusions and 17 recommendations regarding the large project review?

18 A. Yes. At page 17 of the memo, Cadmus notes "the
19 2011 Large Project Review process was not implemented
20 successfully..." Specifically, Cadmus had several

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assist Avista with 1 recommendations to successful implementation, and an effective process: 2 3 • Effectively communicate the new project review 4 process to all key team members; 5 6 clear protocols • Ensure there are in place for 7 addressing issues identified during the review and 8 spot-check; 9 10 • Establish a goal for the number or percentage of projects that should undergo a random spot-check; 11 12 13 • Establish a reasonable goal for how long the review 14 process should take; 15 16 • Consider adopting a tiered approach to the review so 17 that larger, high-risk projects receive more scrutiny before contracts are issued and incentives are paid; 18 19 and 20 21 • Consider structuring random spot-checks, or "audits," 22 to occur at various times of the process. 23 24 Consequently, we began establishing a new procedure full 25 and program implementation to assure that 26 documentation was in place at various stages of 27 nonresidential site-specific projects. For example, two 28 checklists, one prior to contracting and one prior to 29 payment, were developed and implemented mid-2013 and 30 accompany all site-specific projects for documentation and 31 review purposes. This was coincident with a "roles and responsibilities" initiative to assure accountabilities
 will be properly aligned and communication channels
 clearly open. These actions are intended to be responsive
 to Cadmus' recommendations on the Large Project Review
 Process.

Q. The Cadmus memorandum notes data entry errors, and
provides recommendations for improving the database entry
accuracy and processes. Do you agree with these findings?
A. Yes. Specifically, on page 19 of the memo,

- 10 Cadmus recommends:
- 11 • Continue to move forward implementing the new review process to identify and resolve savings 12 13 calculation errors; 14 • Clearly document legacy projects or market transformation projects in SalesLogix; and 15 16 • Continue to improve data entry in SalesLogix to reduce missing or incorrect fields and enhance 17 18 the comprehensive dataset. 19 20 The Company agrees there are improvements that should 21 be made to data entry accuracy, as well as processes and 22 around efficient and consistent use of procedures the 23 example, there instances of database. For were 24 installation dates that preceded payment dates due to 25 incorrect entry into sales-loqix. Site-specific

verification dates may precede payment dates, for example,
 where the payment date is the date the check is cut and
 the verification date is coincident with the verification
 confirmation and hand delivery of the actual check.

5 Avista agrees that documentation improvements within 6 our nonresidential database should be made and these 7 improvements are in progress.

8 Areas of emphasis are existing database fields that and work 9 are used differently by different programs Fields will be reviewed to confirm they are a 10 groups. 11 value-added field for reporting and evaluation, 12 consistently used by all work groups, or eliminated if 13 appropriate. The goal, again, is to improve documentation and data fields in order to further ease reporting and 14 15 evaluation.

Another example is the post-verification date field, which includes prescriptive projects that are randomly sampled for post-verification, customers who did multiple installations of similar measures and a percentage of like measures that were post-verified, as well as users who documented post-verification in notes or attachments

rather than the data field. Avista acknowledges that we 1 2 clarify our need to procedures around installation 3 verifications and ensure that documentation (e.g. pictures 4 and dates) are consistently recorded within the 5 nonresidential database.

Q. Tables 2 & 3 from the Cadmus' memorandum
illustrate prescriptive projects on a system basis that
exceeded the simple payback periods and 50% cap. Can you
explain why these projects were provided incentives?

10 Prescriptive programs allow the Company to Α. Yes. 11 offer a fixed amount for the installation of predetermined 12 efficiency measures without the need for individualized 13 calculation of the rebate or the signature of a pre-14 project agreement. This approach is critical to the 15 efficient marketing and administration of programs 16 promoting these measures. Prescriptive programs have been 17 a critical element to the Avista DSM portfolio for many 18 years.

As stated in the Cadmus memo at page 6, "the sample size for manual review was not large enough to extrapolate findings to the full population. However, based on these 1 findings, it is probable that a large proportion of the 2 projects in Table 2 involved T12 to T8 conversions...".

3 The memorandum's assumption is correct: the 4 prescriptive lighting projects included market transformation T12 conversions that were designed to 5 6 exceed the 50% cap guidelines to accelerate conversions.

7 The Company's tariff did not require prescriptive 8 projects to be subject to the simple payback period and 9 restrictions incentive cap at the time of rebate 10 application approval. Avista filed tariff revisions (Case 11 No. AVU-E-13-04), as noted in Company witness Mr. Folsom's 12 direct testimony, on June 26, 2013, to include additional 13 language to provide greater clarity of how these programs 14 are offered. The following tariff language was approved by 15 the Commission on August 22, 2013:

Incentive levels for these programs are based on market conditions at the time of program design and are not dependent on actual project cost relative to incentive caps. Incentives shall not exceed project costs.

22 All <u>site-specific</u>, nonresidential projects met 23 applicable simple payback and 50% funding cap 24 requirements. Q. What efforts are being made to improve project
 documentation related to nonresidential programs?

Avista agrees that process improvements can be 3 Α. made in its nonresidential project documentation as noted 4 In an effort to address this finding, two 5 by Cadmus. checklists have been implemented prior to the contracting 6 7 projects the payment incentives of and of for 8 nonresidential site-specific projects in an effort to 9 ensure consistent and comprehensive project documentation and application of the Company's tariff Schedules 90 and 10 11 190 (Electric and Natural Gas Energy Efficiency Programs).

12 Cadmus recommended additional notation of "legacy" or 13 "market transformation" type projects within the database 14 for ease of access, reporting and evaluation. These 15 classifications arose from unique circumstances where 16 particular types of measures were affected by code changes 17 or projects requiring transition management due to tariff 18 updates. Avista will carefully consider identification of such items in order to accommodate ease of reporting and 19 20 evaluating when these unique situations occur in the 21 future.

1 Q. Do the findings of the Cadmus Report suggest that the energy-efficiency programs operated by 2 the Company are not cost effective or are imprudently managed? 3 35 years Avista 4 Α. No. For over has had а consistent commitment 5 significant and to energy 6 efficiency. The Company's energy efficiency programs have 7 been very successful offering a broad array of efficiency 8 measures. The energy efficiency program is designed and 9 implemented, with input from the Advisory Group, to 10 provide customers with the means to effectively implement 11 meaningful energy efficiency measures, in a cost-effective 12 manner. Participating customers have benefited through lower bills. Non-participating customers have benefited 13 from the Company having acquired lower cost resources in 14 the form of DSM, as well as maintaining the 15 energy 16 efficiency message and infrastructure for the benefit of 17 our service territory.

18 The purpose of the Impact and Process evaluation is 19 intended to independently verify "claimed" savings and 20 review procedures and implementation of programs for 21 continual improvement. Avista has made, and will continue to make, improvements in its energy efficiency programs
 based on the recent, and future EM&V evaluations.

3 Q. Does this complete your pre-filed direct 4 testimony?

5 A. Yes.

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