Exh. AIW-8
Dockets UE-200900, UG-200901, UE-200894
Witness: Amy I. White

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **AVISTA CORPORATION, d/b/a AVISTA UTILITIES,** **Respondent.**	**DOCKETS UE-200900, UG-200901, UE-200894 (*Consolidated*)**

EXHIBIT TO TESTIMONY OF

Amy I. White

STAFF OF WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

Avista's Response to Public Counsel Data Request No. 143

April 21, 2021

AVISTA CORP.
RESPONSE TO REQUEST FOR INFORMATION

JURISDICTION:	WASHINGTON	DATE PREPARED:	02/10/2021
CASE NO.:	UE-200900 & UG-200901	WITNESS:	Josh DiLuciano
REQUESTER:	Public Counsel	RESPONDER:	Robb Raymond
TYPE:	Data Request	DEPT:	AMI Program
REQUEST NO.:	PC - 143	TELEPHONE:	(509) 495-4695
		EMAIL:	robb.raymond@avistacorp.com

SUBJECT: AMI

REQUEST:

Please refer to Joshua D. DiLuciano, Exhibit JDD-2, at 44, section "Meter Deployment".

a) Provide the number of electric customers, by class, which have received (or which are about to receive) an AMI meter.
b) Provide the number of gas customers which have received (or which are about to receive) a natural gas meter communications module.
c) Provide a count of "gas only" customers as of 12/31/2020.
d) Provide a count of "electric only" customers as of 12/31/2020.
e) Provide a count of combination (electric and gas) customers as of 12/31/2020.
f) Describe the meter reading system in place for electric only customers in place prior to the AMI system.
g) Describe the meter reading system in place for gas only customers in place prior to the AMI system.
h) Describe the meter reading system (or systems) in place for combination (electric and gas) customers in place prior to the AMI system.
i) For the new AMI system, describe the differences in data communications methods for (i) electric only customers; (ii) combination customers; and (iii) gas only customers.
j) Explain the "less than expected" communications capabilities of the (RIVA?) natural gas communications modules (Joshua D. DiLuciano, Exhibit JDD-2, at43). Explain the relevance of these deficiencies the deployment and use of the communications network (or networks) in "gas only" service areas.
k) Explain the "additional . . . communication and programming requirements for natural gas modules" (Joshua D. DiLuciano, Exhibit JDD-2, at 45) as they relate to the "less than expected" communications capabilities explained in response to subpart (g).

RESPONSE:

a) As of the subject date, 260,589 electric meters have been deployed*.

Electric Meter Type	Deployed Service Points
Cellular Electric Meter	227
Commercial Electric Meter	12,196
Residential/Commercial Electric Meter	248,166
	260,589

b) As of the subject date, 152,868 natural gas meters have been deployed*.

Gas Meter Type	Deployed Service Points
Commercial Gas Module	3,560
Residential Gas Module	149,308
	152,868

**These figures represent service points, thus a customer may have multiple meters.*

c) As of the subject date, Avista had 26,583 service points** in the "natural gas only" areas of its service territory.

d) As of the subject date, the Company had 114,069 service points** in the "electric only" portions of its service area.

e) As of the subject date, Avista had 143,584 service points** in our combination electric and natural gas service areas.

***Note that the data is presented by physical premise and that a customer can be the account owner on more than one.*

f) Prior to deployment of advanced metering, Avista used the following methods to obtain reads from electric customer meters.
   i. Meter readers manually reading meters via walked routes.
   ii. Meter readers using an electronic collection device and reading wirelessly by passing by customer premise.
   iii. Meter reading via utilizing wireless communications devices mounted on utility poles to read meters in a geographic area electronically. (called Fixed Network AMR)
   iv. Two Way Automatic Communication technology called TWACS which are meters that communicate via power line carrier via utility power lines back to a transformer which in turn communicates back to a head end system.
   v. Meter reading via a cellular meter solution called MV-90 which mostly serves industrial customers.

g) Prior to deployment of advanced metering, Avista used the following methods to obtain reads from customers' meters in our natural gas only areas.
   i. Meter readers manually reading meters via walked routes
   ii. Meter readers using an electronic collection device and reading wirelessly by passing by customer premise.

h) Prior to deployment of advanced metering, Avista used the following methods to obtain reads from customers' meters in our electric and natural gas combination areas.
   i. Meter readers manually reading meters via walked routes.
   ii. Meter readers using an electronic collection device and reading wirelessly by passing by customer premise.
   iii. Meter reading via utilizing wireless communications devices mounted on utility poles to read meters in a geographic area electronically. (called Fixed Network AMR)

i) Differences in data communication methods for electric only customers, combination customers and natural gas only customers, are explained below.
   i. Electric meters communicate amongst each other either using 900Mhz wireless radio or via Power Line Carrier (PLC) if the electric meters share the same transformer. This creates a mesh network of electric meters that eventually communicate via 900Mhz wireless radio to a Connected Grid Router located on a utility pole. In remote areas where the distance between meters is too great, a meter with a cellular radio can be implemented.
   ii. Where we serve natural gas and electric customers in the same area, gas meters communicate directly with electric meters via 900Mhz radio frequency as stated above. Natural gas modules are referenced as a leaf node to an electric mesh network.
   iii. In areas with only natural gas modules, the modules communicate directly with a specific Connected Grid Router (CGR) that is designed specifically for natural gas communications. This is referred to as a STAR network since gas modules do not communicate with each other and all communicate directly with the CGR.

j) Avista recently made the decision to read the meters of approximately 17,500 natural gas customers served in our "natural gas only" areas using mobile field collectors instead of the planned deployment of AMI fixed network communications. This decision was based on delays in the release of software and firmware updates needed for natural gas modules to communicate reliably in our natural gas only areas. This decision will have nominal impacts on the AMI project lifecycle capital and O&M costs and net financial benefits, as presented in Exh. JDD-2, and the Company is currently revising its business case to reflect this decision.

   In addition to these changes in planned metering in our natural gas only areas, Avista has received several recent data requests asking the Company to provide actual results for AMI costs and benefits in year 2020, which of course were not available when the report was filed and revised in the summer and fall of 2020. Avista believes it is in the interest of all parties to have the Company's AMI business case reflect as much actual and updated information as is practical right now, even though we expect only a nominal impact to the overall net benefits. Accordingly, we are updating the project financials, which will be reflected in revised AMI Cost and Benefit Workbooks, to be available in the next two weeks, which will be followed by our revision of the report document itself, Exh. JDD-2.

k) Avista learned after completion of design phase workshops that additional hardware/software would be required to communicate with and program natural gas modules. As noted above in part (j) Avista experienced delays in the release of software and firmware updates that were necessary for natural gas modules to communicate reliably in our natural gas only areas, leading to the Company's decision explained above.