BEFORE THE WASHINGTON

UTILITIES & TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION,

Complainant,

v.

AVISTA CORPORATION d/b/a AVISTA UTILITIES,

Respondent.

DOCKET NOS. UE-200900 and UG-200901 (*Consolidated*)

PAUL J. ALVAREZ AND DENNIS STEPHENS

ON BEHALF OF THE
WASHINGTON STATE OFFICE OF THE ATTORNEY GENERAL
PUBLIC COUNSEL UNIT

EXHIBIT PADS-10

Avista Response to Public Counsel Data Request No. 84

April 21, 2021

AVISTA CORP.
RESPONSE TO REQUEST FOR INFORMATION

JURISDICTION:	WASHINGTON	DATE PREPARED:	02/03/2021
CASE NO.:	UE-200900 & UG-200901	WITNESS:	David Howell
REQUESTER:	Public Counsel	RESPONDER:	David James
TYPE:	Data Request	DEPT:	Wildfire Resiliency
REQUEST NO.:	PC-084	TELEPHONE:	(509) 495-4185
		EMAIL:	dave.james@avistacorp.com

RE: Wildfire Plan

REQUEST:
Please refer to David R. Howell, Exhibit DRH-2 at 22, and to the table with the heading "The following table provides an example of outcomes and impacts" related to Pole Fires.
a) Provide a definition for the values in the column "probability per event".
b) For each value in the column titled "Probability per event", provide all business cases, worksheets, workbooks, models, cost-benefit analyses, or any other calculations, presentations, requests, standards, or other documentation used to determine each.
c) For each response provided to subpart (b), identify the probability that a pole fire will result in a wildfire, along with all historical or other data used to support this probability.
d) Confirm that the probabilities in the column "probability per event" assumes that every pole fire will result in a wildfire. If this cannot be confirmed, please explain.
e) Confirm that the probabilities in the column "probability per event" are estimated in terms of "probability per pole fire". If this cannot be confirmed, please explain.
f) For each amount shown in the two columns under the title "Impact Cost", provide all business cases, worksheets, workbooks, models, cost-benefit analyses, or any other calculations, presentations, requests, standards, or other documentation used to develop each.
g) For each amount shown in the two columns under the title "Risk Cost", provide all business cases, worksheets, workbooks, models, cost-benefit analyses, or any other calculations, presentations, requests, standards, or other documentation used to develop each.
h) For each of the last five years, for each item (row) of the table for which a value is provided under the headings "Impact cost" and "Risk Cost", provide the average cost (in dollars) actually spent on pole fire events. If there were no such incidents/no such spending for any item in any year, please so state.
i) List the number of times that a pole fire has resulted in a wildfire in each of the past five years within an area of Elevated Fire Risk.
j) List the number of times that a pole fire has resulted in a wildfire in each of the past five years outside an area of Elevated Fire Risk.
k) What does Avista estimate the probability of a single pole fire resulting in a wildfire to be?
l) Provide the number of poles with wood cross arms operating by year on the Avista system for each of the last five years.
m) Provide the number of fires on poles with wood cross arms for each of the past five years.
n) Of the number of fires provided in response to subpart (l), provide the number caused by wood cross arms by year.
o) Provide the number of poles with fiberglass cross arms operating by year on the Avista system for each of the last five years.
p) Provide the number of fires on poles with fiberglass cross arms for each of the past five years.
q) Of the number of fires provided in response to subpart (o), provide the number caused by fiberglass cross arms by year.
r) Estimate the number of poles with wood cross arms which are located in "Elevated Fire Risk" areas.

s) Provide the number of pole fires which occurred in "Elevated Fire Risk" areas in each of the last five years.

t) Replicate the table on page 22 in two versions i) within areas of "Elevated Fire Risk", and ii) outside areas of "Elevated Fire Risk."

RESPONSE:

a) The pole fire example was used in the Plan to help employees and management understand some basic concepts of risk and risk mitigation. Throughout the Plan, risk and risk costs terms are used to quantify the 10-year 'societal' cost exposure associated with utility involved Wildfire. With respect to the risk cost associated with pole fire, probability per event indicates the likelihood of a secondary occurrence. For instance, Avista 1st responders are called upon to 'make-safe' utility pole fires. Suppose that on average, one out of a thousand such calls a crew member suffers a minor injury that requires medical attention (e.g. cut, bruise, or back strain). The 'probability per event is 1/1000 but the annual likelihood of injury is the product of the probability of poles fire X the probability of the injury. Assuming 100 pole fires per year, Probability = Pole Fire Frequency (100/yr) X Injury frequency (1/1000) = 1/100 or 1% per year. Risk cost is the product of Probability of occurrence time Event Impact. If the average cost of this type of injury were $15,000, then the subsequent annual risk cost would be 1% X $15,000 = $150 per year. These values are fictitious and used only to illustrate the concept. Prior to the drafting of the Wildfire Resiliency Plan, a Risk Cost Summary report was produced. That report was filed with the Company's case as Mr. Howell Exh. DRH-4.

b) Values used in the pole fire risk cost example were derived from the Wildfire risk workshops convened in May and June of 2019. Those results are summarized in the January, 2020 Risk Cost Summary, see Exh, DRH-4.

c) Between 2014 and 2018, the 5-year average rate of distribution pole fires was 92 per year. A portion of these pole fires will result in fire transfer to the ground or nearby vegetation but Avista does not collect this information in the current outage management system. Avista's outage management system has historically tracked cause, not effect. The intent of the outage management system is to identify where problems occur so they can be resolved. One of the goals of the Wildfire Resiliency Program is to track these events going forward.

d) Correct, probability per event and probability per pole fire are synonymous.

e) Correct, probability per event and probability per pole fire are synonymous.

f) See response in part (b). Values were derived from subject matter experts in the May-June 2019 wildfire workshops.

g) See response in part (b).

h) The direct cost of Avista response is a small portion of the risk cost. Risk cost was quantified as the cumulative 'societal costs' including the interruption cost to customers, the financial risk associated with worker and public safety, and the potential loss or damage to property and human lives. As demonstrated by the large fires in California, utilities can be held liable for a significant portion of societal costs.

i) Avista has no historical data tying pole fires to wildfires. Historically the Company has not collected data this way.

j) Avista has no historical data tying pole fires to wildfires. Historically the Company has not collected data this way.

k) No analysis has been performed on the probability of this event. No historical data is available from which to base a forecast. One of the goals of the Wildfire Resiliency Program is to track these events going forward.

l) Avista does not specifically track this number.

m)

Number of Distribution Pole Fires		
Year	Count	5 Yr. Ave.
2013	116	
2014	97	
2015	155	
2016	66	
2017	81	103
2018	63	92.4
2019	56	84.2

n) See chart for the number of pole fires. Virtually all of these incidents involve a distribution wood crossarm. This number is for pole fires only. The Company does not collect the number of pole fire events that led to additional fire events. The Company's outage management system collects data on cause of issues, not the effects or additional results beyond what is required for repairs or replacement activities.

o) Avista does not specifically track this number. Since the early 2000's Avista has adopted the use of fiberglass crossarms for overhead distribution lines. The change was made based on the failure rate of wood crossarms. However, wood crossarms are the primary source of spontaneous pole fires. Pole fires generally occur during the late summer after period of hot dry weather followed by a light rain. Contaminants on insulators and wood crossarms create electrical tracking which is then amplified by light rain. The 5-year average frequency of pole fires from 2014 to 2018 was 92 per year. Virtually all of these incidents involve a distribution wood crossarm. Experiential data clearly shows that fiberglass crossarms prevent this mode of failure.

p) Avista does not specifically track this number. Experiential data clearly shows that fiberglass crossarms prevent pole fires.

q) Avista does not specifically track this number. Experiential data clearly shows that fiberglass crossarms prevent pole fires.

r) Avista does not have this information for the Distribution system, as the fire risk areas are focused on the Transmission system. For the number of wood poles in each of the fire risk areas, see the table below. Note that this is not an accurate count of wood crossarms, as the Company does not specifically track this information. It is a count of poles. Note that WUI Tiers 1-3 indicate risk, where WUI 3 is highest risk.

Avista Transmission Number of Wood Poles	
Low Risk	15,058
WUI Tier 1	3,447
WUI Tier 2	3,166
WUI Tier 3	1,547

s) Avista does not have this information for the Distribution system, as the fire risk areas are focused on the Transmission system. The number of pole fires occuring on <u>Transmission System poles</u> in WUI Tier areas are shown in the table on the right.

# Transmission Pole Fires in Elevated Fire Risk Areas	
2016	0
2017	0
2018	2
2019	7
2020	13

t) As defined in the chart description "*The following table provides an example of outcomes and impacts.*" There is no associated data available to allow breaking the table into fire risk areas.