Exh. AMM-9

WUTC DOCKET: UE-200900 UG-200901 UE-200894 EXHIBIT: AMM-9 ADMIT I W/D REJECT I

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

DOCKET NO. UE-20\_\_\_\_\_

DOCKET NO. UG-20\_\_\_\_\_

EXH. AMM-9

ADRIEN M. MCKENZIE

REPRESENTING AVISTA CORPORATION

## **EMPIRICAL CAPM**

## **UTILITY GROUP**

		(a)	(b)		(c)		(d)		(e)	(d)				(e)	(f)	
		Mark	et Retur	n ( <b>R</b> <sub>m</sub> )												Size
		Div	Proj.	Cost of H	Risk-Free	e Risk	Unadjus	sted RP	Beta	Adjustee	d RP	Total	Unadjusted	Market	Size	Adjusted
	Company	Yield	Growth	Equity	Rate	Premiun	n Weight	$RP^{1}$	Beta	Weight	$RP^2$	RP	K <sub>e</sub>	Сар	Adjustment	t K <sub>e</sub>
1	Algonquin Pwr & Util	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.90	75%	6.9%	9.4%	10.8%	\$9,094.3	0.73%	11.5%
2	ALLETE	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.85	75%	6.5%	9.0%	10.4%	\$2,800.0	1.10%	11.5%
3	Ameren Corp.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.80	75%	6.1%	8.6%	10.0%	\$20,000.0	0.50%	10.5%
4	Avangrid, Inc.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.80	75%	6.1%	8.6%	10.0%	\$15,000.0	0.50%	10.5%
5	Avista Corp.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.90	75%	6.9%	9.4%	10.8%	\$2,400.0	1.34%	12.1%
6	Black Hills Corp.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.95	75%	7.2%	9.8%	11.2%	\$3,800.0	1.10%	12.3%
7	CenterPoint Energy	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	1.10	75%	8.4%	10.9%	12.3%	\$11,000.0	0.73%	13.1%
8	CMS Energy Corp.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.80	75%	6.1%	8.6%	10.0%	\$17,000.0	0.50%	10.5%
9	DTE Energy Co.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.90	75%	6.9%	9.4%	10.8%	\$23,000.0	0.50%	11.3%
10	Edison International	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.90	75%	6.9%	9.4%	10.8%	\$20,000.0	0.50%	11.3%
11	Emera Inc.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.75	75%	5.7%	8.3%	9.7%	\$13,100.0	0.73%	10.4%
12	Entergy Corp.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.95	75%	7.2%	9.8%	11.2%	\$20,000.0	0.50%	11.7%
13	Exelon Corp.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.95	75%	7.2%	9.8%	11.2%	\$37,000.0	-0.28%	10.9%
14	FirstEnergy Corp.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.85	75%	6.5%	9.0%	10.4%	\$16,000.0	0.50%	10.9%
15	Hawaiian Elec.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.80	75%	6.1%	8.6%	10.0%	\$4,000.0	1.10%	11.1%
16	IDACORP, Inc.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.80	75%	6.1%	8.6%	10.0%	\$4,600.0	0.79%	10.8%
17	NorthWestern Corp.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.90	75%	6.9%	9.4%	10.8%	\$2,700.0	1.10%	11.9%
18	OGE Energy Corp.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	1.05	75%	8.0%	10.6%	12.0%	\$6,400.0	0.79%	12.7%
19	Otter Tail Corp.	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.85	75%	6.5%	9.0%	10.4%	\$1,600.0	1.47%	11.9%
20	PNM Resources	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.95	75%	7.2%	9.8%	11.2%	\$3,100.0	1.10%	12.3%
21	Sempra Energy	2.3%	9.2%	11.6%	1.4%	10.2%	25%	2.5%	0.95	75%	7.2%	9.8%	11.2%	\$35,000.0	-0.28%	10.9%
	Average												10.7%			11.4%
	Midpoint (g)												11.0%			11.8%

(a) Weighted average for dividend paying components of S&P 500 index from zacks.com (retrieved Oct. 1, 2020).

(b) Average of weighted average earnings growth rates from Value Line Investment Survey, IBES, and Zacks Investment Research for dividend-paying stocks in the S&P 500 based on data from http://finance.yahoo.com (retrieved Oct. 2, 2020), www.zacks.com (retrieved Oct. 1, 2020), and www.valueline.com (retrieved Oct. 1, 2020).

(c) Average yield on 30-year Treasury bonds for the six-months ending Sep. 2020 based on data from the Federal Reserve at https://fred.stlouisfed.org/..

(d) Roger A. Morin, *New Regulatory Finance*, Pub. Util. Reports, Inc. (2006) at 190.

(e) The Value Line Investment Survey (Jul. 24, Aug. 14 and Sep. 11, 2020).

(f) Duff & Phelps, 2020 CRSP Deciles Size Study -- Supplementary Data Exhibits, Cost of Capital Navigator.

(g) Average of low and high values.