

Case No. PAC-E-21-07  
Exhibit No. 14  
Witness: Ann E. Bulkley

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

ROCKY MOUNTAIN POWER

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Exhibit Accompanying Direct Testimony of Ann E. Bulkley

CAPM

May 2021

CAPITAL ASSET PRICING MODEL -- LONG-TERM AVERAGE BETA

CAPM:  $K = R_f + \beta (R_m - R_f)$  / ECAPM:  $K = R_f + 0.25(R_m - R_f) + 0.75\beta (R_m - R_f)$

	[4]	[5]	[6]	[7]	[8]	[9]
	Risk-Free Rate ( $R_f$ )	Beta ( $\beta$ )	Market Return ( $R_m$ )	Market Risk Premium ( $R_m - R_f$ )	CAPM ( $K$ )	ECAPM ( $K$ )
Current 30-day average of 30-year U.S. Treasury bond yield [1]	2.31%	0.726	13.71%	11.40%	10.58%	11.36%
Near-term projected 30-year U.S. Treasury bond yield (Q2 2021 - Q2 2022) [2]	2.60%	0.726	13.71%	11.11%	10.66%	11.42%
Projected 30-year U.S. Treasury bond yield (2022 - 2026) [3]	2.80%	0.726	13.71%	10.91%	10.72%	11.47%
				<b>Average:</b>	<b>10.65%</b>	<b>11.42%</b>

Notes:

- [1] Source: Bloomberg Professional, as of March 31, 2021
- [2] Source: Blue Chip Financial Forecasts, Vol. 40, No. 4, April 1, 2021, at 2
- [3] Source: Blue Chip Financial Forecasts, Vol. 39, No. 12, December 1, 2020, at 14
- [4] See Notes [1], [2], and [3]
- [5] Source: Exhibit No. 14, page 2
- [6] Source: Exhibit No. 13, page 4
- [7] Equals [6] - [4]
- [8] Equals [4] + [5] x [7]
- [9] Equals [4] + 0.25 x ([7]) + 0.75 x ([5] x [7])

HISTORICAL BETA - 2011 - 2020

Company	Ticker	[1] 12/31/11	[2] 12/31/12	[3] 12/31/13	[4] 12/31/14	[5] 12/31/15	[6] 12/31/16	[7] 12/31/17	[8] 12/31/18	[9] 12/31/19	[10] 12/31/20	[11] Average
ALLETE, Inc.	ALE	0.70	0.70	0.75	0.80	0.80	0.75	0.80	0.65	0.65	0.85	0.75
Alliant Energy Corporation	LNT	0.75	0.70	0.75	0.80	0.80	0.70	0.70	0.60	0.60	0.85	0.73
Ameren Corporation	AEE	0.80	0.80	0.80	0.75	0.75	0.65	0.70	0.55	0.55	0.85	0.72
American Electric Power Company, Inc.	AEP	0.70	0.65	0.70	0.70	0.70	0.65	0.65	0.55	0.55	0.75	0.66
Avista Corporation	AVA	0.70	0.70	0.70	0.80	0.80	0.70	0.75	0.65	0.60	0.90	0.73
CMS Energy Corporation	CMS	0.75	0.75	0.70	0.70	0.75	0.65	0.65	0.55	0.50	0.80	0.68
DTE Energy Company	DTE	0.75	0.75	0.80	0.75	0.75	0.65	0.65	0.55	0.55	0.95	0.72
Duke Energy Corporation	DUK	0.65	0.60	0.65	0.60	0.65	0.60	0.60	0.50	0.50	0.85	0.62
Energy Corporation	ETR	0.70	0.70	0.70	0.70	0.70	0.65	0.65	0.60	0.60	0.95	0.70
Evergy, Inc.	EVRG							NMF	NMF		1.00	1.00
NextEra Energy, Inc.	NEE	0.75	0.70	0.70	0.70	0.75	0.65	0.65	0.55	0.55	0.90	0.69
NorthWestern Corporation	NWE	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.60	0.60	0.90	0.70
OGE Energy Corporation	OGE	0.80	0.75	0.85	0.90	0.95	0.90	0.95	0.85	0.75	1.10	0.88
Otter Tail Corporation	OTTR	0.90	0.90	0.95	0.90	0.85	0.85	0.90	0.75	0.70	0.85	0.86
Pinnacle West Capital Corporation	PNW	0.70	0.70	0.70	0.70	0.75	0.70	0.70	0.60	0.55	0.85	0.70
Portland General Electric Company	POR	0.75	0.75	0.75	0.80	0.80	0.70	0.80	0.60	0.60	0.85	0.74
Southern Company	SO	0.55	0.55	0.55	0.55	0.60	0.55	0.55	0.50	0.50	0.90	0.58
Xcel Energy Inc.	XEL	0.65	0.65	0.65	0.70	0.65	0.60	0.60	0.55	0.50	0.80	0.64
Mean		0.72	0.71	0.73	0.74	0.75	0.69	0.71	0.60	0.58	0.88	0.73

Notes:

- [1] Value Line, dated November 4, 2011, November 25, 2011, and December 23, 2011.
- [2] Value Line, dated November 2, 2012, November 23, 2012, and December 21, 2012.
- [3] Value Line, dated November 1, 2013, November 22, 2013, and December 20, 2013.
- [4] Value Line, dated October 31, 2014, November 21, 2014, and December 19, 2014.
- [5] Value Line, dated October 30, 2015, November 20, 2015, and December 18, 2015.
- [6] Value Line, dated October 28, 2016, November 18, 2016, and December 16, 2016.
- [7] Value Line, dated October 27, 2017, November 17, 2017, and December 15, 2017.
- [8] Value Line, dated October 18, 2018, November 16, 2018, and December 14, 2018.
- [9] Value Line, dated October 25, 2019, November 15, 2019, and December 13, 2019.
- [10] Value Line, dated October 23, 2020, November 13, 2020, and December 11, 2020.
- [11] Average ([1] - [10])