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September 2, 2020

Via Electronic Filing

Public Utility Commission of Oregon
Attn: Filing Center
201 High St. SE, Suite 100
Salem OR 97301

Re: In the Matter of PACIFICORP, dba PACIFIC POWER
Request for a General Rate Revision.
Docket No. UE 374

Dear Filing Center:

Pursuant to the Commission's Memorandum issued on August 31, 2020, in the above-referenced docket, please find enclosed the Hearing Materials List of the Alliance of Western Energy Consumers.

Thank you for your assistance. If you have any questions, please do not hesitate to contact me.

Sincerely,

/s/ Jesse O. Gorsuch
Jesse O. Gorsuch

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

UE 374

In the Matter of)	HEARING MATERIALS LIST OF THE
)	ALLIANCE OF WESTERN ENERGY
PACIFICORP, dba PACIFIC POWER,)	CONSUMERS
)	
Request for a General Rate Revision.)	
)	
_____)	

Pursuant to Administrative Law Judge's ("ALJ") August 31, 2020 Memorandum, the Alliance of Western Energy Consumers ("AWEC") identifies the following materials, other than pre-filed testimony, it intends to use in the hearing scheduled for September 9 and 10, 2020, in the above-referenced Docket. PDF versions are attached. As provided in the ALJ's Memorandum, AWEC reserves the right to supplement these materials. AWEC will also refer to its cross-examination exhibits, which are being filed under separate cover.

1. Exhibit PAC/3505 (all pages)
2. Exhibit PAC/3901 (all pages)

Dated this 2nd day of September, 2020.

Respectfully submitted,

DAVISON VAN CLEVE, P.C.

/s/ Tyler C. Pepple

Tyler C. Pepple

1750 S.W. Harbor Way, Suite 450

Portland, Oregon 97204

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Of Attorneys for the Alliance of Western Energy
Consumers

Docket No. UE 374
Exhibit PAC/3505
Witness: Ann E. Bulkley

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

PACIFICORP

**Exhibit Accompanying Surrebuttal Testimony of Ann E. Bulkley
Updated Capital Asset Pricing Model**

August 2020

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VL BETA

$$K = R_f + \beta (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Current 30-day average of 30-year U.S. Treasury bond yield	Beta (β)	Market Return (R_m)	Market Risk Premium ($R_m - R_f$)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	1.34%	0.85	13.81%	12.47%	11.94%	12.41%
Alliant Energy Corporation	LNT	1.34%	0.80	13.81%	12.47%	11.32%	11.94%
Ameren Corporation	AEE	1.34%	0.80	13.81%	12.47%	11.32%	11.94%
American Electric Power Company, Inc.	AEP	1.34%	0.75	13.81%	12.47%	10.70%	11.48%
Avista Corporation	AVA	1.34%	0.95	13.81%	12.47%	13.19%	13.35%
CMS Energy Corporation	CMS	1.34%	0.80	13.81%	12.47%	11.32%	11.94%
Dominion Resources, Inc.	D	1.34%	0.80	13.81%	12.47%	11.32%	11.94%
DTE Energy Company	DTE	1.34%	0.90	13.81%	12.47%	12.57%	12.88%
Duke Energy Corporation	DUK	1.34%	0.85	13.81%	12.47%	11.94%	12.41%
Entergy Corporation	ETR	1.34%	0.95	13.81%	12.47%	13.19%	13.35%
Evergy, Inc.	EVERG	1.34%	1.05	13.81%	12.47%	14.44%	14.28%
IDACORP, Inc.	IDA	1.34%	0.80	13.81%	12.47%	11.32%	11.94%
NextEra Energy, Inc.	NEE	1.34%	0.85	13.81%	12.47%	11.94%	12.41%
NorthWestern Corporation	NWE	1.34%	0.90	13.81%	12.47%	12.57%	12.88%
OGE Energy Corporation	OGE	1.34%	1.05	13.81%	12.47%	14.44%	14.28%
Otter Tail Corporation	OTTR	1.34%	0.85	13.81%	12.47%	11.94%	12.41%
Pinnacle West Capital Corporation	PNW	1.34%	0.85	13.81%	12.47%	11.94%	12.41%
PNM Resources, Inc.	PNM	1.34%	0.90	13.81%	12.47%	12.57%	12.88%
Portland General Electric Company	POR	1.34%	0.85	13.81%	12.47%	11.94%	12.41%
PPL Corporation	PPL	1.34%	1.05	13.81%	12.47%	14.44%	14.28%
Southern Company	SO	1.34%	0.90	13.81%	12.47%	12.57%	12.88%
Xcel Energy Inc.	XEL	1.34%	0.75	13.81%	12.47%	10.70%	11.48%
Mean						12.26%	12.65%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Value Line

[3] Source: Exhibit PAC/3505, page 7 (Analysts Long-term growth estimates)

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VL BETA

$$K = R_f + \beta (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Near-term projected 30-year U.S. Treasury bond yield (Q4 2020 - Q4 2021)	Beta (β)	Market Return (R_m)	Market Risk Premium ($R_m - R_f$)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	1.76%	0.85	13.81%	12.05%	12.01%	12.46%
Alliant Energy Corporation	LNT	1.76%	0.80	13.81%	12.05%	11.40%	12.01%
Ameren Corporation	AEE	1.76%	0.80	13.81%	12.05%	11.40%	12.01%
American Electric Power Company, Inc.	AEP	1.76%	0.75	13.81%	12.05%	10.80%	11.55%
Avista Corporation	AVA	1.76%	0.95	13.81%	12.05%	13.21%	13.36%
CMS Energy Corporation	CMS	1.76%	0.80	13.81%	12.05%	11.40%	12.01%
Dominion Resources, Inc.	D	1.76%	0.80	13.81%	12.05%	11.40%	12.01%
DTE Energy Company	DTE	1.76%	0.90	13.81%	12.05%	12.61%	12.91%
Duke Energy Corporation	DUK	1.76%	0.85	13.81%	12.05%	12.01%	12.46%
Entergy Corporation	ETR	1.76%	0.95	13.81%	12.05%	13.21%	13.36%
Evergy, Inc.	EVERG	1.76%	1.05	13.81%	12.05%	14.42%	14.27%
IDACORP, Inc.	IDA	1.76%	0.80	13.81%	12.05%	11.40%	12.01%
NextEra Energy, Inc.	NEE	1.76%	0.85	13.81%	12.05%	12.01%	12.46%
NorthWestern Corporation	NWE	1.76%	0.90	13.81%	12.05%	12.61%	12.91%
OGE Energy Corporation	OGE	1.76%	1.05	13.81%	12.05%	14.42%	14.27%

Otter Tail Corporation	OTTR	1.76%	0.85	13.81%	12.05%	12.01%	12.46%
Pinnacle West Capital Corporation	PNW	1.76%	0.85	13.81%	12.05%	12.01%	12.46%
PNM Resources, Inc.	PNM	1.76%	0.90	13.81%	12.05%	12.61%	12.91%
Portland General Electric Company	POR	1.76%	0.85	13.81%	12.05%	12.01%	12.46%
PPL Corporation	PPL	1.76%	1.05	13.81%	12.05%	14.42%	14.27%
Southern Company	SO	1.76%	0.90	13.81%	12.05%	12.61%	12.91%
Xcel Energy Inc.	XEL	1.76%	0.75	13.81%	12.05%	10.80%	11.55%
Mean						12.31%	12.68%

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 39, No. 7, July 1, 2020, at 2

[2] Source: Value Line

[3] Source: Exhibit PAC/3505, page 7 (Analysts Long-term growth estimates)

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VL BETA

$$K = R_f + \beta (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Projected 30-year U.S. Treasury bond yield (2022 - 2026)	Beta (β)	Market Return (R_m)	Market Risk Premium ($R_m - R_f$)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	3.00%	0.85	13.81%	10.81%	12.19%	12.60%
Alliant Energy Corporation	LNT	3.00%	0.80	13.81%	10.81%	11.65%	12.19%
Ameren Corporation	AEE	3.00%	0.80	13.81%	10.81%	11.65%	12.19%
American Electric Power Company, Inc.	AEP	3.00%	0.75	13.81%	10.81%	11.11%	11.79%
Avista Corporation	AVA	3.00%	0.95	13.81%	10.81%	13.27%	13.41%
CMS Energy Corporation	CMS	3.00%	0.80	13.81%	10.81%	11.65%	12.19%
Dominion Resources, Inc.	D	3.00%	0.80	13.81%	10.81%	11.65%	12.19%
DTE Energy Company	DTE	3.00%	0.90	13.81%	10.81%	12.73%	13.00%
Duke Energy Corporation	DUK	3.00%	0.85	13.81%	10.81%	12.19%	12.60%
Entergy Corporation	ETR	3.00%	0.95	13.81%	10.81%	13.27%	13.41%
Evergy, Inc.	EVRG	3.00%	1.05	13.81%	10.81%	14.36%	14.22%
IDACORP, Inc.	IDA	3.00%	0.80	13.81%	10.81%	11.65%	12.19%
NextEra Energy, Inc.	NEE	3.00%	0.85	13.81%	10.81%	12.19%	12.60%
NorthWestern Corporation	NWE	3.00%	0.90	13.81%	10.81%	12.73%	13.00%
OGE Energy Corporation	OGE	3.00%	1.05	13.81%	10.81%	14.36%	14.22%
Otter Tail Corporation	OTTR	3.00%	0.85	13.81%	10.81%	12.19%	12.60%
Pinnacle West Capital Corporation	PNW	3.00%	0.85	13.81%	10.81%	12.19%	12.60%
PNM Resources, Inc.	PNM	3.00%	0.90	13.81%	10.81%	12.73%	13.00%
Portland General Electric Company	POR	3.00%	0.85	13.81%	10.81%	12.19%	12.60%
PPL Corporation	PPL	3.00%	1.05	13.81%	10.81%	14.36%	14.22%
Southern Company	SO	3.00%	0.90	13.81%	10.81%	12.73%	13.00%
Xcel Energy Inc.	XEL	3.00%	0.75	13.81%	10.81%	11.11%	11.79%
Mean						12.46%	12.80%

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 39, No. 6, June 1, 2020, at 14

[2] Source: Value Line

[3] Source: Exhibit PAC/3505, page 7 (Analysts Long-term growth estimates)

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & BLOOMBERG BETA

$$K = R_f + \beta (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Current 30-day average of 30-year U.S. Treasury bond yield	Beta (β)	Market Return (R_m)	Market Risk Premium ($R_m - R_f$)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	1.34%	0.83	13.81%	12.47%	11.72%	12.24%
Alliant Energy Corporation	LNT	1.34%	0.81	13.81%	12.47%	11.45%	12.04%
Ameren Corporation	AEE	1.34%	0.76	13.81%	12.47%	10.79%	11.54%
American Electric Power Company, Inc.	AEP	1.34%	0.77	13.81%	12.47%	10.92%	11.64%
Avista Corporation	AVA	1.34%	0.79	13.81%	12.47%	11.24%	11.88%
CMS Energy Corporation	CMS	1.34%	0.77	13.81%	12.47%	10.91%	11.63%
Dominion Resources, Inc.	D	1.34%	0.69	13.81%	12.47%	10.01%	10.96%
DTE Energy Company	DTE	1.34%	0.85	13.81%	12.47%	11.92%	12.39%
Duke Energy Corporation	DUK	1.34%	0.73	13.81%	12.47%	10.43%	11.28%
Entergy Corporation	ETR	1.34%	0.84	13.81%	12.47%	11.78%	12.29%
Evergy, Inc.	EVRG	1.34%	0.81	13.81%	12.47%	11.45%	12.04%
IDACORP, Inc.	IDA	1.34%	0.85	13.81%	12.47%	11.91%	12.39%
NextEra Energy, Inc.	NEE	1.34%	0.76	13.81%	12.47%	10.83%	11.58%
NorthWestern Corporation	NWE	1.34%	0.91	13.81%	12.47%	12.66%	12.95%

OGE Energy Corporation	OGE	1.34%	0.93	13.81%	12.47%	13.00%	13.20%
Otter Tail Corporation	OTTR	1.34%	0.87	13.81%	12.47%	12.20%	12.61%
Pinnacle West Capital Corporation	PNW	1.34%	0.84	13.81%	12.47%	11.77%	12.28%
PNM Resources, Inc.	PNM	1.34%	0.94	13.81%	12.47%	13.06%	13.25%
Portland General Electric Company	POR	1.34%	0.82	13.81%	12.47%	11.57%	12.13%
PPL Corporation	PPL	1.34%	0.92	13.81%	12.47%	12.83%	13.07%
Southern Company	SO	1.34%	0.74	13.81%	12.47%	10.53%	11.35%
Xcel Energy Inc.	XEL	1.34%	0.73	13.81%	12.47%	10.49%	11.32%
Mean						11.52%	12.09%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional

[3] Source: Exhibit PAC/3505, page 7 (Analysts Long-term growth estimates)

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL – NEAR-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$$K = R_f + \beta (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Projected 30-year U.S. Treasury bond yield (2022 - 2026)	Beta (β)	Market Return (R_m)	Market Risk Premium ($R_m - R_f$)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	1.76%	0.83	13.81%	12.05%	11.79%	12.29%
Alliant Energy Corporation	LNT	1.76%	0.81	13.81%	12.05%	11.53%	12.10%
Ameren Corporation	AEE	1.76%	0.76	13.81%	12.05%	10.89%	11.62%
American Electric Power Company, Inc.	AEP	1.76%	0.77	13.81%	12.05%	11.02%	11.72%
Avista Corporation	AVA	1.76%	0.79	13.81%	12.05%	11.33%	11.95%
CMS Energy Corporation	CMS	1.76%	0.77	13.81%	12.05%	11.00%	11.71%
Dominion Resources, Inc.	D	1.76%	0.69	13.81%	12.05%	10.14%	11.06%
DTE Energy Company	DTE	1.76%	0.85	13.81%	12.05%	11.98%	12.44%
Duke Energy Corporation	DUK	1.76%	0.73	13.81%	12.05%	10.55%	11.36%
Entergy Corporation	ETR	1.76%	0.84	13.81%	12.05%	11.85%	12.34%
Evergy, Inc.	EVRG	1.76%	0.81	13.81%	12.05%	11.52%	12.10%
IDACORP, Inc.	IDA	1.76%	0.85	13.81%	12.05%	11.98%	12.44%
NextEra Energy, Inc.	NEE	1.76%	0.76	13.81%	12.05%	10.93%	11.65%
NorthWestern Corporation	NWE	1.76%	0.91	13.81%	12.05%	12.70%	12.98%
OGE Energy Corporation	OGE	1.76%	0.93	13.81%	12.05%	13.03%	13.22%
Otter Tail Corporation	OTTR	1.76%	0.87	13.81%	12.05%	12.26%	12.65%
Pinnacle West Capital Corporation	PNW	1.76%	0.84	13.81%	12.05%	11.84%	12.33%
PNM Resources, Inc.	PNM	1.76%	0.94	13.81%	12.05%	13.09%	13.27%
Portland General Electric Company	POR	1.76%	0.82	13.81%	12.05%	11.64%	12.19%
PPL Corporation	PPL	1.76%	0.92	13.81%	12.05%	12.86%	13.10%
Southern Company	SO	1.76%	0.74	13.81%	12.05%	10.64%	11.43%
Xcel Energy Inc.	XEL	1.76%	0.73	13.81%	12.05%	10.60%	11.41%
Mean						11.60%	12.15%

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 39, No. 7, July 1, 2020, at 2

[2] Source: Bloomberg Professional

[3] Source: Exhibit PAC/3505, page 7 (Analysts Long-term growth estimates)

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL – LONG-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$$K = R_f + \beta (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Projected 30-year U.S. Treasury bond yield (2022 - 2026)	Beta (β)	Market Return (R_m)	Market Risk Premium ($R_m - R_f$)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	3.00%	0.83	13.81%	10.81%	11.99%	12.45%
Alliant Energy Corporation	LNT	3.00%	0.81	13.81%	10.81%	11.76%	12.28%
Ameren Corporation	AEE	3.00%	0.76	13.81%	10.81%	11.19%	11.84%
American Electric Power Company, Inc.	AEP	3.00%	0.77	13.81%	10.81%	11.30%	11.93%
Avista Corporation	AVA	3.00%	0.79	13.81%	10.81%	11.58%	12.14%
CMS Energy Corporation	CMS	3.00%	0.77	13.81%	10.81%	11.29%	11.92%
Dominion Resources, Inc.	D	3.00%	0.69	13.81%	10.81%	10.52%	11.34%
DTE Energy Company	DTE	3.00%	0.85	13.81%	10.81%	12.17%	12.58%
Duke Energy Corporation	DUK	3.00%	0.73	13.81%	10.81%	10.88%	11.62%
Entergy Corporation	ETR	3.00%	0.84	13.81%	10.81%	12.05%	12.49%
Evergy, Inc.	EVRG	3.00%	0.81	13.81%	10.81%	11.76%	12.27%
IDACORP, Inc.	IDA	3.00%	0.85	13.81%	10.81%	12.17%	12.58%
NextEra Energy, Inc.	NEE	3.00%	0.76	13.81%	10.81%	11.23%	11.88%
NorthWestern Corporation	NWE	3.00%	0.91	13.81%	10.81%	12.81%	13.06%
OGE Energy Corporation	OGE	3.00%	0.93	13.81%	10.81%	13.11%	13.28%
Otter Tail Corporation	OTTR	3.00%	0.87	13.81%	10.81%	12.42%	12.77%

Pinnacle West Capital Corporation	PNW	3.00%	0.84	13.81%	10.81%	12.04%	12.48%
PNM Resources, Inc.	PNM	3.00%	0.94	13.81%	10.81%	13.16%	13.32%
Portland General Electric Company	POR	3.00%	0.82	13.81%	10.81%	11.87%	12.35%
PPL Corporation	PPL	3.00%	0.92	13.81%	10.81%	12.96%	13.17%
Southern Company	SO	3.00%	0.74	13.81%	10.81%	10.96%	11.68%
Xcel Energy Inc.	XEL	3.00%	0.73	13.81%	10.81%	10.93%	11.65%
Mean						11.83%	12.32%

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 39, No. 6, June 1, 2020, at 14

[2] Source: Bloomberg Professional

[3] Source: Exhibit PAC/3505, page 7 (Analysts Long-term growth estimates)

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VL BETA

$$K = R_f + \beta (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Current 30-day average of 30-year U.S. Treasury bond yield	Beta (β)	Market Return (R_m)	Market Risk Premium ($R_m - R_f$)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	1.34%	0.85	13.95%	12.60%	12.06%	12.53%
Alliant Energy Corporation	LNT	1.34%	0.80	13.95%	12.60%	11.43%	12.06%
Ameren Corporation	AEE	1.34%	0.80	13.95%	12.60%	11.43%	12.06%
American Electric Power Company, Inc.	AEP	1.34%	0.75	13.95%	12.60%	10.80%	11.58%
Avista Corporation	AVA	1.34%	0.95	13.95%	12.60%	13.32%	13.47%
CMS Energy Corporation	CMS	1.34%	0.80	13.95%	12.60%	11.43%	12.06%
Dominion Resources, Inc.	D	1.34%	0.80	13.95%	12.60%	11.43%	12.06%
DTE Energy Company	DTE	1.34%	0.90	13.95%	12.60%	12.69%	13.00%
Duke Energy Corporation	DUK	1.34%	0.85	13.95%	12.60%	12.06%	12.53%
Entergy Corporation	ETR	1.34%	0.95	13.95%	12.60%	13.32%	13.47%
Evergy, Inc.	EVERG	1.34%	1.05	13.95%	12.60%	14.58%	14.42%
IDACORP, Inc.	IDA	1.34%	0.80	13.95%	12.60%	11.43%	12.06%
NextEra Energy, Inc.	NEE	1.34%	0.85	13.95%	12.60%	12.06%	12.53%
NorthWestern Corporation	NWE	1.34%	0.90	13.95%	12.60%	12.69%	13.00%
OGE Energy Corporation	OGE	1.34%	1.05	13.95%	12.60%	14.58%	14.42%
Otter Tail Corporation	OTTR	1.34%	0.85	13.95%	12.60%	12.06%	12.53%
Pinnacle West Capital Corporation	PNW	1.34%	0.85	13.95%	12.60%	12.06%	12.53%
PNM Resources, Inc.	PNM	1.34%	0.90	13.95%	12.60%	12.69%	13.00%
Portland General Electric Company	POR	1.34%	0.85	13.95%	12.60%	12.06%	12.53%
PPL Corporation	PPL	1.34%	1.05	13.95%	12.60%	14.58%	14.42%
Southern Company	SO	1.34%	0.90	13.95%	12.60%	12.69%	13.00%
Xcel Energy Inc.	CEL	1.34%	0.75	13.95%	12.60%	10.80%	11.58%
Mean						12.37%	12.76%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Value Line

[3] Source: Exhibit PAC/3505 page 7 (S&P Earnings and Estimates Report)

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & VL BETA

$$K = R_f + \beta (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Near-term projected 30-year U.S. Treasury bond yield (Q4 2020 - Q4 2021)	Beta (β)	Market Return (R_m)	Market Risk Premium ($R_m - R_f$)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	1.76%	0.85	13.95%	12.19%	12.12%	12.58%
Alliant Energy Corporation	LNT	1.76%	0.80	13.95%	12.19%	11.51%	12.12%
Ameren Corporation	AEE	1.76%	0.80	13.95%	12.19%	11.51%	12.12%
American Electric Power Company, Inc.	AEP	1.76%	0.75	13.95%	12.19%	10.90%	11.66%
Avista Corporation	AVA	1.76%	0.95	13.95%	12.19%	13.34%	13.49%
CMS Energy Corporation	CMS	1.76%	0.80	13.95%	12.19%	11.51%	12.12%
Dominion Resources, Inc.	D	1.76%	0.80	13.95%	12.19%	11.51%	12.12%
DTE Energy Company	DTE	1.76%	0.90	13.95%	12.19%	12.73%	13.03%
Duke Energy Corporation	DUK	1.76%	0.85	13.95%	12.19%	12.12%	12.58%
Entergy Corporation	ETR	1.76%	0.95	13.95%	12.19%	13.34%	13.49%
Evergy, Inc.	EVERG	1.76%	1.05	13.95%	12.19%	14.56%	14.40%
IDACORP, Inc.	IDA	1.76%	0.80	13.95%	12.19%	11.51%	12.12%
NextEra Energy, Inc.	NEE	1.76%	0.85	13.95%	12.19%	12.12%	12.58%
NorthWestern Corporation	NWE	1.76%	0.90	13.95%	12.19%	12.73%	13.03%
OGE Energy Corporation	OGE	1.76%	1.05	13.95%	12.19%	14.56%	14.40%

Otter Tail Corporation	OTTR	1.76%	0.85	13.95%	12.19%	12.12%	12.58%
Pinnacle West Capital Corporation	PNW	1.76%	0.85	13.95%	12.19%	12.12%	12.58%
PNM Resources, Inc.	PNM	1.76%	0.90	13.95%	12.19%	12.73%	13.03%
Portland General Electric Company	POR	1.76%	0.85	13.95%	12.19%	12.12%	12.58%
PPL Corporation	PPL	1.76%	1.05	13.95%	12.19%	14.56%	14.40%
Southern Company	SO	1.76%	0.90	13.95%	12.19%	12.73%	13.03%
Xcel Energy Inc.	XEL	1.76%	0.75	13.95%	12.19%	10.90%	11.66%
Mean						12.42%	12.80%

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 39, No. 6, June 1, 2020, at 2

[2] Source: Value Line

[3] Source: Exhibit PAC/3505, page 7 (S&P Earnings and Estimates Report)

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & VL BETA

$$K = R_f + \beta (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Projected 30-year U.S. Treasury bond yield		Market Return (Rm)	Market Risk Premium (Rm - Rf)		ECAPM ROE
		(2022 - 2026)	Beta (β)			ROE (K)	
ALLETE, Inc.	ALE	3.00%	0.85	13.95%	10.95%	12.30%	12.71%
Alliant Energy Corporation	LNT	3.00%	0.80	13.95%	10.95%	11.76%	12.30%
Ameren Corporation	AEE	3.00%	0.80	13.95%	10.95%	11.76%	12.30%
American Electric Power Company, Inc.	AEP	3.00%	0.75	13.95%	10.95%	11.21%	11.89%
Avista Corporation	AVA	3.00%	0.95	13.95%	10.95%	13.40%	13.54%
CMS Energy Corporation	CMS	3.00%	0.80	13.95%	10.95%	11.76%	12.30%
Dominion Resources, Inc.	D	3.00%	0.80	13.95%	10.95%	11.76%	12.30%
DTE Energy Company	DTE	3.00%	0.90	13.95%	10.95%	12.85%	13.13%
Duke Energy Corporation	DUK	3.00%	0.85	13.95%	10.95%	12.30%	12.71%
Entergy Corporation	ETR	3.00%	0.95	13.95%	10.95%	13.40%	13.54%
Evergy, Inc.	EVRG	3.00%	1.05	13.95%	10.95%	14.49%	14.36%
IDACORP, Inc.	IDA	3.00%	0.80	13.95%	10.95%	11.76%	12.30%
NextEra Energy, Inc.	NEE	3.00%	0.85	13.95%	10.95%	12.30%	12.71%
NorthWestern Corporation	NWE	3.00%	0.90	13.95%	10.95%	12.85%	13.13%
OGE Energy Corporation	OGE	3.00%	1.05	13.95%	10.95%	14.49%	14.36%
Otter Tail Corporation	OTTR	3.00%	0.85	13.95%	10.95%	12.30%	12.71%
Pinnacle West Capital Corporation	PNW	3.00%	0.85	13.95%	10.95%	12.30%	12.71%
PNM Resources, Inc.	PNM	3.00%	0.90	13.95%	10.95%	12.85%	13.13%
Portland General Electric Company	POR	3.00%	0.85	13.95%	10.95%	12.30%	12.71%
PPL Corporation	PPL	3.00%	1.05	13.95%	10.95%	14.49%	14.36%
Southern Company	SO	3.00%	0.90	13.95%	10.95%	12.85%	13.13%
Xcel Energy Inc.	XEL	3.00%	0.75	13.95%	10.95%	11.21%	11.89%
Mean						12.58%	12.92%

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 39, No. 6, June 1, 2020, at 14

[2] Source: Value Line

[3] Source: Exhibit PAC/3505, page 7 (S&P Earnings and Estimates Report)

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & BLOOMBERG BETA

$$K = R_f + \beta (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
Company	Ticker	Current 30-day average of 30-year U.S. Treasury bond yield		Market Return (Rm)	Market Risk Premium (Rm - Rf)		ECAPM ROE
		yield	Beta (β)			ROE (K)	
ALLETE, Inc.	ALE	1.34%	0.83	13.95%	12.60%	11.83%	12.36%
Alliant Energy Corporation	LNT	1.34%	0.81	13.95%	12.60%	11.56%	12.15%
Ameren Corporation	AEE	1.34%	0.76	13.95%	12.60%	10.88%	11.65%
American Electric Power Company, Inc.	AEP	1.34%	0.77	13.95%	12.60%	11.02%	11.75%
Avista Corporation	AVA	1.34%	0.79	13.95%	12.60%	11.34%	11.99%
CMS Energy Corporation	CMS	1.34%	0.77	13.95%	12.60%	11.01%	11.74%
Dominion Resources, Inc.	D	1.34%	0.69	13.95%	12.60%	10.10%	11.06%
DTE Energy Company	DTE	1.34%	0.85	13.95%	12.60%	12.03%	12.51%
Duke Energy Corporation	DUK	1.34%	0.73	13.95%	12.60%	10.53%	11.38%
Entergy Corporation	ETR	1.34%	0.84	13.95%	12.60%	11.89%	12.40%
Evergy, Inc.	EVRG	1.34%	0.81	13.95%	12.60%	11.55%	12.15%
IDACORP, Inc.	IDA	1.34%	0.85	13.95%	12.60%	12.02%	12.51%
NextEra Energy, Inc.	NEE	1.34%	0.76	13.95%	12.60%	10.93%	11.69%
NorthWestern Corporation	NWE	1.34%	0.91	13.95%	12.60%	12.78%	13.07%

OGE Energy Corporation	OGE	1.34%	0.93	13.95%	12.60%	13.12%	13.33%
Otter Tail Corporation	OTTR	1.34%	0.87	13.95%	12.60%	12.32%	12.72%
Pinnacle West Capital Corporation	PNW	1.34%	0.84	13.95%	12.60%	11.88%	12.40%
PNM Resources, Inc.	PNM	1.34%	0.94	13.95%	12.60%	13.18%	13.38%
Portland General Electric Company	POR	1.34%	0.82	13.95%	12.60%	11.68%	12.24%
PPL Corporation	PPL	1.34%	0.92	13.95%	12.60%	12.95%	13.20%
Southern Company	SO	1.34%	0.74	13.95%	12.60%	10.62%	11.45%
Xcel Energy Inc.	XEL	1.34%	0.73	13.95%	12.60%	10.59%	11.43%
Mean						11.63%	12.21%

Notes:

[1] Source: Bloomberg Professional

[2] Source: Bloomberg Professional

[3] Source: Exhibit PAC/3505, page 7 (S&P Earnings and Estimates Report)

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- NEAR-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$$K = R_f + \beta (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
		Near-term projected 30-year U.S. Treasury bond yield			Market Risk Premium		
Company	Ticker	(Q4 2020 - Q4 2021)	Beta (β)	Return (R_m)	($R_m - R_f$)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	1.76%	0.83	13.95%	12.19%	11.90%	12.41%
Alliant Energy Corporation	LNT	1.76%	0.81	13.95%	12.19%	11.63%	12.21%
Ameren Corporation	AEE	1.76%	0.76	13.95%	12.19%	10.99%	11.73%
American Electric Power Company, Inc.	AEP	1.76%	0.77	13.95%	12.19%	11.12%	11.82%
Avista Corporation	AVA	1.76%	0.79	13.95%	12.19%	11.43%	12.06%
CMS Energy Corporation	CMS	1.76%	0.77	13.95%	12.19%	11.10%	11.81%
Dominion Resources, Inc.	D	1.76%	0.69	13.95%	12.19%	10.23%	11.16%
DTE Energy Company	DTE	1.76%	0.85	13.95%	12.19%	12.10%	12.56%
Duke Energy Corporation	DUK	1.76%	0.73	13.95%	12.19%	10.64%	11.47%
Entergy Corporation	ETR	1.76%	0.84	13.95%	12.19%	11.96%	12.46%
Evergy, Inc.	EVRG	1.76%	0.81	13.95%	12.19%	11.63%	12.21%
IDACORP, Inc.	IDA	1.76%	0.85	13.95%	12.19%	12.09%	12.55%
NextEra Energy, Inc.	NEE	1.76%	0.76	13.95%	12.19%	11.03%	11.76%
NorthWestern Corporation	NWE	1.76%	0.91	13.95%	12.19%	12.82%	13.10%
OGE Energy Corporation	OGE	1.76%	0.93	13.95%	12.19%	13.15%	13.35%
Otter Tail Corporation	OTTR	1.76%	0.87	13.95%	12.19%	12.37%	12.76%
Pinnacle West Capital Corporation	PNW	1.76%	0.84	13.95%	12.19%	11.95%	12.45%
PNM Resources, Inc.	PNM	1.76%	0.94	13.95%	12.19%	13.21%	13.39%
Portland General Electric Company	POR	1.76%	0.82	13.95%	12.19%	11.75%	12.30%
PPL Corporation	PPL	1.76%	0.92	13.95%	12.19%	12.98%	13.22%
Southern Company	SO	1.76%	0.74	13.95%	12.19%	10.73%	11.54%
Xcel Energy Inc.	XEL	1.76%	0.73	13.95%	12.19%	10.70%	11.51%
Mean						11.70%	12.27%

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 39, No. 6, June 1, 2020, at 2

[2] Source: Bloomberg Professional

[3] Source: Exhibit PAC/3505, page 7 (S&P Earnings and Estimates Report)

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

CAPITAL ASSET PRICING MODEL -- LONG-TERM PROJECTED RISK-FREE RATE & BLOOMBERG BETA

$$K = R_f + \beta (R_m - R_f)$$

		[1]	[2]	[3]	[4]	[5]	[6]
		Projected 30-year U.S. Treasury bond yield			Market Risk Premium		
Company	Ticker	(2022 - 2026)	Beta (β)	Return (R_m)	($R_m - R_f$)	ROE (K)	ECAPM ROE
ALLETE, Inc.	ALE	3.00%	0.83	13.95%	10.95%	12.10%	12.56%
Alliant Energy Corporation	LNT	3.00%	0.81	13.95%	10.95%	11.87%	12.39%
Ameren Corporation	AEE	3.00%	0.76	13.95%	10.95%	11.29%	11.95%
American Electric Power Company, Inc.	AEP	3.00%	0.77	13.95%	10.95%	11.40%	12.04%
Avista Corporation	AVA	3.00%	0.79	13.95%	10.95%	11.69%	12.25%
CMS Energy Corporation	CMS	3.00%	0.77	13.95%	10.95%	11.39%	12.03%
Dominion Resources, Inc.	D	3.00%	0.69	13.95%	10.95%	10.61%	11.44%
DTE Energy Company	DTE	3.00%	0.85	13.95%	10.95%	12.28%	12.70%
Duke Energy Corporation	DUK	3.00%	0.73	13.95%	10.95%	10.98%	11.72%
Entergy Corporation	ETR	3.00%	0.84	13.95%	10.95%	12.16%	12.61%
Evergy, Inc.	EVRG	3.00%	0.81	13.95%	10.95%	11.87%	12.39%
IDACORP, Inc.	IDA	3.00%	0.85	13.95%	10.95%	12.28%	12.69%
NextEra Energy, Inc.	NEE	3.00%	0.76	13.95%	10.95%	11.33%	11.98%
NorthWestern Corporation	NWE	3.00%	0.91	13.95%	10.95%	12.93%	13.19%
OGE Energy Corporation	OGE	3.00%	0.93	13.95%	10.95%	13.23%	13.41%

Otter Tail Corporation	OTTR	3.00%	0.87	13.95%	10.95%	12.53%	12.88%
Pinnacle West Capital Corporation	PNW	3.00%	0.84	13.95%	10.95%	12.15%	12.60%
PNM Resources, Inc.	PNM	3.00%	0.94	13.95%	10.95%	13.28%	13.45%
Portland General Electric Company	POR	3.00%	0.82	13.95%	10.95%	11.97%	12.47%
PPL Corporation	PPL	3.00%	0.92	13.95%	10.95%	13.08%	13.29%
Southern Company	SO	3.00%	0.74	13.95%	10.95%	11.06%	11.78%
Xcel Energy Inc.	XEL	3.00%	0.73	13.95%	10.95%	11.03%	11.76%
Mean						11.93%	12.44%

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 39, No. 6, June 1, 2020, at 14

[2] Source: Bloomberg Professional

[3] Source: Exhibit PAC/3505, page 7 (S&P Earnings and Estimates Report)

[4] Equals [3] - [1]

[5] Equals [1] + [2] x [4]

[6] Equals [1] + 0.25 x ([4]) + 0.75 x ([2] x [4])

MARKET RISK PREMIUM DERIVED FROM S&P EARNINGS AND ESTIMATE REPORT

[7] S&P's estimate of the S&P 500 Dividend Yield	1.72%
[8] S&P's estimate of the S&P 500 Growth Rate	12.12%
[9] S&P 500 Estimated Required Market Return	13.95%

MARKET RISK PREMIUM DERIVED FROM ANALYSTS LONG-TERM GROWTH ESTIMATES

[10] Estimated Weighted Average Dividend Yield	1.70%
[11] Estimated Weighted Average Long-Term Growth Rate	12.01%
[12] S&P 500 Estimated Required Market Return	13.81%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[13]	[14]	[15]	[16]	[17]
		Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
LyondellBasell Industries NV	LYB	0.07%	6.72%	0.01%	5.50%	0.00%
American Express Co	AXP	0.27%	1.84%	0.00%	8.53%	0.02%
Verizon Communications Inc	VZ	0.85%	4.28%	0.04%	3.07%	0.03%
Broadcom Inc	AVGO	0.46%	4.10%	0.02%	9.37%	0.04%
Boeing Co/The	BA	0.00%	n/a	n/a	n/a	n/a
Caterpillar Inc	CAT	0.26%	3.10%	0.01%	7.83%	0.02%
JPMorgan Chase & Co	JPM	1.05%	3.73%	0.04%	5.40%	0.06%
Chevron Corp	CVX	0.56%	6.15%	0.03%	38.90%	0.22%
Coca-Cola Co/The	KO	0.73%	3.47%	0.03%	2.19%	0.02%
AbbVie Inc	ABBV	0.60%	4.97%	0.03%	4.85%	0.03%
Walt Disney Co/The	DIS	0.76%	n/a	n/a	4.08%	0.03%
FleetCor Technologies Inc	FLT	0.08%	n/a	n/a	13.20%	0.01%
Extra Space Storage Inc	EXR	0.05%	3.48%	0.00%	1.36%	0.00%
Exxon Mobil Corp	XOM	0.64%	8.27%	0.05%	16.97%	0.11%
Phillips 66	PSX	0.10%	5.80%	0.01%	10.19%	0.01%
General Electric Co	GE	0.19%	0.66%	0.00%	5.67%	0.01%
HP Inc	HPQ	0.09%	4.01%	0.00%	4.77%	0.00%
Home Depot Inc/The	HD	1.02%	2.26%	0.02%	7.65%	0.08%
International Business Machines Corp	IBM	0.39%	5.30%	0.02%	2.62%	0.01%
Concho Resources Inc	CXO	0.04%	1.52%	0.00%	8.80%	0.00%
Johnson & Johnson	JNJ	1.37%	2.77%	0.04%	5.42%	0.07%
McDonald's Corp	MCD	0.52%	2.57%	0.01%	7.22%	0.04%
Merck & Co Inc	MRK	0.72%	3.04%	0.02%	8.45%	0.06%
3M Co	MMM	0.31%	3.91%	0.01%	7.05%	0.02%
American Water Works Co Inc	AWK	0.10%	1.49%	0.00%	8.19%	0.01%
Bank of America Corp	BAC	0.77%	2.89%	0.02%	12.70%	0.10%
Baker Hughes Co	BKR	0.04%	4.65%	0.00%	21.91%	0.01%
Pfizer Inc	PFE	0.76%	3.95%	0.03%	4.85%	0.04%
Procter & Gamble Co/The	PG	1.16%	2.41%	0.03%	7.17%	0.08%
AT&T Inc	T	0.75%	7.03%	0.05%	4.13%	0.03%
Noble Energy Inc	NBL	0.02%	0.80%	0.00%	14.32%	0.00%
Travelers Cos Inc/The	TRV	0.10%	2.97%	0.00%	9.64%	0.01%
Raytheon Technologies Corp	RTX	0.31%	3.35%	0.01%	-4.81%	-0.01%
Analog Devices Inc	ADI	0.15%	2.16%	0.00%	12.18%	0.02%
Walmart Inc	WMT	1.31%	1.67%	0.02%	3.95%	0.05%
Cisco Systems Inc	CSCO	0.71%	3.06%	0.02%	5.50%	0.04%
Intel Corp	INTC	0.73%	2.77%	0.02%	6.62%	0.05%
General Motors Co	GM	0.13%	n/a	n/a	12.76%	0.02%
Microsoft Corp	MSFT	5.55%	0.99%	0.06%	13.63%	0.76%
Dollar General Corp	DG	0.17%	0.76%	0.00%	11.63%	0.02%
Cigna Corp	CI	0.23%	0.02%	0.00%	11.09%	0.03%
Kinder Morgan Inc	KMI	0.11%	7.45%	0.01%	6.35%	0.01%
Citigroup Inc	C	0.37%	4.08%	0.02%	3.17%	0.01%
American International Group Inc	AIG	0.10%	3.98%	0.00%	13.57%	0.01%
Honeywell International Inc	HON	0.37%	2.41%	0.01%	6.98%	0.03%
Altria Group Inc	MO	0.27%	8.36%	0.02%	5.05%	0.01%
HCA Healthcare Inc	HCA	0.15%	n/a	n/a	10.01%	0.02%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[13]	[14]	[15]	[16]	[17]
		Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
Under Armour Inc	UAA	0.01%	n/a	n/a	26.60%	0.00%
International Paper Co	IP	0.05%	5.89%	0.00%	5.15%	0.00%
Hewlett Packard Enterprise Co	HPE	0.05%	4.86%	0.00%	2.40%	0.00%
Abbott Laboratories	ABT	0.64%	1.43%	0.01%	8.31%	0.05%
Aflac Inc	AFL	0.09%	3.15%	0.00%	1.55%	0.00%
Air Products and Chemicals Inc	APD	0.23%	1.87%	0.00%	11.19%	0.03%
Royal Caribbean Cruises Ltd	RCL	0.04%	n/a	n/a	-58.33%	-0.02%
American Electric Power Co Inc	AEP	0.15%	3.22%	0.00%	6.34%	0.01%
Hess Corp	HES	0.05%	2.03%	0.00%	103.20%	0.06%
Archer-Daniels-Midland Co	ADM	0.09%	3.36%	0.00%	7.20%	0.01%
Automatic Data Processing Inc	ADP	0.20%	2.74%	0.01%	12.30%	0.03%
Verisk Analytics Inc	VRSK	0.11%	0.57%	0.00%	9.18%	0.01%
AutoZone Inc	AZO	0.10%	n/a	n/a	7.70%	0.01%
Avery Dennison Corp	AVY	0.03%	2.05%	0.00%	4.55%	0.00%
MSCI Inc	MSCI	0.11%	0.83%	0.00%	11.75%	0.01%
Ball Corp	BLL	0.09%	0.81%	0.00%	6.07%	0.01%
Carrier Global Corp	CARR	0.08%	1.17%	0.00%	5.10%	0.00%
Bank of New York Mellon Corp/The	BK	0.11%	3.46%	0.00%	4.83%	0.01%
Otis Worldwide Corp	OTIS	0.10%	1.27%	0.00%	4.80%	0.00%
Baxter International Inc	BAX	0.16%	1.13%	0.00%	10.38%	0.02%
Becton Dickinson and Co	BDX	0.29%	1.12%	0.00%	8.14%	0.02%
Berkshire Hathaway Inc	BRK/B	0.97%	n/a	n/a	-3.10%	-0.03%
Best Buy Co Inc	BBY	0.09%	2.21%	0.00%	5.76%	0.01%
H&R Block Inc	HRB	0.01%	7.17%	0.00%	10.00%	0.00%
Boston Scientific Corp	BSX	0.20%	n/a	n/a	3.32%	0.01%
Bristol-Myers Squibb Co	BMJ	0.47%	3.07%	0.01%	9.92%	0.05%
Fortune Brands Home & Security Inc	FBHS	0.04%	1.26%	0.00%	9.01%	0.00%
Brown-Forman Corp	BF/B	0.08%	1.01%	0.00%	4.23%	0.00%
Cabot Oil & Gas Corp	COG	0.03%	2.14%	0.00%	9.05%	0.00%
Campbell Soup Co	CPB	0.05%	2.82%	0.00%	8.89%	0.00%
Kansas City Southern	KSU	0.06%	0.93%	0.00%	10.10%	0.01%
Hilton Worldwide Holdings Inc	HLT	0.07%	n/a	n/a	0.37%	0.00%
Carnival Corp	CCL	0.03%	n/a	n/a	-14.19%	0.00%
Qorvo Inc	QRVO	0.05%	n/a	n/a	12.78%	0.01%
CenturyLink Inc	CTL	0.04%	10.36%	0.00%	-1.24%	0.00%
UDR Inc	UDR	0.04%	3.98%	0.00%	4.99%	0.00%
Clorox Co/The	CLX	0.11%	1.88%	0.00%	5.24%	0.01%
Paycom Software Inc	PAYC	0.06%	n/a	n/a	19.70%	0.01%
CMS Energy Corp	CMS	0.07%	2.54%	0.00%	6.87%	0.00%
Newell Brands Inc	NWL	0.02%	5.61%	0.00%	-6.27%	0.00%
Colgate-Palmolive Co	CL	0.24%	2.28%	0.01%	4.85%	0.01%
Comerica Inc	CMA	0.02%	7.06%	0.00%	14.75%	0.00%
IPG Photonics Corp	IPGP	0.03%	n/a	n/a	23.11%	0.01%
Conagra Brands Inc	CAG	0.07%	2.27%	0.00%	7.90%	0.01%
Consolidated Edison Inc	ED	0.09%	3.98%	0.00%	3.35%	0.00%
SL Green Realty Corp	SLG	0.01%	7.61%	0.00%	6.15%	0.00%
Corning Inc	GLW	0.08%	2.84%	0.00%	5.97%	0.01%
Cummins Inc	CMI	0.10%	2.71%	0.00%	3.92%	0.00%
Danaher Corp	DHR	0.52%	0.35%	0.00%	10.96%	0.06%
Target Corp	TGT	0.23%	2.16%	0.00%	7.83%	0.02%
Deere & Co	DE	0.20%	1.72%	0.00%	0.41%	0.00%
Dominion Energy Inc	D	0.24%	4.64%	0.01%	3.54%	0.01%
Dover Corp	DOV	0.05%	1.90%	0.00%	10.47%	0.01%
Alliant Energy Corp	LNT	0.05%	2.82%	0.00%	5.46%	0.00%
Duke Energy Corp	DUK	0.22%	4.56%	0.01%	4.02%	0.01%
Regency Centers Corp	REG	0.02%	5.80%	0.00%	4.27%	0.00%
Eaton Corp PLC	ETN	0.13%	3.14%	0.00%	9.28%	0.01%
Ecolab Inc	ECL	0.19%	1.00%	0.00%	10.90%	0.02%
PerkinElmer Inc	PKI	0.05%	0.24%	0.00%	10.58%	0.01%
Emerson Electric Co	EMR	0.13%	3.23%	0.00%	6.51%	0.01%
EOG Resources Inc	EOG	0.10%	3.20%	0.00%	8.45%	0.01%
Aon PLC	AON	0.17%	0.86%	0.00%	11.05%	0.02%
Entergy Corp	ETR	0.08%	3.54%	0.00%	5.06%	0.00%
Equifax Inc	EFX	0.07%	0.96%	0.00%	9.73%	0.01%
IQVIA Holdings Inc	IQV	0.11%	n/a	n/a	11.75%	0.01%
Gartner Inc	IT	0.04%	n/a	n/a	10.00%	0.00%
FedEx Corp	FDX	0.16%	1.54%	0.00%	12.88%	0.02%
FMC Corp	FMC	0.05%	1.66%	0.00%	9.63%	0.00%

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Name	Ticker	[13]	[14]	[15]	[16]	[17]
		Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
Ford Motor Co	F	0.09%	n/a	n/a	12.74%	0.01%
NextEra Energy Inc	NEE	0.49%	2.00%	0.01%	8.63%	0.04%
Franklin Resources Inc	BEN	0.04%	5.13%	0.00%	-2.69%	0.00%
Freeport-McMoRan Inc	FCX	0.07%	n/a	n/a	136.19%	0.09%
Gap Inc/The	GPS	0.02%	7.26%	0.00%	4.47%	0.00%
DexCom Inc	DXCM	0.15%	n/a	n/a	32.12%	0.05%
General Dynamics Corp	GD	0.15%	3.00%	0.00%	4.40%	0.01%
General Mills Inc	GIS	0.14%	3.10%	0.00%	4.30%	0.01%
Genuine Parts Co	GPC	0.05%	3.51%	0.00%	2.16%	0.00%
Atmos Energy Corp	ATO	0.05%	2.17%	0.00%	7.34%	0.00%
WW Grainger Inc	GWV	0.07%	1.79%	0.00%	9.65%	0.01%
Halliburton Co	HAL	0.05%	1.26%	0.00%	12.95%	0.01%
L3Harris Technologies Inc	LHX	0.13%	2.02%	0.00%	16.64%	0.02%
Healthpeak Properties Inc	PEAK	0.05%	5.42%	0.00%	3.51%	0.00%
Fortive Corp	FTV	0.08%	0.40%	0.00%	8.82%	0.01%
Hershey Co/The	HSY	0.08%	2.21%	0.00%	7.50%	0.01%
Synchrony Financial	SYF	0.05%	3.98%	0.00%	-2.50%	0.00%
Hormel Foods Corp	HRL	0.10%	1.83%	0.00%	0.76%	0.00%
Arthur J Gallagher & Co	AJG	0.07%	1.67%	0.00%	9.73%	0.01%
Mondelez International Inc	MDLZ	0.28%	2.27%	0.01%	9.73%	0.03%
CenterPoint Energy Inc	CNP	0.03%	3.16%	0.00%	-1.59%	0.00%
Humana Inc	HUM	0.19%	0.64%	0.00%	11.56%	0.02%
Willis Towers Watson PLC	WLTW	0.10%	1.30%	0.00%	10.00%	0.01%
Illinois Tool Works Inc	ITW	0.21%	2.31%	0.00%	6.44%	0.01%
CDW Corp/DE	CDW	0.06%	1.31%	0.00%	13.10%	0.01%
Trane Technologies PLC	TT	0.10%	1.90%	0.00%	4.63%	0.00%
Interpublic Group of Cos Inc/The	IPG	0.03%	5.65%	0.00%	0.14%	0.00%
International Flavors & Fragrances Inc	IFF	0.05%	2.38%	0.00%	4.95%	0.00%
Jacobs Engineering Group Inc	J	0.04%	0.89%	0.00%	7.25%	0.00%
Hanesbrands Inc	HBI	0.02%	4.25%	0.00%	2.31%	0.00%
Kellogg Co	K	0.08%	3.31%	0.00%	2.76%	0.00%
Broadridge Financial Solutions Inc	BR	0.06%	1.61%	0.00%	6.50%	0.00%
Perrigo Co PLC	PRGO	0.03%	1.70%	0.00%	2.00%	0.00%
Kimberly-Clark Corp	KMB	0.19%	2.82%	0.01%	4.95%	0.01%
Kimco Realty Corp	KIM	0.02%	n/a	n/a	4.10%	0.00%
Kohl's Corp	KSS	0.01%	n/a	n/a	1.25%	0.00%
Oracle Corp	ORCL	0.61%	1.73%	0.01%	9.23%	0.06%
Kroger Co/The	KR	0.10%	2.07%	0.00%	5.58%	0.01%
Leggett & Platt Inc	LEG	0.00%	3.99%	0.00%	n/a	n/a
Lennar Corp	LEN	0.07%	0.69%	0.00%	9.74%	0.01%
Eli Lilly and Co	LLY	0.51%	1.97%	0.01%	16.25%	0.08%
L Brands Inc	LB	0.02%	n/a	n/a	11.50%	0.00%
Charter Communications Inc	CHTR	0.42%	n/a	n/a	44.10%	0.19%
Lincoln National Corp	LNC	0.03%	4.29%	0.00%	9.00%	0.00%
Loews Corp	L	0.00%	0.69%	0.00%	n/a	n/a
Lowe's Cos Inc	LOW	0.40%	1.48%	0.01%	17.28%	0.07%
Host Hotels & Resorts Inc	HST	0.03%	n/a	n/a	-2.30%	0.00%
Xerox Holdings Corp	XRX	0.01%	6.01%	0.00%	1.00%	0.00%
IDEX Corp	IEX	0.04%	1.21%	0.00%	11.38%	0.01%
Marsh & McLennan Cos Inc	MMC	0.21%	1.60%	0.00%	10.07%	0.02%
Masco Corp	MAS	0.05%	0.94%	0.00%	11.94%	0.01%
S&P Global Inc	SPGI	0.30%	0.77%	0.00%	8.90%	0.03%
Medtronic PLC	MDT	0.46%	2.40%	0.01%	7.60%	0.04%
CVS Health Corp	CVS	0.29%	3.18%	0.01%	7.40%	0.02%
DuPont de Nemours Inc	DD	0.14%	2.24%	0.00%	2.56%	0.00%
Micron Technology Inc	MU	0.20%	n/a	n/a	5.83%	0.01%
Motorola Solutions Inc	MSI	0.09%	1.83%	0.00%	8.50%	0.01%
Cboe Global Markets Inc	CBOE	0.03%	1.64%	0.00%	6.40%	0.00%
Mylan NV	MYL	0.03%	n/a	n/a	0.66%	0.00%
Laboratory Corp of America Holdings	LH	0.07%	n/a	n/a	6.30%	0.00%
Newmont Corp	NEM	0.20%	1.45%	0.00%	26.30%	0.05%
NIKE Inc	NKE	0.43%	1.00%	0.00%	21.98%	0.10%
NiSource Inc	NI	0.03%	3.44%	0.00%	4.66%	0.00%
Norfolk Southern Corp	NSC	0.18%	1.96%	0.00%	6.04%	0.01%
Principal Financial Group Inc	PFG	0.04%	5.28%	0.00%	6.55%	0.00%
Eversource Energy	ES	0.11%	2.52%	0.00%	6.82%	0.01%
Northrop Grumman Corp	NOC	0.19%	1.78%	0.00%	19.56%	0.04%
Wells Fargo & Co	WFC	0.36%	1.65%	0.01%	9.61%	0.03%

STANDARD AND POOR'S 500 INDEX

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		Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
Nucor Corp	NUE	0.05%	3.84%	0.00%	4.85%	0.00%
PVH Corp	PVH	0.01%	n/a	n/a	2.07%	0.00%
Occidental Petroleum Corp	OXY	0.05%	0.25%	0.00%	12.20%	0.01%
Omnicom Group Inc	OMC	0.04%	4.84%	0.00%	1.25%	0.00%
ONEOK Inc	OKE	0.04%	13.40%	0.01%	5.40%	0.00%
Raymond James Financial Inc	RJF	0.03%	2.13%	0.00%	3.50%	0.00%
Parker-Hannifin Corp	PH	0.08%	1.97%	0.00%	9.49%	0.01%
Rollins Inc	ROL	0.00%	0.61%	0.00%	n/a	n/a
PPL Corp	PPL	0.07%	6.23%	0.00%	0.63%	0.00%
ConocoPhillips	COP	0.00%	4.49%	0.00%	n/a	n/a
PulteGroup Inc	PHM	0.04%	1.10%	0.00%	10.19%	0.00%
Pinnacle West Capital Corp	PNW	0.03%	3.77%	0.00%	4.78%	0.00%
PNC Financial Services Group Inc/The	PNC	0.16%	4.31%	0.01%	-4.26%	-0.01%
PPG Industries Inc	PPG	0.09%	2.01%	0.00%	7.82%	0.01%
Progressive Corp/The	PGR	0.19%	0.44%	0.00%	5.36%	0.01%
Public Service Enterprise Group Inc	PEG	0.10%	3.50%	0.00%	4.29%	0.00%
Robert Half International Inc	RHI	0.02%	2.67%	0.00%	6.57%	0.00%
Edison International	EIX	0.08%	4.58%	0.00%	4.26%	0.00%
Schlumberger Ltd	SLB	0.09%	2.76%	0.00%	36.00%	0.03%
Charles Schwab Corp/The	SCHW	0.15%	2.17%	0.00%	1.20%	0.00%
Sherwin-Williams Co/The	SHW	0.21%	0.83%	0.00%	9.32%	0.02%
West Pharmaceutical Services Inc	WST	0.07%	0.24%	0.00%	14.94%	0.01%
J M Smucker Co/The	SJM	0.04%	3.29%	0.00%	0.24%	0.00%
Snap-on Inc	SNA	0.03%	2.96%	0.00%	4.06%	0.00%
AMETEK Inc	AME	0.08%	0.77%	0.00%	9.16%	0.01%
Southern Co/The	SO	0.21%	4.69%	0.01%	4.30%	0.01%
Truist Financial Corp	TFC	0.18%	4.81%	0.01%	2.17%	0.00%
Southwest Airlines Co	LUV	0.07%	n/a	n/a	-3.44%	0.00%
W R Berkley Corp	WRB	0.04%	0.78%	0.00%	10.70%	0.00%
Stanley Black & Decker Inc	SWK	0.09%	1.83%	0.00%	6.44%	0.01%
Public Storage	PSA	0.12%	4.00%	0.00%	3.55%	0.00%
Arista Networks Inc	ANET	0.07%	n/a	n/a	8.38%	0.01%
Sysco Corp	SY	0.10%	3.41%	0.00%	3.90%	0.00%
Corteva Inc	CTVA	0.08%	1.82%	0.00%	8.39%	0.01%
Texas Instruments Inc	TXN	0.42%	2.82%	0.01%	10.00%	0.04%
Textron Inc	TXT	0.03%	0.23%	0.00%	2.83%	0.00%
Thermo Fisher Scientific Inc	TMO	0.59%	0.21%	0.00%	8.30%	0.05%
Tiffany & Co	TIF	0.05%	1.85%	0.00%	6.80%	0.00%
TJX Cos Inc/The	TJX	0.22%	n/a	n/a	8.60%	0.02%
Globe Life Inc	GL	0.03%	0.94%	0.00%	5.06%	0.00%
Johnson Controls International plc	JCI	0.10%	2.70%	0.00%	9.10%	0.01%
Ulta Beauty Inc	ULTA	0.04%	n/a	n/a	6.20%	0.00%
Union Pacific Corp	UNP	0.42%	2.24%	0.01%	7.57%	0.03%
Keysight Technologies Inc	KEYS	0.07%	n/a	n/a	7.83%	0.01%
UnitedHealth Group Inc	UNH	1.03%	1.65%	0.02%	12.55%	0.13%
Unum Group	UNM	0.01%	6.62%	0.00%	9.00%	0.00%
Marathon Oil Corp	MRO	0.02%	n/a	n/a	-11.50%	0.00%
Varian Medical Systems Inc	VAR	0.05%	n/a	n/a	8.40%	0.00%
Bio-Rad Laboratories Inc	BIO	0.05%	n/a	n/a	4.00%	0.00%
Ventas Inc	VTR	0.05%	4.69%	0.00%	-0.29%	0.00%
VF Corp	VFC	0.08%	3.18%	0.00%	8.83%	0.01%
Vornado Realty Trust	VNO	0.02%	6.14%	0.00%	-4.59%	0.00%
Vulcan Materials Co	VMC	0.06%	1.16%	0.00%	14.20%	0.01%
Weyerhaeuser Co	WY	0.07%	n/a	n/a	54.40%	0.04%
Whirlpool Corp	WHR	0.04%	2.94%	0.00%	-0.42%	0.00%
Williams Cos Inc/The	WMB	0.08%	8.37%	0.01%	7.78%	0.01%
WEC Energy Group Inc	WEC	0.11%	2.66%	0.00%	6.39%	0.01%
Adobe Inc	ADBE	0.76%	n/a	n/a	16.35%	0.12%
AES Corp/The	AES	0.04%	3.76%	0.00%	6.99%	0.00%
Amgen Inc	AMGN	0.51%	2.62%	0.01%	7.67%	0.04%
Apple Inc	AAPL	6.50%	0.77%	0.05%	11.60%	0.75%
Autodesk Inc	ADSK	0.19%	n/a	n/a	31.35%	0.06%
Cintas Corp	CTAS	0.11%	0.84%	0.00%	10.52%	0.01%
Comcast Corp	CMCSA	0.70%	2.15%	0.01%	9.26%	0.06%
Molson Coors Beverage Co	TAP	0.03%	n/a	n/a	2.28%	0.00%
KLA Corp	KLAC	0.11%	1.70%	0.00%	10.54%	0.01%
Marriott International Inc/MD	MAR	0.10%	n/a	n/a	1.45%	0.00%
McCormick & Co Inc/MD	MKC	0.09%	1.27%	0.00%	10.13%	0.01%

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PACCAR Inc	PCAR	0.11%	1.50%	0.00%	4.47%	0.00%
Costco Wholesale Corp	COST	0.51%	0.86%	0.00%	6.87%	0.04%
First Republic Bank/CA	FRC	0.07%	0.71%	0.00%	10.43%	0.01%
Stryker Corp	SYK	0.26%	1.19%	0.00%	8.36%	0.02%
Tyson Foods Inc	TSN	0.06%	2.73%	0.00%	2.42%	0.00%
Lamb Weston Holdings Inc	LW	0.03%	1.53%	0.00%	9.13%	0.00%
Applied Materials Inc	AMAT	0.21%	1.37%	0.00%	14.04%	0.03%
American Airlines Group Inc	AAL	0.02%	n/a	n/a	-16.94%	0.00%
Cardinal Health Inc	CAH	0.06%	3.56%	0.00%	5.11%	0.00%
Cerner Corp	CERN	0.08%	1.04%	0.00%	11.76%	0.01%
Cincinnati Financial Corp	CINF	0.00%	3.08%	0.00%	n/a	n/a
ViacomCBS Inc	VIAC	0.05%	3.68%	0.00%	1.60%	0.00%
DR Horton Inc	DHI	0.09%	1.06%	0.00%	14.42%	0.01%
Flowserve Corp	FLS	0.01%	2.87%	0.00%	5.47%	0.00%
Electronic Arts Inc	EA	0.15%	n/a	n/a	7.38%	0.01%
Expeditors International of Washington Inc	EXPD	0.05%	1.23%	0.00%	6.50%	0.00%
Fastenal Co	FAST	0.10%	2.13%	0.00%	14.50%	0.01%
M&T Bank Corp	MTB	0.05%	4.15%	0.00%	-1.80%	0.00%
Xcel Energy Inc	CEL	0.13%	2.49%	0.00%	6.04%	0.01%
Fiserv Inc	FISV	0.24%	n/a	n/a	13.86%	0.03%
Fifth Third Bancorp	FTB	0.05%	5.44%	0.00%	8.97%	0.00%
Gilead Sciences Inc	GILD	0.31%	3.91%	0.01%	0.59%	0.00%
Hasbro Inc	HAS	0.04%	3.74%	0.00%	13.95%	0.00%
Huntington Bancshares Inc/OH	HBAN	0.03%	6.47%	0.00%	-2.94%	0.00%
Welltower Inc	WELL	0.08%	4.56%	0.00%	-0.62%	0.00%
Biogen Inc	BIIB	0.16%	n/a	n/a	1.55%	0.00%
Northern Trust Corp	NTRS	0.06%	3.57%	0.00%	2.11%	0.00%
Packaging Corp of America	PKG	0.03%	3.29%	0.00%	5.60%	0.00%
Paychex Inc	PAYX	0.09%	3.45%	0.00%	6.55%	0.01%
People's United Financial Inc	PBCT	0.02%	6.67%	0.00%	2.00%	0.00%
QUALCOMM Inc	QCOM	0.43%	2.46%	0.01%	18.45%	0.08%
Roper Technologies Inc	ROP	0.16%	0.47%	0.00%	12.23%	0.02%
Ross Stores Inc	ROST	0.11%	n/a	n/a	8.75%	0.01%
IDEXX Laboratories Inc	IDXX	0.12%	n/a	n/a	13.21%	0.02%
Starbucks Corp	SBUX	0.32%	2.14%	0.01%	13.01%	0.04%
KeyCorp	KEY	0.04%	6.16%	0.00%	16.40%	0.01%
Fox Corp	FOXA	0.03%	1.79%	0.00%	-0.71%	0.00%
Fox Corp	FOX	0.02%	1.79%	0.00%	-0.71%	0.00%
State Street Corp	STT	0.08%	3.26%	0.00%	6.18%	0.00%
Norwegian Cruise Line Holdings Ltd	NCLH	0.01%	n/a	n/a	-20.75%	0.00%
US Bancorp	USB	0.20%	4.56%	0.01%	5.20%	0.01%
A O Smith Corp	AOS	0.02%	1.99%	0.00%	8.00%	0.00%
NortonLifeLock Inc	NLOK	0.05%	2.33%	0.00%	7.50%	0.00%
T Rowe Price Group Inc	TROW	0.11%	2.61%	0.00%	6.25%	0.01%
Waste Management Inc	WM	0.17%	1.99%	0.00%	5.59%	0.01%
Constellation Brands Inc	STZ	0.11%	1.68%	0.00%	8.96%	0.01%
Xilinx Inc	XLNX	0.09%	1.42%	0.00%	8.53%	0.01%
DENTSPLY SIRONA Inc	XRAY	0.03%	0.90%	0.00%	-0.71%	0.00%
Zions Bancorp NA	ZION	0.02%	4.19%	0.00%	3.26%	0.00%
Alaska Air Group Inc	ALK	0.00%	n/a	n/a	n/a	n/a
Invesco Ltd	IVZ	0.02%	6.18%	0.00%	-9.48%	0.00%
Linde PLC	LIN	0.46%	1.57%	0.01%	9.50%	0.04%
Intuit Inc	INTU	0.29%	0.69%	0.00%	13.20%	0.04%
Morgan Stanley	MS	0.28%	2.86%	0.01%	1.97%	0.01%
Microchip Technology Inc	MCHP	0.09%	1.45%	0.00%	11.57%	0.01%
Chubb Ltd	CB	0.21%	2.45%	0.01%	9.37%	0.02%
Hologic Inc	HOLX	0.06%	n/a	n/a	13.91%	0.01%
Citizens Financial Group Inc	CFG	0.04%	6.29%	0.00%	8.07%	0.00%
O'Reilly Automotive Inc	ORLY	0.13%	n/a	n/a	9.81%	0.01%
Allstate Corp/The	ALL	0.11%	2.29%	0.00%	7.33%	0.01%
FLIR Systems Inc	FLIR	0.00%	1.63%	0.00%	n/a	n/a
Equity Residential	EQR	0.07%	4.49%	0.00%	4.00%	0.00%
BorgWarner Inc	BWA	0.03%	1.86%	0.00%	8.96%	0.00%
Incyte Corp	INCY	0.08%	n/a	n/a	31.37%	0.02%
Simon Property Group Inc	SPG	0.07%	8.34%	0.01%	0.60%	0.00%
Eastman Chemical Co	EMN	0.04%	3.54%	0.00%	1.58%	0.00%
Twitter Inc	TWTR	0.10%	n/a	n/a	9.50%	0.01%
AvalonBay Communities Inc	AVB	0.08%	4.15%	0.00%	2.58%	0.00%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[13]	[14]	[15]	[16]	[17]
		Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
Prudential Financial Inc	PRU	0.09%	6.94%	0.01%	7.00%	0.01%
United Parcel Service Inc	UPS	0.36%	2.83%	0.01%	8.86%	0.03%
Apartment Investment and Management Co	AIV	0.02%	4.22%	0.00%	1.59%	0.00%
Walgreens Boots Alliance Inc	WBA	0.13%	4.59%	0.01%	0.04%	0.00%
STERIS PLC	STE	0.05%	0.93%	0.00%	8.20%	0.00%
McKesson Corp	MCK	0.09%	1.12%	0.00%	8.62%	0.01%
Lockheed Martin Corp	LMT	0.38%	2.53%	0.01%	7.32%	0.03%
AmerisourceBergen Corp	ABC	0.07%	1.68%	0.00%	4.13%	0.00%
Capital One Financial Corp	COF	0.10%	0.63%	0.00%	1.65%	0.00%
Waters Corp	WAT	0.05%	n/a	n/a	3.13%	0.00%
Dollar Tree Inc	DLTR	0.08%	n/a	n/a	8.86%	0.01%
Darden Restaurants Inc	DRI	0.04%	n/a	n/a	12.76%	0.00%
Domino's Pizza Inc	DPZ	0.05%	0.81%	0.00%	13.89%	0.01%
NVR Inc	NVR	0.05%	n/a	n/a	7.92%	0.00%
NetApp Inc	NTAP	0.04%	4.33%	0.00%	9.73%	0.00%
Citrix Systems Inc	CTXS	0.06%	0.98%	0.00%	9.63%	0.01%
DXC Technology Co	DXC	0.02%	n/a	n/a	-17.84%	0.00%
Old Dominion Freight Line Inc	ODFL	0.08%	0.33%	0.00%	9.24%	0.01%
DaVita Inc	DVA	0.04%	n/a	n/a	9.96%	0.00%
Hartford Financial Services Group Inc/The	HIG	0.05%	3.07%	0.00%	9.50%	0.01%
Iron Mountain Inc	IRM	0.03%	8.78%	0.00%	0.06%	0.00%
Estee Lauder Cos Inc/The	EL	0.16%	n/a	n/a	20.37%	0.03%
Cadence Design Systems Inc	CDNS	0.11%	n/a	n/a	10.89%	0.01%
Tyler Technologies Inc	TYL	0.05%	n/a	n/a	12.17%	0.01%
Universal Health Services Inc	UHS	0.03%	n/a	n/a	8.00%	0.00%
E*TRADE Financial Corp	ETFC	0.04%	1.10%	0.00%	-9.84%	0.00%
Skyworks Solutions Inc	SWKS	0.09%	1.37%	0.00%	13.58%	0.01%
National Oilwell Varco Inc	NOV	0.02%	n/a	n/a	19.15%	0.00%
Quest Diagnostics Inc	DGX	0.06%	1.76%	0.00%	9.44%	0.01%
Activision Blizzard Inc	ATVI	0.23%	0.50%	0.00%	11.38%	0.03%
Rockwell Automation Inc	ROK	0.09%	1.87%	0.00%	7.44%	0.01%
Kraft Heinz Co/The	KHC	0.15%	4.65%	0.01%	4.30%	0.01%
American Tower Corp	AMT	0.41%	1.68%	0.01%	15.32%	0.06%
HollyFrontier Corp	HFC	0.02%	5.09%	0.00%	-2.42%	0.00%
Regeneron Pharmaceuticals Inc	REGN	0.23%	n/a	n/a	14.45%	0.03%
Amazon.com Inc	AMZN	5.67%	n/a	n/a	32.26%	1.83%
Jack Henry & Associates Inc	JKHY	0.05%	0.96%	0.00%	12.10%	0.01%
Ralph Lauren Corp	RL	0.01%	n/a	n/a	4.53%	0.00%
Boston Properties Inc	BXP	0.05%	4.40%	0.00%	3.97%	0.00%
Amphenol Corp	APH	0.11%	0.95%	0.00%	8.08%	0.01%
Howmet Aerospace Inc	HWM	0.02%	n/a	n/a	50.90%	0.01%
Pioneer Natural Resources Co	PXD	0.06%	2.27%	0.00%	15.50%	0.01%
Valero Energy Corp	VLO	0.08%	6.97%	0.01%	4.70%	0.00%
Synopsys Inc	SNPS	0.11%	n/a	n/a	14.23%	0.02%
Western Union Co/The	WU	0.04%	3.71%	0.00%	5.30%	0.00%
CH Robinson Worldwide Inc	CHRW	0.05%	2.18%	0.00%	8.63%	0.00%
Accenture PLC	ACN	0.51%	1.42%	0.01%	10.33%	0.05%
TransDigm Group Inc	TDG	0.08%	n/a	n/a	6.18%	0.01%
Yum! Brands Inc	YUM	0.10%	2.06%	0.00%	11.46%	0.01%
Prologis Inc	PLD	0.28%	2.20%	0.01%	7.27%	0.02%
FirstEnergy Corp	FE	0.06%	5.38%	0.00%	4.20%	0.00%
VeriSign Inc	VRSN	0.09%	n/a	n/a	10.30%	0.01%
Quanta Services Inc	PWR	0.00%	0.50%	0.00%	n/a	n/a
Henry Schein Inc	HSIC	0.04%	n/a	n/a	-0.82%	0.00%
Ameren Corp	AEE	0.07%	2.47%	0.00%	7.03%	0.00%
ANSYS Inc	ANSS	0.10%	n/a	n/a	11.30%	0.01%
NVIDIA Corp	NVDA	0.93%	0.15%	0.00%	18.78%	0.18%
Sealed Air Corp	SEE	0.02%	1.79%	0.00%	2.37%	0.00%
Cognizant Technology Solutions Corp	CTSH	0.13%	1.29%	0.00%	10.40%	0.01%
SVB Financial Group	SIVB	0.04%	n/a	n/a	10.00%	0.00%
Intuitive Surgical Inc	ISRG	0.29%	n/a	n/a	8.93%	0.03%
Take-Two Interactive Software Inc	TTWO	0.07%	n/a	n/a	6.13%	0.00%
Republic Services Inc	RSG	0.10%	1.95%	0.00%	6.63%	0.01%
eBay Inc	EBAY	0.14%	1.16%	0.00%	13.97%	0.02%
Goldman Sachs Group Inc/The	GS	0.24%	2.53%	0.01%	3.50%	0.01%
SBA Communications Corp	SBAC	0.12%	0.60%	0.00%	29.90%	0.04%
Sempra Energy	SRE	0.13%	3.36%	0.00%	7.37%	0.01%
Moody's Corp	MCO	0.19%	0.80%	0.00%	9.80%	0.02%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[13]	[14]	[15]	[16]	[17]
		Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
Booking Holdings Inc	BKNG	0.24%	n/a	n/a	13.20%	0.03%
F5 Networks Inc	FFIV	0.03%	n/a	n/a	11.50%	0.00%
Akamai Technologies Inc	AKAM	0.07%	n/a	n/a	11.87%	0.01%
MarketAxess Holdings Inc	MKTX	0.00%	0.46%	0.00%	n/a	n/a
Devon Energy Corp	DVN	0.01%	4.19%	0.00%	-9.16%	0.00%
Alphabet Inc	GOOGL	1.60%	n/a	n/a	15.83%	0.25%
Teleflex Inc	TFX	0.06%	0.36%	0.00%	13.00%	0.01%
Netflix Inc	NFLX	0.77%	n/a	n/a	32.13%	0.25%
Allegion plc	ALLE	0.03%	1.29%	0.00%	5.59%	0.00%
Agilent Technologies Inc	A	0.11%	0.75%	0.00%	10.30%	0.01%
Anthem Inc	ANTM	0.25%	1.39%	0.00%	12.67%	0.03%
CME Group Inc	CME	0.21%	2.05%	0.00%	8.07%	0.02%
Juniper Networks Inc	JNPR	0.03%	3.15%	0.00%	7.83%	0.00%
BlackRock Inc	BLK	0.31%	2.53%	0.01%	7.13%	0.02%
DTE Energy Co	DTE	0.08%	3.50%	0.00%	6.00%	0.00%
Nasdaq Inc	NDAQ	0.08%	1.49%	0.00%	9.29%	0.01%
Celanese Corp	CE	0.04%	2.55%	0.00%	4.01%	0.00%
Philip Morris International Inc	PM	0.43%	6.09%	0.03%	6.38%	0.03%
salesforce.com Inc	CRM	0.63%	n/a	n/a	19.08%	0.12%
Ingersoll Rand Inc	IR	0.05%	n/a	n/a	10.20%	0.00%
Huntington Ingalls Industries Inc	HII	0.03%	2.37%	0.00%	40.00%	0.01%
MetLife Inc	MET	0.12%	4.86%	0.01%	4.42%	0.01%
Under Armour Inc	UA	0.01%	n/a	n/a	12.07%	0.00%
Tapestry Inc	TPR	0.01%	n/a	n/a	8.05%	0.00%
CSX Corp	CSX	0.20%	1.46%	0.00%	8.28%	0.02%
Edwards Lifesciences Corp	EW	0.17%	n/a	n/a	13.75%	0.02%
Ameriprise Financial Inc	AMP	0.07%	2.71%	0.00%	3.90%	0.00%
Zebra Technologies Corp	ZBRA	0.05%	n/a	n/a	10.30%	0.01%
TechnipFMC PLC	FTI	0.01%	1.62%	0.00%	9.50%	0.00%
Zimmer Biomet Holdings Inc	ZBH	0.10%	0.71%	0.00%	2.44%	0.00%
CBRE Group Inc	CBRE	0.05%	n/a	n/a	8.45%	0.00%
Mastercard Inc	MA	1.09%	0.52%	0.01%	18.78%	0.21%
CarMax Inc	KMX	0.06%	n/a	n/a	9.93%	0.01%
Intercontinental Exchange Inc	ICE	0.19%	1.24%	0.00%	9.23%	0.02%
Fidelity National Information Services Inc	FIS	0.32%	0.96%	0.00%	19.58%	0.06%
Chipotle Mexican Grill Inc	CMG	0.12%	n/a	n/a	20.46%	0.02%
Wynn Resorts Ltd	WYNN	0.03%	n/a	n/a	20.00%	0.01%
Live Nation Entertainment Inc	LYV	0.00%	n/a	n/a	n/a	n/a
Assurant Inc	AIZ	0.00%	2.34%	0.00%	n/a	n/a
NRG Energy Inc	NRG	0.03%	3.55%	0.00%	-13.64%	0.00%
Regions Financial Corp	RF	0.04%	5.71%	0.00%	1.86%	0.00%
Monster Beverage Corp	MNST	0.15%	n/a	n/a	9.95%	0.01%
Mosaic Co/The	MOS	0.02%	1.48%	0.00%	38.35%	0.01%
Expedia Group Inc	EXPE	0.04%	n/a	n/a	10.00%	0.00%
Evergy Inc	EVRG	0.05%	3.12%	0.00%	6.33%	0.00%
Discovery Inc	DISCA	0.01%	n/a	n/a	-4.45%	0.00%
CF Industries Holdings Inc	CF	0.02%	3.83%	0.00%	11.05%	0.00%
Leidos Holdings Inc	LDOS	0.05%	1.43%	0.00%	10.36%	0.01%
Alphabet Inc	GOOG	1.77%	n/a	n/a	15.83%	0.28%
Cooper Cos Inc/The	COO	0.05%	0.02%	0.00%	8.45%	0.00%
TE Connectivity Ltd	TEL	0.11%	2.16%	0.00%	8.78%	0.01%
Discover Financial Services	DFS	0.05%	3.56%	0.00%	15.23%	0.01%
Visa Inc	V	1.15%	0.63%	0.01%	13.89%	0.16%
Mid-America Apartment Communities Inc	MAA	0.00%	3.36%	0.00%	n/a	n/a
Xylem Inc/NY	XYL	0.05%	1.43%	0.00%	20.17%	0.01%
Marathon Petroleum Corp	MPC	0.09%	6.07%	0.01%	11.55%	0.01%
Tractor Supply Co	TSCO	0.06%	0.98%	0.00%	12.38%	0.01%
Advanced Micro Devices Inc	AMD	0.33%	n/a	n/a	23.93%	0.08%
ResMed Inc	RMD	0.10%	0.77%	0.00%	13.80%	0.01%
Mettler-Toledo International Inc	MTD	0.08%	n/a	n/a	7.41%	0.01%
Copart Inc	CPRT	0.00%	n/a	n/a	n/a	n/a
Albemarle Corp	ALB	0.03%	1.87%	0.00%	10.02%	0.00%
Fortinet Inc	FTNT	0.08%	n/a	n/a	15.10%	0.01%
Apache Corp	APA	0.02%	0.65%	0.00%	-29.29%	-0.01%
Essex Property Trust Inc	ESS	0.05%	3.76%	0.00%	3.61%	0.00%
Realty Income Corp	O	0.07%	4.67%	0.00%	4.45%	0.00%
Seagate Technology PLC	STX	0.04%	5.75%	0.00%	5.18%	0.00%
Westrock Co	WRK	0.02%	2.98%	0.00%	-0.10%	0.00%

STANDARD AND POOR'S 500 INDEX

Name	Ticker	[13]	[14]	[15]	[16]	[17]
		Weight in Index	Estimated Dividend Yield	Cap-Weighted Dividend Yield	Long-Term Growth Est.	Cap-Weighted Long-Term Growth Est.
IHS Markit Ltd	INFO	0.11%	0.84%	0.00%	12.18%	0.01%
Westinghouse Air Brake Technologies Corp	WAB	0.04%	0.77%	0.00%	8.97%	0.00%
Western Digital Corp	WDC	0.05%	n/a	n/a	0.30%	0.00%
PepsiCo Inc	PEP	0.68%	2.97%	0.02%	4.81%	0.03%
Diamondback Energy Inc	FANG	0.02%	3.76%	0.00%	17.64%	0.00%
Maxim Integrated Products Inc	MXIM	0.06%	n/a	n/a	11.65%	0.01%
ServiceNow Inc	NOW	0.30%	n/a	n/a	34.13%	0.10%
Church & Dwight Co Inc	CHD	0.09%	1.00%	0.00%	7.89%	0.01%
Duke Realty Corp	DRE	0.05%	2.34%	0.00%	-0.65%	0.00%
Federal Realty Investment Trust	FRT	0.02%	5.50%	0.00%	3.16%	0.00%
MGM Resorts International	MGM	0.03%	0.06%	0.00%	18.70%	0.01%
JB Hunt Transport Services Inc	JBHT	0.05%	0.83%	0.00%	13.30%	0.01%
Lam Research Corp	LRCX	0.20%	1.22%	0.00%	13.41%	0.03%
Mohawk Industries Inc	MHK	0.02%	n/a	n/a	9.00%	0.00%
Pentair PLC	PNR	0.03%	1.77%	0.00%	8.60%	0.00%
Vertex Pharmaceuticals Inc	VRTX	0.25%	n/a	n/a	24.81%	0.06%
Amcor PLC	AMCR	0.06%	4.47%	0.00%	7.25%	0.00%
Facebook Inc	FB	2.18%	n/a	n/a	23.69%	0.52%
T-Mobile US Inc	TMUS	0.48%	n/a	n/a	5.00%	0.02%
United Rentals Inc	URI	0.04%	n/a	n/a	-3.65%	0.00%
ABIOMED Inc	ABMD	0.00%	n/a	n/a	n/a	n/a
Alexandria Real Estate Equities Inc	ARE	0.08%	2.39%	0.00%	4.99%	0.00%
Delta Air Lines Inc	DAL	0.06%	n/a	n/a	-7.67%	0.00%
United Airlines Holdings Inc	UAL	0.03%	n/a	n/a	-0.70%	0.00%
News Corp	NWS	0.01%	1.57%	0.00%	13.20%	0.00%
Centene Corp	CNC	0.14%	n/a	n/a	13.23%	0.02%
Martin Marietta Materials Inc	MLM	0.05%	1.06%	0.00%	10.11%	0.00%
PayPal Holdings Inc	PYPL	0.82%	n/a	n/a	21.76%	0.18%
Coty Inc	COTY	0.01%	n/a	n/a	3.45%	0.00%
DISH Network Corp	DISH	0.03%	n/a	n/a	1.62%	0.00%
Dow Inc	DOW	0.11%	6.82%	0.01%	1.60%	0.00%
Alexion Pharmaceuticals Inc	ALXN	0.08%	n/a	n/a	12.37%	0.01%
Everest Re Group Ltd	RE	0.03%	2.83%	0.00%	10.11%	0.00%
Teledyne Technologies Inc	TDY	0.04%	n/a	n/a	10.10%	0.00%
News Corp	NWSA	0.02%	1.57%	0.00%	13.20%	0.00%
Exelon Corp	EXC	0.13%	3.96%	0.01%	1.39%	0.00%
Global Payments Inc	GPN	0.19%	0.44%	0.00%	17.45%	0.03%
Crown Castle International Corp	CCI	0.25%	2.88%	0.01%	17.63%	0.04%
Aptiv PLC	APTIV	0.08%	n/a	n/a	10.69%	0.01%
Advance Auto Parts Inc	AAP	0.04%	0.67%	0.00%	11.75%	0.00%
Align Technology Inc	ALGN	0.08%	n/a	n/a	13.93%	0.01%
Illumina Inc	ILMN	0.20%	n/a	n/a	18.06%	0.04%
LKQ Corp	LKQ	0.03%	n/a	n/a	7.90%	0.00%
Nielsen Holdings PLC	NLSN	0.02%	1.66%	0.00%	12.00%	0.00%
Garmin Ltd	GRMN	0.07%	2.47%	0.00%	6.93%	0.00%
Zoetis Inc	ZTS	0.26%	0.53%	0.00%	7.23%	0.02%
Equinix Inc	EQIX	0.25%	1.35%	0.00%	18.75%	0.05%
Digital Realty Trust Inc	DLR	0.15%	2.79%	0.00%	14.80%	0.02%
Las Vegas Sands Corp	LVS	0.12%	n/a	n/a	8.40%	0.01%
Discovery Inc	DISCK	0.02%	n/a	n/a	-4.45%	0.00%

Notes:

[7] Source: S&P Dow Jones Indices, S&P 500 Earnings and Estimate Report, July 31, 2020.

[8] Source: S&P Dow Jones Indices, S&P 500 Earnings and Estimate Report, July 31, 2020.

[9] Equals ([7] x (1 + (0.5 x [8]))) + [8]

[10] Equals sum of Col. [15]

[11] Equals sum of Col. [17]

[12] Equals ([10] x (1 + (0.5 x [11]))) + [11]

[13] Equals weight in S&P 500 based on market capitalization

[14] Source: Bloomberg Professional, as of July 31, 2020.

[15] Equals [13] x [14]

[16] Source: Bloomberg Professional, as of July 31, 2020.

[17] Equals [13] x [16]

Docket No. UE 374
Exhibit PAC/3901
Witness: Robert Van Engelenhoven

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

PACIFICORP

**Exhibit Accompanying Surrebuttal Testimony of Robert Van Engelenhoven
PacifiCorp's Email Correspondence with Kiewit Representatives**

August 2020

From: [Bob.Slettehaugh](mailto:Bob.Slettehaugh@kiewit.com)
To: [Laughter, Grant \(PacifiCorp\)](mailto:Grant.Laughter@pacificorp.com)
Cc: [Max.Sherman](mailto:Max.Sherman@kiewit.com); [Chuck.Nordhausen](mailto:Chuck.Nordhausen@kiewit.com)
Subject: [INTERNET] RE: 2019 Demolition Study: Data Request - Work Papers
Date: Tuesday, May 26, 2020 10:51:02 AM
Attachments: [image001.gif](#)
[image002.png](#)

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Internet Tag	Messages from the Internet should have [INTERNET] added to the subject.
Links	Does this message contain links? Yes Check links before clicking them or removing BLOCKED in the browser.
Cybersecurity risk assessment: Medium	

Grant,

Respectfully, we are unable to accommodate this request. Thank you for your understanding.

Regards,



BOB SLETTEHAUGH, PE

Manager, Technology Assessments
Engineering & Consulting Services

KIEWIT ENGINEERING GROUP INC.

8900 Renner Boulevard, Lenexa, KS 66219
913-928-7743
kiewit.com

From: Laughter, Grant [<mailto:Grant.Laughter@pacificorp.com>]
Sent: Tuesday, May 26, 2020 8:46 AM
To: [Bob.Slettehaugh <Bob.Slettehaugh@kiewit.com>](mailto:Bob.Slettehaugh@kiewit.com); [Max.Sherman <Max.Sherman@Kiewit.com>](mailto:Max.Sherman@kiewit.com); [Chuck.Nordhausen <Chuck.Nordhausen@kiewit.com>](mailto:Chuck.Nordhausen@kiewit.com)
Subject: [EXTERNAL] 2019 Demolition Study: Data Request - Work Papers

Bob:

PacifiCorp received a data request for the work papers that support the 2019 demolition study Thermal Power Plant Demolition Estimates. The work papers were not included as a deliverable in the scope of work for the study. PacifiCorp does not possess or control the work papers.

PacifiCorp and the requestor have been in contact. As a result of the contact and for due diligence PacifiCorp needs to determine if Kiewit and Kiewit's subcontractors are willing to provide the work papers.

Please let me know if Kiewit is willing to provide the work papers and, if so, the cost and conditions for providing the work papers.

Thank you,

Grant Laughter, P.E.*
Principal Engineer
1407 West North Temple, Suite 230
Salt Lake City, Utah 84116

RMP_Email_Signature_WorkingSafely-2



*Licensed in Nevada and Utah

From: [Bob.Slettehaugh](mailto:Bob.Slettehaugh@kiewit.com)
To: [Laughter, Grant \(PacifiCorp\)](mailto:Grant.Laughter@pacificorp.com)
Cc: [Chuck.Nordhausen](mailto:Chuck.Nordhausen@kiewit.com)
Subject: [INTERNET] RE: 2019 Demolition Study
Date: Tuesday, July 28, 2020 12:08:52 PM
Attachments: [image001.png](#)

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Links	Does this message contain links? Yes Check links before clicking them or removing BLOCKED in the browser.
Cybersecurity risk assessment: Medium	

Grant,
I hope you enjoyed the long weekend.

Respectfully, we are unable to accommodate this request. Thank you for your understanding.



BOB SLETTEHAUGH, PE

Manager, Technology Assessments
Engineering & Consulting Services

KIEWIT ENGINEERING GROUP INC.

8900 Renner Boulevard, Lenexa, KS 66219
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From: Laughter, Grant (PacifiCorp) [<mailto:Grant.Laughter@pacificorp.com>]
Sent: Thursday, July 23, 2020 3:33 PM
To: Bob.Slettehaugh <Bob.Slettehaugh@kiewit.com>
Cc: Chuck.Nordhausen <Chuck.Nordhausen@kiewit.com>
Subject: [EXTERNAL] 2019 Demolition Study

Bob:

We are continuing to work to resolve stakeholder concerns with the demolition study. The Oregon PUC is continuing to look for work papers.

Would Kiewit be willing to enter into an NDA with the Oregon PUC and share work papers with them? You probably need to coordinate this with NADC and the asbestos abatement companies.

Tomorrow is a state holiday, I will be available again on Monday.

Thank you,

Grant Laughter
(801) 220-2208