

Exh. AEB-18
Docket UE-230172
Witness: Ann E. Bulkley

**BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION**

WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,

Complainant,

v.

PACIFICORP dba
PACIFIC POWER & LIGHT COMPANY

Respondent.

Docket UE-230172
(Consolidated)

In the Matter of

ALLIANCE OF WESTERN ENERGY
CONSUMERS'

Petition for Order Approving Deferral of
Increased Fly Ash Revenues

Docket UE-210852
(Consolidated)

PACIFICORP

EXHIBIT OF ANN E. BULKLEY

Capital Asset Pricing Model

October 2023

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

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

| | [1] | [2] | [3] | [4] | [5] | [6] | |
|---------------------------------------|--------|--|------------------|--------------------------|--|---------|------------------|
| Company | Ticker | Current 30-day average of 30-year U.S. Treasury bond yield | Beta (β) | Market Return (Rm) | Market Risk Premium (Rm - Rf) | ROE (K) | ECAPM ROE (K) |
| ALLETE, Inc. | ALE | 4.42% | 0.90 | 12.08% | 7.67% | 11.32% | 11.51% |
| Alliant Energy Corporation | LNT | 4.42% | 0.85 | 12.08% | 7.67% | 10.93% | 11.22% |
| Ameren Corporation | AEE | 4.42% | 0.85 | 12.08% | 7.67% | 10.93% | 11.22% |
| American Electric Power Company, Inc. | AEP | 4.42% | 0.80 | 12.08% | 7.67% | 10.55% | 10.93% |
| Avista Corporation | AVA | 4.42% | 0.90 | 12.08% | 7.67% | 11.32% | 11.51% |
| CMS Energy Corporation | CMS | 4.42% | 0.80 | 12.08% | 7.67% | 10.55% | 10.93% |
| Duke Energy Corporation | DUK | 4.42% | 0.85 | 12.08% | 7.67% | 10.93% | 11.22% |
| Entergy Corporation | ETR | 4.42% | 0.95 | 12.08% | 7.67% | 11.70% | 11.80% |
| Evergy, Inc. | EVRG | 4.42% | 0.90 | 12.08% | 7.67% | 11.32% | 11.51% |
| IDACORP, Inc. | IDA | 4.42% | 0.80 | 12.08% | 7.67% | 10.55% | 10.93% |
| NextEra Energy, Inc. | NEE | 4.42% | 0.95 | 12.08% | 7.67% | 11.70% | 11.80% |
| NorthWestern Corporation | NWE | 4.42% | 0.95 | 12.08% | 7.67% | 11.70% | 11.80% |
| OGE Energy Corporation | OGE | 4.42% | 1.05 | 12.08% | 7.67% | 12.47% | 12.37% |
| Pinnacle West Capital Corporation | PNW | 4.42% | 0.90 | 12.08% | 7.67% | 11.32% | 11.51% |
| Portland General Electric Company | POR | 4.42% | 0.90 | 12.08% | 7.67% | 11.32% | 11.51% |
| Southern Company | SO | 4.42% | 0.90 | 12.08% | 7.67% | 11.32% | 11.51% |
| Xcel Energy Inc. | XEL | 4.42% | 0.85 | 12.08% | 7.67% | 10.93% | 11.22% |
| Mean | | | | | | 11.23% | 11.44% |
| Median | | | | | | 11.32% | 11.51% |

Notes:

[1] Bloomberg Professional, as of September 30, 2023

[2] Value Line

[3] Market Return

[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

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

| | | [1] | [2] | [3] | [4] | [5] | [6] |
|---------------------------------------|--------|---|------------------|--------------------------|--|---------|------------------|
| | | Near-term projected 30- year U.S. Treasury bond yield | Beta (β) | Market Return (Rm) | Market Risk Premium (Rm - Rf) | ROE (K) | ECAPM ROE (K) |
| Company | Ticker | (Q4 2023 - Q4 2024) | | | | | |
| ALLETE, Inc. | ALE | 4.16% | 0.90 | 12.08% | 7.92% | 11.29% | 11.49% |
| Alliant Energy Corporation | LNT | 4.16% | 0.85 | 12.08% | 7.92% | 10.90% | 11.19% |
| Ameren Corporation | AEE | 4.16% | 0.85 | 12.08% | 7.92% | 10.90% | 11.19% |
| American Electric Power Company, Inc. | AEP | 4.16% | 0.80 | 12.08% | 7.92% | 10.50% | 10.90% |
| Avista Corporation | AVA | 4.16% | 0.90 | 12.08% | 7.92% | 11.29% | 11.49% |
| CMS Energy Corporation | CMS | 4.16% | 0.80 | 12.08% | 7.92% | 10.50% | 10.90% |
| Duke Energy Corporation | DUK | 4.16% | 0.85 | 12.08% | 7.92% | 10.90% | 11.19% |
| Entergy Corporation | ETR | 4.16% | 0.95 | 12.08% | 7.92% | 11.69% | 11.79% |
| Evergy, Inc. | EVRG | 4.16% | 0.90 | 12.08% | 7.92% | 11.29% | 11.49% |
| IDACORP, Inc. | IDA | 4.16% | 0.80 | 12.08% | 7.92% | 10.50% | 10.90% |
| NextEra Energy, Inc. | NEE | 4.16% | 0.95 | 12.08% | 7.92% | 11.69% | 11.79% |
| NorthWestern Corporation | NWE | 4.16% | 0.95 | 12.08% | 7.92% | 11.69% | 11.79% |
| OGE Energy Corporation | OGE | 4.16% | 1.05 | 12.08% | 7.92% | 12.48% | 12.38% |
| Pinnacle West Capital Corporation | PNW | 4.16% | 0.90 | 12.08% | 7.92% | 11.29% | 11.49% |
| Portland General Electric Company | POR | 4.16% | 0.90 | 12.08% | 7.92% | 11.29% | 11.49% |
| Southern Company | SO | 4.16% | 0.90 | 12.08% | 7.92% | 11.29% | 11.49% |
| Xcel Energy Inc. | XEL | 4.16% | 0.85 | 12.08% | 7.92% | 10.90% | 11.19% |
| Mean | | | | | | 11.20% | 11.42% |
| Median | | | | | | 11.29% | 11.49% |

Notes:

[1] Blue Chip Financial Forecasts, Vol. 42, No. 10, October 1, 2023, at 2

[2] Value Line

[3] Market Return

[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

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$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

| | [1] | [2] | [3] | [4] | [5] | [6] | |
|---------------------------------------|--------|--|------------------|--------------------|-------------------------------|---------|---------------|
| Company | Ticker | Projected 30-year U.S. Treasury bond yield (2025 - 2029) | Beta (β) | Market Return (Rm) | Market Risk Premium (Rm - Rf) | ROE (K) | ECAPM ROE (K) |
| ALLETE, Inc. | ALE | 3.80% | 0.90 | 12.08% | 8.28% | 11.26% | 11.46% |
| Alliant Energy Corporation | LNT | 3.80% | 0.85 | 12.08% | 8.28% | 10.84% | 11.15% |
| Ameren Corporation | AEE | 3.80% | 0.85 | 12.08% | 8.28% | 10.84% | 11.15% |
| American Electric Power Company, Inc. | AEP | 3.80% | 0.80 | 12.08% | 8.28% | 10.43% | 10.84% |
| Avista Corporation | AVA | 3.80% | 0.90 | 12.08% | 8.28% | 11.26% | 11.46% |
| CMS Energy Corporation | CMS | 3.80% | 0.80 | 12.08% | 8.28% | 10.43% | 10.84% |
| Duke Energy Corporation | DUK | 3.80% | 0.85 | 12.08% | 8.28% | 10.84% | 11.15% |
| Entergy Corporation | ETR | 3.80% | 0.95 | 12.08% | 8.28% | 11.67% | 11.77% |
| Evergy, Inc. | EVRG | 3.80% | 0.90 | 12.08% | 8.28% | 11.26% | 11.46% |
| IDACORP, Inc. | IDA | 3.80% | 0.80 | 12.08% | 8.28% | 10.43% | 10.84% |
| NextEra Energy, Inc. | NEE | 3.80% | 0.95 | 12.08% | 8.28% | 11.67% | 11.77% |
| NorthWestern Corporation | NWE | 3.80% | 0.95 | 12.08% | 8.28% | 11.67% | 11.77% |
| OGE Energy Corporation | OGE | 3.80% | 1.05 | 12.08% | 8.28% | 12.50% | 12.39% |
| Pinnacle West Capital Corporation | PNW | 3.80% | 0.90 | 12.08% | 8.28% | 11.26% | 11.46% |
| Portland General Electric Company | POR | 3.80% | 0.90 | 12.08% | 8.28% | 11.26% | 11.46% |
| Southern Company | SO | 3.80% | 0.90 | 12.08% | 8.28% | 11.26% | 11.46% |
| Xcel Energy Inc. | XEL | 3.80% | 0.85 | 12.08% | 8.28% | 10.84% | 11.15% |
| Mean | | | | | | 11.16% | 11.39% |
| Median | | | | | | 11.26% | 11.46% |

Notes:

[1] Blue Chip Financial Forecasts, Vol. 42, No. 6, June 1, 2023, at 14

[2] Value Line

[3] Market Return

[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

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

| | [1] | [2] | [3] | [4] | [5] | [6] |
|---------------------------------------|--|------------------|--------------------------|--|---------|------------------|
| Company | Current 30-day average of 30-year U.S. Treasury bond yield | Beta (β) | Market Return (Rm) | Market Risk Premium (Rm - Rf) | ROE (K) | ECAPM ROE (K) |
| ALLETE, Inc. | 4.42% | 0.82 | 12.08% | 7.67% | 10.73% | 11.07% |
| Alliant Energy Corporation | 4.42% | 0.79 | 12.08% | 7.67% | 10.48% | 10.88% |
| Ameren Corporation | 4.42% | 0.75 | 12.08% | 7.67% | 10.18% | 10.65% |
| American Electric Power Company, Inc. | 4.42% | 0.76 | 12.08% | 7.67% | 10.23% | 10.69% |
| Avista Corporation | 4.42% | 0.75 | 12.08% | 7.67% | 10.18% | 10.66% |
| CMS Energy Corporation | 4.42% | 0.75 | 12.08% | 7.67% | 10.16% | 10.64% |
| Duke Energy Corporation | 4.42% | 0.72 | 12.08% | 7.67% | 9.92% | 10.46% |
| Entergy Corporation | 4.42% | 0.86 | 12.08% | 7.67% | 10.98% | 11.25% |
| Evergy, Inc. | 4.42% | 0.78 | 12.08% | 7.67% | 10.39% | 10.81% |
| IDACORP, Inc. | 4.42% | 0.80 | 12.08% | 7.67% | 10.51% | 10.91% |
| NextEra Energy, Inc. | 4.42% | 0.82 | 12.08% | 7.67% | 10.69% | 11.04% |
| NorthWestern Corporation | 4.42% | 0.86 | 12.08% | 7.67% | 10.99% | 11.26% |
| OGE Energy Corporation | 4.42% | 0.92 | 12.08% | 7.67% | 11.47% | 11.63% |
| Pinnacle West Capital Corporation | 4.42% | 0.82 | 12.08% | 7.67% | 10.74% | 11.07% |
| Portland General Electric Company | 4.42% | 0.79 | 12.08% | 7.67% | 10.44% | 10.85% |
| Southern Company | 4.42% | 0.78 | 12.08% | 7.67% | 10.37% | 10.80% |
| Xcel Energy Inc. | 4.42% | 0.74 | 12.08% | 7.67% | 10.07% | 10.58% |
| Mean | | | | | 10.50% | 10.90% |
| Median | | | | | 10.44% | 10.85% |

Notes:

[1] Bloomberg Professional, as of September 30, 2023

[2] Bloomberg Professional, based on 10-year weekly returns

[3] Market Return

[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

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

| Company | Ticker | [1] Near-term projected 30- year U.S. Treasury bond yield (Q4 2023 - Q4 2024) | [2] Beta (β) | [3] Market Return (Rm) | [4] Market Risk Premium (Rm - Rf) | [5] ROE (K) | [6] ECAPM ROE (K) |
|---------------------------------------|--------|---|-------------------------|---------------------------------|---|----------------|-------------------------|
| ALLETE, Inc. | ALE | 4.16% | 0.82 | 12.08% | 7.92% | 10.68% | 11.03% |
| Alliant Energy Corporation | LNT | 4.16% | 0.79 | 12.08% | 7.92% | 10.43% | 10.84% |
| Ameren Corporation | AEE | 4.16% | 0.75 | 12.08% | 7.92% | 10.11% | 10.60% |
| American Electric Power Company, Inc. | AEP | 4.16% | 0.76 | 12.08% | 7.92% | 10.17% | 10.65% |
| Avista Corporation | AVA | 4.16% | 0.75 | 12.08% | 7.92% | 10.12% | 10.61% |
| CMS Energy Corporation | CMS | 4.16% | 0.75 | 12.08% | 7.92% | 10.09% | 10.59% |
| Duke Energy Corporation | DUK | 4.16% | 0.72 | 12.08% | 7.92% | 9.85% | 10.41% |
| Entergy Corporation | ETR | 4.16% | 0.86 | 12.08% | 7.92% | 10.94% | 11.23% |
| Evergy, Inc. | EVRG | 4.16% | 0.78 | 12.08% | 7.92% | 10.33% | 10.77% |
| IDACORP, Inc. | IDA | 4.16% | 0.80 | 12.08% | 7.92% | 10.46% | 10.87% |
| NextEra Energy, Inc. | NEE | 4.16% | 0.82 | 12.08% | 7.92% | 10.64% | 11.00% |
| NorthWestern Corporation | NWE | 4.16% | 0.86 | 12.08% | 7.92% | 10.95% | 11.24% |
| OGE Energy Corporation | OGE | 4.16% | 0.92 | 12.08% | 7.92% | 11.45% | 11.61% |
| Pinnacle West Capital Corporation | PNW | 4.16% | 0.82 | 12.08% | 7.92% | 10.69% | 11.04% |
| Portland General Electric Company | POR | 4.16% | 0.79 | 12.08% | 7.92% | 10.39% | 10.81% |
| Southern Company | SO | 4.16% | 0.78 | 12.08% | 7.92% | 10.31% | 10.75% |
| Xcel Energy Inc. | XEL | 4.16% | 0.74 | 12.08% | 7.92% | 10.01% | 10.53% |
| Mean | | | | | | 10.45% | 10.86% |
| Median | | | | | | 10.39% | 10.81% |

Notes:

[1] Blue Chip Financial Forecasts, Vol. 42, No. 10, October 1, 2023, at 2

[2] Bloomberg Professional, based on 10-year weekly returns

[3] Market Return

[4] Equals [3] - [1]

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

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

| | [1] | [2] | [3] | [4] | [5] | [6] | |
|---------------------------------------|--------|--|------------------|--------------------|-------------------------------|---------|---------------|
| Company | Ticker | Projected 30-year U.S. Treasury bond yield (2025 - 2029) | Beta (β) | Market Return (Rm) | Market Risk Premium (Rm - Rf) | ROE (K) | ECAPM ROE (K) |
| ALLETE, Inc. | ALE | 3.80% | 0.82 | 12.08% | 8.28% | 10.62% | 10.98% |
| Alliant Energy Corporation | LNT | 3.80% | 0.79 | 12.08% | 8.28% | 10.35% | 10.79% |
| Ameren Corporation | AEE | 3.80% | 0.75 | 12.08% | 8.28% | 10.02% | 10.54% |
| American Electric Power Company, Inc. | AEP | 3.80% | 0.76 | 12.08% | 8.28% | 10.08% | 10.58% |
| Avista Corporation | AVA | 3.80% | 0.75 | 12.08% | 8.28% | 10.03% | 10.54% |
| CMS Energy Corporation | CMS | 3.80% | 0.75 | 12.08% | 8.28% | 10.00% | 10.52% |
| Duke Energy Corporation | DUK | 3.80% | 0.72 | 12.08% | 8.28% | 9.74% | 10.33% |
| Entergy Corporation | ETR | 3.80% | 0.86 | 12.08% | 8.28% | 10.89% | 11.19% |
| Evergy, Inc. | EVRG | 3.80% | 0.78 | 12.08% | 8.28% | 10.25% | 10.71% |
| IDACORP, Inc. | IDA | 3.80% | 0.80 | 12.08% | 8.28% | 10.39% | 10.81% |
| NextEra Energy, Inc. | NEE | 3.80% | 0.82 | 12.08% | 8.28% | 10.58% | 10.95% |
| NorthWestern Corporation | NWE | 3.80% | 0.86 | 12.08% | 8.28% | 10.90% | 11.20% |
| OGE Energy Corporation | OGE | 3.80% | 0.92 | 12.08% | 8.28% | 11.42% | 11.59% |
| Pinnacle West Capital Corporation | PNW | 3.80% | 0.82 | 12.08% | 8.28% | 10.63% | 10.99% |
| Portland General Electric Company | POR | 3.80% | 0.79 | 12.08% | 8.28% | 10.31% | 10.75% |
| Southern Company | SO | 3.80% | 0.78 | 12.08% | 8.28% | 10.23% | 10.69% |
| Xcel Energy Inc. | XEL | 3.80% | 0.74 | 12.08% | 8.28% | 9.91% | 10.46% |
| Mean | | | | | | 10.37% | 10.80% |
| Median | | | | | | 10.31% | 10.75% |

Notes:

[1] Blue Chip Financial Forecasts, Vol. 42, No. 6, June 1, 2023, at 14

[2] Bloomberg Professional, based on 10-year weekly returns

[3] Market Return

[4] Equals [3] - [1]

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

CAPITAL ASSET PRICING MODEL -- CURRENT RISK-FREE RATE & VALUE LINE LT AVERAGE BETA

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

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| ALLETE, Inc. | 4.42% | 0.79 | 12.08% | 7.67% | 10.44% | 10.85% |
| Alliant Energy Corporation | 4.42% | 0.75 | 12.08% | 7.67% | 10.17% | 10.65% |
| Ameren Corporation | 4.42% | 0.73 | 12.08% | 7.67% | 9.98% | 10.50% |
| American Electric Power Company, Inc. | 4.42% | 0.68 | 12.08% | 7.67% | 9.59% | 10.22% |
| Avista Corporation | 4.42% | 0.79 | 12.08% | 7.67% | 10.44% | 10.85% |
| CMS Energy Corporation | 4.42% | 0.69 | 12.08% | 7.67% | 9.71% | 10.30% |
| Duke Energy Corporation | 4.42% | 0.67 | 12.08% | 7.67% | 9.52% | 10.16% |
| Entergy Corporation | 4.42% | 0.75 | 12.08% | 7.67% | 10.13% | 10.62% |
| Evergy, Inc. | 4.42% | 0.95 | 12.08% | 7.67% | 11.70% | 11.80% |
| IDACORP, Inc. | 4.42% | 0.73 | 12.08% | 7.67% | 10.01% | 10.53% |
| NextEra Energy, Inc. | 4.42% | 0.73 | 12.08% | 7.67% | 10.01% | 10.53% |
| NorthWestern Corporation | 4.42% | 0.75 | 12.08% | 7.67% | 10.13% | 10.62% |
| OGE Energy Corporation | 4.42% | 0.93 | 12.08% | 7.67% | 11.55% | 11.68% |
| Pinnacle West Capital Corporation | 4.42% | 0.74 | 12.08% | 7.67% | 10.05% | 10.56% |
| Portland General Electric Company | 4.42% | 0.75 | 12.08% | 7.67% | 10.17% | 10.65% |
| Southern Company | 4.42% | 0.66 | 12.08% | 7.67% | 9.44% | 10.10% |
| Xcel Energy Inc. | 4.42% | 0.66 | 12.08% | 7.67% | 9.44% | 10.10% |
| Mean | | | | | 10.15% | 10.63% |
| Median | | | | | 10.05% | 10.56% |

Notes:

[1] Bloomberg Professional, as of September 30, 2023

[2] LT Beta

[3] Market Return

[4] Equals [3] - [1]

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

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| | | [1] | [2] | [3] | [4] | [5] | [6] |
|---------------------------------------|--------|---|------------------|--------------------------|--|---------|------------------|
| | | Near-term projected 30- year U.S. Treasury bond yield | Beta (β) | Market Return (Rm) | Market Risk Premium (Rm - Rf) | ROE (K) | ECAPM ROE (K) |
| Company | Ticker | (Q4 2023 - Q4 2024) | | | | | |
| ALLETE, Inc. | ALE | 4.16% | 0.79 | 12.08% | 7.92% | 10.38% | 10.81% |
| Alliant Energy Corporation | LNT | 4.16% | 0.75 | 12.08% | 7.92% | 10.10% | 10.60% |
| Ameren Corporation | AEE | 4.16% | 0.73 | 12.08% | 7.92% | 9.91% | 10.45% |
| American Electric Power Company, Inc. | AEP | 4.16% | 0.68 | 12.08% | 7.92% | 9.51% | 10.15% |
| Avista Corporation | AVA | 4.16% | 0.79 | 12.08% | 7.92% | 10.38% | 10.81% |
| CMS Energy Corporation | CMS | 4.16% | 0.69 | 12.08% | 7.92% | 9.63% | 10.24% |
| Duke Energy Corporation | DUK | 4.16% | 0.67 | 12.08% | 7.92% | 9.43% | 10.09% |
| Entergy Corporation | ETR | 4.16% | 0.75 | 12.08% | 7.92% | 10.06% | 10.57% |
| Evergy, Inc. | EVRG | 4.16% | 0.95 | 12.08% | 7.92% | 11.69% | 11.79% |
| IDACORP, Inc. | IDA | 4.16% | 0.73 | 12.08% | 7.92% | 9.94% | 10.48% |
| NextEra Energy, Inc. | NEE | 4.16% | 0.73 | 12.08% | 7.92% | 9.94% | 10.48% |
| NorthWestern Corporation | NWE | 4.16% | 0.75 | 12.08% | 7.92% | 10.06% | 10.57% |
| OGE Energy Corporation | OGE | 4.16% | 0.93 | 12.08% | 7.92% | 11.53% | 11.67% |
| Pinnacle West Capital Corporation | PNW | 4.16% | 0.74 | 12.08% | 7.92% | 9.98% | 10.51% |
| Portland General Electric Company | POR | 4.16% | 0.75 | 12.08% | 7.92% | 10.10% | 10.60% |
| Southern Company | SO | 4.16% | 0.66 | 12.08% | 7.92% | 9.35% | 10.03% |
| Xcel Energy Inc. | XEL | 4.16% | 0.66 | 12.08% | 7.92% | 9.35% | 10.03% |
| Mean | | | | | | 10.08% | 10.58% |
| Median | | | | | | 9.98% | 10.51% |

Notes:

[1] Blue Chip Financial Forecasts, Vol. 42, No. 10, October 1, 2023, at 2

[2] LT Beta

[3] Market Return

[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 & VALUE LINE LT BETA

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

$$K = R_f + 0.25 \times (R_m - R_f) + 0.75 \times \beta \times (R_m - R_f)$$

| | [1] | [2] | [3] | [4] | [5] | [6] | |
|---------------------------------------|--------|--|------------------|--------------------|-------------------------------|---------|---------------|
| Company | Ticker | Projected 30-year U.S. Treasury bond yield (2025 - 2029) | Beta (β) | Market Return (Rm) | Market Risk Premium (Rm - Rf) | ROE (K) | ECAPM ROE (K) |
| ALLETE, Inc. | ALE | 3.80% | 0.79 | 12.08% | 8.28% | 10.30% | 10.75% |
| Alliant Energy Corporation | LNT | 3.80% | 0.75 | 12.08% | 8.28% | 10.01% | 10.53% |
| Ameren Corporation | AEE | 3.80% | 0.73 | 12.08% | 8.28% | 9.81% | 10.38% |
| American Electric Power Company, Inc. | AEP | 3.80% | 0.68 | 12.08% | 8.28% | 9.39% | 10.06% |
| Avista Corporation | AVA | 3.80% | 0.79 | 12.08% | 8.28% | 10.30% | 10.75% |
| CMS Energy Corporation | CMS | 3.80% | 0.69 | 12.08% | 8.28% | 9.52% | 10.16% |
| Duke Energy Corporation | DUK | 3.80% | 0.67 | 12.08% | 8.28% | 9.31% | 10.00% |
| Entergy Corporation | ETR | 3.80% | 0.75 | 12.08% | 8.28% | 9.97% | 10.50% |
| Evergy, Inc. | EVRG | 3.80% | 0.95 | 12.08% | 8.28% | 11.67% | 11.77% |
| IDACORP, Inc. | IDA | 3.80% | 0.73 | 12.08% | 8.28% | 9.85% | 10.41% |
| NextEra Energy, Inc. | NEE | 3.80% | 0.73 | 12.08% | 8.28% | 9.85% | 10.41% |
| NorthWestern Corporation | NWE | 3.80% | 0.75 | 12.08% | 8.28% | 9.97% | 10.50% |
| OGE Energy Corporation | OGE | 3.80% | 0.93 | 12.08% | 8.28% | 11.50% | 11.65% |
| Pinnacle West Capital Corporation | PNW | 3.80% | 0.74 | 12.08% | 8.28% | 9.89% | 10.44% |
| Portland General Electric Company | POR | 3.80% | 0.75 | 12.08% | 8.28% | 10.01% | 10.53% |
| Southern Company | SO | 3.80% | 0.66 | 12.08% | 8.28% | 9.23% | 9.94% |
| Xcel Energy Inc. | XEL | 3.80% | 0.66 | 12.08% | 8.28% | 9.23% | 9.94% |
| Mean | | | | | | 9.99% | 10.51% |
| Median | | | | | | 9.89% | 10.44% |

Notes:

[1] Blue Chip Financial Forecasts, Vol. 42, No. 6, June 1, 2023, at 14

[2] LT Beta

[3] Market Return

[4] Equals [3] - [1]

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

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