

**EXH. AEB-6
DOCKETS UE-240004/UG-240005
2024 PSE GENERAL RATE CASE
WITNESS: ANN E. BULKLEY**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

**Docket UE-240004
Docket UG-240005**

**FIFTH EXHIBIT (NONCONFIDENTIAL) TO THE
PREFILED DIRECT TESTIMONY OF**

ANN E. BULKLEY

ON BEHALF OF PUGET SOUND ENERGY

FEBRUARY 15, 2024

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) |
| NiSource Inc. | NI | 4.77% | 0.90 | 12.56% | 7.78% | 11.78% | 11.97% |
| ALLETE, Inc. | ALE | 4.77% | 0.90 | 12.56% | 7.78% | 11.78% | 11.97% |
| Alliant Energy Corporation | LNT | 4.77% | 0.85 | 12.56% | 7.78% | 11.39% | 11.68% |
| Ameren Corporation | AEE | 4.77% | 0.85 | 12.56% | 7.78% | 11.39% | 11.68% |
| American Electric Power Company, Inc. | AEP | 4.77% | 0.80 | 12.56% | 7.78% | 11.00% | 11.39% |
| Avista Corporation | AVA | 4.77% | 0.90 | 12.56% | 7.78% | 11.78% | 11.97% |
| Black Hills Corporation | BKH | 4.77% | 1.00 | 12.56% | 7.78% | 12.56% | 12.56% |
| CMS Energy Corporation | CMS | 4.77% | 0.80 | 12.56% | 7.78% | 11.00% | 11.39% |
| Duke Energy Corporation | DUK | 4.77% | 0.85 | 12.56% | 7.78% | 11.39% | 11.68% |
| Entergy Corporation | ETR | 4.77% | 0.95 | 12.56% | 7.78% | 12.17% | 12.27% |
| Evergy, Inc. | EVRG | 4.77% | 0.90 | 12.56% | 7.78% | 11.78% | 11.97% |
| IDACORP, Inc. | IDA | 4.77% | 0.85 | 12.56% | 7.78% | 11.39% | 11.68% |
| MGE Energy, Inc. | MGEE | 4.77% | 0.75 | 12.56% | 7.78% | 10.61% | 11.10% |
| NextEra Energy, Inc. | NEE | 4.77% | 0.95 | 12.56% | 7.78% | 12.17% | 12.27% |
| NorthWestern Corporation | NWE | 4.77% | 0.95 | 12.56% | 7.78% | 12.17% | 12.27% |
| OGE Energy Corporation | OGE | 4.77% | 1.05 | 12.56% | 7.78% | 12.95% | 12.85% |
| Pinnacle West Capital Corporation | PNW | 4.77% | 0.95 | 12.56% | 7.78% | 12.17% | 12.27% |
| Portland General Electric Company | POR | 4.77% | 0.90 | 12.56% | 7.78% | 11.78% | 11.97% |
| Southern Company | SO | 4.77% | 0.90 | 12.56% | 7.78% | 11.78% | 11.97% |
| Wisconsin Energy Corporation | WEC | 4.77% | 0.80 | 12.56% | 7.78% | 11.00% | 11.39% |
| Xcel Energy Inc. | XEL | 4.77% | 0.85 | 12.56% | 7.78% | 11.39% | 11.68% |
| Mean | | | | | | 11.69% | 11.90% |
| Median | | | | | | 11.78% | 11.97% |

Notes:

[1] Source: Bloomberg Professional, as of November 30, 2023

[2] Source: Value Line

[3] Source: 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] |
|---------------------------------------|--------|--|------------------|--------------------|-------------------------------|---------|---------------|
| Company | Ticker | Near-term projected 30-year U.S. Treasury bond yield (Q1 2024 - Q1 2025) | Beta (β) | Market Return (Rm) | Market Risk Premium (Rm - Rf) | ROE (K) | ECAPM ROE (K) |
| NiSource Inc. | NI | 4.48% | 0.90 | 12.56% | 8.08% | 11.75% | 11.95% |
| ALLETE, Inc. | ALE | 4.48% | 0.90 | 12.56% | 8.08% | 11.75% | 11.95% |
| Alliant Energy Corporation | LNT | 4.48% | 0.85 | 12.56% | 8.08% | 11.35% | 11.65% |
| Ameren Corporation | AEE | 4.48% | 0.85 | 12.56% | 8.08% | 11.35% | 11.65% |
| American Electric Power Company, Inc. | AEP | 4.48% | 0.80 | 12.56% | 8.08% | 10.94% | 11.35% |
| Avista Corporation | AVA | 4.48% | 0.90 | 12.56% | 8.08% | 11.75% | 11.95% |
| Black Hills Corporation | BKH | 4.48% | 1.00 | 12.56% | 8.08% | 12.56% | 12.56% |
| CMS Energy Corporation | CMS | 4.48% | 0.80 | 12.56% | 8.08% | 10.94% | 11.35% |
| Duke Energy Corporation | DUK | 4.48% | 0.85 | 12.56% | 8.08% | 11.35% | 11.65% |
| Entergy Corporation | ETR | 4.48% | 0.95 | 12.56% | 8.08% | 12.15% | 12.25% |
| Evergy, Inc. | EVRG | 4.48% | 0.90 | 12.56% | 8.08% | 11.75% | 11.95% |
| IDACORP, Inc. | IDA | 4.48% | 0.85 | 12.56% | 8.08% | 11.35% | 11.65% |
| MGE Energy, Inc. | MGEE | 4.48% | 0.75 | 12.56% | 8.08% | 10.54% | 11.04% |
| NextEra Energy, Inc. | NEE | 4.48% | 0.95 | 12.56% | 8.08% | 12.15% | 12.25% |
| NorthWestern Corporation | NWE | 4.48% | 0.95 | 12.56% | 8.08% | 12.15% | 12.25% |
| OGE Energy Corporation | OGE | 4.48% | 1.05 | 12.56% | 8.08% | 12.96% | 12.86% |
| Pinnacle West Capital Corporation | PNW | 4.48% | 0.95 | 12.56% | 8.08% | 12.15% | 12.25% |
| Portland General Electric Company | POR | 4.48% | 0.90 | 12.56% | 8.08% | 11.75% | 11.95% |
| Southern Company | SO | 4.48% | 0.90 | 12.56% | 8.08% | 11.75% | 11.95% |
| Wisconsin Energy Corporation | WEC | 4.48% | 0.80 | 12.56% | 8.08% | 10.94% | 11.35% |
| Xcel Energy Inc. | XEL | 4.48% | 0.85 | 12.56% | 8.08% | 11.35% | 11.65% |
| Mean | | | | | | 11.65% | 11.88% |
| Median | | | | | | 11.75% | 11.95% |

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 42, No. 12, December 1, 2023, at 2

[2] Source: Value Line

[3] Source: Market Return

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

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| | | [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) |
| NiSource Inc. | NI | 4.10% | 0.90 | 12.56% | 8.46% | 11.71% | 11.92% |
| ALLETE, Inc. | ALE | 4.10% | 0.90 | 12.56% | 8.46% | 11.71% | 11.92% |
| Alliant Energy Corporation | LNT | 4.10% | 0.85 | 12.56% | 8.46% | 11.29% | 11.61% |
| Ameren Corporation | AEE | 4.10% | 0.85 | 12.56% | 8.46% | 11.29% | 11.61% |
| American Electric Power Company, Inc. | AEP | 4.10% | 0.80 | 12.56% | 8.46% | 10.87% | 11.29% |
| Avista Corporation | AVA | 4.10% | 0.90 | 12.56% | 8.46% | 11.71% | 11.92% |
| Black Hills Corporation | BKH | 4.10% | 1.00 | 12.56% | 8.46% | 12.56% | 12.56% |
| CMS Energy Corporation | CMS | 4.10% | 0.80 | 12.56% | 8.46% | 10.87% | 11.29% |
| Duke Energy Corporation | DUK | 4.10% | 0.85 | 12.56% | 8.46% | 11.29% | 11.61% |
| Entergy Corporation | ETR | 4.10% | 0.95 | 12.56% | 8.46% | 12.13% | 12.24% |
| Evergy, Inc. | EVRG | 4.10% | 0.90 | 12.56% | 8.46% | 11.71% | 11.92% |
| IDACORP, Inc. | IDA | 4.10% | 0.85 | 12.56% | 8.46% | 11.29% | 11.61% |
| MGE Energy, Inc. | MGEE | 4.10% | 0.75 | 12.56% | 8.46% | 10.44% | 10.97% |
| NextEra Energy, Inc. | NEE | 4.10% | 0.95 | 12.56% | 8.46% | 12.13% | 12.24% |
| NorthWestern Corporation | NWE | 4.10% | 0.95 | 12.56% | 8.46% | 12.13% | 12.24% |
| OGE Energy Corporation | OGE | 4.10% | 1.05 | 12.56% | 8.46% | 12.98% | 12.87% |
| Pinnacle West Capital Corporation | PNW | 4.10% | 0.95 | 12.56% | 8.46% | 12.13% | 12.24% |
| Portland General Electric Company | POR | 4.10% | 0.90 | 12.56% | 8.46% | 11.71% | 11.92% |
| Southern Company | SO | 4.10% | 0.90 | 12.56% | 8.46% | 11.71% | 11.92% |
| Wisconsin Energy Corporation | WEC | 4.10% | 0.80 | 12.56% | 8.46% | 10.87% | 11.29% |
| Xcel Energy Inc. | XEL | 4.10% | 0.85 | 12.56% | 8.46% | 11.29% | 11.61% |
| Mean | | | | | | 11.61% | 11.85% |
| Median | | | | | | 11.71% | 11.92% |

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 42, No. 12, December 1, 2023, at 14

[2] Source: Value Line

[3] Source: 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 & 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 | 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) |
| NiSource Inc. | NI | 4.77% | 0.81 | 12.56% | 7.78% | 11.10% | 11.46% |
| ALLETE, Inc. | ALE | 4.77% | 0.83 | 12.56% | 7.78% | 11.20% | 11.54% |
| Alliant Energy Corporation | LNT | 4.77% | 0.79 | 12.56% | 7.78% | 10.92% | 11.33% |
| Ameren Corporation | AEE | 4.77% | 0.75 | 12.56% | 7.78% | 10.61% | 11.10% |
| American Electric Power Company, Inc. | AEP | 4.77% | 0.76 | 12.56% | 7.78% | 10.65% | 11.13% |
| Avista Corporation | AVA | 4.77% | 0.76 | 12.56% | 7.78% | 10.70% | 11.16% |
| Black Hills Corporation | BKH | 4.77% | 0.90 | 12.56% | 7.78% | 11.79% | 11.98% |
| CMS Energy Corporation | CMS | 4.77% | 0.75 | 12.56% | 7.78% | 10.58% | 11.08% |
| Duke Energy Corporation | DUK | 4.77% | 0.72 | 12.56% | 7.78% | 10.34% | 10.89% |
| Entergy Corporation | ETR | 4.77% | 0.86 | 12.56% | 7.78% | 11.46% | 11.73% |
| Evergy, Inc. | EVRG | 4.77% | 0.78 | 12.56% | 7.78% | 10.85% | 11.28% |
| IDACORP, Inc. | IDA | 4.77% | 0.80 | 12.56% | 7.78% | 10.99% | 11.38% |
| MGE Energy, Inc. | MGEE | 4.77% | 0.68 | 12.56% | 7.78% | 10.08% | 10.70% |
| NextEra Energy, Inc. | NEE | 4.77% | 0.81 | 12.56% | 7.78% | 11.10% | 11.47% |
| NorthWestern Corporation | NWE | 4.77% | 0.87 | 12.56% | 7.78% | 11.52% | 11.78% |
| OGE Energy Corporation | OGE | 4.77% | 0.92 | 12.56% | 7.78% | 11.90% | 12.06% |
| Pinnacle West Capital Corporation | PNW | 4.77% | 0.82 | 12.56% | 7.78% | 11.15% | 11.50% |
| Portland General Electric Company | POR | 4.77% | 0.79 | 12.56% | 7.78% | 10.92% | 11.33% |
| Southern Company | SO | 4.77% | 0.77 | 12.56% | 7.78% | 10.80% | 11.24% |
| Wisconsin Energy Corporation | WEC | 4.77% | 0.73 | 12.56% | 7.78% | 10.47% | 10.99% |
| Xcel Energy Inc. | XEL | 4.77% | 0.74 | 12.56% | 7.78% | 10.51% | 11.02% |
| Mean | | | | | | 10.93% | 11.34% |
| Median | | | | | | 10.92% | 11.33% |

Notes:

[1] Source: Bloomberg Professional, as of November 30, 2023

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

[3] Source: Market Return

[4] Equals [3] - [1]

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

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

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| | | [1] | [2] | [3] | [4] | [5] | [6] |
|---------------------------------------|--------|--|------------------|--------------------|-------------------------------|---------|---------------|
| Company | Ticker | Near-term projected 30-year U.S. Treasury bond yield (Q1 2024 - Q1 2025) | Beta (β) | Market Return (Rm) | Market Risk Premium (Rm - Rf) | ROE (K) | ECAPM ROE (K) |
| NiSource Inc. | NI | 4.48% | 0.81 | 12.56% | 8.08% | 11.04% | 11.42% |
| ALLETE, Inc. | ALE | 4.48% | 0.83 | 12.56% | 8.08% | 11.15% | 11.50% |
| Alliant Energy Corporation | LNT | 4.48% | 0.79 | 12.56% | 8.08% | 10.85% | 11.28% |
| Ameren Corporation | AEE | 4.48% | 0.75 | 12.56% | 8.08% | 10.54% | 11.04% |
| American Electric Power Company, Inc. | AEP | 4.48% | 0.76 | 12.56% | 8.08% | 10.58% | 11.08% |
| Avista Corporation | AVA | 4.48% | 0.76 | 12.56% | 8.08% | 10.63% | 11.11% |
| Black Hills Corporation | BKH | 4.48% | 0.90 | 12.56% | 8.08% | 11.76% | 11.96% |
| CMS Energy Corporation | CMS | 4.48% | 0.75 | 12.56% | 8.08% | 10.51% | 11.02% |
| Duke Energy Corporation | DUK | 4.48% | 0.72 | 12.56% | 8.08% | 10.26% | 10.83% |
| Entergy Corporation | ETR | 4.48% | 0.86 | 12.56% | 8.08% | 11.42% | 11.70% |
| Evergy, Inc. | EVRG | 4.48% | 0.78 | 12.56% | 8.08% | 10.78% | 11.23% |
| IDACORP, Inc. | IDA | 4.48% | 0.80 | 12.56% | 8.08% | 10.93% | 11.34% |
| MGE Energy, Inc. | MGEE | 4.48% | 0.68 | 12.56% | 8.08% | 9.99% | 10.63% |
| NextEra Energy, Inc. | NEE | 4.48% | 0.81 | 12.56% | 8.08% | 11.05% | 11.42% |
| NorthWestern Corporation | NWE | 4.48% | 0.87 | 12.56% | 8.08% | 11.48% | 11.75% |
| OGE Energy Corporation | OGE | 4.48% | 0.92 | 12.56% | 8.08% | 11.87% | 12.04% |
| Pinnacle West Capital Corporation | PNW | 4.48% | 0.82 | 12.56% | 8.08% | 11.09% | 11.46% |
| Portland General Electric Company | POR | 4.48% | 0.79 | 12.56% | 8.08% | 10.86% | 11.28% |
| Southern Company | SO | 4.48% | 0.77 | 12.56% | 8.08% | 10.74% | 11.19% |
| Wisconsin Energy Corporation | WEC | 4.48% | 0.73 | 12.56% | 8.08% | 10.39% | 10.93% |
| Xcel Energy Inc. | XEL | 4.48% | 0.74 | 12.56% | 8.08% | 10.43% | 10.96% |
| Mean | | | | | | 10.87% | 11.29% |
| Median | | | | | | 10.85% | 11.28% |

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 42, No. 12, December 1, 2023, at 2

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

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[4] Equals [3] - [1]

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

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|---------------------------------------|--------|--|------------------|--------------------------|--|---------|------------------|
| 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) |
| NiSource Inc. | NI | 4.10% | 0.81 | 12.56% | 8.46% | 10.97% | 11.37% |
| ALLETE, Inc. | ALE | 4.10% | 0.83 | 12.56% | 8.46% | 11.08% | 11.45% |
| Alliant Energy Corporation | LNT | 4.10% | 0.79 | 12.56% | 8.46% | 10.77% | 11.22% |
| Ameren Corporation | AEE | 4.10% | 0.75 | 12.56% | 8.46% | 10.44% | 10.97% |
| American Electric Power Company, Inc. | AEP | 4.10% | 0.76 | 12.56% | 8.46% | 10.49% | 11.01% |
| Avista Corporation | AVA | 4.10% | 0.76 | 12.56% | 8.46% | 10.54% | 11.04% |
| Black Hills Corporation | BKH | 4.10% | 0.90 | 12.56% | 8.46% | 11.72% | 11.93% |
| CMS Energy Corporation | CMS | 4.10% | 0.75 | 12.56% | 8.46% | 10.41% | 10.95% |
| Duke Energy Corporation | DUK | 4.10% | 0.72 | 12.56% | 8.46% | 10.15% | 10.75% |
| Entergy Corporation | ETR | 4.10% | 0.86 | 12.56% | 8.46% | 11.36% | 11.66% |
| Evergy, Inc. | EVRG | 4.10% | 0.78 | 12.56% | 8.46% | 10.70% | 11.16% |
| IDACORP, Inc. | IDA | 4.10% | 0.80 | 12.56% | 8.46% | 10.85% | 11.28% |
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| NextEra Energy, Inc. | NEE | 4.10% | 0.81 | 12.56% | 8.46% | 10.98% | 11.37% |
| NorthWestern Corporation | NWE | 4.10% | 0.87 | 12.56% | 8.46% | 11.43% | 11.71% |
| OGE Energy Corporation | OGE | 4.10% | 0.92 | 12.56% | 8.46% | 11.84% | 12.02% |
| Pinnacle West Capital Corporation | PNW | 4.10% | 0.82 | 12.56% | 8.46% | 11.02% | 11.41% |
| Portland General Electric Company | POR | 4.10% | 0.79 | 12.56% | 8.46% | 10.78% | 11.22% |
| Southern Company | SO | 4.10% | 0.77 | 12.56% | 8.46% | 10.65% | 11.13% |
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| Xcel Energy Inc. | XEL | 4.10% | 0.74 | 12.56% | 8.46% | 10.33% | 10.89% |
| Mean | | | | | | 10.79% | 11.23% |
| Median | | | | | | 10.77% | 11.22% |

Notes:

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

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

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

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|---------------------------------------|--------|--|------------------|--------------------------|--|---------|------------------|
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| Alliant Energy Corporation | LNT | 4.77% | 0.75 | 12.56% | 7.78% | 10.61% | 11.10% |
| Ameren Corporation | AEE | 4.77% | 0.73 | 12.56% | 7.78% | 10.42% | 10.95% |
| American Electric Power Company, Inc. | AEP | 4.77% | 0.68 | 12.56% | 7.78% | 10.03% | 10.66% |
| Avista Corporation | AVA | 4.77% | 0.79 | 12.56% | 7.78% | 10.88% | 11.30% |
| Black Hills Corporation | BKH | 4.77% | 0.89 | 12.56% | 7.78% | 11.70% | 11.91% |
| CMS Energy Corporation | CMS | 4.77% | 0.69 | 12.56% | 7.78% | 10.14% | 10.75% |
| Duke Energy Corporation | DUK | 4.77% | 0.67 | 12.56% | 7.78% | 9.95% | 10.60% |
| Entergy Corporation | ETR | 4.77% | 0.75 | 12.56% | 7.78% | 10.57% | 11.07% |
| Evergy, Inc. | EVRG | 4.77% | 0.95 | 12.56% | 7.78% | 12.17% | 12.27% |
| IDACORP, Inc. | IDA | 4.77% | 0.73 | 12.56% | 7.78% | 10.46% | 10.98% |
| MGE Energy, Inc. | MGEE | 4.77% | 0.69 | 12.56% | 7.78% | 10.11% | 10.72% |
| NextEra Energy, Inc. | NEE | 4.77% | 0.73 | 12.56% | 7.78% | 10.46% | 10.98% |
| NorthWestern Corporation | NWE | 4.77% | 0.75 | 12.56% | 7.78% | 10.57% | 11.07% |
| OGE Energy Corporation | OGE | 4.77% | 0.93 | 12.56% | 7.78% | 12.01% | 12.15% |
| Pinnacle West Capital Corporation | PNW | 4.77% | 0.74 | 12.56% | 7.78% | 10.49% | 11.01% |
| Portland General Electric Company | POR | 4.77% | 0.75 | 12.56% | 7.78% | 10.61% | 11.10% |
| Southern Company | SO | 4.77% | 0.66 | 12.56% | 7.78% | 9.87% | 10.54% |
| Wisconsin Energy Corporation | WEC | 4.77% | 0.66 | 12.56% | 7.78% | 9.91% | 10.57% |
| Xcel Energy Inc. | XEL | 4.77% | 0.66 | 12.56% | 7.78% | 9.87% | 10.54% |
| Mean | | | | | | 10.58% | 11.08% |
| Median | | | | | | 10.49% | 11.01% |

Notes:

[1] Source: Bloomberg Professional, as of November 30, 2023

[2] Source: LT Beta

[3] Source: 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 & VALUE LINE LT AVERAGE 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 | Near-term projected 30-year U.S. Treasury bond yield (Q1 2024 - Q1 2025) | Beta (β) | Market Return (Rm) | Market Risk Premium (Rm - Rf) | ROE (K) | ECAPM ROE (K) |
| NiSource Inc. | NI | 4.48% | 0.74 | 12.56% | 8.08% | 10.44% | 10.97% |
| ALLETE, Inc. | ALE | 4.48% | 0.79 | 12.56% | 8.08% | 10.82% | 11.25% |
| Alliant Energy Corporation | LNT | 4.48% | 0.75 | 12.56% | 8.08% | 10.54% | 11.04% |
| Ameren Corporation | AEE | 4.48% | 0.73 | 12.56% | 8.08% | 10.34% | 10.89% |
| American Electric Power Company, Inc. | AEP | 4.48% | 0.68 | 12.56% | 8.08% | 9.93% | 10.59% |
| Avista Corporation | AVA | 4.48% | 0.79 | 12.56% | 8.08% | 10.82% | 11.25% |
| Black Hills Corporation | BKH | 4.48% | 0.89 | 12.56% | 8.08% | 11.67% | 11.89% |
| CMS Energy Corporation | CMS | 4.48% | 0.69 | 12.56% | 8.08% | 10.05% | 10.68% |
| Duke Energy Corporation | DUK | 4.48% | 0.67 | 12.56% | 8.08% | 9.85% | 10.53% |
| Entergy Corporation | ETR | 4.48% | 0.75 | 12.56% | 8.08% | 10.50% | 11.01% |
| Evergy, Inc. | EVRG | 4.48% | 0.95 | 12.56% | 8.08% | 12.15% | 12.25% |
| IDACORP, Inc. | IDA | 4.48% | 0.73 | 12.56% | 8.08% | 10.38% | 10.92% |
| MGE Energy, Inc. | MGEE | 4.48% | 0.69 | 12.56% | 8.08% | 10.01% | 10.65% |
| NextEra Energy, Inc. | NEE | 4.48% | 0.73 | 12.56% | 8.08% | 10.38% | 10.92% |
| NorthWestern Corporation | NWE | 4.48% | 0.75 | 12.56% | 8.08% | 10.50% | 11.01% |
| OGE Energy Corporation | OGE | 4.48% | 0.93 | 12.56% | 8.08% | 11.99% | 12.13% |
| Pinnacle West Capital Corporation | PNW | 4.48% | 0.74 | 12.56% | 8.08% | 10.42% | 10.95% |
| Portland General Electric Company | POR | 4.48% | 0.75 | 12.56% | 8.08% | 10.54% | 11.04% |
| Southern Company | SO | 4.48% | 0.66 | 12.56% | 8.08% | 9.77% | 10.47% |
| Wisconsin Energy Corporation | WEC | 4.48% | 0.66 | 12.56% | 8.08% | 9.81% | 10.50% |
| Xcel Energy Inc. | XEL | 4.48% | 0.66 | 12.56% | 8.08% | 9.77% | 10.47% |
| Mean | | | | | | 10.51% | 11.02% |
| Median | | | | | | 10.42% | 10.95% |

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 42, No. 12, December 1, 2023, at 2

[2] Source: LT Beta

[3] Source: 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) |
| NiSource Inc. | NI | 4.10% | 0.74 | 12.56% | 8.46% | 10.34% | 10.89% |
| ALLETE, Inc. | ALE | 4.10% | 0.79 | 12.56% | 8.46% | 10.74% | 11.19% |
| Alliant Energy Corporation | LNT | 4.10% | 0.75 | 12.56% | 8.46% | 10.44% | 10.97% |
| Ameren Corporation | AEE | 4.10% | 0.73 | 12.56% | 8.46% | 10.23% | 10.81% |
| American Electric Power Company, Inc. | AEP | 4.10% | 0.68 | 12.56% | 8.46% | 9.81% | 10.50% |
| Avista Corporation | AVA | 4.10% | 0.79 | 12.56% | 8.46% | 10.74% | 11.19% |
| Black Hills Corporation | BKH | 4.10% | 0.89 | 12.56% | 8.46% | 11.63% | 11.86% |
| CMS Energy Corporation | CMS | 4.10% | 0.69 | 12.56% | 8.46% | 9.94% | 10.59% |
| Duke Energy Corporation | DUK | 4.10% | 0.67 | 12.56% | 8.46% | 9.72% | 10.43% |
| Entergy Corporation | ETR | 4.10% | 0.75 | 12.56% | 8.46% | 10.40% | 10.94% |
| Evergy, Inc. | EVRG | 4.10% | 0.95 | 12.56% | 8.46% | 12.13% | 12.24% |
| IDACORP, Inc. | IDA | 4.10% | 0.73 | 12.56% | 8.46% | 10.27% | 10.84% |
| MGE Energy, Inc. | MGEE | 4.10% | 0.69 | 12.56% | 8.46% | 9.89% | 10.56% |
| NextEra Energy, Inc. | NEE | 4.10% | 0.73 | 12.56% | 8.46% | 10.27% | 10.84% |
| NorthWestern Corporation | NWE | 4.10% | 0.75 | 12.56% | 8.46% | 10.40% | 10.94% |
| OGE Energy Corporation | OGE | 4.10% | 0.93 | 12.56% | 8.46% | 11.97% | 12.11% |
| Pinnacle West Capital Corporation | PNW | 4.10% | 0.74 | 12.56% | 8.46% | 10.32% | 10.88% |
| Portland General Electric Company | POR | 4.10% | 0.75 | 12.56% | 8.46% | 10.44% | 10.97% |
| Southern Company | SO | 4.10% | 0.66 | 12.56% | 8.46% | 9.64% | 10.37% |
| Wisconsin Energy Corporation | WEC | 4.10% | 0.66 | 12.56% | 8.46% | 9.68% | 10.40% |
| Xcel Energy Inc. | XEL | 4.10% | 0.66 | 12.56% | 8.46% | 9.64% | 10.37% |
| Mean | | | | | | 10.41% | 10.95% |
| Median | | | | | | 10.32% | 10.88% |

Notes:

[1] Source: Blue Chip Financial Forecasts, Vol. 42, No. 12, December 1, 2023, at 14

[2] Source: LT Beta

[3] Source: 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])