Rates of Return for New Transmission Build in the US and Canada

CEA Joint D&T-Councils & Corporate Partners Committee Strategic Workshops

February 25, 2009
Overview of Concentric Energy Advisors

Concentric Energy Advisors is a leading management and financial advisory firm focused on the North American energy industry. We are staffed and led by senior industry professionals who have widely-recognized expertise in:

- Financial advisory assignments
- Market assessment and strategy development
- Litigation support
- Ratemaking and utility regulation
- Management and operations consulting

Concentric’s principals and affiliates have held executive positions in management consulting firms, utility companies, regulatory agencies, competitive energy suppliers, and investment banks. Our extensive industry experience combined with rigorous analysis and a highly collaborative approach to working with clients enables us to deliver pragmatic strategic insights and innovative solutions that help ensure client success.
Introduction

- **Concentric has recently completed two studies on ROE awards in Canada and the U.S.:**
  - A Comparative Analysis of Return on Equity of Natural Gas Utilities (prepared for the OEB, June 2007)
  - A Comparative Analysis of Return on Equity for Electric Utilities (prepared for CLD and Hydro One Networks, June 2008) – *Not Public*

- **Concentric is providing expert testimony on behalf of ATCO Utilities in the 2009 Alberta GCC Proceedings (2008-2009)**

- **Concentric provided expert testimony on behalf of Atlantic Path 15 Transmission Upgrade before the FERC (2007)**

- **Provided expert testimony on behalf of Oncor Electric Delivery LLC and Joint Bid Parties in CREZ proceedings (2009)**
Overview

- **Need for Transmission Investment in North America**
  - American Stimulus Plan
  - Integrating Wind Energy

- **Long-term Provincial Transmission Plans**

- **U.S. and Canadian Transmission Returns on Equity**
  - Why U.S. Returns are higher

- **Promoting Transmission Investment and Removing Obstacles in the U.S.**
  - Federal Initiatives
  - State Initiatives

- **How will Canadian Regulators Address the Capital Requirements associated with Transmission Expansion?**
North American Reliability Zones

Figure 1-1. Map of North American Electric Reliability Council (NERC) Interconnections

American Recovery and Reinvestment Plan

- $6 billion in temporary loan guarantees for renewable energy, biofuel projects, and electric power transmission systems
  - Eligible projects must commence by September 30, 2011
  - Funding for biofuel projects limited to $500 million
- $2.5 billion renewable energy R&D
- $4.5 billion transmission and smart grid funding
- $3.25 billion of borrowing authority granted to WAPA and BPA to upgrade their respective transmission systems
- DOE authorized to finance up to 50% of the cost of qualifying advanced grid technology demonstration projects made by electric utilities
- Secretary of Energy to identify significant sources of constrained renewable resources from 2009 Congestion Study and make recommendations for achieving adequate transmission capacity
- $11.1 billion Energy Efficiency Initiatives
Condition Constraint Areas – 2006 EEI Congestion Study

Figure ES-4. Conditional Constraint Areas
Provincial Transmission Plans

- **Ontario Integrated Power System Plan (2008)**
  - $4 billion (2007 dollars) projected transmission spend (2008 – 2027)

- **British Columbia Transmission Corporation (BCTC) Transmission System Capital Plan F2010 and F2011 Upgrade Technology**
  - $5.3 billion projected transmission expenditures (2010-2019)

- **Alberta**
  - AESO’s 10-year plan projected $3.5 billion in proposed transmission development in addition to $1.2 billion already approved and underway (2007–2016).

- **Newfoundland and Labrador**
  - Newfoundland Power plans $72.2 million 2009-2013 to update aging transmission lines and substations
  - Newfoundland and Labrador Hydro plans $61 million from 2009-2013 for transmission and terminal stations.
Planned Electric Transmission Projects (Canada & U.S.)

Source: SNL Financial; includes “announced,” “advanced development,” and “under construction” projects

Source: SNL Financial
Are Returns Sufficient to Attract the Needed Capital?

Corporate Credit Crunch

Recession

Renewable Energy Targets

Aging Infrastructure

$300 billion Investment 2010 - 2030

Smart Grid Advanced Technology

NIMBY

Obama Stimulus Package

Material & Labor Cost Increases

Reliability Improvements

1Brattle Group, Transforming America’s Power Industry: The Investment Challenge 2010 - 2030
Common Approaches to Estimating Return on Equity

- **Discounted Cash Flow (DCF) or Gordon Growth Model**

\[
P = \frac{D_0 (1 + g)^1}{(1 + r)^1} + \frac{D_0 (1 + g)^2}{(1 + r)^2} + \ldots + \frac{D_0 (1 + g)^n}{(1 + r)^n}
\]

where:
- \( P \) = the current stock price
- \( g \) = the dividend growth rate
- \( D_n \) = the dividend in year \( n \)
- \( r \) = the cost of common equity.

Assuming a constant growth rate in dividends, the model may be rearranged to compute the ROE accordingly:

\[
r = \frac{D}{P} + g
\]
Common Approaches to Estimating Return on Equity (Continued)

- **Equity Risk Premium ("ERP")**

  \[ R = R_f + R_p \]

  where:
  - \( R \) = the required return on common equity for a specific stock
  - \( R_f \) = the risk free rate of return
  - \( R_p \) = the risk premium.

- **Capital Asset Pricing Model ("CAPM")**

  \[ R_c = R_f + \beta (R_m - R_f) \]

  where:
  - \( R_c \) = the required return on common equity for a specific stock
  - \( R_f \) = the risk free rate of return
  - \( R_m \) = the return required for the market as a whole
  - \( \beta \) = Beta, a measure of the covariance between the returns (dividends plus capital gains) of the market average and those of a specific stock.
Leverage and ROE

Cost of Capital Curves According to Finance Theory

Pre-Tax Equity Cost

Pre-Tax Debt Cost

Wtd Avg Cost

Optimal Capital Structure

Equity Ratio

Percent

Min WACC

Wtd Avg

Debt

Equity

Cost

Pre-Tax

100%

- Canadian ROEs represent most recent ROEs awarded to all electric transmission companies in Canada
- U.S. ROEs represent all transmission ROEs awarded by the FERC in 2008

- Excludes Newfoundland and Labrador Hydro's ROE of 4.47% (Source: 2007 Annual Report, pg. 28)
- Canadian ROEs represent most recent ROEs awarded to all electric transmission companies in Canada
- U.S. ROEs represent all transmission ROEs awarded by the FERC in 2008
## Canadian Approach to ROE – Ontario Example

**Table 1: Allowed ROE**

<table>
<thead>
<tr>
<th>Description</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average of 3- and 12-month Consensus Forecasts outlook for 10-year Government of Canada bond rates</td>
<td>4.75%</td>
</tr>
<tr>
<td>Average difference during April 2005 between 10- and 30-year Government of Canada bond yields (Source: Bank of Canada)</td>
<td>0.45%</td>
</tr>
<tr>
<td>Equity risk premium</td>
<td>3.80%</td>
</tr>
</tbody>
</table>

**Allowed return on equity**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>9.00%</td>
</tr>
</tbody>
</table>

**Table 2: 2006 Rates Capital Structure and Debt Rates**

<table>
<thead>
<tr>
<th>Rate Base</th>
<th>Deemed Capital Structure</th>
<th>Deemed Debt Rate (DR)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Debt (D)</td>
<td>Equity (1-D)</td>
</tr>
<tr>
<td>&gt; $1.0 billion</td>
<td>65%</td>
<td>35%</td>
</tr>
<tr>
<td>$250 million - $1.0 billion</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>$100 million - $250 million</td>
<td>55%</td>
<td>45%</td>
</tr>
<tr>
<td>&lt; $100 million</td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

The Board will deem a single capital structure for all distributors for rate-making purposes. …the Board has determined that a split of 60% debt, 40% equity is appropriate for all distributors.

**ROE Update for any Period**

Using March 1999 as the starting calculation and substituting for the initial ROE and Long Canada Bond Forecast approved by the Board in the Decision RP-1998-0001 the following is the adjustment formula for calculating the ROE at time $t$:

$$ROE_t = 9.35\% + 0.75 \times (LCBF_t - 5.50\%)$$

For any period $t$ the Long Canada Bond Forecast $LCBF_t$ can be expressed as:

$$LCBF_t = \left[ \frac{10 \times CBF_{3,t} + 10 \times CBF_{12,t}}{2} \right] + \frac{\sum_{i} (30 \times CB_{i,t} - 10 \times CB_{i,t})}{I_t}$$

**Source:** OEB - Report of the Board on Cost of Capital and 2nd Generation Incentive Regulation for Ontario’s Electricity Distributors (2006)
## Canadian Jurisdictions’ Authorized Return Approaches

<table>
<thead>
<tr>
<th>Transmission Utility</th>
<th>Ownership</th>
<th>ROE</th>
<th>Equity Ratio</th>
<th>Methodology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newfoundland Power</td>
<td>IOU</td>
<td>8.69%</td>
<td>45.00%</td>
<td>Formula</td>
</tr>
<tr>
<td>AltaLink</td>
<td>IOU</td>
<td>8.75%</td>
<td>35.00%</td>
<td>Formula</td>
</tr>
<tr>
<td>ATCO Electric Transmission</td>
<td>IOU</td>
<td>8.75%</td>
<td>33.00%</td>
<td>Formula</td>
</tr>
<tr>
<td>FortisBC</td>
<td>IOU</td>
<td>8.87%</td>
<td>40.00%</td>
<td>Formula</td>
</tr>
<tr>
<td>Nova Scotia Power</td>
<td>IOU</td>
<td>9.60%</td>
<td>37.50%</td>
<td>Rate Case</td>
</tr>
<tr>
<td>Maritime Electric Power</td>
<td>IOU</td>
<td>10.25%</td>
<td>42.69%</td>
<td>Rate Case</td>
</tr>
<tr>
<td>Newfoundland and Labrador Hydro</td>
<td>Province</td>
<td>4.47%</td>
<td>17.00%</td>
<td>Rate Case</td>
</tr>
<tr>
<td>Hydro One Networks</td>
<td>Province</td>
<td>8.35%</td>
<td>40.00%</td>
<td>Formula</td>
</tr>
<tr>
<td>BC Transmission Corp</td>
<td>Province</td>
<td>8.47%</td>
<td>40.70%</td>
<td>Formula</td>
</tr>
<tr>
<td>ENMAX Transmission</td>
<td>City</td>
<td>8.75%</td>
<td>35.00%</td>
<td>Formula</td>
</tr>
<tr>
<td>EPCOR Transmission</td>
<td>City</td>
<td>8.75%</td>
<td>35.00%</td>
<td>Formula</td>
</tr>
<tr>
<td>SaskPower</td>
<td>Province</td>
<td>9.00%</td>
<td>40.00%</td>
<td>Rate Review Panel</td>
</tr>
<tr>
<td>Northwest Territories Power</td>
<td>Province</td>
<td>9.25%</td>
<td>49.00%</td>
<td>Rate Case</td>
</tr>
<tr>
<td>New Brunswick Power</td>
<td>Province</td>
<td>9.50%</td>
<td>35.00%</td>
<td>Rate Case</td>
</tr>
<tr>
<td>Manitoba Hydro</td>
<td>Province</td>
<td>Not disclosed</td>
<td>25.00%</td>
<td>Int. Cov. Formula</td>
</tr>
</tbody>
</table>
U.S. FERC Approach to Setting Transmission ROEs

- **Proxy Group of Electric Utilities with Significant Electric Transmission Operations in ISO or NERC Region**

- **DCF Calculation**
  
  \[ k = \frac{D(1 + g)}{P} + g \]

  - \( D/P \) = the most recent six-month average low and high dividend yields
  - \( g \) = Analyst 5 year growth rate or Sustainable Growth Rate (BxR+SxV)

- **Range of Reasonableness**
  
  - High Dividend Yield and High Growth Rate (Defines Upper End of Range)
  - Low Dividend Yield and Low Growth Rate (Defines Lower End of Range)
  - Pick a point within range for ROE recommendation

- **Capital Structure is “Actual” unless significantly different than proxy group**
## Typical FERC – Electric Transmission ROE Calculation

### FERC OPM-TPP DCF Model (OUTLINES DCF MODEL)

<table>
<thead>
<tr>
<th>Company</th>
<th>Average High Stock Price</th>
<th>Average Low Stock Price</th>
<th>Average Annual Dividend</th>
<th>High Dividend Yield</th>
<th>Low Expected Dividend Yield</th>
<th>High Expected Dividend Yield</th>
<th>Sustainable Growth</th>
<th>Yahoo First Call EPS Growth Rate</th>
<th>Weighted Average Growth Rate</th>
<th>Low DCF ROE</th>
<th>High DCF ROE</th>
<th>Midpoint</th>
</tr>
</thead>
<tbody>
<tr>
<td>Declasotte &amp; Co. Corp.</td>
<td>DCL</td>
<td>43.01</td>
<td>30.00</td>
<td>1.07</td>
<td>5.10%</td>
<td>3.50%</td>
<td>6.00%</td>
<td>7.00%</td>
<td>5.70%</td>
<td>7.00%</td>
<td>7.00%</td>
<td>7.00%</td>
</tr>
<tr>
<td>Edison International</td>
<td>EIN</td>
<td>55.00</td>
<td>52.00</td>
<td>1.16</td>
<td>5.95%</td>
<td>2.15%</td>
<td>2.00%</td>
<td>2.29%</td>
<td>7.54%</td>
<td>7.43%</td>
<td>9.38%</td>
<td>9.80%</td>
</tr>
<tr>
<td>Duquene &amp; Co.</td>
<td>DQG</td>
<td>47.00</td>
<td>39.00</td>
<td>1.20</td>
<td>5.30%</td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.52%</td>
<td>3.75%</td>
<td>6.02%</td>
<td>3.54%</td>
<td>3.60%</td>
</tr>
<tr>
<td>PNM Resources</td>
<td>PNM</td>
<td>40.00</td>
<td>30.00</td>
<td>2.10</td>
<td>3.00%</td>
<td>5.00%</td>
<td>5.00%</td>
<td>9.00%</td>
<td>6.00%</td>
<td>9.20%</td>
<td>9.20%</td>
<td>9.20%</td>
</tr>
<tr>
<td>Semper Energy</td>
<td>SEP</td>
<td>51.00</td>
<td>55.00</td>
<td>2.01</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
<td>2.00%</td>
</tr>
<tr>
<td>Xcel Energy, Inc.</td>
<td>XEL</td>
<td>22.00</td>
<td>20.00</td>
<td>0.01</td>
<td>4.00%</td>
<td>4.00%</td>
<td>4.00%</td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
<td>3.00%</td>
</tr>
</tbody>
</table>

### Notes

1. Source: Yahoo Finance average of the high stock price observations for each of the six months ended November 30, 2007.
2. Source: Yahoo Finance average of the prevailing annualized dividends for each of the six months ended November 30, 2007.
3. Source: Yahoo Finance average of the low stock price observations for each of the six months ended November 30, 2007.
4. Source: Yahoo Finance average of the high dividend yields (annualized dividend yield / low stock price) for each of the six months ended November 30, 2007.
5. Source: Yahoo Finance average of the low dividend yields (annualized dividend yield / high stock price) for each of the six months ended November 30, 2007.
6. Source: Yahoo Finance average of the low dividend yields (annualized dividend yield / high stock price) for each of the six months ended November 30, 2007.
7. High Expected Dividend Yield = High Dividend Yield * (1 + 1/2 (longer of the sustainable growth or Yahoo First Call growth rates))
8. Sustainable Growth Rate per Value Line Data calculated as (p/n) * (p/n), as shown on ATL - 03.
14. Equals Min of [12]
The Growing Gap between Ontario and U.S. Utility ROEs

U.S. and Canadian 10-Year Government Bond Yields

January 1, 2004 – February 6, 2009 Source: Bloomberg
Divergence of 30-Year Canadian Corporate and Government Bond Yields

January 1, 2004 – February 6, 2009
Source: Bloomberg
Promoting Transmission Investment and Removing Obstacles

- **FEDERAL**
  - National Interest Electric Corridor
  - FERC Order 679 Incentives

- **STATE**
  - CREZ
  - Colorado Senate Bill 07-100
  - Feed-In Tariffs
FERC - National Interest Electric Transmission Corridor

“This rule designates geographic areas where transmission congestion or constraints adversely affect consumers as National Interest Electric Transmission Corridors… A National Corridor designation itself does not preempt State authority or any State actions. The designation does not constitute a determination that transmission must, or even should, be built; it is not a proposal to build a transmission facility and it does not direct anyone to make a proposal to build additional transmission facilities. Furthermore, a National Corridor is not a siting decision, nor does it dictate the route of a proposed transmission project. The National Corridor designation serves to spotlight the congestion or constraint problems adversely affecting consumers in the area and under certain circumstances could provide FERC with limited siting authority.”
Energy Policy Act 2005 – Section 219 - Transmission Rate Reform

- **Added Section 219 to the Federal Power Act.**
- **Established incentive-based (including performance-based) rate treatments for the transmission of electric energy in interstate commerce by public utilities.**

- **The rule was to**
  - Promote reliable and economically efficient transmission and generation of electricity by promoting capital investment in the enlargement, improvement, maintenance, and operation of all facilities for the transmission of electric energy in interstate commerce, regardless of the ownership of the facilities;
  - Provide a return on equity that attracts new investment in transmission facilities (including related transmission technologies);
  - Encourage deployment of transmission technologies and other measures to increase the capacity and efficiency of existing transmission facilities and improve the operation of the facilities;
  - Allow recovery of
    - Prudently incurred costs to comply with mandatory reliability standards
    - Prudently incurred costs related to transmission infrastructure development

- **Provided incentives to each transmitting utility or electric utility that joins a Transmission Organization.**
Incentives Proposed in FERC Order 679

- The Commission encouraged incentive-based rate proposals for all jurisdictional public utilities, including Transcos:

  1. Provide a rate of return on equity (ROE), within the zone of reasonableness, that is sufficient to attract new investment in transmission facilities;
  2. Recover 100 percent of prudently incurred transmission-related Construction Work in Progress (CWIP) in rate base;
  3. Recover prudently incurred pre-commercial operations costs by expensing these costs instead of capitalizing them;
  4. Adopt a hypothetical capital structure;
  5. Accelerate the recovery of depreciation expense;
  6. Recover all prudently incurred development costs in cases where construction of facilities may subsequently be abandoned as a result of factors beyond the public utility’s control;
  7. Provide deferred cost recovery; and
  8. Provide any other incentives approved by the Commission that are determined to be just and reasonable and not unduly discriminatory or preferential.
**Showing of Eligibility for Incentives under FERC Order 679**

- The wording in Commission Order 679 establishes that any transmission project that
  - ensures reliability or
  - reduces the cost of delivered power by reducing congestion, regardless of where it is located on the nationwide transmission grid, is eligible for the above incentives.

- Rebuttable presumption of eligibility for incentive rate treatment if the project has been approved by a Regional Transmission Planning process.

- Must demonstrate that there is a nexus between the incentive sought and the investment being made.
  - The project must generally be discretionary and non-routine in nature as routine projects are often mandatory and may not qualify for incentives as they are generally adequately addressed through traditional ratemaking and there is high assurance of recovery of the related costs.

- Any resulting rate treatment must not be preferential or unduly discriminatory but rather just and reasonable.

- **Typical Incentives Granted - (Not Carved in Stone)**
  - Participation in an RTO 50 basis points
  - TRANSCO up to 150 basis points
  - Transco and RTO 150 basis points
  - Advanced Technologies 50 basis points
  - New Transmission Investment (meets Section 219 Criteria) 100-200 basis points
### Examples of FERC Incentives Granted Under FERC Order 679

**INCENTIVES ACCEPTED BY THE COMMISSION**

<table>
<thead>
<tr>
<th>CASE</th>
<th>DOCKET</th>
<th>ORDER DATE</th>
<th>TRANSCO</th>
<th>NEW INVESTMENT</th>
<th>INVESTMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>NSTAR Electric Co.</td>
<td>ER06-14-000</td>
<td>12/18/2006</td>
<td>NO</td>
<td>YES</td>
<td>100</td>
</tr>
<tr>
<td>340 MW Project</td>
<td>ER09-14-001</td>
<td>12/11/2009</td>
<td>169</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Brook Street Project</td>
<td>ER09-14-001</td>
<td>12/11/2009</td>
<td>169</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Career Project</td>
<td>ER06-14-000</td>
<td>12/11/2009</td>
<td>169</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Transmission Project</td>
<td>ER06-14-000</td>
<td>12/11/2009</td>
<td>169</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Commonwealth Edison</td>
<td>ER06-14-000</td>
<td>12/11/2009</td>
<td>169</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Verizon Transmission, LLC</td>
<td>ER08-15-000</td>
<td>12/11/2009</td>
<td>169</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Maine Wind Transmission, LLC</td>
<td>ER08-15-000</td>
<td>12/11/2009</td>
<td>169</td>
<td>50</td>
<td>100</td>
</tr>
<tr>
<td>Federal Manco Power Co.</td>
<td>EL09-77-000</td>
<td>11/17/2008</td>
<td>250</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>Maine Public Service Co.</td>
<td>EL09-77-000</td>
<td>11/17/2008</td>
<td>250</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>Northeast Utilities Service Co.</td>
<td>ER08-15-000</td>
<td>11/17/2008</td>
<td>250</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>National Grid U.S.</td>
<td>ER08-15-000</td>
<td>11/17/2008</td>
<td>250</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>KeyCorp</td>
<td>HS-10-001</td>
<td>10/28/2008</td>
<td>250</td>
<td>50</td>
<td>150</td>
</tr>
<tr>
<td>Central Maine Power Co.</td>
<td>HS-10-001</td>
<td>10/28/2008</td>
<td>250</td>
<td>50</td>
<td>150</td>
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<tr>
<td>Maine Light Company</td>
<td>HS-10-001</td>
<td>11/15/2008</td>
<td>250</td>
<td>50</td>
<td>150</td>
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<tr>
<td>New York Regional Interconnection</td>
<td>ER09-30-000</td>
<td>12/18/2009</td>
<td>300</td>
<td>50</td>
<td>158</td>
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<tr>
<td>Virginia Electric Power Co.</td>
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<td>11/17/2008</td>
<td>250</td>
<td>50</td>
<td>150</td>
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<tr>
<td>Peabody Energy, Inc.</td>
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<td>11/17/2008</td>
<td>250</td>
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<tr>
<td>Northeast Utilities Service Co.</td>
<td>ER07-69-000</td>
<td>7/17/2007</td>
<td>250</td>
<td>50</td>
<td>150</td>
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<td>Maine Light Company</td>
<td>ER07-69-000</td>
<td>7/17/2007</td>
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<td>150</td>
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<td>Virginia Electric Power Co.</td>
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<td>4/26/2006</td>
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<td>50</td>
<td>150</td>
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<td>PPL Electric Utilities Corp</td>
<td>ER07-69-000</td>
<td>7/17/2007</td>
<td>250</td>
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<tr>
<td>Allegheny Transmission, Inc</td>
<td>ER05-13-001</td>
<td>3/31/2005</td>
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<tr>
<td>Bangor Hydro-Electric Company</td>
<td>ER04-14-014</td>
<td>3/29/2004</td>
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<td>Western Energy, Inc.</td>
<td>EL08-31-000</td>
<td>3/24/2003</td>
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<td>Nevada Hydro Company, Inc</td>
<td>ER07-31-000</td>
<td>3/23/2003</td>
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<td>Potomac Appalachian Transmision Company</td>
<td>CR08-02-000</td>
<td>3/23/2003</td>
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<tr>
<td>Commonwealth Edison</td>
<td>EL07-41-001</td>
<td>11/17/2008</td>
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<td>All Energy Services</td>
<td>ER07-41-001</td>
<td>11/17/2008</td>
<td>250</td>
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Examples of FERC Incentives Granted Under FERC Order 679 (Continued)

<table>
<thead>
<tr>
<th>Name of Company</th>
<th>Order No. 1</th>
<th>Order Date</th>
<th>Transmission</th>
<th>New Investment</th>
<th>RCE Incentives Granted</th>
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<tbody>
<tr>
<td>Southern California Edison Company</td>
<td>EL07-62-000</td>
<td>11/18/2007</td>
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<tr>
<td>Baltimore Gas &amp; Electric</td>
<td>ER01-575-000</td>
<td>11/18/2007</td>
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<td>Puget Sound Power</td>
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<td>Pacific Gas &amp; Electric Company</td>
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<td>6/30/2007</td>
<td>NO</td>
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<td>BGE</td>
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<td>Commonwealth Edison</td>
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<td>Trans-Allegheny Interstate Line Company</td>
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<td>United Illuminating Company</td>
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<td>Allegheny Energy Inc.</td>
<td>EL09-64-001</td>
<td>1/19/2007</td>
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<td>Bangor Hydro-Electric Company and NE ISO</td>
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<td>10/31/2006</td>
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<td>PPL Pennsylvania</td>
<td>EL09-56-000</td>
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Competitive Renewable Energy Zones (CREZ) Texas ERCOT

- Geographic Areas throughout Texas suitable for renewable energy resource development
- Breaks the “chicken and egg” deadlock between wind developers and transmission providers
- Assumes system expansion to transmit renewable capacity of 10,000 MWs by 2025

- Develop a transmission plan with sufficient capacity to deliver output from renewable resources
- Prospective transmission providers selected by way of competitive bid
Colorado Senate Bill 07-100

- Designates “Energy Resource Zones” for areas where transmission constraints hinder delivery of electricity or the development of new generation.

- Utilities prepare annual plans to address congestion in their service areas.

- Utility may recover return on CWIP of such facilities through rate adjustment clause.

- Utility may recover through annual rate adjustment clause, costs incurred for planning, developing, and completing the construction of transmission facilities.
Standard Offer Contracts/Feed-in Tariffs

- **Advantages**
  - Rapid development and deployment of renewable generation resources
  - Price certainty and stability
  - Successful models incorporate generous returns to attract investment
  - Increases distributed generation and resource mix
  - Could be supplemental to competitive solicitations and integrated with RPS targets

- **Disadvantages**
  - Could be more costly to ratepayers
  - May promote suboptimal technologies and inefficient use of resources
  - Uncertain level of policy response and economic impacts
How will Canadian Regulators Address the Capital Requirements associated with Transmission Expansion?

- Discontinue Use or Modify Current ROE Formula?
- Government Subsidized Investment?
- ROE and Rate Incentives?
- Development of National Transmission Corridors?
- Feed-In Tariffs?
- Competitive Bidding Processes?
For More Information, Please Contact:

Julie Lieberman
jlieberman@ceadvisors.com

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