Transmission Investment
Adequate Returns and Regulatory Certainty Are Key

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I. Executive Summary

A Robust Transmission System Is Critical to Electric Reliability

The North American electric system is comprised of a complex, interconnected network of generating plants, transmission lines, and distribution facilities. Electric utilities have interconnected their transmission systems to ensure reliability of service and to facilitate energy exchanges and other market transactions. Transmission lines link the generators of electricity to the distributors, transporting electricity to local electric utilities, which in turn deliver it to customers.

The numerous benefits of a robust transmission network are undisputed, and the nation’s shareholder-owned electric utilities have a long history of making cost-effective investments in needed and beneficial transmission infrastructure. In fact, these utilities have increased their investment in transmission significantly in recent years, and are projected to spend an additional $54.6 billion on transmission infrastructure through 2015 (real $2011). At the same time, electric utilities have invested in cleaner energy sources, greater efficiency, and more resilient and flexible distribution facilities that use modern, smart technologies.

The Federal Energy Regulatory Commission (FERC or the Commission), Congress, and the Administration have determined that cost-effective, properly planned electric transmission investments are needed, and they all have taken actions in the past decade to promote investment. These investments ensure a reliable and efficient electric power grid that can promote robust competitive wholesale electric markets; reduce congestion; support delivery of renewable and cleaner energy resources; respond to emerging security threats; and safely and securely meet the needs of a 21st-century digital economy that increasingly relies on electricity.

Transmission Investment Requires Significant Capital

The electric power industry is the most capital-intensive industry in the United States, with transmission assets accounting for just one aspect of overall utility investments. In 2012, electric utilities invested $90.5 billion in generation, transmission, and distribution systems.

Compared to other assets, transmission investments are extremely risky and require long lead times for the planning process and stakeholder involvement. They also often face extensive and sometimes successful litigation on siting and related issues; in addition, cost recovery can be challenging. As a result, investors require predictable, sustainable, and reasonable returns, or they will reallocate their capital into one of the many other sectors that offer a more competitive return and less risky investments. There are many attractive investment options at this time.

The nation is in a unique economic situation, as the Federal Reserve and other government policies have reduced the cost of debt to serve important economic goals. While there often has been a consistent spread between the costs of debt and equity in the past, the electric power industry, like other domestic businesses, has seen that spread widen considerably in recent years so that the cost of equity is far higher than the traditional spread compared to the cost of debt.
Key Regulatory Policy Goals Must Be Sustained

In recent years, FERC has relied upon a discounted cash flow (DCF) financial model to determine utility cost of equity for transmission. However, that model has not been adjusted to reflect the fundamental shift between the cost of debt and equity that has occurred during the current slow economic recovery. As a result, application of the traditional DCF model can result in dramatically lower returns on equity (ROEs) for transmission investment. Such an application fails to recognize that:

- The current returns are still within the range of reasonableness;
- There is no link between record low interest rates and investors’ expected return on transmission investment;
- Adequate long-term returns are important to the long-term investment in the transmission system and other policy goals.

It also does not demonstrate there is any reduction in the risks of planning, siting, and building transmission. While transmission accounts for about 11 percent of an electric customer’s total bill, ROEs need to be predictable and sustainable over the long-term in order for a robust, modernized transmission system to produce savings and to promote many different policy benefits.

The Edison Electric Institute (EEI) supports a reasonable and practical solution to a strict application of these challenges. In the past, FERC, like all regulatory commissions, has adjusted its regulatory methodologies to reflect changes in economic and financial realities to ensure that ROEs remain within the range of reasonableness. It is critical that FERC stay the course and provide regulatory certainty and adequate returns by making a few simple adjustments to its analysis of the current challenges and to the DCF methodology. Otherwise, the nation’s electric utilities and their investors could divert needed capital to investments with greater returns, jeopardizing transmission reliability.

II. Introduction

EEI’s shareholder-owned electric utility members are making cost-effective transmission investments to ensure that the power grid is reliable and efficient, meets 21st-century electricity needs, and supports competitive wholesale markets. There are numerous benefits of a robust transmission system, which have been recognized by Congress, the Administration, and FERC. Recently, however, several parties have advocated for significant reductions to existing FERC-authorized returns on transmission investments. The parties raising questions rely on a narrow, mechanistic application of FERC’s preferred DCF financial model for determining authorized returns during the current period of artificially low record interest rates. This kind of application can produce ROE results that are downward-biased and are insufficient to meet legal and regulatory standards; moreover, such results would compromise established policy goals. These parties fail to: demonstrate that the link between the record low interest rates and investors’ expected returns on transmission investment has remained constant; recognize the widespread benefits of a robust transmission network; demonstrate that the risks of developing transmission have diminished; and recognize the premise upon which historical transmission investments were made, i.e., stable returns over the asset lives of the facilities.

EEI urges FERC to consider all of the benefits of transmission, as well as its importance to the Commission’s policy goals and regulatory standards, in addressing these challenges by recognizing the limitations of the DCF analysis and assessing the application of the DCF methodology described herein. Over the long term, failure to retain stable and adequate returns for transmission investment that reflect the actual financial conditions influencing that investment likely will prevent the industry from attracting the
necessary capital required for a 21st-century transmission grid. Ultimately, this may lead to less efficient and less cost-effective energy solutions for electricity consumers.

III. Robust Transmission Infrastructure Provides Numerous Benefits to Customers

Over the past decade, EEI members have reversed the trend of declining investment in our nation’s transmission infrastructure that occurred prior to 2000, as shown in the graph below.

![Historical Transmission Investment by Shareholder-Owned Electric Utilities (1982-2000)](chart.png)

Since 2001, EEI members’ year-over-year transmission investment has nearly doubled from $5.8 billion in 2001 to $11.1 billion in 2011 (real $2011). These transmission investments have funded necessary projects, including several projects supported by FERC’s Order No. 679, which implemented Congress’ directive to incentivize improvement and expansion of our nation’s transmission infrastructure.

Customers receive considerable benefits from these transmission investments including:

- An assurance of U.S. electric system reliability;
- Facilitation of robust electric market competition;
- Reduced congestion and line loss costs;
- Integration of new generation resources, including renewables;
- The necessary upkeep of infrastructure; and
A more resilient grid in the face of extreme weather events.

All of these benefits are provided by transmission plant, which remains the smallest portion of an electric customer’s bill. On average, transmission costs are approximately 11 percent of the price of electricity when compared to generation and distribution.9

The benefits of robust transmission infrastructure can be seen around the country:

- Investments made by transmission owners in ISO-New England have resulted in annual savings of approximately $700 million in reduced energy and capacity market costs for electric customers.10
- In PJM, the Trans-Allegheny Interstate Line (TrAIL) project that entered service in 2010 resulted in a reduction of congestion costs of 50 percent, saving customers millions of dollars during 2010 and 2011.11
- In the MISO region, the Multi-Value Projects (MVPs) portfolio alone is expected to create thousands of jobs and provide additional energy-cost savings. Specifically, MISO estimates that the 2011 portfolio of 11 transmission projects will provide benefits between $15.6 and $49.3 billion, approximately 1.8 to 3.0 times the projected capital costs of $5.2 billion (real $2011).12

Investing in transmission infrastructure also provides grid resiliency, which helps to avoid major electricity blackouts that can result in significant economic losses. For example, due to a transmission issue starting on August 14, 2003, an estimated 50 million people in the Midwest and Northeast United States and Ontario, Canada, experienced an area-wide blackout lasting up to four days in some areas. Total estimates of business and other losses for this event ranged from $4 billion to $10 billion for the outage periods.13

The Need for a Robust Transmission Grid Is Undisputed

EEI believes the clear conclusion of governmental and regulatory bodies is that the public policy benefits of transmission investment are without dispute, and the need for greater transmission investments is clear.

FERC continues to articulate public policy reasons for additional investment in transmission infrastructure and recognizes the benefits of a robust transmission system. For example, with the issuance of Order No. 1000, the Commission stated that “[t]he need for additional transmission facilities is being driven, in large part, by changes in generation mix.”14 Also, FERC stated that “additional, and potentially significant, investment in new transmission facilities will be required in the future to meet reliability needs and integrate new sources of generation;” and “…increased adoption of [renewable portfolio standard measures] has contributed to rapid growth of renewable energy resources that are frequently remote from load centers, and thus [increase the] need for transmission to access remote resources ….”15 This also is consistent with FERC’s strategic goals (Fiscal Years 2009-2014), which state, in part, that the Commission will “[p]romote the development of safe, reliable and efficient energy infrastructure that serves the public interest” in order to fulfill its mission to “[a]ssist consumers in obtaining reliable, efficient and sustainable energy services at a reasonable cost through appropriate regulatory and market means.”16 To support this strategic goal, FERC has pursued policies to support electric transmission planning and to encourage new electric transmission facilities that advance efficient transmission system operation.17
In January 2011, the five sitting FERC Commissioners endorsed the need for transmission investment in a letter to the editor of The Wall Street Journal, disputing an editorial critical of FERC’s proposed rule covering transmission planning and cost allocation. The Commissioners stated “investment in transmission promotes efficient and competitive electricity markets, which hold down prices for consumers. Transmission investment also enhances reliability and allows access to new energy resources.” Indeed, additional transmission investment is needed as electricity providers continue to address the evolving energy needs of our nation.

Recent extreme weather events also have highlighted the need for reinforcing and upgrading electric infrastructure. In addition, the U.S. Environmental Protection Agency (EPA) is promulgating and implementing evolving regulations that are driving significant generation retirements. Managing these generation retirements will increase the need for new and upgraded transmission assets. For example, PJM recently approved more than $5 billion of transmission enhancements driven by plant retirements, generation projects switching to natural gas, and the growth of wind power projects.

Moreover, transmission development to integrate and support renewable energy resources remains critical, especially those remotely located resources that need access to the market and load centers. For example, the American Wind Energy Association recently released a report highlighting that “transmission is ‘extremely important’ to the future of the wind industry in the United States, and as noted previously, is the ‘industry’s number one barrier’ to integrating more wind energy.”

Meanwhile, the North American Electric Reliability Corporation (NERC) and FERC continue to develop and approve a growing list of mandatory standards aimed at ensuring Bulk Power System reliability, requiring incremental capital investments for all utilities that own transmission. In addition, the cyber and physical security needs of the nation’s critical infrastructure, including the electric grid, also require increased attention and investment. While there have been increases in distributed energy resources, transmission investments still are needed to support these resources locally and in the wholesale energy markets. And, although demand response and energy efficiency may reduce electricity usage, increased customer participation does not affect the need for transmission materially. Generation resources still are needed to meet electricity demand, and transmission is needed to integrate these resources and reduce system congestion.

As the Nation’s Demand for Reliable, Affordable Electricity Grows, EEI Members Remain Committed to Developing the Transmission Needed to Provide Reliable Electricity

EEI members have responded to the growing transmission needs of our nation. The graph below demonstrates EEI members’ commitment to meet those needs as demonstrated by the recent increase in transmission investments. These investments have been encouraged by FERC’s subsequent policies implementing the Energy Policy Act of 2005 (EPAct 2005).

In response to the sustained need for transmission investments, EEI projects that its members will invest an additional $54.6 billion in transmission through 2015 (real $2011). However, planned transmission investments are affected by economic conditions, capital allocation, financial markets, and public policy objectives. Currently, EEI forecasts a decrease in transmission investment after 2013 (relative to 2013), in part because several major projects recently have been modified, delayed, or cancelled. While transmission investments by EEI members during 2014 and 2015 are anticipated to be significantly higher than in 2011, it is important to note that, given the length of time it takes to plan, permit, and build significant transmission projects (up to 10 years), the ramp up in investment reflects investment decisions made in response to policies enacted by Congress in EPACT 2005 and appropriate ROEs. These planned transmission investments are premised on ROEs that are consistent with currently authorized levels.
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($Millions [Real $2011])

Longer-term, EEI’s 2013 Transmission Projects: At A Glance report highlights more than 150 planned transmission projects, totaling approximately $51.1 billion (nominal $) planned through 2023. These projects do not include investments in transmission upgrades or replacements to existing facilities. Twenty percent of these projects are interstate projects, which face significant challenges for siting, permitting, cost allocation, and cost recovery from numerous federal, state, and local entities. Seventy-six percent of these projects support the integration of renewable resources, such as wind and solar. These projects are critical to assisting electricity providers’ cost-effective compliance with renewable portfolio standards (RPS) currently in place in 29 states and the District of Columbia. For example, Southern California Edison’s Tehachapi Renewable Transmission Project is expected to accommodate 4,500 megawatts (MW) of high-quality renewable resources, meeting approximately one-third of California’s 33-percent RPS.

While the proposed investment numbers are significant, The Brattle Group estimates that the need for additional transmission investment through 2030 is in the range of $240 billion to $320 billion. With supportive FERC policies in place since EPAct 2005, the industry has been able to devote more capital expenditures to transmission and is moving forward to build transmission. But, much more needs to be done, and the risks and challenges of developing and building transmission have not lessened. Many projects that
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proposed—and needed to provide—the most significant benefits to customers, are the large regional and inter-regional, backbone projects; these projects also carry the most upfront development time, longer construction schedules, and overall risk.

As previously noted, EEI members are obligated to maintain the reliability of the electric system. While EEI members take such obligations seriously, it will be increasingly challenging to ensure robust reliability if expected returns fall below those for other investments that are more attractive and less risky than transmission. Moreover, the choices of how to meet particular reliability needs are numerous, and electric utilities must make those choices within the confines of capital limitations. If ROEs for transmission are not sufficient, a utility may choose a short-term, more-local project or an alternative resource solution to maintain reliability rather than choose the riskier, more strategic option that could provide additional benefits to customers and be more cost-effective. Given the numerous risks and challenges associated with developing large-scale transmission, it is critical that returns are sufficient to encourage EEI members to focus on evaluating and building the larger, more challenging projects needed for a more robust electric grid that will provide reliability and other benefits to customers in both the short and long term.

Order No. 1000 Effectiveness Relies on Continued Transmission Investments

As previously noted, in Order No. 1000, FERC recognized the benefits of a robust transmission system and the need for additional investment. Order No. 1000 establishes key regional planning and cost-allocation requirements for transmission projects. The goal of Order No. 1000 is to promote more coordinated regional planning and inter-regional planning processes to identify needed, cost-effective, transmission along with the implementation of regional cost allocation for projects that provide regional benefits.

These checks and balances protect customers by ensuring that only needed, cost-effective, and efficient transmission projects that meet local and regional needs ultimately are constructed. Properly structured, these open, transparent and comprehensive processes should identify cost-saving opportunities, support robust wholesale electricity markets, and facilitate the construction of new transmission to meet reliability and public policy requirements. However, without adequate returns to support investment in needed transmission, projects evaluated in these planning processes may not be undertaken because limited capital will be invested elsewhere, likely resulting in delay or absence of projects required to address congestion, to implement public policy objectives, and to bring benefits to customers.

IV. The Risks and Challenges of Developing Transmission Have Not Diminished

Investing in transmission introduces a number of risks and challenges, including significant development risk around ultimately championing a project through the planning process, financing risks, and permitting risks and challenges. Congress recognized the importance of transmission investment and the attendant risks of development when it enacted, as part of EPAct 2005, section 219 of the Federal Power Act (FPA). Congress has not amended or taken other action to diminish the importance of transmission investment since EPAct 2005, nor have project risks and challenges fundamentally changed.

Given these risks, transmission investments are unlike investments in any other utility infrastructure where the projects tend to be smaller in size, shorter in duration, and are located in one area. Due to the long-term nature of transmission projects, regulatory certainty is needed to obtain and maintain financing. With regard to financial challenges, transmission developers are frequently faced with low or negative free cash flows (internally generated cash less capital investments) for an extended period of time when embarking on transmission projects, given their heavy development costs and long lead times. These long lead times include pre-construction activities, such as development and siting approvals. Such financial challenges can
put pressure on a utility’s financial metrics that are used to determine interest rates and terms for accessing needed capital and may limit the ability to access capital on favorable terms. This potentially can drive up a utility’s borrowing costs (if it can get access to capital at all) or limit a utility’s overall capital expenditures. Since the cost of accessing capital ultimately is borne by customers, it is clearly in everyone’s interest that this outcome be avoided. Regulators should look for opportunities to provide certainty by maintaining and authorizing stable, long-term returns for transmission developers and owners to support timely development of beneficial and necessary transmission investments.

Prior to construction, transmission projects generally are evaluated using a Commission-approved transmission planning process, which rigorously evaluates the costs and benefits of each project, assesses the forecasted changes in regional supply and demand, and considers alternative solutions such as new generation or demand-side energy-efficiency measures. Once projects are selected, they still are subject to additional evaluations as part of federal agency and state commission reviews and siting processes.

In some jurisdictions, projects also are subject to additional reviews in subsequent planning cycles and may be delayed, scaled back, or cancelled. In addition, there is a wide disparity in how different planning processes evaluate the benefits of transmission, with some jurisdictions evaluating a significant number of the benefits while others rely mainly on reliability or narrowly defined analyses. However, these reviews and benefit analyses contribute to the riskiness of developing efficient transmission projects.

Lengthy, complicated, and costly siting and permitting processes continue to be major barriers to installing new transmission lines and upgrading existing lines. Since multiple federal, state, and local government agencies often are involved in right-of-way authorizations and related environmental permitting, the lack of inter-agency coordination forms another obstacle to permitting and siting. The challenge of locating lines across states and across federal lands, coupled with targeted, strong opposition from a variety of public interest groups, make the process even more daunting. Rerouting lines occurs with regularity, which increases construction costs.

Federal agencies have agreed to coordinate permitting efforts on federal lands, and a Department of Energy (DOE)-led Rapid Response Team for Transmission has engaged in an effort to streamline the federal approvals for seven large-scale transmission projects. Yet, these efforts have not been implemented broadly yet to significantly reduce the permitting time and expedite permitting on federal lands. Moreover, depending on the location, there may be demands to place transmission underground, which can increase cost and construction times dramatically. This, when coupled with other things such as political challenges, exacerbates the already long lead times for developing transmission and adds another layer of financial risk.

Southern California Edison’s Devers-Colorado River (“DCR”) transmission line project illustrates the significant challenges that utilities face in developing transmission. The DCR project includes the construction of new 110-mile and 42-mile 500-kilovolt (kV) transmission lines and a new 500-kV switchyard to facilitate, primarily, the development of renewable generation resources. The project originally was estimated to cost $545.3 million (real $2005); however, this estimate has increased to $701.3 million (real $2005). The single largest drivers behind the cost increase are direct and indirect costs associated with extensive environmental measures, including costs for mitigation, land, and field monitors; the costs of preparing permits; notice-to-proceed requests; requests for variances and determinations of National Environmental Policy Act adequacy; addendums; project refinement reports; requests for temporary extra workspace; and the resources needed to prepare, review and process documents.
Another example of development challenges is the experience of joint-venture partners to develop the Prairie Wind project. This project is a 110-mile, double-circuit 345-kV line with a projected cost of $225 million. Early in the planning stages, Prairie Wind briefly considered a route through the Red Hills area of Kansas, but rejected it due to concerns expressed by environmental groups, state and federal wildlife agencies, and landowners about a potential adverse impact on sensitive species and substantial additional costs for environmental remediation. Ultimately, the line had to be rerouted to avoid habitats of the lesser prairie chicken and a number of bat species.

American Transmission Company’s crossing of the Namekagon River as part of its Arrowhead-Weston 345-kV line tells a similar story. The Arrowhead-Weston Transmission Line Project is a 220-mile, 345-kV line built from Wausau, Wisconsin, to Duluth, Minnesota, to address what was at the time the second-most congested transmission seam in the Eastern Interconnection. The project needed to cross the Namekagon River, a wild and scenic river that is part of the St. Croix National Scenic Riverway, regulated by the National Park Service (NPS). Both a permit and an easement were needed prior to beginning construction. Although the river already was crossed by another utility’s 161-kV line and two petroleum pipelines, obtaining the NPS permits took approximately 5.5 years and cost $3.9 million, almost twice the actual $2.0 million construction costs of the river crossing.

V. Transmission Investments Must Compete with Alternative Investment Opportunities

EEI members invested $90.5 billion in generation, transmission, and distribution systems in 2012 and are projected to invest approximately $85 billion annually through 2015 with the expectation of retaining currently existing ROEs. Meanwhile, industry free cash flow, or internally generated cash flows less capital investments before financing, has been negative since 2005. This requires utilities to access the equity and debt markets to fund investments. Moreover, transmission assets generate low levels of cash flows for reinvestment, since a primary source of cash flows from utility assets is depreciation, and many transmission assets are at the end of their depreciable lives. Therefore, access to equity capital in the financial markets to fund needed transmission is all the more critical as utilities work to maintain and/or expand their systems to meet customers’ needs reliably and cost-effectively.
Utilities Compete Globally and with Other Industries for Capital

The ROE approved by FERC is intended to provide investors a return comparable to returns on similar investments of comparable risk. In order for utilities to attract capital to develop needed transmission, the ROE approved by FERC must be adequate and stable to attract investors and meet regulatory standards affirmed by the courts.\textsuperscript{42} Investors only are willing to commit capital to utilities if they expect to earn a predictable return that is commensurate not only with the risks and challenges associated with developing transmission but also with the returns available to investments with comparable risks. It is both the level of return and the stability of that return that attract investment.

To the extent that FERC decisions result in a significant reduction of base ROEs after facilities have been placed into service, investors and financing entities will view future investment in the sector as less desirable, given the potential for unpredictable results as well as the diminished return. The result is that actions to reduce base ROEs have a magnifying effect of increasing investors’ required cost of capital, further shrinking the available pool of funds for transmission investment.

Now is not the time to make significant reductions to ROEs on transmission investments. The competition for capital for infrastructure is growing, as illustrated by projected and significant capital needs in other industries. In addition to the electric power industry’s capital expenditure needs, the American Petroleum Institute projects oil and natural gas industry investments of $5 trillion through 2035.\textsuperscript{43} Also, a 2012 study...
on drinking water infrastructure needs estimates that the most urgent investments could be spread over 25 years at a cost of approximately $1 trillion.\textsuperscript{44} There are other studies that identify infrastructure needs that will require significant amounts of capital.\textsuperscript{45}

Apart from other investment opportunities in the energy industry, capital markets offer a wide variety of comparable risk alternatives in other sectors of the economy that compete with transmission investments for investors’ scarce capital. As a result, there will be significant competing demands for capital and financing. If returns on electric transmission infrastructure are not sufficient and stable, investors will avoid such investments and instead will seek better and more stable returns elsewhere. For example, review of FERC’s historical decisions indicates that, in 2011, FERC’s approved ROEs for natural gas pipelines were 264 basis points higher, on average, than those of electric utilities and present alternative investment opportunities. ROEs proposed by complainants and FERC staff in current section 206 filings before the Commission would imply a dramatic and unwarranted increase in this differential.

**Transmission Investments Compete with Alternative Utility Investments**

As currently applied by the Commission, the DCF methodology results in transmission ROEs that are below currently authorized state ROEs. In some cases, these differences may amount to 200 or more basis points. For example, EEI data shows that the average state-approved ROE in 2012 was 10.15 percent, which—even being at the lowest in decades—is significantly above those under review and pending before FERC.\textsuperscript{46}

Rational markets would not produce such significant and abrupt adjustments to existing ROEs; if anything, such anomalous results should signal that the Commission must reexamine its application of the DCF model and recognize that the model is not working in the current environment. As a result, changes to the DCF methodology and its evaluation of the results are needed. Rather than sending unintended investment signals with sharp downward adjustments to utilities’ ROEs, the Commission should take the opportunity to consider the practical and necessary adjustments to its DCF methodology, as well as the insight offered by alternative approaches and the competition for capital.

With the needs for utilities not only to invest in ongoing transmission upgrades, but also generation and distribution system upgrades, it will be difficult for utilities to justify continued transmission investment, or to attract capital to such investment, if they cannot offer investors the opportunity to earn a fair, stable return. Transmission continues to be inherently more difficult to develop, construct, and operate than other areas of infrastructure development. As a result, transmission infrastructure development remains a pressing need across the country.

In determining a just and reasonable ROE, the Commission should consider state ROEs in relation to the result produced by the DCF methodology and its own policy goals related to transmission development. Such an approach would help to avoid undermining the progress that has been made in developing transmission by allowing the Commission to consider broader policy needs and the supporting actions necessary to achieve those results.

Capital markets are highly sophisticated and will move to risk-comparable investment opportunities with higher returns where such opportunity exists. FERC should give careful consideration to the competition for capital when determining just and reasonable ROEs for transmission, particularly where rigid application of the current DCF methodology leads to unsupported divergence between transmission ROEs and ROEs of risk-comparable utilities such as natural gas pipelines.
VI. FERC’s Ratemaking Should Align with Its Public Policy Priorities

As required by the FPA, FERC must assure just and reasonable rates. In Order No. 1000, FERC adopted reforms, including a requirement that transmission providers consider needs driven by public policy goals in regional and interregional requirements in the planning processes. Public policy goals include cost-effective integration of renewable resources required under state statutes and voluntary guidelines. In particular, as noted, 29 states and the District of Columbia have set statutory deadlines to achieve these goals. In addition to these mandated deadlines, eight states have voluntary guidelines for development and integration of renewable resources.47

Compliance with state statutory goals will require additional transmission. Given the long lead times and risks, stable and compensatory ROEs are needed to ensure that the capital necessary to finance these and other projects is available. To ensure that ROEs remain sufficiently robust to support investment in this additional transmission, EEI recommends the Commission adopt the principles described in the following sections.

To Provide a More Stable Regulatory Framework for Investment, Requests to Lower Existing Returns Should Be Required to Demonstrate That These Returns Fall Outside of the Range of Reasonableness

Under section 206 of the FPA, parties requesting revisions to existing utility rates bear the burden of demonstrating that existing rates are not just and reasonable before FERC may consider whether a new rate should be established.48 Accordingly, complainants must meet this initial burden of proof: specifically, they must show that the existing ROE falls outside of the statutory range of reasonableness in determining an ROE using the FERC-preferred DCF methodology. This range of reasonableness is bound by a low-end ROE calculation and a high-end ROE calculation, which result from the DCF financial model. The evaluation of whether an existing rate can be considered to be unjust and unreasonable should continue if, and only if, the complainant demonstrates the existing rate falls outside of this range of reasonableness. Without this standard, there is no real measure as to whether an existing rate is just and reasonable and calls into question every previously authorized return, depending on market conditions.

FERC’s Analytical Method of Determining ROEs Should Not Be Allowed to Undermine Its Policy Objectives and Hinder Needed Transmission Investment

While FERC has relied solely on the results of a specific application of the DCF model to determine ROEs for electric transmission operations, dependence on a single, mechanical approach heightens the risk that the evidence considered by the Commission will not reflect realities in the capital markets accurately. The DCF methodology is a useful tool in estimating investors’ requirements, but there is no “perfect” method to calculate a fair and reasonable ROE. Volatile and anomalous capital market conditions further increase the risks that a single, formulaic DCF application will not produce a just and reasonable ROE, particularly when those capital market conditions are the result of abnormal intervention.

There is considerable evidence that current financial market conditions spurred by the Federal Reserve’s monetary policy in response to the 2008 recession seriously have undermined the Commission’s ability to rely on its DCF approach as the sole determinant of a just and reasonable ROE. The results of FERC’s DCF analysis, as it has evolved, can vary dramatically depending on:

- Whether the key metric of central tendency is the median or the midpoint;
- The makeup of the proxy group; and
The criteria used to eliminate outliers.

Even when there is general agreement on these parameters, the DCF model can produce results that are not sufficient to support transmission investments and can undermine FERC’s policy objectives. Legal precedent and the rule of reason support the Commission’s careful consideration of current financial market conditions and the results of alternative methods. FERC should exercise flexibility, within or as an adjunct to, its existing DCF methodology, to account for the extraordinary financial environment now extant (e.g., continuing Federal Reserve actions to stimulate the economy by keeping interest rates low, purchasing bonds, etc.) and ensure that ROEs are sufficient to support needed transmission investment.

The Commission Must Recognize Limitations of the DCF Methodology and Adjust Implementation

Today’s economic and financial conditions contribute to anomalous results in DCF analysis, as it currently is applied. Further, DCF proxy group result screens and other implementation aspects of the methodology that have been put into place over time have biased the DCF model to produce lower results in the current interest rate environment, which do not reflect financial market conditions in the future.

For example, Southern California Edison’s experience with issuing preferred equity demonstrates that investors continue to expect returns that are well above current yields on Treasury securities. Although interest rates have fallen since 2008 as a result of the Federal Reserve’s efforts to stimulate the economy, data on rates for preferred equity issued by Southern California Edison indicates that the cost of equity has not experienced a commensurate decline and remains much higher than the interest rates on Treasury securities. This is illustrated in the following table, which shows that the spreads between preferred equity issues and interest rates on Treasury securities have increased as much as 164 to 208 basis points. In fact, the average rate for preferred equity issues increased by four basis points, notwithstanding significant declines in Treasury rates and FERC DCF estimates.

<table>
<thead>
<tr>
<th>Issue Date</th>
<th>Preference Stock Issue</th>
<th>Projected/Actual Preferred Coupon</th>
<th>30-Year Treasury Rate</th>
<th>Spread Over 30-Year Treasury</th>
<th>20-Year Treasury Rate</th>
<th>Spread Over 20-Year Treasury</th>
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<td>9/21/05</td>
<td>SCE Series B Preference Stock</td>
<td>6.125%</td>
<td>#/N/A</td>
<td>4.52%</td>
<td>1.61%</td>
<td>4.19%</td>
<td>1.94%</td>
<td></td>
</tr>
<tr>
<td>1/24/06</td>
<td>SCE Series C Preference Stock</td>
<td>6.00%</td>
<td>#/N/A</td>
<td>4.63%</td>
<td>1.37%</td>
<td>4.40%</td>
<td>1.60%</td>
<td></td>
</tr>
<tr>
<td>Average Rate/Spread, Prior to 2008</td>
<td>5.82%</td>
<td>#/N/A</td>
<td>4.82%</td>
<td>1.22%</td>
<td>4.40%</td>
<td>1.54%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3/10/11</td>
<td>SCE Series D Preference Stock</td>
<td>6.50%</td>
<td>4.53%</td>
<td>1.97%</td>
<td>4.25%</td>
<td>2.25%</td>
<td>3.37%</td>
<td>3.13%</td>
</tr>
<tr>
<td>1/17/12</td>
<td>SCE Series E Preference Stock</td>
<td>6.25%</td>
<td>2.89%</td>
<td>3.36%</td>
<td>2.57%</td>
<td>3.68%</td>
<td>1.87%</td>
<td>4.38%</td>
</tr>
<tr>
<td>5/17/12</td>
<td>SCE Series F Preference Stock</td>
<td>5.625%</td>
<td>2.80%</td>
<td>2.83%</td>
<td>2.38%</td>
<td>3.24%</td>
<td>1.70%</td>
<td>3.93%</td>
</tr>
<tr>
<td>1/29/13</td>
<td>SCE Series G Preference Stock</td>
<td>5.100%</td>
<td>3.18%</td>
<td>1.92%</td>
<td>2.79%</td>
<td>2.31%</td>
<td>2.03%</td>
<td>3.07%</td>
</tr>
<tr>
<td>Average Rate/Spread, After 2008</td>
<td>5.87%</td>
<td>2.52%</td>
<td>2.87%</td>
<td>3.63%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Increase in Rate/Spread | 0.04%                      | 1.64%                | 2.08%                      |

* - Coupon rate floats after ten years
** - Cumulative preference stock
Simply stated, the current DCF analyses may not produce results conducive to attracting the capital that utilities require to meet the need for increased transmission investment. This will make it considerably more challenging to achieve the goals of increased transmission set by Congress and FERC. Consistency in ROE determinations will help to ensure increased long-term capital flow to transmission infrastructure investment. Considering present dislocations in the capital markets, FERC should maintain flexibility in its analysis and exercise its discretion in determining ROEs to protect customers and to enable utilities to attract the necessary capital investment.

Such flexibility should reflect the fact that current utility bond yields are anomalous and are expected to increase significantly, primarily driven by Treasury bonds being artificially and historically low, due to federal intervention to restore economic growth. Nevertheless, investors’ required equity risk premium above lower-risk bonds has expanded, making it greater than otherwise would be the case at a more “normal” interest rate level. Equity continues to be the riskiest form of security in a corporation, and investors will not purchase equity unless it provides a return that exceeds the yield on bonds by some amount consistent with investors’ premium expectations.

Since investors’ required equity risk premium has expanded under current economic conditions, EEI recommends enhancements to provide the Commission flexibility to accommodate shifts in capital market conditions, to ensure that its public policy goals are achieved, and to ensure that utilities can continue to make the level of transmission investment needed. EEI, along with several economic and financial experts in individual FERC proceedings, support the following recommendations:

- Consider the results of alternative approaches, such as the risk premium method and the capital asset pricing model. In addition, consider the results of the current DCF analysis performed on a proxy group of companies from other capital-intensive industries or low-risk firms from the competitive sector. The results of these alternative analyses may be used as benchmarks in evaluating a fair ROE from within the range of reasonableness established by the DCF method applied to electric utilities. This will allow FERC to better set base ROEs in the current environment in the upper end of the zone of reasonableness to offset distortion of the DCF analysis. In parallel, allow flexibility to set ROEs in the upper end of the range of reasonableness based on benchmarking results. (For example, if the results show the central tendency is consistently below other benchmarking methods, FERC should set the ROE to be comparable to the outcome of other methods.) Electric utilities do not compete just with other electric utilities for capital; they also compete with companies from other sectors of the economy.

- Increase the screen for low estimates in a proxy group to be higher, such as 200-300 basis points above the prevailing long-term utility bond yield; and/or incorporate projected bond yields and then apply the currently applicable 100-basis-point threshold.

- Recognize that low and high DCF values are independent estimates, and the fact that one is considered to be an outlier does not compromise the remaining estimate, as the two methods are independent of each other. FERC should discontinue its policy of removing both results for a company from the proxy group if only one DCF estimate is identified to be excluded.

- There should be a shorter period of time for excluding companies with a recent dividend cut. FERC’s practice of a multi-year exclusion of these companies is unreasonable, especially in instances where the cut was related to an external one-time event (e.g., storm restoration). The DCF is a forward-looking model relying on data that is current, using data that is no more than six months old, and forecasted growth rates. Therefore, a dividend cut that occurred six months prior is reflected in the market price and a longer exclusion from the proxy groups is not warranted.
FERC should make these practical adjustments to its ROE methodology immediately to better align it with current market conditions and facilitate reasonable returns. Furthermore, these changes have the benefit of being relatively simple and straightforward and, therefore, should not require a significant overhaul of the DCF methodology.

VII. FERC Should Reaffirm Its Commitment to Transmission Investment by Ensuring Adequate and Stable ROEs Are Retained

Finally, the Commission must consider the long-term implications of compromising its policy of promoting transmission investment. The record shows that utilities responded to the Commission’s policy of promoting transmission by increasing their investments in this area significantly to the benefit of wholesale markets, reliability, renewable integration, and customers nationwide. In addition, numerous utilities pursued the development of wholesale energy markets by joining ISOs and RTOs per Commission policy. For the Commission to backtrack now would signal to the utilities and investors that its policies lack stability and durability.

FERC must realize that utility decisions to make long-term investments, and investors’ decisions to commit the capital to back such investments, depend on stable and predictable regulatory policies. If the Commission changes course now, the long-term implications will be significant and may be irreversible. Therefore, rather than undermine its stated policies supporting needed transmission investment, FERC should reaffirm its commitment to transmission investment by making necessary adjustments in its approach to setting a just and reasonable ROE for transmission investment.


Endnotes

1 EEI is the association of U.S. shareholder-owned electric utilities and affiliates worldwide. EEI’s members own or operate approximately 70 percent of the electric industry assets in this country, including approximately 70 percent of the transmission facilities in our nation. EEI’s diverse membership includes utilities operating in all regions, including in regions with Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) and companies supplying electricity at wholesale in all regions.


3 See, e.g., Announcement of the Rapid Response Team – Transmission Pilot Projects, Secretary Ken Salazar, “Transmission is a vital component of our nation’s energy portfolio...serves as important links across our country to increase our power grid’s capacity and reliability...This is the kind of critical infrastructure we should be working together to advance in order to create jobs and move our nation toward energy independence” (2011); Secretary Steven Chu, “To compete in the global economy, we need a modern electricity grid. ” “An upgraded electricity grid will give consumers choices while promoting energy savings, increasing energy efficiency, and fostering the growth of renewable energy resources” (2011); Announcement of Load Guarantee for One Nevada Transmission Line, Secretary Steven Chu “This project...is a win for the economy as well as for the environment.”

4 See, e.g., Chairman Jon Wellinghoff, Testimony before the House Energy and Commerce Committee Energy and Environment Subcommittee, “A robust electric transmission grid is essential to achieving the vision of an energy future that I believe most of us share,” (2010); Commissioner Philip Moeller, Statement on Transmission Planning and Cost Allocation, Docket No. RM10-23-000, “By building needed transmission, our nation’s transmission network can be maintained at reliability levels that are the envy of the world, while simultaneously improving consumer access to lower-cost power generation.” (2011)

5 Sound regulatory economics and the standards for determining compensatory returns are set forth by the Supreme Court in [Bluefield (Bluefield Water Works & Improvement Co. v. Pub. Serv. Comm’n, 262 U.S. 679 (1923)] and Hope [FPC v. Hope Natural Gas Co., 320 U.S. 591 (1944)] specifically, that a utility’s allowed return on common equity should be sufficient to: (1) fairly compensate investors for capital they have invested in the utility, (2) enable the utility to offer a return adequate to attract new capital on reasonable terms, and (3) maintain the utility’s financial integrity.

6 Actual expenditures are from EEI’s Annual Property & Plant Capital Investment Survey and FERC Form 1s.


8 It is important to note that reliable integration of renewable resources, such as wind and solar, are dependent on a robust transmission grid.

9 While the transmission cost component may vary over time and by region, the Department of Energy recently estimated that transmission comprises 11 percent of a customer’s bill. See, e.g., Energy Information Administration, http://www.eia.gov/energyexplained/index.cfm?page=electricity_factors_affecting_prices.

10 See, i.e., ISO-NE Order No. 1000 compliance filing, ER193-000, October 25, 2012.

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congestion costs by about $1 billion in 2012. See, Figure 13.2 of the 2010 PJM RTEP Plan, available at:

12 See, e.g., MVPs Create Jobs, Benefits for States, available at:
%20-%20Total%20Footprint.pdf.

http://www.infrastructurereportcard.org/a/#e/power-interruptions This report includes estimates of average costs of a sustained outage, defined as a sustained interruption of 106 minutes or more.

14 Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, Order No. 1000, FERC Stats. & Regs. ¶ 31,323 at P 45 (2011) (Order No. 1000), order on reh’g, Order No. 1000-A, 139 FERC ¶ 61,132 (Order No. 1000-A), order on reh’g, Order No. 1000-B, 141 FERC ¶ 61,044 (2012) (Order No. 1000-B).

15 Order No. 1000 at PP 46, 497.


17 See id. at 22.


19 See, e.g., PSE&G Working to Make NJ “Energy Strong.” (announcing $3.9 billion, 10-year proposal to reduce power outages, stabilize customer bills, and create 5,800 jobs), available at:


22 Reliability Standards for the Bulk Electric System of North America (updated March 12, 2013), available at:

23 See, e.g., Executive Order – Improving Critical Infrastructure Cybersecurity, available at:

Planned total industry expenditures are preliminary and are estimated from an 85-percent response rate to EEI's Electric Transmission Capital Budget & Forecast Survey.

25 A free copy of the report is available as an eBook and PDF on EEI’s Web site at:

26 Id. (Some of these investments are also captured in EEI's total transmission investment projections through 2015.)
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30 Section 215 of EPAct 2005 requires a FERC-certified Electric Reliability Organization (ERO) to develop mandatory and enforceable Reliability Standards, which are subject to Commission review and approval. Once approved, the Reliability Standards may be enforced by the ERO, subject to FERC oversight or FERC can independently enforce Reliability Standards, Energy Policy Act of 2005, Pub. L. No 109-58, Title XII, Subtitle A, 119 Stat. 594, 941 (2005), 16 U.S.C. 824o.

31 As noted in Transmission Projects: At A Glance, most transmission projects in the report are multifaceted, addressing a range of needs and delivering a number of benefits. See supra note 26.

32 Order No. 1000 at p 4.

33 Order No. 1000 provides that certain transmission projects will be open to competition in the planning process and increases the risk of whether a particular project will be selected in the regional plan.

34 While there are certain project-specific rate treatments provided by FERC for qualifying projects, such as full rate base treatment for Construction Work in Progress, they do not fully mitigate the risks of the project for the transmission developer. These additional risks must be addressed by the developer in financing the project.

35 There are also merchant transmission projects that may result from voluntary contracts.


38 This project is being jointly developed by Westar Corporation, American Electric Power, and MidAmerican Energy and approved by the Southwest Power Pool pursuant to its regional planning process.


41 Free Cash Flow = Net Cash Provided from Operating Activities – Capital Expenditures – Dividends Paid to Common Shareholders. Sources: EEI Financial Department; company reports; SNL Financial.

42 See Hope, Bluefield discussed supra.
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49 See Robert Mitkowski, Value Line, Weak Jobs Report Gives Fed Cover to Continue Bond-Buying Program, but… (Apr. 13, 2013) (“the Fed’s extra-aggressive monetary policy...is creating extreme environments in segments of the economy. Those include the bond market…”).

50 It is reasonable to expect that common stock ROEs would show a similar increase relative to interest rates.

51 While FERC's present DCF method does not incorporate Treasury rates directly, it does utilize utility bond yields as a cutoff for low estimates, and that cutoff does not incorporate this change in relative risk.
The **Edison Electric Institute (EEI)** is the association of U.S. shareholder-owned electric companies. Our members serve 95% of the ultimate customers in the shareholder-owned segment of the industry, and represent approximately 70% of the U.S. electric power industry. We also have as Affiliate members more than 80 International electric companies, and as Associate members more than 200 industry suppliers and related organizations.

Organized in 1933, EEI works closely with all of its members, representing their interests and advocating equitable policies in legislative and regulatory arenas.

EEI provides public policy leadership, critical industry data, strategic business intelligence, one-of-a-kind conferences and forums, and top-notch products and services.

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