

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Transmission Planning and Cost Allocation)	
By Transmission Owning and Operating)	RM10-23-000
Public Utilities)	
)	

**REPLY COMMENTS OF THE MAINE PUBLIC
UTILITIES COMMISSION, THE MAINE OFFICE
OF THE PUBLIC ADVOCATE AND THE MAINE GOVERNOR’S
OFFICE OF ENERGY, INDEPENDENCE AND SECURITY**

I. INTRODUCTION

Pursuant to the Notice issued on September 29, 2010, the Maine Public Utilities Commission (“MPUC”), the Maine Office of Public Advocate, and the Maine Governor’s Office of Energy, Independence and Security (together the “Maine Parties”) hereby file reply comments in the above docket. On September 29, 2010 the Integrated Transmission Benefits Model (“ITBM”) Proponents filed initial comments in response to the Notice of Proposed Rulemaking (“NOPR”) on Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, which was issued by the Federal Energy Regulatory Commission (“Commission”) on June 17, 2010.¹ In their initial comments, the ITBM Proponents identified the ways in which ISO-NE’s transmission planning and cost allocation failed to meet the principles set forth in the NOPR. The ITBM Proponents also outlined the ITBM as a feasible approach to bringing ISO-NE into compliance with the requirements of the final rule. Finally, the ITBM Proponents asked the

¹ *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, 131 FERC ¶ 61,253 (2010) (“NOPR”).

Commission to provide ISO-NE with sufficient direction to develop the ITBM in the compliance phase following the issuance of the rule.

In these reply comments, the Maine Parties demonstrate that some commentors' desire to maintain the *status quo* in New England's transmission planning and cost allocation methodology will not further the Commission's objectives set forth in the NOPR or bring ISO-NE into compliance with the final rule. As discussed further below, the Maine Parties demonstrate the need for clear direction from the Commission about how public policy objectives that are to be considered in the ISO-NE Regional System Plan ("RSP") should be identified and what role Regional Transmission Organizations ("RTOs") should play in identifying the most cost-effective public policy projects. The Maine Parties also address concerns, expressed by some commentors, about beneficiary pays cost allocation methodologies such as the ITBM. Together with the initial comments of the ITBM Proponents, these Reply Comments demonstrate not only the need for change in ISO-NE's transmission planning and cost allocation rules and processes, but also how the ITBM can successfully and efficiently effect those changes.

II. REPLY COMMENTS

A. Transmission to Access Renewables or Advance Other Public Policy Objectives²

1. Comments Make Clear that There is a Need for Direction from the Commission

The ITBM Proponents' initial comments in this docket pointed out that ISO-NE's transmission planning process, as applied, is deficient in addressing proposals for economic upgrades and accessing renewable resources such as wind. Several commentors, including ISO-NE and some state commissions, gloss over these deficiencies or concede that there are gaps but prefer that the Commission let the region work out solutions. Some, however, recognized that Commission direction is needed. As discussed below, maintaining the *status quo* will not break the log jam that is currently hindering development of transmission projects to access renewables.

ISO-NE's comments do not acknowledge any deficiency in the tariff or the process with regard to planning for economic upgrades and, in fact, fail to even mention the tariff provisions for inclusion of market efficiency transmission

² As a preliminary matter, the Maine Parties recognize that certain RTOs and their member states and transmission owners have not adopted public policy imperatives such as renewable portfolio standards ("RPSs") or renewable energy credits ("RECs"). Although the Maine Parties now propose that FERC mandate certain criteria to be considered by RTOs when considering transmission projects that will help achieve RECs or RPSs, these criteria should only apply prospectively to those Regional Transmission RTOs in which member states and transmission owners have existing RPSs, RECs or similar public policy imperatives or to those RTOs that may choose to adopt such public policy requirements in the future or are required to do so under a federal regime.

upgrades (METUs)³ in the RSP. As though the METU provisions do not exist, ISO-NE states that “the region continues to work through issues related region-wide funding for ‘economic’ transmission projects.”⁴ With regard to public policy projects, ISO-NE suggests that “to some extent, public policy is already playing a role in New England intra-regional planning process, as the ISO-NE OATT’s Attachment K already requires the planning process to “account[] for . . . economic, environmental and other considerations, as may be agreed upon from time to time.” *Id.* at 21. ISO-NE also urges the Commission to formulate the final rule “so that specific policy goals or criteria are *not* to be hard-wired into the region’s OATT.” *Id.* at 24.

While the New England Power Pool Participants Committee (“NEPOOL”) acknowledged the existence of METU provisions in the tariff, and that no METUs have been found to be needed, they do not acknowledge that there is a need for further guidance from the Commission:

The other type of Regional Benefit Upgrades are Market Efficiency Upgrades, which are PTF upgrades that would, as determined through the Regional System Planning process, provide a net reduction in total production cost to supply the system load. Thus far there have been no Market Efficiency Upgrades determined to be needed through the regional system planning process. ISO-NE and the New England stakeholders continue to

³ Under the ISO-NE tariff, a METU is defined as:

Those additions and upgrades that are not related to the interconnection of a generator, and, in the ISO’s determination, are designed to reduce bulk power system costs to load system-wide, where the net present value of the reduction in bulk power system costs to load system-wide exceeds the net present value of the cost of the transmission addition or upgrade. For purposes of this definition, the term “bulk power system costs to load system-wide” includes, but is not limited to, the costs of energy, capacity, reserves, losses and impacts on bilateral prices for electricity.

See ISO-NE OATT I.1.2

⁴ See Comments of Independent System Operator of New England, Docket No. RM 10-23-000, September 29, 2010 (“ISO-NE Comments”) at 11.

look at the rules for Market Efficiency Upgrades to determine what, if any, changes should be made.⁵

The Massachusetts Department of Public Utilities and the Massachusetts Department of Energy Resources (“Massachusetts Parties”) made similar assertions that the existing planning process is adequate in dealing with economic upgrades and provide a potential tool for public policy transmission projects. They state:

New England’s planning process complies with the spirit of this proposed rule. The ISO-NE OATT does not explicitly require that the regional planning process consider public policy requirements, but it does include broad language that could be interpreted to take into account such requirements.⁶

Similarly the Connecticut Department of Public Utility Control and the Rhode Island Public Utilities Commission (“the Connecticut and Rhode Island Commissions”) state, “[w]hile New England can continue to explore ways to fine tune the regional planning process, the current process and cost allocation method complies with the Commission’s proposed rule, works very well, and does not need to be changed in any substantial or substantive way.”⁷

Other commentors do acknowledge that the existing transmission planning process must be changed so that public policy objectives are

⁵ Comments of the New England Power Pool on Notice of Proposed Rulemaking, Docket No. RM10-23, September 24, 2010, at 7.

⁶ Comments of the Massachusetts Department of Public Utilities and the Massachusetts Department of Energy Resources, Docket No. RM10-23-000, September 29, 2010 (“Massachusetts’ Parties Comments”) at 11.

⁷ Comments of the Comments of the Connecticut Department of Public Utility Control and the Rhode Island Public Utilities Commission Regarding Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, Docket No. RM10-23-000, September 29, 2010 (“Connecticut and Rhode Island Comments”) at 19.

addressed in the planning process. For example, National Grid, U.S.A. (“National Grid”) states:

Many national studies have underscored the need to develop a more robust transmission network to integrate increased amounts of renewable resources and to incorporate demand side management programs into transmission planning efforts. In the Northeast, the most favorable regions for the development of renewable power are often far from the load centers with the highest level of electricity consumption (*e.g.*, abundant wind resources are located in northern Maine, New Hampshire, upstate New York and offshore, while most load is located in southern New England and the New York City area). Given the geographic separation of these renewable resources from load centers, it will be almost impossible to serve target levels of energy demand with renewable resources without substantial upgrades to the transmission network.

One of the impediments to the build-out of the transmission network needed to support increased levels of renewable resources is the fact that existing transmission planning processes do not fully take into account the public policy requirements for the integration of renewable resources, or the need for increased responsiveness from the grid to accommodate demand response resources. Many transmission developers ready to invest in transmission to bring large amounts of renewable resources to load centers have been frustrated that, under current tariffs, most regional system planners and transmission providers lack the authority to actively plan *and implement* regional system plans that include projects needed to meet public policy objectives and bring consumer benefits.⁸

The New England Transmission Owners (“NETOs”) believe that the tariff gives ISO-NE the authority to consider in its needs assessment the ability to integrate renewable generation in order to satisfy renewable portfolio standards.⁹ They state, however, that ISO-NE has not done so:

⁸ Comments of National Grid U.S.A. (“National Grid Comments”), September 29, 2010, RM10-23-000 at 8.

⁹ See Comments of the New England Transmission Owners, (“NETOs Comments”) at 6, September 29, 2010, RM10-23-000(stating that section 4.1 of Attachment K to the ISO-NE OATT “provides that ISO-NE has the responsibility to consider the need to satisfy reliability requirements, support efficient operation of the transmission system (economic projects) and also to integrate new generation resources in its Needs Assessment.”)

However, while ISO-NE has conducted broad-based scenario planning to consider transmission needed to meet the region’s public policy goals, it has not included the need to satisfy public policy objectives such as renewable power integration in its Needs Assessment, and transmission projects designed for this purpose have not been included in its annual transmission plan to date. The New England TOs agree with the Commission that such projects should be part of the regional transmission planning process in New England and intend to urge ISO-NE to include public policy objectives in its Needs Assessment and annual transmission plan, consistent with the NOPR.¹⁰

The Maine Parties agree with National Grid and the NETOs that even if the tariff provisions currently exist that would authorize ISO-NE to plan for transmission to meet public policy needs such as accessing renewables or facilitating demand response, such planning is not being done at this point. The ITBM Proponents’ earlier comments demonstrate and the above comments reinforce that the existing tariff language relating to METUs is not being utilized by ISO-NE due in part to the objections raised by parties in southern New England load centers over consideration of METU projects that would improve access to renewables, such as the Maine Power Connection project.¹¹ The comments discussed above demonstrate that unless the Commission explicitly requires changes to ISO-NE’s tariff to

¹⁰ NETOs Comments at 6-7.

¹¹ As noted in the ITBM Proponents’ initial comments, The Maine Power Connection (“MPC”) was a transmission project proposed as a METU that would have interconnected central Maine and the New England grid directly with as much as 800 MW of renewable wind resources. However, the use of the METU provision faced significant resistance especially from Massachusetts and Connecticut interests. Since the MPC proposal was withdrawn, ISO-NE and regional stakeholders have ignored the METU provisions in the tariff. Furthermore, not a single economic upgrade has been approved since ISO-NE’s inception. Instead, utilities in New England have customarily sought approval of projects as reliability transmission upgrades (“RTUs”) regardless of the fact that many of these projects have yielded significant economic benefits. Unless this distinction is eliminated and ISO-NE is directed to consider all effects of transmission projects during the planning process, including the ability of the states and region to attain RPS goals, the lowest-cost renewable projects will not get built.

require ISO-NE to include needs to further public policy objectives in its RSP, the status quo, as illustrated in National Grid's comments will continue.

2. State Participation in the Compliance Phase is Critical, But States Should Not Have Veto Power Over ISO-NE Determinations

The NOPR stated that instead of identifying the public policy requirements established by state or federal laws or regulations that must be considered in the transmission planning process, the Commission proposed to require each public utility transmission provider to coordinate with its customers and other stakeholders to identify public policy requirements established by state or federal laws or regulations that are appropriate to include in its local and regional transmission planning processes:

Further, the Commission proposes to require each public utility transmission provider to specify in its OATT the procedures and mechanisms in its local and regional transmission planning processes for evaluating transmission projects proposed to achieve public policy requirements established by state or federal laws or regulations.¹²

Many of the commentors suggested varying levels of state participation in determination of the public policy objectives. The Massachusetts Parties assert that, “[r]egions should not consider a state’s policy requirements in the planning process unless and until that state has either requested or assented to consideration of its policy objectives” and that states “should determine whether the proposed transmission infrastructure would best advance the stated policy objectives.”

Massachusetts Parties Comments at 12-13.

¹² NOPR 65-66.

Similarly, the Connecticut and Rhode Island Commissions

state that,

[r]egional planning process transmission projects designed to further state public policy objectives should be pursued only when the specific state beneficiaries agree to bear the costs—*i.e.*, the process should not seek to impose the costs involuntarily on other states in the region based on any state’s public policy requirements. Conversely, states in a region should not be required to pay for transmission improvements that only certain states desire to further their public policy objectives. Finally, the Commission should not adopt a rule that would permit transmission planners and transmission utilities to propose transmission projects for the sole or primary purpose of implementing state public policies but without the affected state’s concurrence.¹³

ISO-NE similarly suggests a decisional role for states. ISO-NE suggests an approach in which:

A Regional State Committee (rather than a market operator or non-governmental entities participating in the planning process) establishes and communicates regional public policy-driven needs and goals as inputs to the regional planning process and to the transmission upgrades that are built as a result of the process.¹⁴

The Regional State Committee would further “identify the location of the existing or proposed generating resources desired to be integrated into the regional bulk power system,” or would identify “a sufficiently formulated conceptual transmission project.”¹⁵ Alternatives suggested by ISO-NE are that the Regional State Committee could bring a conceptual project to the ISO such as a transmission line “from point A to point B to facilitate renewable integration”¹⁶ or coordinated regional procurement of generation which would allocate costs through contract mechanisms.

¹³ Connecticut and Rhode Island Comments at 20.

¹⁴ ISO-NE Comments at 21.

¹⁵ *Id.* at 22.

¹⁶ *Id.*

Others suggest that where states have already acted to identify public policy objectives, such as in the adoption of renewable portfolio standards, the Commission should designate renewable portfolio requirements as a type of need that will be considered in transmission planning. Under this model, the ISO would work closely with the states, but the states would not necessarily have a decisional role.

For example, National Grid states:

Many states already have laws and state regulatory requirements that require utilities to fulfill renewable portfolio standards. It is appropriate for the Commission to use its authority to designate the types of needs that will be considered in utility transmission planning processes to allow these processes to respond to state or federal objectives. States and regions must develop specific regional public policy priorities and allow those policies to guide transmission planning.

...

Because most existing public policy requirements arise from state laws and regulations, states should play a central role in the effort to determine how best to incorporate public policy considerations in local and regional planning processes. In regions like New England where the states have formed regional state committees to provide input on transmission and electricity market issues, such regional state committees should continue to play a strong role.

Moreover, planning regions that encompass multiple states, like the ISO New England planning region, will need to determine how to incorporate public policy requirements of each of these states in the regional planning process. For example, states in New England have their own renewable portfolio standards, which differ in the amount of renewable generation to be procured, the qualification standards, and the schedule for complying with these requirements

...

Transmission planners in multi-state regions will need to work closely with the states, as well as the utilities, and other interested stakeholders to determine how best to reflect the public policy requirements of all states in the region in the criteria for the regional planning process.¹⁷

¹⁷ Comments of National Grid at 13-14.

The Maine Parties agree with National Grid that the Commission can identify, as a public policy that should be advanced in the RSP, the promotion of renewable resources, if all or most of the states in the region have renewable portfolio standards as is the case in New England and most of the northeast.¹⁸ The Maine Parties also agree that the criteria for identifying projects to meet these objectives will need to be worked out through the stakeholder process during the compliance phase and with input from the states is critical.

The Maine Parties disagree, however, with the Massachusetts Parties, and the Connecticut and Rhode Island Commissions that public policy transmission projects can be included in the regional system plan *only* if they are not vetoed by the specific state beneficiary of the project. Regional planning must be just that--regional. One crucial goal of regional planning is to integrate the different state RPS, and Alternate Energy Plans into regional plans to provide pathways and illustrate costs for necessary transmission that will ensure reliability and least-cost build out of the grid to achieve these state requirements consistent with national energy goals. Allowing singular states to veto the most cost-effective renewable developments for an entire RTO is anathema to the regional planning function an RTO is obligated to perform.

¹⁸ Every New England state save Vermont has a mandatory Renewable Portfolio Standards in place (Vermont has renewable development goals). This is true of the entire northeast from Maryland to Maine and west to Michigan and Ohio where every state, again save Vermont, has a mandatory RPS or mandatory Alternative Energy Plan in place. Scenarios to meet these state renewable requirement can be readily modeled for regional planning purposes using current modeling tools and stakeholder processes. Planning and modeling compliance with these state requirements is certainly no more challenging than the generation and transmission planning RTOs conduct regularly with stakeholder and state input.

In addition, the ISO proposal is flawed because it will not remove the log jam that currently exists in New England and thus will not meet the Commission's objectives. In correspondence and conversations, ISO-NE executives and employees have indicated that building transmission projects to access renewables will *not* move forward without the cooperation of Connecticut and Massachusetts, whose consumers would be the customers for the majority of the renewable power. Thus, giving a decisional role to a regional state committee dominated by these states will continue these states' ability to veto projects that would bring cost effective renewable power from northern New England and Canada.

Further, ISO-NE's proposal is inconsistent with the NOPR proposal that *the transmission provider* (1) identify public policy requirements in coordination with stakeholders and (2) include in its OATT the procedures and mechanisms for evaluating transmission projects proposed to achieve public policy requirements. Accordingly, the Commission should issue a clear directive to ISO-NE, to identify, with the input of states and stakeholders, the public policies that should be considered and to develop criteria for evaluating projects that advance the identified public policies. As the ITBM Proponents stated in their initial comments "[w]ithout an explicit requirement that the public utility, transmission provider, or RTO plan for public policy requirements such as for renewable development there will be no way to end the log jam that is obstructing access to renewables, and compliance with the long-term state-mandated renewable goals in New England will not be met."

3. ISO-NE Could Plan for Public Policy Transmission Projects if the Criteria for Identifying Such Projects Are Set Forth in the Tariff.

As long as the criteria are spelled out in the tariff, ISO-NE *could* identify the most cost effective projects to access renewables and facilitate demand response. Recently, the Midwest ISO (“MISO”) has tried to develop tariff provisions that include such criteria for identifying public policy projects.¹⁹ While the Maine Parties disagree with the cost allocation proposed in Docket No. ER10-1791-000, the filing itself indicates that with state and stakeholder input, the independent system operator can “hardwire” certain criteria that will advance state public policy goals.

The MISO Board of Directors adopted a set of Planning Principles that included planning to meet public policy needs.²⁰ This effort, which became known as the Regional Generation Outlet Study (“RGOS”), consisted of a collaborative stakeholder process of the Midwest ISO, transmission owners, state regulators and other stakeholders that sought to identify the transmission required to meet the currently applicable RPS requirements in the Midwest ISO region.²¹ Eventually, the MISO built on the RGOS to come up with its Multi Value Projects (“MVP”) proposal.²² MVPs can be driven either by public policy requirements or

¹⁹ See Comments of the Midwest Independent Transmission System Operator, Inc., Docket No. RM10-23-000, September 29, 2010 (“Midwest ISO Comments”) at 8-9.; citing *Midwest Independent System Operator, Inc. and the Midwest ISO Transmission Owners*, Docket No. ER10-1791-000, Proposed Tariff Revisions to the Midwest ISO Open Access Transmission, Energy and Operating Reserve Markets Tariff, July 15, 2010 (“MISO filing”).

²⁰ MISO Filing at 8.

²¹ *Id.* at 8-9.

²² *Id.*

regional economic enhancements and the costs would be allocated regionally.²³ The MISO process is far ahead of New England primarily due to its openness considering MVPs to meet currently applicable RPS requirements.

The MISO filing is important, not for the specific criteria established or the cost allocation methodology proposed, but simply for the fact that an ISO *can, with significant input from states and stakeholders, develop* the tariff language necessary to implement public policy projects, *if it has a will to do so*. Since many ISOs, including ISO-NE, have not taken this step forward, the rule to emerge from the NOPR must be sufficiently explicit and clear about the role the ISO must play in identifying the state and federal public policies and in developing criteria for selecting projects.

B. Arguments in Support of the Status Quo Cost Allocation Methodology in New England Fail to Demonstrate Compliance with the “Roughly Commensurate” Standard.

1. Claims of Generalized Benefits, Diffuse Benefits or Indirect Benefits Do Not Demonstrate that Socialization of Transmission Costs Results in a Methodology in Which Costs are Allocated Roughly Commensurate with Benefits Received.

a. Generalized Benefits

The ITBM Proponents’ initial comments demonstrated that ISO-NE’s cost allocation methodology was inconsistent with the requirement set forth in *Illinois Commerce Commission v. FERC*²⁴ that transmission costs must be allocated in a manner that is roughly commensurate to benefits received from the projects. Several commentors defend ISO-NE’s current socialization methodology by

²³ *Id.* at 9.

²⁴ See *Illinois Commerce Comm’n v. FERC*, 576 F.3d 470 (7th Cir. 2009).

claiming that it is a beneficiaries pay methodology.²⁵ This claim is based on the assumption that there are substantial region-wide benefits resulting from reliability projects even though these benefits are not delineated or quantified. The Connecticut and Rhode Island Commissions for example, speak of the “the broad diffusion of benefits” that transmission upgrades provide²⁶ and assert that “transmission enhancements necessary for compliance with reliability requirements accrue benefits broadly to all customers, *even when allocations of measurable benefits –e.g., reduced congestion or locational energy and capacity prices—might not reflect this result.*”²⁷

The “diffuse” or “generalized” benefit argument was addressed by the Seventh Circuit Court of Appeals in *Illinois Commerce Commission*.

There the Court stated:

If [FERC] cannot quantify the benefits to the midwestern utilities from new 500 kV lines in the East, even though it does so for 345 kV lines, but it has an articulable and plausible reason to believe that the benefits are at least roughly commensurate with those utilities' share of total electricity sales in PJM's region, then fine; the Commission can approve PJM's proposed pricing scheme on that basis. For that matter it can presume that new transmission lines benefit the entire network by reducing the likelihood or severity of outages. *But it cannot use the presumption to avoid the duty of 'comparing the costs assessed against a party to the burdens imposed or benefits drawn by that party.'*²⁸

Thus, while it may be permissible for ISO-NE to adopt a presumption that a reliability project benefits everyone in the region, ISO-NE may not use the

²⁵ See e.g. Comments of ISO-NE, at 10, calling the ISO-NE socialization cost methodology “a ‘beneficiary pays’ model.”

²⁶ Connecticut and Rhode Island Comments at 7.

²⁷ *Id.* at 7 (emphasis added).

²⁸ *Id.* at 477 (internal citations omitted) (emphasis added).

presumption to avoid “comparing the costs assessed against a party to the burdens imposed or benefits drawn by that party.”²⁹

While some commentators place great weight on the Commission’s prior approval of ISO-NE’s cost allocation methodology, the rationale for such approval was explicitly rejected by the Seventh Circuit in *Illinois Commerce Commission*. For example, the Connecticut and Rhode Island Commissions rely on the following Commission’s statement in its 2004 decision approving a continuation of a socialized approach to cost allocation, in which the Commission stated, “[a] needed reliability or economic upgrade on one part of New England’s grid provides diffuse network benefits to other parts of the grid, both immediately and to changing beneficiaries over time.”³⁰

However, the Court in *Illinois Commerce Commission* made clear that there has to be *enough of a benefit* to justify the cost-sharing and actual data not generalizations is needed to make the case:

No doubt there will be *some* benefit to the midwestern utilities just because the network *is* a network, and there have been outages in the Midwest. But enough of a benefit to justify the costs that FERC wants shifted to those utilities? Nothing in the Commission’s opinions enables an answer to that question.³¹

²⁹ *Id.*

³⁰ Connecticut and Rhode Island Comments at 14; citing *New England Power Pool, ISO New England, Inc.*, 103 FERC ¶ 61,304 (2003) at P 56; *see also New England Power Pool and ISO New England, Inc.*, 105 FERC ¶ 61,300 (2003) (“2003 Order”) at P 22, *reh’g denied*, 109 FERC ¶ 61,252 (2004).

³¹ *Illinois Commerce Comm’n*, 576 F.3d at 477.

Moreover, the Court made clear that if the benefit to one sub-region was very small compared to the cost allocated to that region, the cost allocation would not pass the “roughly commensurate” test.

At argument FERC's counsel reluctantly conceded that if Commonwealth Edison would derive only \$ 1 million in expected benefits from Project Mountaineer, for which it is being asked to chip in (by its estimate) \$ 480 million, the disparity between benefit and cost would be unreasonable. The concession was prudent.³²

Accordingly, defenses of the existing ISO-NE cost allocation methodology that rely on general, unquantified reliability benefits do not meet the roughly commensurate standard established by the Seventh Circuit.

b. Diffuse or Widespread Benefits.

Defenders of the *status quo* also claim that reliability upgrades provide region-wide benefits. For example, the Connecticut and Rhode Island Commissions state that,

any transmission project that is necessary to comply with reliability criteria established by North American Electric Reliability Corporation, Northeast Power Coordinating Council, Inc., or New England planning procedures should be presumed to provide region-wide benefits, and the costs should be allocated accordingly. Any attempt to parse the distribution of benefits more precisely is not likely to be fruitful.³³

This contention is unsupported and contrary to the information provided in the ITBM Proponents’ initial comments. The planning process in New England already defines cost causation and beneficiaries (both reliability and economic) of transmission projects fairly precisely and in contradiction to a region wide benefit presumption. Thus, there appears to be no relationship between New England’s current socialized

³² *Id.* at 476.

³³ Connecticut and Rhode Island Comments at 8.

cost allocation methodology and the specific findings that are regularly conducted by the ISO and reviewed at multiple junctures by stakeholders.

The ITBM Proponents initial comments in this proceeding used the economic benefits generated by recent transmission projects to demonstrate numerically how dramatically the distribution of economic benefits departs from a “region-wide benefit” assumption. They also proposed a specific methodology, the Integrated Transmission Benefit Model (“ITBM”) for how the costs could be allocated differently to more closely align with information developed in the planning process. The initial comments further illustrated how the ITBM would allocate costs with examples based on recently completed transmission projects using actual changes to energy prices paid by consumers in the system as reported by ISO-NE’s external market monitor.

The ITBM examples provided in the ITBM Proponents initial comments were drawn from ex-poste observations by ISO-NE New England’s external market monitor. But both the localized reliability benefit and the economic benefit of those projects were modeled ex-ante by ISO-NE, anticipated in advance of project construction, and discussed by the stakeholders in the planning stages of those projects. In its 2002 Regional Transmission Expansion Plan (“RTEP”), for example, ISO-NE highlighted the economic benefits that would flow to Southwest Connecticut from the reliability improvements.

ISO-NE found that improving the import limits into SWCT were the most effective strategy for reducing congestion costs. Later analysis modeled specific proposed SWCT transmission upgrades utilizing updated planning assumptions. The results indicate the potential for large decreases in congestion costs in an SMD environment (i.e.,

including locational marginal pricing) for relatively small transfer limit improvements.³⁴

The reliability benefit of the Southwest Connecticut upgrades was clear from ISO studies and in testimony by ISO in the Connecticut siting proceedings for the Southwest Connecticut project.

Based on studies to date, applicable regional reliability standards, and its own operating experience, ISO considers the electricity delivery system in the southwestern region of Connecticut to be unreliable. Given the present and predicted future composition of generating units and electric demand in that part of the state, transmission system reinforcements are required to enable consumers of electricity in that part of the state to receive reliable electricity service in accordance with regional reliability standards.³⁵

It is clear from the ISO testimony that the load growth in the region was driving the need for transmission infrastructure in the area. This information is clearly inconsistent with a presumption of region-wide benefits or any claim that such benefits are roughly commensurate with the costs allocated to other sub-regions.

The ITBM Proponents' initial comments also used ISO-NE's external market monitor's ex-poste observations of the economic benefits of the Lower Southeast Massachusetts ("SEMA") upgrades to provide another example of how the ITBM can align costs more closely to conclusions reached in the planning studies. For that project as well, both the reliability and economic effects of the project were studied by ISO-NE and recognized in advance in the planning process.

³⁴ ISO-NE 2002 RTEP at 9.

³⁵ March 9, 2004 Pre-filed Testimony of ISO New England Inc. by Stephen G. Whitley, State of Connecticut Siting Council Docket No. 272.

Recent operating experience has identified the need to develop procedures for committing generating units in lower southeastern Massachusetts. Procedures now in place ensure that adequate generation is committed to address second-contingency protection for the loss of two major 345 kV lines. This situation has resulted in some significant out-of-merit operating costs.³⁶

These out-of-merit costs were estimated by local consumers to amount to \$349 million from 2005 through 2008.³⁷

The illustrative examples set forth in the ITBM

Proponents' initial filing of how the ITBM methodology would have allocated costs provide further evidence to contradict the claims of the Connecticut and Rhode Island Commissions that a presumption of region-wide benefit should be afforded reliability projects. Further, even if a presumption were allowed, it could not be used to avoid the requirement of demonstrating that the benefits are roughly commensurate with the costs.³⁸ The information provided above and in the ITBM Proponents' initial filing makes clear that while the costs are allocated broadly under the *status quo*, the majority of the benefits are distributed quite narrowly.

For example, the Southwest Connecticut Reliability Study was conducted by ISO-New England and reviewed by the stakeholders. The study identified reliability needs and economic benefits narrowly focused in Southwest Connecticut, yet under the ITBM Proponents' initial filing demonstrates that New England's current cost allocation methodology, the majority of the costs of

³⁶ ISO New England RTEP 08 at 137.

³⁷ SEMA Municipals' Presentation to Markets Committee on Lower SEMA LSCPR Charges 2006-2008 November 12, 2008.

³⁸ *Illinois Commerce Commission*, 576 F.3d at 477.

these projects will be born by consumers outside of the Southwest Connecticut region.³⁹

Similarly, in the Short Term Lower SEMA studies, of both the reliability and economic benefits were directed to a single load zone. In fact, in an April 2008 decision, the MADPU recognized that the Short Term SEMA upgrades were intended to avoid the uneconomic consequences resulting from the need to dispatch the Canal oil-fired generation units when they were out-of-merit.

The DPU stated:

The proposed project would increase the ability of the area transmission to carry power into Lower SEMA up to 70 percent of SEMA's annual peak load requirements. This would reduce the number of days in which ISO-NE would require the oil-fueled Canal power plant to run to ensure system reliability. The public would benefit by *avoiding substantial uneconomic wholesale market costs related to the Canal power plant running under certain conditions.*

...

In the instant case, *the record demonstrates that as a principal benefit, the proposed project would sharply avoid uneconomic wholesale generation costs associated with the current inability to import sufficient power into the region.* A possible delay in improvements serving to avoid these uneconomic costs supports the issuance of an exemption to NSTAR Electric from the zoning by-laws of Carver and Wareham.⁴⁰

³⁹ See Comments of the Maine Public Utilities Commission, the Maine Office of the Public Advocate, the Maine Governors Office of Energy Independence and Security, the New Hampshire Public Utilities Commission, Environmental Northeast and Conservation Law Foundation (Collectively "ITBM Proponents") on Notice of Proposed Rulemaking, Table 1.

⁴⁰ MA DPU Docket Nos. 07-60 / 07-61, *Petition of NSTAR Electric Company pursuant to G.L. c. 164, § 72 for approval to construct and operate new transmission lines in the Towns of Carver, Middleborough, Rochester and Wareham, and Petition pursuant to G.L. c. 40A, § 3 for exemption from the Zoning By-Laws of Carver and Wareham to expand facilities at two electric substations, Petition*, Order on Petition, April 2, 2008 ("April 2008 SEMA Order") at 50, 52 (emphasis added).

The narrow reach of the Short Term Lower SEMA upgrade benefits was further confirmed by ISO-NE's External Market Monitor. In its 2009 Assessment of the Electricity Markets in New England, the External Market Monitor stated:

Transmission upgrades completed in 2009 significantly reduced congestion into Lower SEMA and Connecticut. In the day-ahead market, the average congestion-related price difference between the New England Hub and Lower SEMA fell from \$10.10 per MWh in 2008 to \$0.96 per MWh in 2009.⁴¹

Given the statements by the External Market Monitor and the MA DPU, it is clear that the Short Term SEMA brought reliability and economic benefits to a specific geographic area within Massachusetts rather than the entire region. Nevertheless, under New England's current postage stamp allocation regime, the five other New England states bore the majority of the cost of the Project.⁴²

The above examples demonstrate that the vast majority of benefits do not accrue broadly to all regions, as suggested by the Connecticut and Rhode Island comments. Accordingly, the information provided in this case provides an insufficient basis to determine that the methodology meets the "roughly commensurate" test. The information provided, in fact, supports a conclusion that the ISO-NE cost allocation methodology is not compliant with the principles in the NOPR and the "roughly commensurate" test.

⁴¹ See David B. Patton, Pallas LeeVanSchaick, Potomac Economics, Ltd., Independent Market Monitoring Unit, *2009 Assessments of the Electricity Markets In New England*, June 2010 ("2009 External Market Monitor Report") at xii. ("2009 External Market Monitor Report") at xii.

⁴² See Comments of the ITBM Proponents', Table 1.

c. Indirect Benefits

Some commentators suggest that indirect benefits should be considered in justifying a socialized cost methodology. For example, the Connecticut and Rhode Island Commissions state: “The analysis of anticipated benefits may be particularly misleading if it ignores the full range of indirect benefits and beneficiaries.”⁴³ However, these filers fail to identify such benefits or discuss whether they can be quantified. The Brattle Group provides a list of benefits that it labels as broad in scope, however, it fails to distinguish between easily quantifiable direct benefits and indirect benefits such as fuel diversification and economic development. Simply citing the possibility of benefits will be insufficient to justify cost socialization under *Illinois Commerce Commission*. As the Illinois Commerce Commission states, searching for all possible future beneficiaries “is virtually impossible,” and that therefore, “free riders, as the Commission defines them will always exist.”⁴⁴ However, free ridership is much more prevalent under a socialized cost methodology as demonstrated above, than from identifying economic benefits and beneficiaries of a project.

2. The Possibility of Changing Beneficiaries Does Not Transform a Socialized Cost Methodology into a Beneficiary Pays Methodology.

Several commentators suggest that the possibility that beneficiaries change over time demonstrates that eventually everyone benefits from reliability upgrades even though initially, beneficiaries can be readily identified. For example, the Connecticut and Rhode Island Commissions state that that “any

⁴³ Connecticut and Rhode Island at 9.

⁴⁴ Motion to File Comments Out of Time and Comments of the Illinois Commerce Commission (“Illinois Commerce Commission Comments:”) filed September 30, 2010, RM10-23-000 at 8.

prediction about future costs or benefits must be assessed in light of the probability that the actual costs or benefits may be quite different.⁴⁵ Similarly, the Vermont Electric Power Company (“VELCO”) states that the socialized cost model is as equitable over time as the beneficiary-pays model in a regional system as small and interconnected as New England . . . because the system changes continuously such that benefits created by specific transmission projects can yield relatively more or fewer benefits to different parties over time.”⁴⁶ The Brattle Group also suggests that benefits change with system conditions and future generation and transmission additions.

There are several ways to address the possibility of changing beneficiaries over time. However as Dayton Power and Light witness, Hertz Shamash testified in Docket No. EL05-121, the answer is *not* to start with an allocation that does not allocate costs roughly commensurate with benefits based on speculation that the beneficiaries will eventually change.

The potential that some five, ten, or twenty years from now power flows may differ such that the facility may be used differently is speculation. And even if that speculation were given some weight, it would not suggest that there should be a current allocation based on a load ration share, which is a method that is unrelated to any level of usage now or in the future.⁴⁷

Similarly Exelon’s witness in the same docket addresses the “changing beneficiary” argument “by pointing out that the decision to build a project is based on a careful

⁴⁵ *Id.*

⁴⁶ Comments of Vermont Electric Power Company, Inc., on Notice of Proposed Rulemaking, September 29, 2010, (“VELCO Comments”) at 11.

⁴⁷ See, Affidavit of Hertz Shamash, dated May 28, 2010, submitted in Docket No. EL05-121 at ¶ 36.

analysis of power flows at a “snapshot in time” so it would be illogical to consider the benefits over the life of a project.”⁴⁸ Moreover, Exelon’s witness also demonstrated that PJM’s analysis of the energy savings from some of the projects over a number of years confirmed that socialization was inconsistent with the allocation of economic benefits.

Some commentators suggested a “second look” to examine whether beneficiaries change over time. For example, the Electricity Consumers Resource Council (“ELCON”) and the Associated Industrial Group (collectively “ELCON”) suggest that possible changes in power flows should be addressed by a periodic reexamination of beneficiaries but noted that these periodic reviews would not change the amount of the recovery “and therefore adds no regulatory uncertainty to cost recovery.”⁴⁹

There may be other ideas relating to how to address concerns over changing beneficiaries that emerge in the compliance filing phase of the rulemaking. For example in Docket No. EL05-121, the Pennsylvania Office of Consumer Advocate (“PA OCA”) suggested a methodology that, after a set period of time, gradually increased the level of socialized cost by a certain percentage until the remaining depreciable costs are socialized.⁵⁰

The possible approaches to addressing concerns over changing beneficiaries can be addressed in the compliance phase. However, simply allowing a cost allocation methodology that does not meet the roughly commensurate standard to

⁴⁸ Exelon Reply Comments in Docket No. EL05-121-006 quoting Naumann affidavit P 85.

⁴⁹ ELCON Comments at 24.

⁵⁰ See May, 28, 2010 Comments of the Pennsylvania Office of Consumer Advocate at 9, in *PJM Interconnection, LLC*, Docket No. EL05-121-006.

continue because of concerns over changing beneficiaries, impermissibly uses a presumption (that there will be changing beneficiaries and that the changing benefits will result in an allocation of costs that relates to a load weighted share) to avoid the obligation to determine whether the costs allocated are roughly commensurate with the benefits received. As discussed above, it is clear that the socializing the costs of projects results in sub-regions enjoying most if not all of the benefits of the upgrade while the rest of the region contributes a significant share of the costs.

3. Socialized Cost Allocation is inconsistent with Cost Causation Principles

Dominion Resource Services, Inc. (“Dominion”) states that flexibility in choosing a cost allocation scheme should be allowed only in so far as the scheme meets the Commission’s cost causation criteria. If socialization results in a disproportionate allocation of costs to benefits received, it will not satisfy these cost causation principles:

For example, it may be the case that a particular zone receives no material benefits from most new projects costing 99% of the total costs but receives benefits from a subset of the new projects costing 1% of the total costs of all new projects. For the sake of discussion assume the chosen single cost allocation method is a postage stamp allocation that allocates 10% of all of the new costs to the zone. This would not seem to be an allocation method consistent with the Commission’s cost causation principles and at least this particular single cost allocation method should not be used for all projects. *While such an allocation method would prevent a free-rider problem because everyone pays, it does that by foisting disproportional costs on certain riders while subsidizing other riders.*⁵¹

The Maine Parties agree with Dominion’s concerns. As the Commission states in its NOPR, costs of transmission facilities “must be allocated in

⁵¹ Comments of Dominion Resource Services, Inc. (“Dominion Comments”), September 29, 2010, RM10-23-000 at 8. (emphasis added).

a manner that satisfies the ‘cost causation’ principle.” NOPR P. 139. This principle is defined as follows:

All approved rates must reflect to some degree the costs actually caused by the customer who must pay them. Not surprisingly, we evaluate compliance with this unremarkable principle by comparing the costs assessed against a party to the burdens imposed or benefits drawn by that party.⁵²

The Maine Parties also agree with the Public Utilities Commission of Ohio which states that a beneficiary pays approach to cost allocation is more consistent with cost-causation principles than a cost socialization methodology:

The beneficiary pays approach ensures that FERC will realize its obligation to ensure just and reasonable rates by making certain that those causing costs are being rendered the appropriate charges. Cost socialization methodologies do not accurately reflect cost causation and consequently, conflict with the mandate of the Federal Power Act (“FPA”) to ensure just and reasonable rates that are not unduly discriminatory. Cost socialization has no basis in cost causation and therefore is not just and reasonable.⁵³

A helpful discussion of the disconnect between cost causation and socialization is provided in the expert testimony of Michael Schnitzer on behalf of Dayton Power and Light in Docket No EL05-121, the remand proceeding from *Illinois Commerce Commission*. Mr Schnitzer states:

There are many criteria that can be used in the determination of just and reasonable utility rates, but three of them –efficiency, equity, and revenue adequacy—stand out as primary under cost-of-service based regulation.

...

Professor Bonbright highlights the link between costs incurred and benefits received in both the equity and efficiency criteria. He argues that uniform rates when costs are in fact not uniform would impose

⁵² NOPR at P 140 *citing, KN Energy, Inc. v. FERC*, 225 F.3d 667 (D.C.Cir. 2000).

⁵³ Comments submitted on Behalf of the Public Utilities Commission of Ohio, September 29, 2010, RM10-23-000 at 10.

unfair burdens on the consumers of the less costly service, and also would result in an inefficient utilization of society's resources. Cost allocation based on cost causation is the primary mechanism by which both Bonbright's efficiency and equity objectives are met.

...

From a policy perspective, cost causation is so critical to satisfying Bonbright's equity and efficiency objectives that it should only be compromised when the following circumstances are present: 1) it is impossible, on even an approximate basis, to identify the cost-causing customers; or 2) the efficiency implication of deviating from cost causation are not significant and there are compelling equity reasons to so deviate.

Mr. Schnitzer concludes that, in the PJM area, socialization is not consistent with cost causation and that cost causation analysis is feasible because the cost causing zones can be readily identified, that inefficiencies result from abandoning cost causation and that the equities do not favor socialized cost methodology. Similarly, in ISO-NE, the equities do not favor abandoning cost causation as discussed above in section II,B,1. Moreover, as discussed in section 5 below, identification of beneficiaries is far from impossible and the methodology for doing so is readily accessible.

4. Socialized Cost Allocation is Not the Cause of Recent Transmission Build Out

Several parties suggest that New England's current practice of socializing transmission costs is responsible for recent expansions of the regions transmission plant. NEPOOL states, for example,

Since the adoption of the TCA rules in 2004, New England transmission owners have made over \$4 billion of additional investments in the bulk power grid (and several billion dollars of additional investments are planned), with the costs of those investments allocated in accordance with the TCA rules⁵⁴.

⁵⁴ NEPOOL Comments at 7.

Similarly, the Connecticut and Rhode Island Commissions state that “[t]he current New England transmission planning process and cost allocation methodology have stimulated the building of needed transmission projects . . .”⁵⁵ These commentators draw a causal connection, unsupported by any factual foundation, between the cost allocation methodology and the transmission build out that has occurred in New England.

A review of the facts reveals no basis for the belief that New England’s current and practice of socialization of transmission cost is wholly or even partly responsible for recent investments in transmission. There are in fact multiple factors that more plausibly explain New England’s successful transmission development. Among the factors are a historic underinvestment in transmission plant and mandatory reliability standards.

a. Deferred investment.

Recent transmission build out reflects the pent-up need to upgrade the transmission system due to underinvestment in transmission plant that occurred through the 1990s. During that decade, multiple sources of industry uncertainty contributed to underinvestment in transmission plant.⁵⁶ Revenue uncertainty was first introduced in the development of the current network rate. Even before the development of a regional transmission organization, NEPOOL agreed to a regionalized rate in 1997. This agreement resulted in the creation of the Regional Network Service (“RNS”) rate that still exists today. At about the same time, additional and perhaps greater uncertainty was introduced by the specter of industry

⁵⁵ Connecticut and Rhode Island Comments at 16.

⁵⁶ From 1996 through 2003, an average of less than \$100 million per year was invested in pool transmission facilities. Between 2010 and 2013 additions to PTF are projected to average \$1.7 billion per year.

restructuring at both state and federal levels. Finally there was the creation of the region's independent system operator, ISO-NE and the negotiation of its tariff.

b. Mandatory Reliability Standards.

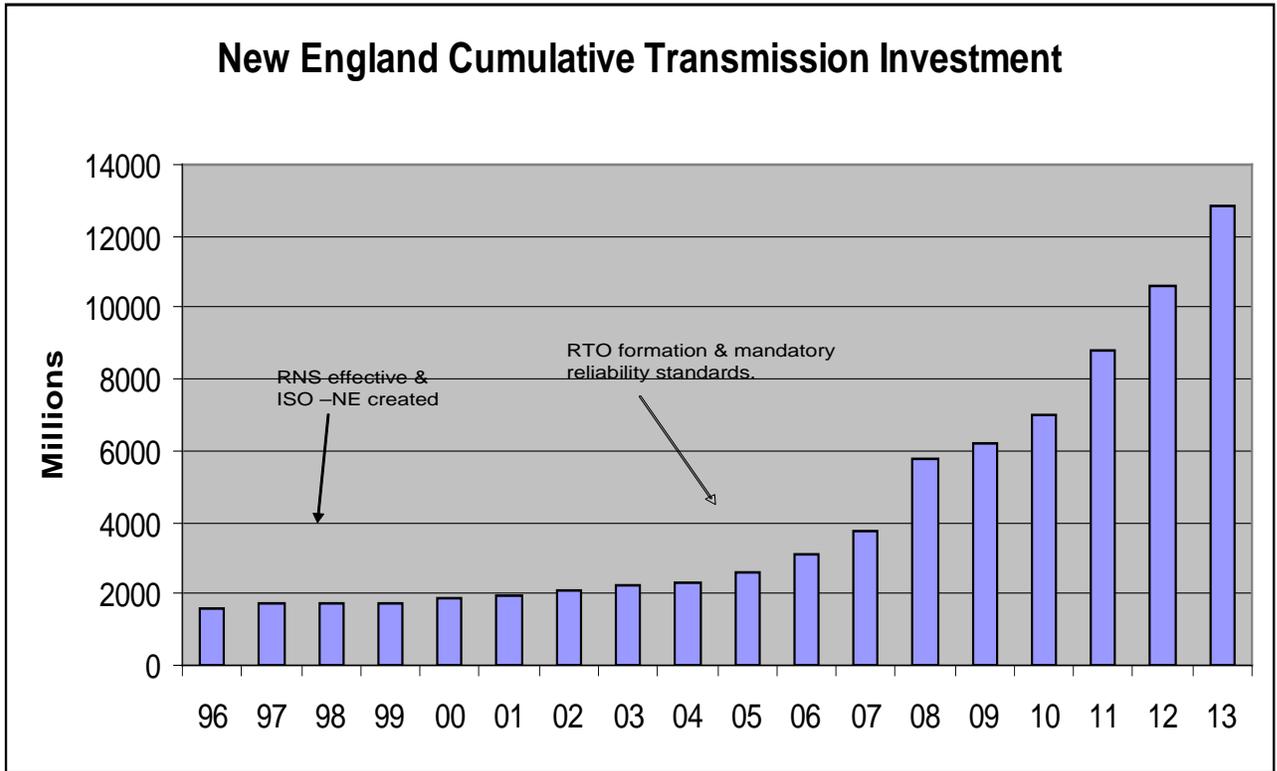
Bulk power system reliability standards, which were once voluntary and subject to interpretation by each transmission owner have become mandatory⁵⁷ and are now applied uniformly by ISO-NE through its agreement as the regional Reliability Coordinator in its agreement with the North American Electric Reliability Corporation (“NERC”). ISO interprets the NERC standards and applies them in the transmission planning process. As the NERC standards and ISO New England's interpretation of them become more conservative, the plans then include greater amounts of transmission.

In short, there is no evidence that the current cost allocation scheme which has been in place essentially since 1997⁵⁸ is causally connected to increased transmission investment. Figure 1 below shows historic and projected investment in Pool Transmission Facilities from 1996, shortly before the current rate allocation scheme was adopted through 2013. There is also no reason to believe that investment will decrease because the cost allocation is changed to be consistent with principles of cost causation and equity.

⁵⁷ See, 16 U.S.C. § 824o (2006).

⁵⁸ FERC accepted the 33rd Restated NEPOOL Agreement in 1997. It included the formation of ISO-NE, the NOATT, Market Based Rates and Regional Transmission Group. The ISO in 2004 then adopted the RNS rate with minor changes to prevent gold plating.

Figure 1



methodology is preferable to a beneficiary pays approach because it eliminates the need to identify local beneficiaries. These commentors raise concerns that it will be too difficult to identify beneficiaries. For example, VELCO states that the existing methodology in New England “avoids issues associated with a beneficiary-pays model, including disagreements over which utilities benefit from a project and to what extent, along with risks that concerns over costs will delay, impede or drive the design of transmission projects.”⁵⁹ The Connecticut and Rhode Island Commissions state that [a]lthough the benefits [from transmission enhancements] might accrue at different times as economic conditions and the electrical system itself changes, any proposals that would attempt to determine rates for these facilities with more exacting

⁵⁹ VELCO Comments at 11.

precision [than on a pro rata load share basis] would be futile.”⁶⁰ Neither the fear of litigation or nor speculation over difficulty of implementation is a sound basis for failing to fix a non-compliant cost allocation methodology. Such fears and concerns, though understandable, are typical responses to the prospect of change; however, these fears and concerns are unfounded. The type of analysis that would support a cost allocation under the ITBM is accepted and in use in numerous contexts as discussed below.

a. Economic Analyses Similar to the Type Advocated by the ITBM Proponents Already Exists and Have Been Used Routinely by ISO-NE, Other RTOs and Others.

i. ISO-NE Studies

In 2002, ISO-NE evaluated economic benefits resulting from reduced congestion and levelized LMP load flows over constrained zones in its Regional Transmission Expansion Plan (“2002 RTEP”). In its introduction of the 2002 RTEP process, ISO-NE stated:

The RTEP shall identify the anticipated benefits of any proposed Upgrade. To the extent an Upgrade is proposed to reduce Congestion Costs, the RTEP shall include data and information that would permit the calculation of the costs and economic benefits of such an Upgrade and the distribution of such benefits within the region...⁶¹

ISO-NE then summarized various projects included in the RTEP, including the economic benefits that would result. Just one example is the 2002 RTEP’s reference to the Southwest Connecticut Reliability Study (“Southwest Connecticut Import Capability Enhancement Study”) which studied various proposed transmission

⁶⁰ Connecticut and Rhode Island Comments at 16.

⁶¹ See ISO-New England, 2002 Regional Transmission Expansion Plan, Approved by the Board of Directors on November 7, 2002 (“RTEP 2002”) at 20.

upgrades in the Southwest Connecticut region. In the 2002 RTEP, ISO-NE not only listed as one of the concerns that would be addressed by the Southwest Connecticut upgrades as “projected high congestion costs due to limited transmission infrastructure,”⁶² but also devoted an entire section of the RTEP to a Projected Congested Cost Assessment,⁶³ the purpose of which was “to develop a framework that can be used to identify economic benefits of transmission upgrades and understand the beneficiaries of such upgrades in connection with the implementation of S[tandard]M[arket]D[esign] in the New England Wholesale Electric market.”⁶⁴ From this language, it is not only clear that economic benefits can be calculated as part of planning and designing a transmission system, but also that ISO-NE has engaged in such analyses historically when designing its system.

ISO-NE’s capability to conduct economic studies as part of the planning process is similarly demonstrated in its most recent Regional System Plan (“2010 RSP”). The 2010 RSP describes the economic studies that it has recently conducted or are underway.⁶⁵ In these studies, ISO-NE assesses production costs, load serving entity expenses, estimates of transmission congestion, and environmental metrics.⁶⁶ ISO New England’s 2010 RSP includes a detailed description of the modeling methodology that it will use in the New York ISO/ISO

⁶² *Id.* at 56.

⁶³ *Id.* at 109-143.

⁶⁴ *Id.* at 109.

⁶⁵ Affidavit of Daniel E. Peaco at ¶ 25, n.8. (Attached as Exhibit 1) citing *2010 Regional System Plan*, ISO New England, October 28, 2010, See Section 10: System Performance and Production Cost Studies.

⁶⁶ *Id.* at 24-28.

New England Economic Study.⁶⁷ This study scope includes the use of the Interregional Electric Market Model (“IREMM”) to do zonal analysis of the northeast markets.⁶⁸ This model, which was also used in the Maine Power Connection study, is being used to develop planning information regarding costs and prices across the system with information regarding the effects of transmission interface limitations.⁶⁹ ISO-NE also refers to its plans to do more follow-up analysis using more detailed models, models that can represent the transmission system in more detail at the nodal or bus level.⁷⁰

In its recently completed 2030 Power System Study,⁷¹ ISO New England used the IREMM model to evaluate the economic implications of alternative renewable energy expansions, much of this wind energy in northern New England, and associated transmission expansion scenarios.⁷² Again, the analysis was used to examine pricing and cost effects at the zonal level across the system, recognizing transmission limitations in the system.⁷³ Due to the concentration of regional renewable energy resource potential in areas of New England that areas distant from current transmission facilities, this large development of generation

⁶⁷ *2010 Regional System Plan*, Section 10.2.

⁶⁸ Peaco Affidavit at ¶ 26.

⁶⁹ *Id.*

⁷⁰ *Id.*

⁷¹ *2030 Power System Study, Scenario Analysis of Renewable Resource Development, Report to the New England Governors*, ISO New England, February 2010.

⁷² Peaco Affidavit at ¶ 27.

⁷³ *Id.*

would create significant congestion if built and would require transmission investments to realize this potential and reliably integrate into the ISO-NE system.⁷⁴

Based on these studies, ISO-NE has clearly demonstrated its capability to conduct the types of economic analyses that would be required to implement the ITBM with relative ease.⁷⁵

ii. **PJM Studies**

The feasibility and practicality allocating costs to economic beneficiaries is further illustrated in the May 28, 2010 Comments of Exelon Corporation in *PJM Interconnection, L.L.C.*, Docket No. EL05-121-006, a proceeding stemming from the Seventh Circuit Court of Appeals' remand to the Commission in *Illinois Commerce Commission v. FERC*.⁷⁶ In this docket, Exelon, submitting supporting testimony for a Distribution Factor Analysis ("DFAX") cost allocation methodology and offered the affidavit of Steven T. Naumann ("Naumann Affidavit").

In his affidavit, Mr. Naumann stated that the load in western PJM experiences higher energy and capacity costs as a result of elimination of congestion between the western zones and eastern zones and offered his opinion that the pro rata allocation method of the RTEP projects was unjust and unreasonable.⁷⁷ Naumann then provided a summary of various transmission projects and other system upgrades included in PJM's prior RTEPs including PJM's analysis of the economic benefits associated with various projects. Just one example of this

⁷⁴ *Id.*

⁷⁵ *Id.* at ¶ 28.

⁷⁶ *Supra* at n. 8.

⁷⁷ Naumann Affidavit at ¶¶ 70-73.

economic analysis conducted by PJM involved the a 500 kV transmission project known as the 502 Junction – Loudon upgrade (“Loudon line”) which PJM identified as needed as part of the 2006 PJM RTEP.⁷⁸ In summarizing the PJM economic studies of this project, Mr. Naumann stated that PJM identified areas and zones that would benefit from the upgrade and estimated that the Loudon line would reduce congestion and lower wholesale electricity prices in the northern Virginia area by \$5.50/MWh.⁷⁹ PJM also conducted a detailed analysis that revealed significant savings by loads in the eastern and Dominion parts of PJM and increases in costs to loads in AEP, ComEd, Dayton and Duquesne zones.⁸⁰

Mr. Naumann’s affidavit reveals that economic studies of beneficiaries of transmission projects through an analysis of reduced congestion and lower energy prices are not only practical and feasible, but have been conducted by RTOs routinely as part of their RTEP process. Similar studies should be conducted as part of the ISO-NE RSP processes and should serve as the basis for a beneficiary pays cost allocation regime such as the ITBM.

The studies and analyses discussed above provide several examples of the application of economic modeling to decisions in which locational differences in costs and benefits are of interest and importance. These studies further demonstrate that the analyses encouraged by the ITBM Proponents are not only feasible, but are routinely conducted by RTOs, utility consultants and others

⁷⁸ Naumann Affidavit at ¶¶ 21-23.

⁷⁹ *Id.*

⁸⁰ *Id.* at ¶ 22.

in regional transmission planning processes and would provide a sound basis for allocating costs to ratepayers in a manner that was “roughly commensurate” to the benefits that they received.

iii. Economic Analysis in Maine Power Reliability Project and Maine Power Connector.

Acting as CMP’s consultant in the MPRP, La Capra Associates conducted a non-transmission alternatives assessment and economic benefits assessments of MPRP as part of CMP’s application for a CPCN before the MPUC.⁸¹ In the studies, La Capra Associates developed combinations of alternatives to the transmission project that could address the identified reliability needs, and compared financial and economic performance of those resource options to the proposed transmission upgrades.⁸² In doing so, La Capra also evaluated the economic implications to Maine and New England consumers’ market cost of energy associated with losses and congestion characteristics of each alternative, examined the potential for the transmission solution to provide expanded market access for Maine’s wind energy resources, and evaluated a competing proposal for a solar alternative.⁸³ These analyses were supported by extensive market modeling, using PROSYM™, a licensed power market software tool, which we utilized to conduct a zonal analysis of market price and production cost implications for the New England

⁸¹ See Peaco Affidavit at ¶ 15, citing *Maine Power Reliability Project: Non-Transmission Alternatives Assessment and Economic Evaluation*, La Capra Associates, June 30 2008. This report was prepared for Central Maine Power and filed with the Company’s project application to the Maine Public Utilities Commission on July 1, 2008. This report and associated written and oral testimony and supplemental assessments were provided in hearings and technical conferences held by the MPUC in Docket No. 2008-255.

⁸² Peaco Affidavit at ¶15.

⁸³ *Id.*

market.⁸⁴ LaCapra also conducted a regional economic assessment of the MPRP and non-transmission alternatives in order to determine the regional economics of the alternatives, as well.⁸⁵ This type of economic assessment provides a tangible example of the feasibility and value of the economic assessment approach advocated by the ITBM Proponents.⁸⁶

The Maine Power Connection (“MPC”) as a Market Efficiency Transmission Upgrade (“METU”) was proposed to address economic needs, specifically integration of Maine Public Service Company and an 800 MW wind energy resource into the ISO-NE system.⁸⁷ ISO-NE initiated a study process to assess the economic benefits in accordance with the Attachment N “production cost savings” criterion, a preliminary analysis was completed which assessed both production cost savings and impacts on LMPs using a zonal model similar to the model we used for the MPRP and our analysis of the MPC.⁸⁸ The MPC was the first and is the only METU application to have been submitted to ISO-NE for consideration under Attachment N rules, but was ultimately abandoned by the wind developer prior to conclusion of the ISO-NE studies.⁸⁹

⁸⁴ *Id.*

⁸⁵ *Id.* at ¶ 16.

⁸⁶ *Id.* at ¶ 17.

⁸⁷ *Id.* at ¶ 18.

⁸⁸ *Id.* at ¶ 19; citing Economic Studies Working Group (“ESWG”) Maine Power Connector Economic Analysis; May 23, 2008, Wayne Coste, Principal Engineer, Preliminary Report prepared for ISO-New England.

⁸⁹ Peaco Affidavit at ¶ 19.

La Capra Associates was retained by CMP to conduct economic benefits assessments of MPC for its CPCN application.⁹⁰ In these studies, La Capra Associates conducted production cost savings in accordance with the Attachment N criterion, as well as analysis of LMP impacts in Maine and New England.⁹¹ The zonal modeling detail and approach were similar to those being prepared by ISO-NE but used the PROSYM™ market model to produce a zonal analysis of market price and production cost implications for the New England market.⁹² The economic assessments conducted by La Capra and ISO-NE of the MPC demonstrate the feasibility and value of the economic assessment approach advocated by the ITBM Proponents.⁹³

iv. Other Examples of Identifying Economic Benefits

The feasibility of the ITBM approach to identifying economic benefits through changes in energy price is further illustrated by the 2006 Congestion Study conducted by the United States Department of Energy (“2006 Congestion Study”)⁹⁴ as well as a September 2010 study that explored the costs and

⁹⁰ Peaco Affidavit at ¶ 21 & n. 7; citing *Maine Power Connection: Locational Marginal Price and Production Cost Implications in Maine and New England*, La Capra Associates, June 30, 2008. This report was prepared for Central Maine Power and Maine Public Service Company and filed with the Companies’ project application to the Maine Public Utilities Commission on July 1, 2008 in Docket No. 2008-256. See also Maine and Joint Filers’ September 29, 2010 Comments at 10.

⁹¹ Peaco Affidavit at ¶ 19.

⁹² *Id.* at ¶ 21.

⁹³ *Id.* at ¶ 22.

⁹⁴ See Peaco Affidavit at ¶31, n.12; citing *National Electric Transmission Congestion Study*, U. S. Department of Energy, August 2006. Document available online at: http://nietc.anl.gov/documents/docs/Congestion_Study_2006-9MB.pdf

benefits of Entergy and Cleco Power joining the Southwest Power Pool (“SPP Study”).⁹⁵

With respect to the 2006 Congestion Study, the DOE commissioned a study to identify critical congestion areas and congestion areas of concern within the United States electric system.⁹⁶ This study, which was conducted using the GE MAPS model, simulated the operation of the economic dispatch of each market area in the US to assess the production costs and the effects on those costs due to limitations or constraints in the transmission system.⁹⁷ This modeling informed the DOE determinations on Critical Congestion Areas (where congestion is a concern in the existing system), Congestion Areas of Concern (where congestion is an emerging issue), and Conditional Constraint Areas (where congestion would occur if new generation resources were added).⁹⁸ The Conditional Constraint Areas analysis is of particular relevance to the ITBM proposal as it specifically tests the transmission constrained economic dispatch in a scenario when new generation resources are added.⁹⁹

The GE MAPS modeling that was employed in the 2006 Congestion Study is directly analogous to the analysis conducted by ISO New England and La Capra Associates for the Maine Power Connection METU proposal

⁹⁵ See Peaco Affidavit at ¶ 30, n.11; citing *Cost Benefit Analysis of Entergy and Cleco Power Joining the SPP RTP, Report prepared for the Federal Energy Regulatory Commission, Charles River Associates and Resero Consulting*, September 30, 2010. Document available online at: <http://www.ferc.gov/industries/electric/indus-act/rto/spp/spp-entergy-cba-report.pdf>

⁹⁶ Peaco Affidavit at ¶ 31.

⁹⁷ *Id.*

⁹⁸ *Id.*

⁹⁹ *Id.* at ¶ 31 & n. 13; citing DOE 2006 Congestion Study, Section 5.4 Enabling New Resource Development: Conditional Constraint Areas.

to ISO New England, the ISO New England 2030 Power System Study,¹⁰⁰ and provides concrete example of modeling that is available to address the renewable energy access issues raised by the ITBM Proponents.¹⁰¹

A similar economic assessment was conducted as part of the SPP Study, which explored the costs and benefits of Entergy and Cleco Power joining the Southwest Power Pool (“SPP”).¹⁰² This study was conducted with a nodal model, GE MAPS, to simulate the Eastern Interconnection in order to estimate the production cost savings, representing the generation and transmission systems in significant detail.¹⁰³ The study revealed net economic benefits to each region as well as net trade benefits.¹⁰⁴

All of the studies discussed above and in the Peaco affidavit demonstrate that the methodology that would be used in the ITBM cost allocation exists and is in use in several RTOs including ISO-NE and PJM. The availability of these methodologies and their use to project economic benefits resulting from transmission upgrades indicates that identifying beneficiaries on a sub-regional basis is far from “futile” and is in fact routinely undertaken in numerous contexts.

¹⁰⁰ *Id.* at ¶ 31.

¹⁰¹ *Id.*

¹⁰² *Id.* at ¶ 30 & n. 11; citing *Cost Benefit Analysis of Entergy and Cleco Power Joining the SPP RTP, Report prepared for the Federal Energy Regulatory Commission, Charles River Associates and Resero Consulting*, September 30, 2010 (“SPP Study”) Document available online at: <http://www.ferc.gov/industries/electric/indus-act/rto/spp/spp-entergy-cba-report.pdf>

¹⁰³ *Id.*

¹⁰⁴ See SPP Study.

III. CONCLUSION

For the reasons discussed above as well as those set forth in the ITBM Proponents' September 29, 2010 Comments, the Maine Parties urge the Commission to direct ISO-NE to begin development of the ITBM as part of its compliance filing to the rule adopted by the Commission in this rulemaking and mandate procedures and criteria to be followed by ISO-NE for considering and selecting transmission projects that will fulfill regional public policy imperatives projects within New England.

Dated: November 12, 2010

Respectfully submitted,

/s/
Lisa Fink
Benjamin J. Smith
State of Maine
Public Utilities Commission
18 State House Station
Augusta, ME 04333-0018
Tel: (207) 287-1389
lisa.fink@maine.gov

/s/
John Kerry
Director of Office of Energy
Independence and Security
Counsel for the Maine Public
Utilities Commission
Maine Governor's Office
38 State House Station
Augusta, ME 04333-0038
Tel: (207) 287-3292
John.kerry@maine.gov

Tel: (207) 287-6343
benjamin.j.smith@maine.gov

/s/
Agnes Gormley
Office of Public Advocate
112 State House Station
Augusta, ME 04333-0112
Tel: (207) 287-2445
Agnes.Gormley@maine.gov

*Counsel for the Maine Office of the
Public Advocate*

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the service list compiled by the Secretary in this proceeding either by U.S. Mail or electronic service, as appropriate. Dated at Hallowell, Maine, this 12th day of November, 2010.

/s/

Jacob A. McDermott
State of Maine
Public Utilities Commission
18 State House Station
Augusta, ME 04333-0018
Tel: 207-287-6341
Jacob.a.mcdermott@maine.gov

EXHIBIT 1

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Transmission Planning and Cost Allocation)
By Transmission Owning and Operating) RM10-23-000
Public Utilities)
)

AFFIDAVIT OF DANIEL E. PEACO

I. QUALIFICATIONS AND EXPERIENCE

1. My name is Daniel E. Peaco. I offer the following background information on my experience relevant to the issues that I address in this affidavit.

2. I am President of La Capra Associates, an electric industry planning specialist with more than 30 years of experience in power markets and marketing, strategic planning, pricing and price forecasting, power procurement and contracts, and power systems planning. My consulting practice has included a range of engagements relating to integrated resource planning, transmission planning, renewable energy planning and policy, competitive electric markets and industry restructuring, generation asset valuation, strategic planning, competitive market formation and pricing, market analysis of prices and supply requirements, power contract analysis, and power procurement practices.

3. I am an experienced expert witness, having testified on topics relevant to this affidavit on numerous occasions. Prior to joining La Capra Associates in 1996, I held management and planning positions in power supply planning at Central Maine Power, CMP International Consultants, Pacific Gas & Electric, and the Massachusetts Energy Facilities Siting Council.

4. La Capra Associates is a Boston-based consulting firm specializing in energy planning, market analysis and regulatory policy in the electricity and natural gas industries.

EXHIBIT 1

The firm has a national practice with clientele including renewable energy producers, private and public utilities, energy producers and traders, energy consumers and consumer advocates, regulatory agencies, and public policy and energy research organizations.

5. La Capra Associates' experience and expertise includes detailed analyses of energy and environmental performance of the electric systems, economic planning for transmission and non-transmission alternatives affected market prices and overall costs to consumers. As will be further detailed below, La Capra Associates' recent economic analyses of transmission projects in New England has been conducted by using a detailed market simulation model to conduct a zonal analysis of market price and production cost implications for the New England market.

6. La Capra Associates has offices in Boston, Massachusetts, Portland, Maine, and Williston, Vermont (www.lacapra.com).

II. SUMMARY OF ANALYSIS OF ITBM PROPOSAL

7. The Maine Public Utilities Commission ("MPUC"), the Maine Office of Public Advocate ("OPA"), the Maine Governor's Office of Energy Independence and Security ("OEIS"), the New Hampshire Public Utilities Commission ("NHPUC"), Environment Northeast ("ENE"), and the Conservation Law Foundation ("CLF") joined as the Integrated Transmission Benefits Model Proponents (collectively, "ITBM Proponents") to offer comments on September 29, 2010 in response to the Commission's June 17, 2010 Notice of Proposed Rulemaking ("NOPR") regarding transmission planning and cost allocation. The ITBM Proponents urged the Commission to direct the Independent System Operator of New England ("ISO-NE") to develop an ITBM to foster the development of New England's

EXHIBIT 1

renewable energy resource potential and to align the cost impact of transmission with the benefits the transmission provides.

8. The ITBM Proponents have asked me to offer this affidavit in conjunction with their reply comments on the NOPR to provide information to the Commission on the feasibility of the ITBM and the practicality of applying the ITBM to transmission planning and cost allocation decisions in New England and elsewhere.

9. The ITBM Proponents initial comments cited two economic studies conducted under my direction at La Capra Associates on behalf of the proponents of two transmission projects, the Maine Power Reliability Project ("MPRP") and the Maine Power Connection ("MPC").¹ The MPRP is a \$1.5 billion Reliability Transmission Upgrade ("RTU") project that is being developed by Central Maine Power ("CMP") and is included in the ISO-NE Regional System Plan. CMP recently completed permitting for the MPRP and has begun construction of that project. The MPC was a Market Efficiency Transmission Upgrade ("METU") proposal sponsored by Central Maine Power and Maine Public Service Company in 2008. The MPC was proposed as a \$625 million 345 kV economic transmission project to integrate the Maine Public Service system into ISO-NE and to provide transmission access for an 800 MW wind energy development in Aroostook County Maine. The MPC project is not currently active.

10. In this affidavit, I describe the economic modeling that La Capra Associates conducted for the MPRP and MPC projects for the transmission project applicants as evidence of a) the economic benefits that can derive from a reliability transmission upgrade (i.e., MPRP), b) the feasibility of conducting such economic assessments for decision making

¹ ITBM Proponents' initial comments at 28 and 31.

EXHIBIT 1

on transmission projects as was the case in the MPUC's certification of the MPRP, c) that information can be obtained from such economic studies to determine the distribution of economic benefits over a region such as New England. I also describe ISO-NE's capability to conduct such studies as evidenced by their work on the MPC and other ISO-NE economic studies conducted under their Attachment K process. Finally, I describe similar analyses that have been conducted in proceedings before the Commission and for the U. S. Department of Energy ("DOE"), demonstrating the broader availability and use of economic assessments in determining location economic benefits associated with transmission projects.

11. I concur with the ITBM Proponents that transmission projects designed to address reliability needs can also provide significant economic benefits. I also agree that the locational economic benefits analysis that the ITBM Proponents ask to be included in planning and cost allocation for reliability and economic transmission upgrades can be accomplished as part of the planning for these facilities.

III. ANALYSIS OF PRACTICALITY AND FEASIBILITY OF ITBM PROPOSAL BASED ON RECENT EXAMPLES

12. The ITBM Proponents' initial comments cited two economic studies conducted by under my direction at La Capra Associates on behalf of the proponents of two transmission projects, the Maine Power Reliability Project ("MPRP") and the Maine Power Connection ("MPC") as examples of the type of analysis that could be incorporated into the ITBM process they are advocating.

EXHIBIT 1

A. **Maine Power Reliability Project**

13. The MPRP is a \$1.5 billion RTU project that is being developed by CMP and is included in the ISO-NE Regional System Plan. CMP recently completed permitting for the MPRP and has begun construction of that project.

14. The MPRP was proposed to address reliability needs identified in the ISO-NE Needs Assessment process. Consistent with ISO-NE's Open Access Transmission Tariff ("OATT") and its past practice, ISO-NE did not study or consider economic benefits in its determination of need or cost allocation for the MPRP.

In addition to the ISO-NE determinations on MPRP, CMP was also required to obtain a Certificate of Public Convenience and Necessity ("CPCN") from the MPUC for this project. The MPUC rules require consideration of benefits to Maine electric consumers and consideration of alternatives in making a determination to certificate a proposed project.

15. La Capra Associates was retained by CMP to perform a non-transmission alternatives assessment and conduct economic benefits assessments of MPRP for its CPCN application.² In the studies, La Capra Associates developed combinations of alternatives to the transmission project that could address the identified reliability needs, and compared financial and economic performance of those resource options to the proposed transmission upgrades. Our analysis considered how each option performed under the societal cost test and the impact on electric rates. We also evaluated the economic implications to Maine and New England consumers' market cost of energy associated with losses and congestion

² See *Maine Power Reliability Project: Non-Transmission Alternatives Assessment and Economic Evaluation*, La Capra Associates, June 30 2008. This report was prepared for Central Maine Power and filed with the Company's project application to the Maine Public Utilities Commission on July 1, 2008. This report and associated written and oral testimony and supplemental assessments were provided in hearings and technical conferences held by the MPUC in Docket No. 2008-255.

EXHIBIT 1

characteristics of each alternative, examined the potential for the transmission solution to provide expanded market access for Maine's wind energy resources, and evaluated a competing proposal for a solar alternative. These analyses were supported by extensive market modeling, using PROSYM™, a licensed power market software tool, which we utilized to conduct a zonal analysis of market price and production cost implications for the New England market.

16. To address the alternatives question regionally, we conducted a regional economic assessment of the MPRP and non-transmission alternatives to demonstrate the regional economics of the alternatives, as well. In this assessment, the MPRP creates benefits to consumers across the region through lower locational marginal prices ("LMPs") resulting from modified commitment and dispatch of generation, reduced losses, and increased transfer capability.

17. This economic assessment of the MPRP provides a tangible example of the feasibility and value of the economic assessment approach advocated by the ITBM Proponents. While this study was only designed and utilized for a state planning decision, the information generated from a zonal analysis³ of the region could also provide information for analysis of regional distribution of cost and benefits as contemplated in the ITBM.⁴

³ A zonal analysis aggregates loads and generation into several distinct electrical subareas of the regional market, representing key interfaces within the region. Added detail can be obtained with the use of a nodal model. The scope of the MPRP economic study did not warrant the added detail of the nodal modeling approach. ISO-NE uses a similar zonal model for many of its economic studies.

⁴ These economic studies were not considered by ISO-NE in determination of need or in determination of cost allocation treatment for the MPRP.

EXHIBIT 1

B. Maine Power Connection

18. The MPC was a METU proposal sponsored by CMP and Maine Public Service Company ("MPS") in 2008. The MPC was proposed as a \$625 million 345 kV economic transmission project to integrate the MPS system into ISO-NE and to provide transmission access for an 800 MW wind energy development in Aroostook County Maine. The MPC project is not currently active.

19. The MPC was proposed to address economic needs, specifically integration of Maine Public Service Company and an 880 MW wind energy resource into the ISO-NE system. CMP and MPS petitioned ISO-NE to consider the MPC under Attachment N provisions of its regional tariff, the process established to consider METU proposals. ISO-NE initiated a study process to assess the economic benefits in accordance with the Attachment N "production cost savings" criterion, a preliminary analysis was completed which assessed both production cost savings and impacts on LMPs using a zonal model similar to the model we used for the MPRP and our analysis of the MPC.⁵ As noted in the ITBM Proponents' initial comments,⁶ the MPC was the first and is the only METU application to have been submitted to ISO-NE for consideration under Attachment N rules. The ISO-NE study was not completed before the wind developer withdrew from the process.

20. As in the case of MPRP, CMP was also required to obtain a CPCN from the MPUC for this project.

⁵ Economic Studies Working Group ("ESWG") Maine Power Connector Economic Analysis; May 23, 2008, Wayne Coste, Principal Engineer, Preliminary Report prepared for ISO-New England.

⁶ ITBM Proponents' comments at 10.

EXHIBIT 1

21. La Capra Associates was retained by CMP to conduct economic benefits assessments of MPC for its CPCN application.⁷ In the studies, La Capra Associates conducted production cost savings in accordance with the Attachment N criterion, as well as analysis of LMP impacts in Maine and New England. The zonal modeling detail and approach were similar to those being prepared by ISO-NE. As in the MPRP studies, these analyses were produced using the PROSYM™ market model, which we utilized to conduct a zonal analysis of market price and production cost implications for the New England market.

22. The economic assessments of the MPC conducted by La Capra Associates and ISO-NE also demonstrate the feasibility and value of the economic assessment approach advocated by the ITBM Proponents. In this case, the studies were designed to make the planning determination on an METU proposal and support a state siting decision.

IV. ANALYSIS OF PRACTICALITY AND FEASIBILITY OF ITBM PROPOSAL BASED ON SIMILAR STUDIES BY ISO-NE AND THE DEPARTMENT OF ENERGY

23. The feasibility and practicality of the economic analysis proposed by the ITBM proponents is further illustrated by similar studies recently conducted by ISO-NE, the United States Department of Energy (“DOE”) and the Commission.

⁷ See *Maine Power Connection: Locational Marginal Price and Production Cost Implications in Maine and New England*, La Capra Associates, June 30, 2008. This report was prepared for Central Maine Power and Maine Public Service Company and filed with the Companies’ project application to the Maine Public Utilities Commission on July 1, 2008 in Docket No. 2008-256.

EXHIBIT 1

A. ISO-New England Economic Studies

24. ISO-NE has the capability to conduct the economic studies contemplated in the ITBM, as evidenced by their work on the MPC METU study and other ISO-NE economic studies conducted under their Attachment K process.

25. ISO-NE's most recent Regional System Plan ("2010 RSP") describes the economic studies that it has recently conducted or are underway.⁸ In these studies, ISO-NE assesses production costs, load serving entity expenses, estimates of transmission congestion, and environmental metrics.

26. ISO-NE's 2010 RSP includes a detailed description of the modeling methodology that it will use in the New York ISO/ ISO-NE Economic Study.⁹ This study scope includes the use of the Interregional Electric Market Model ("IREMM") to do zonal analysis of the northeast markets. This model, which was also used in the Maine Power Connection study, is being used to develop planning information regarding costs and prices across the system with information regarding the effects of transmission interface limitations. ISO-NE also refers to its plans to do more follow-up analysis using more detailed models, models that can represent the transmission system in more detail at the nodal or bus level.

27. In its recently completed 2030 Power System Study,¹⁰ ISO-NE used the IREMM model to evaluate the economic implications of alternative renewable energy expansions, much of this wind energy in northern New England, and associated transmission expansion scenarios. Again, the analysis was used to examine pricing and cost effects at the zonal level

⁸ *2010 Regional System Plan*, ISO New England, October 28, 2010. See Section 10: System Performance and Production Cost Studies.

⁹ *2010 Regional System Plan*, Section 10.2.

¹⁰ *2030 Power System Study, Scenario Analysis of Renewable Resource Development, Report to the New England Governors*, ISO New England, February 2010.

EXHIBIT 1

across the system, recognizing transmission limitations in the system. Due to the concentration of regional renewable energy resource potential in areas of New England that areas distant from current transmission facilities, this large development of generation would create significant congestion if built and would require transmission investments to realize this potential and reliably integrate into the ISO-NE system.

28. As documented in the 2010 RSP and the referenced studies, ISO-NE has demonstrated its capability to conduct the types of economic analyses that would be required to implement the ITBM. Case specific determinations would need to be made to determine if zonal modeling or more detailed nodal modeling would be required, however, ISO-NE does have the capability to conduct such studies.

B. FERC and DOE Economic Studies

29. The economic modeling required to implement ITBM is also consistent with modeling that has been utilized and relied upon by the Commission and the DOE. I briefly point to two examples here.

30. The Commission funded a recently completed study regarding the costs and benefits of Entergy and Cleco Power joining the Southwest Power Pool.¹¹ This study was conducted with a nodal model, GE MAPS, to simulate the Eastern Interconnection to estimate the production cost savings in this study, representing the generation and transmission systems in significant detail. This modeling is the type of more detailed modeling referenced by ISO-NE (noted above).

¹¹ *Cost Benefit Analysis of Entergy and Cleco Power Joining the SPP RTP, Report prepared for the Federal Energy Regulatory Commission, Charles River Associates and Resero Consulting, September 30, 2010. Document available online at: <http://www.ferc.gov/industries/electric/indus-act/rto/spp/spp-entergy-cba-report.pdf>*

EXHIBIT 1

31. In 2006, the DOE commissioned a national congestion study¹² to fulfill its obligation to do so under the Energy Policy Act of 2005. This study was relied upon to identify Critical Congestion Areas and Congestion Areas of Concern within the U. S. electric system. This study was also conducted using the GE MAPS model to simulate the operation of the economic dispatch of each market area in the US to assess the production costs and the effects on those costs due to limitations or constraints in the transmission system. This modeling was used to inform the DOE determinations on Critical Congestion Areas (where congestion is a concern in the existing system), Congestion Areas of Concern (where congestion is an emerging issue), and Conditional Constraint Areas (where congestion would occur if new generation resources were added). The Conditional Constraint Areas analysis is of particular relevance to the ITBM proposal as it specifically tests the transmission constrained economic dispatch in a scenario when new generation resources are added.¹³ This modeling is directly analogous to the analysis conducted by ISO-NE and La Capra Associates for the Maine Power Connection METU proposal to ISO-NE, the ISO-NE 2030 Power System Study, and is the analysis that is needed to address the renewable energy access issues raised by the ITBM Proponents.

32. These studies are two examples of the application of economic modeling to decisions in which locational differences in costs and benefits are of interest and importance. In these two examples, the more detailed modeling was employed. These examples also

¹² *National Electric Transmission Congestion Study*, U. S. Department of Energy, August 2006. Document available online at:
http://nietc.anl.gov/documents/docs/Congestion_Study_2006-9MB.pdf

¹³ DOE 2006 Congestion Study, Section 5.4 Enabling New Resource Development: Conditional Constraint Areas.

EXHIBIT 1

demonstrate the capabilities available to conduct the economic analysis that is needed to implement the ITBM.

V. CONCLUSION

33. Transmission projects of all types – reliability, economic, or renewable access – will have impacts on commitment and dispatch of generation and, as a result, production costs, market prices, and environmental performance of the power system. The impacts can be localized, such as the Southeastern Massachusetts project example cited by the ITBM Proponents or can be regional, or interregional.

34. Economic modeling analysis of the affected systems can be conducted to assess the amount and distribution of these impacts. I have cited examples from my own experience (MPRP and MPC), from ISO-NE's experience, and examples familiar to the Commission. The scope (geographic or market areas to include in the modeling) and level of detail (zonal or nodal) needed to conduct a given study will need to be determined. However, there are a range of models available to Regional Transmission Organizations ("RTOs") and transmission owners that can be applied in the planning process and in the cost allocation process.

35. The ITBM Proponents believe it is important to evaluate the economic impacts of all transmission projects in planning and in cost allocation and believe that, in doing so, public policy transmission projects will benefit, particularly renewable energy projects, and cost allocation for all transmission projects can be better allocated in a manner roughly commensurate with benefits.

36. I concur with the ITBM Proponents that transmission projects designed to address reliability needs can also provide significant economic effects. I also agree that the

EXHIBIT 1

locational economic benefits analysis that the ITBM Proponents ask to be included in planning and cost allocation for reliability and economic transmission upgrades can be accomplished as part of the planning for these facilities. The models and techniques are available and have been applied in planning studies of local, regional and interregional scope and would allow the ITBM to be implemented in planning and cost allocation determinations.

EXHIBIT 1

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Transmission Planning and Cost Allocation)
By Transmission Owning and Operating) RM10-23-000
Public Utilities)
)
)

VERIFICATION OF DANIEL E. PEACO

County of Suffolk,
^{Commonwealth}
State of Massachusetts

I, the undersigned, being duly sworn, depose and say that the foregoing is the Affidavit of the undersigned, and that such Affidavit and any exhibits sponsored by me to the best of my knowledge, information and belief, are true, correct, accurate and complete, and I hereby adopt said Affidavit as if given by me in formal hearing, under oath.

Daniel E. Peaco

Daniel E. Peaco

Subscribed and sworn to before me,
this 12th day of November, 2010

Bonnie M. Dowd

Notary Public Bonnie McDonald

My Commission Expires: 1-30-2015