2014 Annual Report to the New England Governors



New England States Committee on Electricity NESCOE

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In Memory of Allison Smith

NESCOE Analyst 2010 - 2015



Allison Smith joined NESCOE in 2010 as an Analyst. Allison was NESCOE's first staff member after its Executive Director. At NESCOE, Allison focused on issues such as the creation of New England's first Energy Efficiency Forecast as well as forecasting and accounting for distributed generation in system planning and resource need determinations. Previously, Allison was with Anbaric Transmission and Synapse Energy Economics. Allison had a Bachelor of Arts in Environmental Studies from Dartmouth College and a Master of Studies in Environmental Law from Vermont Law School.

Allison lost her life in a car accident in February 2015. She approached her work on regional electric matters with confidence, respect and grace. She will be remembered for her intelligence, inquisitive nature and incomparable ability to create good cheer.

SECTION I: GOVERNANCE

A Board of Managers representing the six New England states directs NESCOE's affairs and engagement in regional issues. Each Governor appoints a NESCOE Manager. Regardless of the number of individuals each Governor appoints as a NESCOE Manager, each New England state has one undivided vote in arriving at NESCOE determinations.

Nearly all NESCOE determinations have been unanimous, reflecting the New England states' efforts to achieve consensus on regional electricity matters. In circumstances where there may not be consensus, NESCOE makes policy determinations with a majority vote (i.e., a numerical majority of the states) and a majority

With limited exceptions,
NESCOE
determinations have
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weighted to reflect relative electric load of each state within the region's overall load.

In addition, from time to time representatives from various offices within state governments contribute diverse expertise on various matters. NESCOE appreciates the contributions these perspectives provide to its determinations.

NESCOE MANAGERS

STATE OF CONNECTICUT Katie Scharf Dykes

Deputy Commissioner for Energy Connecticut Department of Energy and Environmental Protection (CT DEEP)



Deputy Commissioner Dykes oversees the work of both halves of CT DEEP's Energy branch: the Public Utilities Regulatory Authority (PURA) on the regulatory side, and the Bureau of Energy and Technology Policy on the energy strategy side. Deputy Commissioner Dykes joined CT DEEP in March 2012, after serving as Deputy General Counsel for the White House Council on Environmental Quality. In that role she provided legal counsel on a variety of energy and

environmental issues including climate change and sustainability. Prior to that, she served as Legal Advisor to the General Counsel for the U.S. Department of Energy. At the Department of Energy, she worked on issues related to regulatory reform, electric power transmission, energy efficiency, and renewable energy. Deputy Commissioner Dykes holds a bachelor's degree in history and environmental studies from Yale, a master's degree in history, also from Yale, and she is a graduate of Yale Law School.

STATE OF MAINE Thomas L. Welch

Chairman, Public Utilities Commission NESCOE Treasurer, 2014 Retired, December 2014



Chairman Welch was appointed to the Maine Public Utilities Commission as Chair in April 2011. He had previously served as Chair of the Commission from 1993-2005. Between his Commission appointments, Commissioner Welch worked for PJM Interconnection, a Pennsylvania-based Regional Transmission Organization, and for five years was an attorney at Pierce Atwood, LLP, in Portland, Maine, specializing in energy and utility law. Before

moving to Maine in 1993, he served as Chief Deputy Attorney General for

Antitrust in the Pennsylvania Attorney General's Office, in-house counsel for Bell Atlantic, and Assistant Professor at Villanova University School of Law. Commissioner Welch graduated from Stanford University in 1972 and received his law degree from Harvard Law School in 1975. His term on the Commission expires March 2017.

In 2015, Maine Governor Paul LePage appointed
Patrick Woodcock, Director of Maine's Energy Office as Maine's
NESCOE Manager

COMMONWEALTH OF MASSACHUSETTS Ann Berwick

Chair, Department of Public Utilities NESCOE President, 2014 Term concluded January 2015



Ann Berwick was appointed Chair of the Department of Public Utilities by Governor Deval Patrick in June 2010. Prior to that, Chair Berwick was the Commonwealth's Undersecretary for Energy and also served as Acting Chair of the Energy Facilities Siting Board. As Undersecretary, Chair Berwick was a key participant in the development of the Green Communities Act, the Patrick Administration's signature energy legislation, and worked closely

on its implementation with the state's Department of Energy Resources and Department of Public Utilities. Chair Berwick worked with those agencies on a range of issues, including the introduction of a more progressive building code and the development of renewable resources in the Commonwealth.

Before serving in the Patrick Administration, Chair Berwick was a senior consultant at M.J. Bradley & Associates in Concord, Massachusetts. In that role she advised non-profit organizations and electric distribution and generating companies on a wide range of issues, including environmental science; pollution control technology; and developments in state and federal energy and environmental law, regulation, and policy.

Chair Berwick served as Chief of the Environmental Protection Division in the Massachusetts Attorney General's Office from 1991 to 1996, where she exercised joint oversight of the Massachusetts Environmental Strike Force. From 1996 to 1997 she worked in the Alaska Attorney General's Office, where she participated in

litigation before the Ninth Circuit Court of Appeals and the U.S. Supreme Court. She has also been a legal services attorney, and a partner in the litigation department at the Boston law firm Goulston & Storrs.

Chair Berwick holds a B.A. from Radcliffe College and a J.D. from the University of Wisconsin Law School.

In 2015, Massachusetts Governor Charlie Baker appointed Angela O'Connor, DPU Chair, as Massachusetts' NESCOE Manager

STATE OF NEW HAMPSHIRE **Robert Scott**

Commissioner, Public Utilities Commission NESCOE Treasurer, 2015



Commissioner Scott was appointed
Commissioner of the New Hampshire Public
Utilities Commission in March 2012. He
previously served with New Hampshire
Department of Environmental Services as Air
Resources Director (2003-2012) and in various
positions with the Department of Environmental
Services prior to that. He worked as an engineer
in private industry from 1990 to 1995 and as a
Munitions and Aircraft Maintenance officer in

the active duty US Air Force from 1986 to 1990. Commissioner Scott serves on the Regional Greenhouse Gas Initiative, Inc. (RGGI) Board of Directors, Co-Chairs the Northeast Energy Efficiency Partnerships Evaluation, Measurement and Verification Forum Steering Committee, and Co-Chairs the New England Conference of Public Utilities Commissioners (NECPUC) subcommittee on cyber security. He is currently commander of the 265th Combat Communications Squadron of Maine Air National Guard. Commissioner Scott holds a B.S. in Mechanical Engineering from Lehigh University.

STATE OF RHODE ISLAND Maríon Gold, Ph.D

Commissioner, Office of Energy Resources NESCOE President, 2015



Marion Gold has served as Commissioner of the Rhode Island Office of Energy Resources (OER) since August 2012. Dr. Gold is dedicated to working with public and private sector partners to provide sustainable, secure, and cost-effective energy services to all sectors of the community. Prior to joining the OER, she was the Director of the Outreach Center at the University of Rhode of Island (URI) where she established the URI Partnership for Energy and directed extension

programs for communities and the public in energy, environmental horticulture, and urban agriculture. She served on the URI President's Council for Sustainability and on the Rhode Island Energy Efficiency and Resource Management Council.

Dr. Gold has been a leader in environmental issues throughout her decades of public service. Early in her career, she worked at the Rhode Island Department of Environmental Management and the state's Resource Recovery Corporation, where she was instrumental in launching the first statewide recycling program in the country. She continues to serve as an adjunct professor of Environmental and Resource Economics, and enjoys teaching courses on energy and energy economics; serving on graduate committees; and advising Energy Fellows. Dr. Gold holds a BS with honors in Natural Resource Science and Policy from the University of Michigan, a MS in Environmental Economics from Michigan State University, and a Ph.D. in Environmental Sciences from the University of Rhode Island.

Margaret Curran Chairperson, Public Utilities Commission



Margaret Ellen (Meg) Curran was appointed to Chair the Commission by Governor Lincoln Chafee in June 2013.

Ms. Curran had served as United States Attorney (District of Rhode Island) from 1998 to 2003, previously serving as Assistant US Attorney. She was most recently a member of the Rhode Island Parole Board, and is currently Chair of the Rhode Island health benefits exchange Advisory Board.

(HealthSource RI).

Chairperson Curran has a B.A. in Biology from the University of Pennsylvania and an M.S. in Anthropology from Purdue University. Ms. Curran received her J.D., with high honors, from the University of Connecticut School of Law. She was Editor-in-Chief of the Connecticut Law Review. After graduation, she clerked for the Honorable Bruce M. Selya, in the United States District Court for the District of RI. She subsequently clerked for the Honorable Thomas J. Meskill, who was then on the Court of Appeals for the Second Circuit. She has also been in private practice and served as Adjunct Professor of Law at the Roger Williams University School of Law, which would later award her an Honorary Doctor of Laws degree in 2003. In 2004, she received the John H. Chafee Memorial History Maker Award for Service.

Ms. Curran is a member of the American Law Institute and an advisor on the Model Penal Code: Sentencing Project. She is a member of the First Circuit Court of Appeals Rules Advisory Committee. She also belongs to the National Association of Former United States Attorneys and Bat Conservation International. Since 2008, Ms. Curran has also been a member of the Board of Directors of the Institute for the Study & Practice of Nonviolence.

STATE OF VERMONT Christopher Recchia

Commissioner, Department of Public Service



Christopher (Chris) Recchia was named Commissioner of the Public Service Department by Governor Peter Shumlin in January, 2013. Prior to his appointment as Public Service Commissioner, Recchia served as Deputy Secretary for the Agency of Natural Resources, a position to which he was appointed in January, 2011. Commissioner Recchia has almost 30 years of experience as an environmental leader in the development of state and federal environmental

and energy policy and the implementation of programs managing natural and energy resources. In addition to serving in leadership roles in the private sector, Recchia also served as both Deputy Commissioner and Commissioner for the Vermont Department of Environmental Conservation from 1997 to 2003. He holds a bachelor's degree from the University of Vermont in biology, a master's degree in Environmental Law from Vermont Law School, as well as a master's degree in Natural Resource Policy and Management from Yale University.

SECTION II: STAFF & CONSULTANTS

The NESCOE staff team has diverse academic and professional backgrounds, including economics, accounting, engineering, and law as well as a cross section of private and public sector experience in New England. NESCOE's professional staff and technical consultants bring comprehensive and deep experience to analysis and filings with FERC, other federal agencies and ISO New England.

Jeff Bentz
Director of Analysis



Jeff Bentz, CPA was named NESCOE's Director of Analysis in 2011. Previously, Jeff was with a New England generating facility, MASSPOWER, for nearly twenty years. Jeff served in progressive positions with MASSPOWER and was ultimately its General Manager. Earlier in his career Jeff was with Arthur Andersen and Company. Jeff has a Bachelor of Science degree in Accounting from Central Connecticut State University.

Dorothy Capra
Director of Regulatory Services



In 2011, *Dorothy Capra* was named NESCOE's Director of Regulatory Services. Since 2000, Dorothy was International Power's Director of Regulatory Affairs for NEPOOL and more recently for PJM. In that capacity, she coordinated regulated activities in New England and PJM and related activities at the FERC. Dorothy was elected Vice Chair of NEPOOL's Transmission Committee and has served in the past as Vice Chair of its Reliability Committee. Before that, Dorothy was with New England Electric System (National Grid) for ten years in a variety of positions, including in transmission and rates. She began her career at BP Oil, Inc. Dorothy has a MBA from

the Amos Tuck School at Dartmouth and a BS in Chemical Engineering from Washington University in St. Louis.

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Ben D'Antonío Counsel & Analyst



Ben D'Antonio joined NESCOE in 2012 as Counsel and Analyst. Before that, Ben worked in the Regional and Federal Affairs Division of the Massachusetts Department of Public Utilities as an economist and legal counsel, with a focus on wholesale electricity market and transmission planning issues. Previously, Ben was the Regulatory Assistance Project's first Energy and Environment Fellow, where he provided support to state utility commissions on clean energy policies. Earlier, Ben worked in financial services. Ben has a Juris Doctor, cum laude, and Masters of Environmental Law, magna cum laude, from Vermont Law School and a Bachelor of Arts in Economics

from the University of Vermont.

Heather Hunt
Executive Director



Heather Hunt joined NESCOE as Executive Director in 2009. Previously, Heather had a regulatory law practice for six years, was Director, State Government Affairs, United Technologies Corporation and Group Director, then Vice President, Regulatory at Southern Connecticut Gas. Earlier, she was a Public Utility Commissioner in Maine and Connecticut and was on the legal staff of a Connecticut Governor. Heather has a Bachelor of Arts in Politics from Fairfield University and a Juris Doctor from Western New England College School of Law. Heather is a founder and president of Live On Organ Donation, Inc.

Jason Marshall
General Counsel



Jason Marshall joined NESCOE in 2012 as Senior Counsel. Previously, he was Counsel with the Regional and Federal Affairs Division of the Massachusetts Department of Public Utilities (DPU). Before that, Jason was Legal Counsel to a Massachusetts State Senator. Earlier, Jason was an associate at the law firm Brown Rudnick and was a Law Clerk to the Chief Justice of the Massachusetts Appeals Court. Jason has a Bachelor of Arts, with honors, from Boston College and a Juris Doctor, with honors, from the University of Connecticut School of Law.

NESCOE retains consultants to provide technical analysis in the areas of system planning and expansion and resource adequacy. NESCOE also retains consultants to conduct specific analysis to inform policymakers' consideration of current issues. In 2014, NESCOE worked with consultants such as **Wilson Energy Economics** and **Peter Flynn LLC**.

NESCOE does not use litigation as a primary means to accomplish its objectives, and NESCOE staff produced the vast majority of legal pleadings. In 2014, NESCOE legal activity was undertaken to a significant degree in defense of New England consumers as a response to litigation that generators initiated to try to force through significant market rule changes on an expedited basis. When NESCOE required outside counsel in 2014, it worked primarily with McCarter & English, LLP in Washington D.C.

SECTION III: COORDINATION WITH REGIONAL STATE ENTITIES

NESCOE works to ensure coordination and communication by and among state entities in the New England region. Throughout 2014, NESCOE continued to work closely with the New England Conference of Public Utility Commissioners (NECPUC), including participating in regular NECPUC calls, such as those with ISO New England Inc.

(ISO New England), and the Federal Energy Regulatory Commission (FERC). NESCOE also participated in meetings in 2014 with NECPUC Commissioners and ISO New England's Board of Directors, as well as NECPUC's Annual Symposium. NESCOE expresses its appreciation to former NECPUC Executive Director Sarah Hofmann for her collegiality and contribution to regional electric matters as she transitions in her new



role as a Commissioner at the Vermont Public Service Board.

In 2014, NESCOE worked with the Coalition of Northeastern Governors (CONEG) to ensure coordinated policy positions where appropriate and avoid duplication of efforts on subject matters of mutual interest. At CONEG's request, NESCOE participated from time to time in discussions with the Northeastern International Committee on Energy (NICE) on electricity matters with cross border implications. This included consultation in connection with New England's Generator Information System and issues associated with verifying the source of hydroelectric power.

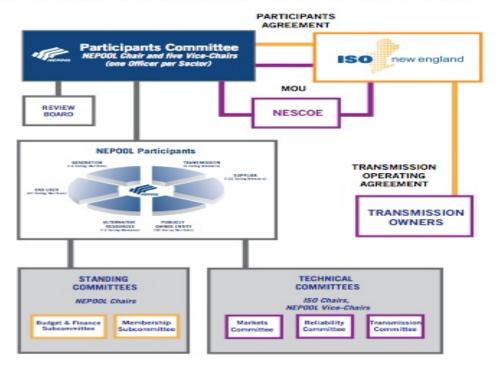
Additionally, to maximize coordination among states and leverage the technical expertise that exists within state agencies on various matters, in 2014, NESCOE coordinated several teams of subject matter experts from state governments to work with NESCOE on matters such as distributed generation and energy efficiency data collection, North American Electric Reliability Corporation (NERC) standards development, and coordinated power procurement.

SECTION IV: 2014 ACTIVITY, FOCUS AREAS & ACCOMPLISHMENTS

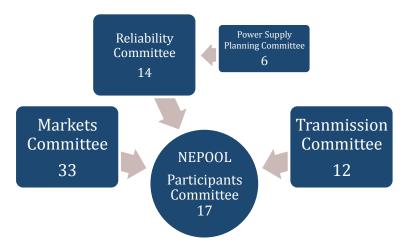
Regional Stakeholder Meeting Participation

NESCOE participated – and regularly played an important role – in substantive New England regional stakeholder meetings throughout 2014. NESCOE continued its regular participation in the New England Power Pool's (NEPOOL) Participants, Reliability, Transmission, Markets, and Power Supply Planning Committee meetings. NESCOE represented the collective views of the New England states and offered proposals to ensure appropriate planning and market rule changes to achieve common energy policy objectives and the states' role in relation to decisions about infrastructure proposed to advance state policies.

NEPOOL Stakeholder Process



2014 NEPOOL Committee Meetings (in meeting days)



Additionally, NESCOE participated in ISO New England's Planning Advisory Committee (PAC) and Consumer Liaison Group meetings. NESCOE appreciates the opportunity provided by ISO New England at PAC meetings for NESCOE to update stakeholders periodically regarding its activities.

2014 ISO New England Meetings



Together, the various committees convened for more than 100 meeting days in 2014.

NESCOE also participated in various working groups and *ad hoc* subject matter meetings convened for specific purposes, such as the Energy Efficiency Forecast Working Group, the Distributed Generation Forecast Working Group and the Variable Resource Working Group. NESCOE appreciates the opportunity to participate in such groups, which facilitates NESCOE's understanding of diverse stakeholder perspectives and communication of the collective views of the six New England states.

In 2014, NESCOE continued to serve as one of the Tri-Chairs of the New England Gas-Electric Focus Group established to improve cross-sector coordination in exploring solutions to address New England's increased dependency on natural gas. The other Tri-

Chairs represent the natural gas industry and NEPOOL Participants. ISO New England, representatives of all the major pipelines that serve New England, liquefied natural gas (LNG) terminal operators, generators, transmission owners (TOs), representatives of public power, end users (both electricity and gas), environmental advocates and natural gas local distribution companies (LDCs) were all represented on the Gas-Electric Focus Group.

NESCOE participated in and monitored the Eastern Interconnection States Planning Council (EISPC) meetings and Eastern Interconnection Planning Collaborative (EIPC) working group meetings relating to interregional coordination. Also, from time to time and as warranted, NESCOE participated in Inter-area Planning Stakeholder Advisory Committee meetings, Northeast Power Coordinating Committee (NPCC) Government Relations Committee meetings, and the Northeast International Committee on Energy meetings.

In 2015, NESCOE will continue to participate in regional stakeholder meetings to advance the collective objectives of the six New England states and in meetings outside of the region as appropriate on issues related to resource adequacy and system planning and expansion.



Comments to Regulators, Agencies and ISO New England

NESCOE's interactions with federal regulators, agencies, and ISO New England reflected another year of significant regional and federal activity with important implications for New England consumers in the areas of resource adequacy and system planning and expansion. In 2014, NESCOE made more than twenty (20) substantive filings with federal agencies and jurisdictional entities.

A representative sample of such filings and comments includes:

- Accounting for Renewable and Other Distributed Generation Resources in Wholesale Markets and Planning: NESCOE submitted multiple comments to ISO New England and ultimately FERC on the need to ensure that consumers receive value for their investments in Distributed Generation (DG) resources. NESCOE also worked closely with ISO New England and stakeholders to garner support for NESCOE's proposed tailored exemption from market rules for certain renewable energy resources and filed supportive comments at FERC. In addition, NESCOE filed comments at NERC supporting reliability standards reforms that would mitigate unnecessary costs imposed on renewable resources that could inhibit their operation and development.
- U.S. Department of Energy (DOE) Activity: NESCOE filed comments with DOE in two important areas with potential significant implications for New England. NESCOE commented on DOE's National Electric Transmission Congestion Study—which can serve as a precursor to federal siting authority over transmission projects—underscoring how New England has alleviated electric transmission congestion and how it would be incorrect to conclude that the New England states' clean energy policies contribute to such congestion. NESCOE also commented on the DOE's Quadrennial Energy Review (QER), which, in New England, focused on energy infrastructure constraints. State officials from across New England participated in the QER meeting held in the region last spring.
- Challenging New England Generators' "Fast Tracked" Litigation Adverse to Consumers: Over the course of 2014, NESCOE filed protests with FERC to multiple and, at year's end, consecutive complaints from New England generators seeking significant and costly revisions to market rules on an expedited basis. NESCOE urged FERC to reject these proposed changes on the eve of upcoming capacity auctions and, where appropriate, allow for discussion among states, market participants and stakeholders. NESCOE's viewpoint generally prevailed in those matters.

New England Governors' Regional Energy Infrastructure Initiative

In December 2013, the New England Governors communicated their collective perspective that New England consumers can benefit if the states collaborate on energy infrastructure issues to advance the states' common energy, environmental and economic objectives. In 2014, the Governors worked, through NESCOE, to advance a regional energy infrastructure initiative. Its purpose was to advance cost-effective energy infrastructure that



would increase access to clean power and to address ISO New England's operational and reliability concerns about the precarious position of the New England power grid, and the associated costs that have increased the electricity price disparity between New England and neighboring regions. Indeed, even *before* the most recent supply-related price increases across New England, the United States Energy Information Administration (EIA) reported that residential electricity prices in New England grew three times the national average when comparing rates in the first half of 2014 to the first half of 2013. In early 2015, energy prices for many New England residential consumers increased even further – in some cases, dramatically.

In 2014, NESCOE dedicated significant time to regional and federal discussions regarding electric system operational challenges and potential risks to reliability arising from natural gas infrastructure constraints. In addition, NESCOE participated actively in NEPOOL stakeholder discussions about ISO New England's proposed market rule changes designed to address reliability concerns in the short and long-term due to natural gas supply constraints.

To ensure consumers would have reliable power service in the short-term at the lowest possible price despite the natural gas infrastructure constraints, NESCOE substantially engaged in ISO New England's development of the second annual winter

reliability program. NESCOE evaluated ISO New England's risk assertion, components of the program design and associated consumer costs and benefits. In 2014, NESCOE supported ISO New England's final proposed winter program, which included critical design changes NESCOE suggested as a means to lower consumer costs.

NESCOE also monitored and provided comments on the myriad studies that examined New England's gas-electric challenges, all of which were directionally consistent with NESCOE 2013 Gas-Electric Study conducted by its consultant Black & Veatch. All studies, including those funded and designed by ISO New England, entities in the gas and electric industries, state governments of the Commonwealth of Massachusetts and the State of Maine, and the U.S. Department of Energy, concluded that New England needs additional natural gas supply infrastructure to satisfy New England's power system demand.

Despite many years of conversation about potential market mechanisms to address New England's critically needed energy infrastructure, not one has been proposed that is

expected to solve the region's natural gas constraints. According to an ISO New England consultant, ISO New England's recent capacity market reforms approved by the Federal Energy Regulatory Commission, referred to as Pay-for-Performance, are likely to result in greater use of fuel oil as a back-up fuel source when they are in place a few years from now. One



concern about this trend is that it would reverse progress on New England's environmental objectives.

On behalf of the six New England states, NESCOE proposed generic cost recovery mechanisms in connection with infrastructure in the region, which was the subject of stakeholder discussions through NEPOOL. Had NESCOE continued to pursue these mechanisms, such funding vehicles would ultimately have been considered by FERC following its public process. As proposed by NESCOE, this funding would have only

become effective after FERC's consideration and approval and after: (1) a competitive solicitation process to enable the New England states to determine if any potential projects can provide consumer benefits that outweigh consumer costs, and (2) other required state and federal processes—with public input opportunities—to consider the project(s).

Throughout 2014, the New England states, through NESCOE, met with NEPOOL sectors (generators, transmission owners, alternative resources, consumer representatives, environmental advocates, public power, and others) to discuss these issues; solicited multiple rounds of comments on various open questions from NEPOOL stakeholders and others in the Gas-Electric Focus Group; and began the process of advancing conceptual proposals for discussion through NEPOOL's technical committees, a prerequisite to any proposal to be proposed to FERC for its process and consideration. NESCOE paused the stakeholder discussion mid-year in light of a state legislative impediment and then to allow for the Commonwealth of Massachusetts to undertake additional study. NESCOE valued NEPOOL stakeholders' diverse perspectives and feedback throughout the year and greatly appreciated NEPOOL's continued accommodation.

In 2015, NESCOE will, at the direction of the New England Governors, continue to support and/or coordinate as appropriate their representatives' efforts to explore and execute cost-effective solutions to the region's power system reliability challenge, which would enhance reliability and mitigate the associated price disparity between New England customers and customers elsewhere, and improve New England's economic competitiveness.



Coordinated Competitive Renewable Power Procurement to Serve Customers at the Lowest All-In Delivered Cost

In furtherance of the concept identified in the 2009 New England Governors Renewable Energy Blueprint, NESCOE facilitated development of documents in connection

with coordinated competitive clean power procurement by and among several New England states and interested electric distribution companies. This followed the direction of the New England Governors in 2013 to develop a work plan, which included the formation of a Procurement Team and Legal Subteam comprised of NESCOE staff, state agency personnel, and representatives of New England electric distribution companies identified by the states and to develop of a draft Request for Proposals (RFP) and related documents. This effort was paused in early 2013 in light of several states' interest in moving forward expeditiously with single-state RFPs in order to capture for their ratepayers the benefits of federal tax credits that were set to expire in the near-term. However, some states expressed renewed interest in mid-2014 in a coordinated competitive power procurement effort to explore projects jointly and to leverage the benefits from economies of scale. In the latter half of 2014, NESCOE facilitated coordinated work by interested state governments and electric distribution company representatives on draft joint procurement documents that satisfy individual states' processes and requirements, leading to release of draft solicitation documents for public comment in early 2015.

In 2015, NESCOE will continue to coordinate and support these efforts as directed by the states.

Accommodation of State Policies Codified in State Laws in Competitive Markets

For New England-wide system planning and wholesale competitive markets to be sustainable, they must reasonably accommodate state energy and environmental policies and priorities codified in state laws.



In 2014, NESCOE advanced various proposals designed to respect such policies. For example, NESCOE requested that ISO New England develop and implement a distributed generation forecast for use in the region's planning processes and in ISO New England's installed capacity requirement determinations. NESCOE also proposed a narrowly tailored renewable resource exemption to the minimum price offer

rule in the Forward Capacity Market, which FERC approved with other related measures in 2014.

The practical reality is that state energy and environmental requirements intersect with regional competitive energy markets. State requirements must be harmonized with regional resource adequacy criteria and market mechanisms to ensure that consumers receive the full value of their investments in clean and/or local energy resources and that the resources consumers pay for through regional planning and markets account for those energy resources installed in accordance with state policies.

In 2015 and beyond, NESCOE will continue to advance proposals and support market modifications that recognize the imperative that regional planning and wholesale market mechanisms find an appropriate balance to enable the states to execute the requirements of state energy and environmental laws, reflect consumer investment in local energy resources, and consider wholesale market concerns. It is critical that federal regulators



and the entities they regulate respect state energy and environmental laws and reflect consumer investment in local energy resources. These may include but are not limited to state renewable energy requirements, implementation of microgrids, sustained aggressive investment in energy efficiency and small local generation resources, and other means to enhance grid reliability and continue progress to reduce the region's reliance on higher emissions fuel sources.

FERC Order 1000: Ensuring Appropriate Opportunities for Competition and State Determinations Concerning Implementation of State Policies

In prior years, NESCOE sought to ensure that the New England implementation of Order 1000, which marks a major shift in the regional transmission planning and development landscape, respects the authority and jurisdiction of state governments to execute the requirements of state laws and regulations. NESCOE also supported Order

1000's directive to introduce competitive dynamics into transmission development. Open processes, appropriately implemented, will allow experienced developers to compete to satisfy system needs at the lowest reasonable overall cost to consumers.

Order 1000 is one way, but certainly not the only way, for states to advance public policy objectives. Irrespective of how FERC resolves contested issues in the Order 1000 compliance proceedings, the New England states can move forward to advance state policies by other available means and through coordinated efforts.

In 2015, NESCOE will evaluate FERC's response to NESCOE's Request for Rehearing and other Order 1000-related FERC and federal court actions. NESCOE will also participate actively in any process for implementing competitive dynamics and the consideration of public policies in regional transmission planning.

Improving Transmission Project Cost Estimating Practices

Accurate transmission project cost estimates and controls have long been important to consumers that fund such projects. Increasing competitive dynamics in transmission under the current paradigm and under forthcoming FERC Order 1000 parameters spotlight this long-standing challenge. Reliable cost estimates are a prerequisite to ISO New England's and state siting authorities' assessment of alternatives means to satisfy an identified objective in a way that best meets consumer interests.



Cost caps are another tool to limit the risk of cost overruns ultimately paid for by consumers and are an appropriate selection criterion on which to base the evaluation of competing transmission projects. A cost cap methodology for transmission project proposals can appropriately balance consumers' interest in cost certainty and transmission developers' interests in ensuring that there is a means to accommodate legitimate unforeseeable transmission project cost overruns.

In 2015, NESCOE will encourage focus on cost containment approaches, including consideration of cost caps and a review of Planning Procedure 4, which identifies the process for developing transmission project cost estimates.

Improving Clarity and Consistency in Transmission Planning

In response to states' request about transmission planning issues that arose across a number of state siting proceedings, ISO New England developed Transmission Planning Guides (the Planning Guides) on the regional planning process and assumptions that are applied therein. The Planning Guides should help to increase transparency about – and confidence in – aspects of the planning process that are often questioned in the New England stakeholder process and during state siting proceedings. These issues relate generally and most frequently to how ISO New England models transmission system conditions in identifying a system "need." In this regard, the Planning Guides are valuable vehicles in which to memorialize what are reasonable assumptions and criteria. NESCOE will continue to provide input on the evolving Planning Guides as ISO New England focuses on them in 2015.

In connection with the regional discussion about reasonable planning assumptions, NESCOE presented to the PAC and the NPCC Regulatory/Government Affairs Advisory Group in 2013 the concept of utilizing probabilities in system planning. In short, the use of probabilities would establish a more analytically and mathematically coherent approach to developing planning assumptions, enhancing both consistency across planning studies and transparency. The region began this discussion in 2014 and, in 2015, will consider the important issues of load modeling and unit availability assumptions.

Accounting for Energy Efficiency in Load Forecasting and Planning

The New England states' sustained efforts to obtain from ISO New England greater integration of energy efficiency savings in the regional load forecast and system planning has achieved results for consumers in the form of ISO New England's energy efficiency forecast. The forecast reflects projected annual reductions in electric energy use, including peak demand, related to the New England states' investments in energy efficiency measures.

From 2018 through 2023, the forecast estimates that combined spending by the six states on energy efficiency programs will be \$5.7 billion, resulting in a total reduction in electricity consumption of 9,105 GWh. The average annual energy efficiency energy savings was about one percent of total generation.

The forecast helps capture the full value of public dollars committed to state energy efficiency programs. Implementation of the energy efficiency forecast has already translated into hundreds of millions of dollars of savings for consumers in the form of transmission project deferrals.

In 2015, NESCOE will continue to participate actively in ISO New England's Energy Efficiency Forecast Working Group and work with states and stakeholders as the forecasts are refined in light of experience gained over the initial forecast years.

Accounting for Distributed Generation in Load Forecasting and Planning

Through state programs and policies, New England consumers invest substantially in distributed generation (DG) resources. In 2013, NESCOE requested that ISO New England produce a Distributed Generation Forecast to account for the exponential increase of distributed resources expected to interconnect to the power system in the next ten years. Since then,

For New England wholesale competitive markets to be sustainable, they must accommodate state energy and environmental policies and priorities codified in state laws.

NESCOE and state distributed generation experts have worked with ISO New England and other stakeholders to develop the forecast. ISO New England initially focused on solar PV resources because most state policies incent its growth relative to other resources, and in 2014 ISO New England created the region's first Interim Solar PV Forecast.

Throughout 2014, NESCOE urged ISO New England to use the solar PV forecast in resource adequacy studies, such as the Installed Capacity Requirement and reserves determinations, so that consumer investments in resources through ISO New England markets reflect consumer investment in local generation.

In 2015, NESCOE will encourage ISO New England's current efforts on a proposed approach to do so. Further, NESCOE will continue to review data to determine if a forecast is needed at this time for other resources such as combined heat and power and assist ISO New England in the update of the Solar PV Forecast based on new data, policies and funding.

Going forward, New England will need to work through the operational challenges that will result from a power system with substantially higher penetrations of solar and other distributed resources than exist today. This may include operational challenges, forecasting, market accommodations and modifications to state interconnection standards.



Issues related to ISO New England's Strategic Planning Initiative, Ensuring Power System Reliability over the Long Term and Associated Market Matters

ISO New England introduced its Strategic Planning Initiative in 2010, which called for the evaluation of wholesale markets and system planning issues. At a high level, ISO New England identified then current and emerging risks to the New England power system and markets and indicated its intent to implement integrated solutions at the earliest possible time. The region continues to address these issues, some of which have presented increasingly acute challenges and risks to the power system and consumers. The challenges ISO New England identified were:

- Resource performance and flexibility
- ➤ Increased reliance on natural gas-fired capacity
- Potential retirement of generation units
- Integration of a greater level of variable resources, such as wind power
- Alignment of markets and planning

In 2014, the region focused on market design changes to address New England's evolving strategic risks and to improve the function and competitiveness of various markets. Over the course of the year, the Markets Committee covered dozens of proposed

market rule changes. Some proposed changes resulted from years of analysis and discussion. Others emerged in reaction to current circumstances.

In 2014, NESCOE advanced and contributed to the development of a series of market mechanisms related to these challenges and the adequacy of the region's power system resources.

- System-Wide Demand Curve and Renewable Resource Exemption: After a decade of regional discussion and debate, NESCOE supported a package of Forward Capacity Market design changes that included a downward sloping demand curve and an exemption to mitigation rules for renewable resources. This success followed state and stakeholder attempts in 2012 to reach agreement on a similar proposal and FERC's rejection of NESCOE's earlier request for approval of a renewable exemption. NESCOE, working with like-minded stakeholders, influenced several of the key parameters of ISO New England's original proposal, such as the starting point of the Forward Capacity Market auction, the rate of downward slope, and inclusion of NESCOE's renewable exemption. All of these items were important to ensure a functional market that provides incentives for investors, protects consumers and accommodates state policy objectives.
- ➤ Zonal Demand Curve: After working successfully with ISO-NE and NEPOOL to separate the zonal demand curve discussion from the system-wide discussion, the region began the complicated discussion of zonal demand curves. After the states worked collectively with the benefit of additional individual state alternatives, NESCOE's "same-as-system" proposed design was incorporated into ISO-NE's zonal demand curve proposal. In 2015, this work will continue as the Internal Market Monitor continues to evaluate and address market power and other concerns.
- Performance Incentives: NESCOE spent considerable time in early 2014 analyzing ISO New England's Pay for Performance capacity market design proposal. Ultimately, the states did not collectively support the Pay for Performance proposal as designed. However, NEPOOL supported NESCOE's proposed design modifications, including a reduced Performance Payment Rate and a Transmission Outage Exemption. Although ISO New England did not include a transmission outage exemption, a phased-in Performance Payment Rate was included in the final design, to the benefit of consumers. In 2014, NESCOE joined NEPOOL in opposing a design change related to inter-zonal constraints.
- Other related matters: In 2014, NESCOE supported actions related to: energy market offer flexibility, changes to allow Demand Response resources to provide operating reserves, changes to allow for On-Peak demand resource to qualify for the NESCOE renewable exemption, relaxation of rules to allow for a one-year deferral of new obligations, and changes to the Forward Capacity Market calendar related

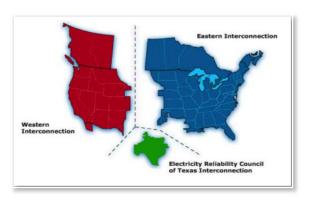
to when resources can seek retirement. NESCOE opposed proposals to modify the Peak Energy Rent design, adjustments to the Forward Capacity Market clearing price for resources held for local reliability concerns or other delist bids rejected for reliability, a "shadow" delist bid mechanism for resources that accepted multi-year pricing options and other design changes to market rules that did not adequately advance or protect consumers' interest.

In 2014, NESCOE successfully defended consumer interests in a series of litigated cases that generator owners brought to FERC for "fast track" decisions at the close of the calendar year. In 2015, NESCOE will continue to focus on improvements to the region's wholesale markets in ways that provide consumers with reliable service at the lowest reasonable cost over the long-term while maintaining environmental quality.

Eastern Interconnection Planning Collaborative

In 2014, NESCOE provided technical support to states in connection with the Eastern Interconnection Planning Collaborative (EIPC). The EIPC was formed in 2010 to

develop and analyze hypothetical future scenarios for the bulk power system throughout the eastern interconnection. The eastern interconnection includes thirty-nine (39) states, extending from the foot of the Rocky Mountains to the Atlantic seaboard and part of Canada.



The United States Department of Energy (DOE) funded EIPC at its outset. Today, consumers fund EIPC work conducted by Regional Transmission Organizations such as ISO New England and through state participation.

In 2014, the EIPC completed its second biennial planning exercise, finding, in part, ISO New England's planned transmission system capable of reliably serving load in 2018 and 2023, even under the stresses associated with drought and heat wave conditions. The EIPC also completed significant portions of its natural gas study funded by the DOE, which, to date, shows that the natural gas infrastructure serving New England will likely remain constrained during the 2018 and 2023 winter seasons.

The New England states have worked to ensure that analyses performed in the EIPC process reflect - to the fullest extent - the states' implementation of energy and environmental goals and provide objective data to inform future policy decisions. In 2015, NESCOE will review and provide feedback where appropriate on studies and whitepapers developed through EIPC and monitor the Planning Authorities' work on further studies to ensure New England consumers' interests are fully and fairly reflected.

Engagement in NERC Standards Development

In 2014, NESCOE continued to track power system reliability and consumer cost implications arising from actions and proposals by the North American Electric Reliability Corporation (NERC). In all instances, NESCOE's actions are guided by a core principle important to New England consumers: that the development of new reliability standards must consider both system reliability benefits and whether incremental reliability gains justify new costs imposed on electricity consumers.

NESCOE will continue to track NERC standards development in 2015, as well as NERC-related issues at the FERC that have significant resource adequacy and system planning implications for New England consumers.

Department of Energy Congestion Study

Every three years, the DOE is required to conduct a congestion study on electric transmission congestion and constraints within the Eastern and Western Interconnections. The last study, conduced in 2009, included an analysis of areas with significant renewable resource potential in which development may be inhibited because of insufficient transmission infrastructure. The Secretary of the DOE has the



authority to designate an area experiencing energy transmission constraints or congestion that adversely affects consumers as a "national interest electric transmission corridor,"

which is a prerequisite to the FERC seeking to exercise so-called "backstop siting authority" over electric transmission facilities.

In April 2014, NESCOE provided comments on the Consultation Draft of the 2012 Congestion Study. The comments reiterated that New England has no electric power system congestion and that clean energy policies do not create such congestion. As New England has demonstrated its ability to plan and construct transmission for reliability, effectively address summer peak conditions, and improve the economic efficiency of its seam with New York, a national corridor designation from DOE is unnecessary. In August 2014, the U.S. DOE responded by letter to NESCOE's comments on the Consultation Draft. Subsequently, the U.S. DOE issued a revised version of the 2012 Congestion Study for public comment that incorporated elements of NESCOE's feedback. The final version of the 2012 Congestion Study remains pending.

The triennial study cycle is presumably scheduled to recommence in 2015. NESCOE continues to monitor DOE's approach and the study's progress and will prepare comments as appropriate on the 2015 Congestion Study.

Presentations

In response to requests from various organizations, NESCOE representatives made a number of presentations throughout 2014. NESCOE appreciates the opportunity to share information about current issues and to receive feedback.

A representative sample of meetings at which NESCOE presented includes the following:

- The Northeast Energy and Commerce Association and Connecticut Power
 Energy Society Annual Conference
- The ISO New England Consumer Liaison Group
- The Industrial Energy Users of Maine Annual Meeting
- The United States Department of Energy's Electricity Advisory Committee

SECTION V: PRIORITIES FOR 2015 AND 2016

NESCOE carries into 2015 several priority projects that will require significant attention. At the direction of Managers, NESCOE will also continue to identify areas for

proactive engagement related to resource adequacy and system planning and expansion and conduct independent technical analyses to inform policymakers' decisions.

NESCOE looks forward to participating actively in NEPOOL stakeholder meetings, exchanging ideas with ISO New England and market participants, and representing the collective interests of New England states at FERC and, where appropriate, before other federal agencies.

In addition to addressing new issues that will require attention, NESCOE anticipates undertaking work in the following areas in 2015 and 2016:

- Figure 2 Transmission Planning: Review and provide input on ISO New England's plans and planning processes, including but not limited to Regional System Plans, forecasting, and certain needs assessments and solution studies; provide feedback on ISO New England's reexamination of appropriate planning assumptions, including load modeling and unit availability assumptions; ensure that ISO New England's implementation of FERC's Order 1000, after FERC acts on final compliance filings, appropriately reflects state laws and regulations, if and as determined by state officials, that would benefit from transmission analysis and identifies and applies criteria in competitive transmission evaluation processes in a way that advances reliable service at the lowest cost to consumers over the long-term.
- Transmission Cost Estimation and Containment Practices: Consistent with requests to ISO New England in prior years to gather and report transmission project costs in a way that enables costs to be tracked accurately over time as a project moves from a proposal to operation, continue tracking transmission project costs, monitoring cost overruns, and advancing changes to cost estimating practices or requirements. Cost estimating and containment practices will take on a different kind of importance as the region moves to a framework under FERC's Order 1000 in which transmission developers offer competing transmission proposals to satisfy the same need, and cost containment features can and should influence project selection. To the extent improved project cost estimating and tracking reveal cost overruns, which, among other issues, suggest alternative means would have been a better choice for consumers to satisfy the identified need, work with ISO New England and transmission companies to modify cost estimating practices and/or mitigate cost escalation.
- Reliability Requirements: Provide input as appropriate on ISO New England's recommended *Installed Capacity Requirement* (ICR), related values

and associated issues, with particular attention to ensuring that the ICR appropriately reflects New England consumers' increasing investment in local distributed generation and other clean energy resources and the improved generator performance New England consumers will pay for through ISO New England's Pay-for-Performance modifications to the Forward Capacity Market.

- Resource Adequacy and Reliability Over the Long-Term: As issues and risks identified in ISO New England's Strategic Planning Initiative continue to translate into proposed changes to the Forward Capacity Market and other rules, work with stakeholders and ISO New England to ensure that any such modifications provide consumers with reliable service at the lowest possible cost over the long-term while maintaining environmental quality. Additionally, to inform policy-makers' consideration of proposed solutions, provide state policymakers with analyses where appropriate to confirm the nature of identified risks, and to understand the range of potential cost-effective solutions, including whether the costs of proposed solutions have a reasonable relationship to asserted risks.
- Accommodating Requirements of New England States' Energy and Environmental Laws and Regulations in New England Wholesale Markets: Advocate in various forums to ensure reasonable and necessary harmonization in the regional electricity market of state energy and environmental policies codified in New England states' laws.
- New England Governors' Regional Energy Infrastructure Initiative: At the direction of the New England Governors, support the states' efforts to develop new diverse cost-effective energy infrastructure that will address New England's natural gas-electric interdependency challenge and gas supply infrastructure constraints and enable increased levels of clean power resources to serve New England consumers; continue to work with stakeholders through NEPOOL and with ISO New England as appropriate.
- ➤ Coordinated Procurement: At the direction of the New England states, coordinate and support states' regional competitive procurement to facilitate development of resources that would further state policies, take advantage of economies of scale to the benefit of consumers in multiple states, and provide individual states the opportunity to consider projects that may advance their energy and environmental objectives at the lowest all-in delivered cost to consumers.

- Advocate for Reasonable Decision-Making Processes that Enable Full Consideration of Economic Implications on Consumers: Ensure that decision-making processes provide reasonable notice and opportunity to consider fully the consumer implications of proposed rule changes and opportunities for states and stakeholders to explore the lowest cost means to achieve identified objectives. Additionally, to the extent New England power generators continue their annual year-end litigation at FERC on matters decided earlier in the year with requests for so-called "fast-tracked" status, advocate for reasonable time and processes for consideration of consumer and other implications.
- For Generator Interconnection System Modifications, as Needed: To the extent the New England states seek to count imported *hydropower* resources as satisfying state carbon reduction requirements or goals, work with NEPOOL, Canadian provinces, and other stakeholders as appropriate to modify and/or implement *tracking systems* to enable hydro generator unit specific validation.
- Eastern Interconnection Planning Collaborative: Monitor and analyze interconnection-wide study activities conducted by *EIPC* to ensure that New England ratepayers' interests are appropriately represented and that system planning determinations that have economic implications for New England ratepayers remain a function of regional decision-making; and work to ensure that any customer-supported interconnection-wide studies provide value to New England customers.
- ▶ NERC: Continue to track and comment on 𝒦𝑛𝒦C activities that have the potential for significant cost implications for New England electricity consumers, ensuring that, while reliability is always a top priority, reliability standards development and other NERC activities consider the costs relative to potential incremental reliability gains and take regional differences into account.
- Energy Efficiency in Planning: Support continued refinement of ISO New England's *Energy Efficiency Forecast* to ensure that New England's transmission planning process continues to accurately reflect consumers' significant investments in energy efficiency resources and the resulting reduction to the region's energy use.
- ➤ Distributed Generation Forecast: To ensure that consumers receive the full benefit of state policies and ratepayer investments in all forms of power generation technologies, continue work with ISO New England and

stakeholders to appropriately capture in the load forecast, the transmission planning process, and installed capacity determinations the increased penetration of solar energy and other *distributed generation resources*. In 2015, NESCOE will work with states and ISO New England to continue progress on a forecast that incorporates other distributed generation resources for inclusion in the 2015 RSP. NESCOE will seek to ensure that ISO New England makes the appropriate use of the Interim Photovoltaic Forecast and subsequent Distributed Generation Forecast in transmission system planning, markets and operations so that consumers' investment in the range of resources is reflected in regional electric planning and resource acquisition.

- Demand Response/FERC Order 745: Monitor the United States Supreme Court's ruling on petitions associated with EPSA v. FERC, as well as FERC's and ISO New England's response to such ruling and the status of Demand Response in the wholesale markets and assist states' consideration and determinations about future interactions of demand response resources and the wholesale markets as appropriate.
- Interconnecting Resources Efficiently: Continue to monitor the operation of ISO New England's *generation interconnection queue* including the time and costs to move proposed projects through the queue in absolute terms and in relation to other Regional Transmission Organizations; if appropriate and helpful to facilitate future procurement of renewable resources, work with ISO New England and stakeholders to implement the cluster interconnection provision in ISO New England's tariff.
- ➤ ISO New England Major Initiatives Assessment: Monitor and advance consumer interests in connection with ISO New England's approach to and execution of *quantitative and qualitative analysis* of major market initiatives, with a focus on ensuring the consumer cost implications of proposed initiatives, and any alternatives, are understood and considered in decision-making.
- ➤ Coordinate with Regional Organizations: Continue NESCOE's close *collaboration* and partnership with NECPUC, as well as other state agencies and organizations, on important regional and federal issues affecting resource adequacy and system planning and expansion to ensure consistency of views and to avoid the potential for duplication of efforts.

VI. 2014 EXPENDITURES

NESCOE operations are funded by a FERC-approved charge collected through Schedule 5 of Section IV.A of ISO New England's tariff.

In 2014, an independent audit of NESCOE's books for the year-end December 31, 2013, was completed and presented to the NESCOE Managers. The independent auditor opined that the organization's books conform to generally accepted accounting principles and issued an unqualified opinion letter.

A 2014 Statement of Spending is at page 36.

VII. BUDGET 2015 & PRELIMINARY BUDGET 2016

NESCOE's 2015 budget, which is consistent with the current five-year *pro-forma* approved by NEPOOL and accepted by FERC, was presented to and affirmed by NEPOOL in October 2014. The 2015 NESCOE budget was submitted to the FERC, also in October, and was accepted in December 2014.

The 2015 and preliminary 2016 budgets are at page 37.

NESCOE

Statement of Spending December 31, 2014

Expenses	
Direct Expenses, Consulting	
Legal (FERC) Services	138,394
Technical Consulting	106,681
Total Direct Expenses, Consulting	245,075
Employment and Benefits	
Disability	10,409
Employee Health Insurance	42,360
Life Insurance	1,836
Payroll Taxes	55,775
Pension Contributions	31,345
Salaries & Wages	827,247
Total Employment and Benefits	968,972
General and Administrative	
Dues and Subscriptions	5,673
Insurance	6,705
Office Expenses	3,282
Professional Services	30,549
Rent, Parking & Utilities	15,071
Telephone & Communications	12,593
Travel and Meetings	55,387
Total General and Administrative	129,259
Capital Expenditures	
Asset Acquisition	1,285
Total Capital Expenditures	1,285
Total Expenses	1,344,591

NESCOE Pro Forma Budget 2015 and Preliminary 2016

	2015	Preliminary 2016
Salaries and Wages		
Salaries	899,602	926,590
Payroll Taxes	89,960	92,659
Health and Other Benefits	75,000	77,250
Retirement §401(k)	30,900	31,827
Total, Salaries and Wages	1,095,462	1,128,326
Direct Expenses - Consulting		
Technical Analysis	473,800	488,014
Legal (FERC)	128,750	132,613
Total Direct Expenses - Consulting	602,550	620,627
General and Administrative		
Rent	18,566	19,123
Utilities	4,244	4,371
Office and Administrative Expenses	26,265	27,053
Professional Services	73,645	75,854
Travel and Lodging	77,250	79,568
Total General and Administrative	199,969	205,968
Capital Expenditures & Contingencies		
IT Equipment	5,305	5,464
Contingencies	190,329	196,038
Total Capital Exp. & Contingencies	195,633	201,502
TOTAL EXPENSES	2,093,615	2,156,423
BUDGET	2,249,957	2,317,455