June 24th, 2014

Governor Dannel Malloy
State of Connecticut

Governor Paul LePage
State of Maine

Governor Lincoln Chafee
State of Rhode Island and Providence Plantations

Governor Maggie Hassan
State of New Hampshire

Governor Deval Patrick
Commonwealth of Massachusetts

Governor Peter Shumlin
State of Vermont

Right-Sizing Infrastructure for an Energy System in Transition

Dear Governors Chafee, Hassan, LePage, Malloy, Patrick and Shumlin:

The undersigned organizations and businesses commend you for endeavoring to take a regional approach to meeting New England's energy needs. Such regional coordination holds potential for promoting solutions that are aligned with the region's economic and environmental objectives. We appreciate that the Governors' Energy Infrastructure Initiative recognizes that our increasing dependence on natural gas for both heating and power generation exposes the region to price volatility and episodic natural gas deliverability issues during cold snaps. However, we are concerned that proposed solutions to our over-reliance on natural gas do not fully evaluate the array of energy resources that can reduce natural gas dependence while furthering environmental, competitive market, and consumer protection goals.

As you consider options to address our natural gas dependency, we encourage you to pursue comprehensive analysis of a range of alternatives that minimize risks to consumers and are consistent with environmental objectives.[1] We all have learned from past experiences that prices, technologies, and demand can and do change dramatically and quickly. In the energy world, this has never been more true than today, as the rapid development of new and improved energy technologies allow us to conserve, store, and produce energy in new ways and optimize the use of existing infrastructure.

In order to minimize the risk to ratepayers and consumers, maximize economic productivity, and further important climate and environmental goals, it is incumbent on the states to explore a combination of viable solutions to meet their energy needs before forcing consumers to pay for unprecedented, out-of-market expenditures on multi-billion dollar supply infrastructure. Publicly financing large-scale infrastructure investments would impose new electric charges that consumers would pay for decades, while any potential future benefits would depend on assumptions about stable natural gas prices, low expected costs of a large greenfield pipeline project, and other uncertain variables.

A tailored, blended set of lower risk, market-based options could mitigate pressure on winter natural gas and electricity prices and improve energy reliability at lower cost and with greater economic and consumer benefits than paying for expensive new supply infrastructure. In fact, the principal study commissioned by the states on potential solutions to electric winter price volatility finds that new infrastructure could be avoided entirely if energy efficiency, renewable heating, and distributed

[1] Black & Veatch explicitly endorsed such a comprehensive analysis noting that: "optimal solutions will be determined by cost-benefit analyses. The most appropriate approach to estimate the cost and benefits is a systematic fundamental analysis that simultaneously considers the natural gas and electric market wherein the impact of *each* alternative solution can be quantified." *Phase II*, 4 (emphasis added).

renewables keep gas demand low,[2] yet the costs and benefits of pursuing these options has not been quantified. Components of an integrated approach that merit additional analysis include:

- **Gas-Electric Market Reforms** – Aligning the natural gas and electricity markets can improve the utilization of existing gas pipelines and reduce the frequency of price increases.[3]

- **Energy Efficiency** – Energy efficiency investments have already saved consumers over $400 million in infrastructure upgrades[4] while suppressing energy prices across the region, yet, despite some states achieving nation-leading savings levels, significant additional cost-effective potential exists for investment in both natural gas and electric efficiency.

- **Short-term Utilization of Existing Liquefied Natural Gas Infrastructure** – Existing LNG infrastructure is capable of meeting peak demands under a fuel neutral winter-reliability solution.[5]

- **Renewable Generation** – Declining costs are driving significant installations of renewable generation that reduces demand for natural-gas fired power. For example an additional 3,000MW of distributed generation is likely to come on line by 2021, yet this important resource is not reflected in demand projections or analysis of costs and benefits associated with infrastructure investments.[6]

- **Combined Heat & Power –** Facilities that capture waste heat from electric generation can significantly reduce demand for electricity otherwise needed to produce heat, with only modest increases in gas consumption. A study commissioned by the states identified over 6,400MW of CHP potential that exists across the region.[7]

- **Renewable Thermal** – Renewable heating technologies such as solar thermal, air- and ground-source heat pumps, and high efficiency, sustainably sourced biomass are capable of reducing consumption of natural gas and electricity for heating and hot water. Massachusetts is considering establishing a target to meet 5% of thermal load through renewable technologies by 2020, increasing to 26% by 2030,[8] and similar opportunities exist in other New England states.

---

[2] In analysis for the New England States Committee on Electricity, Black & Veatch finds that under the Low Demand Scenario already planned expansion in gas pipeline capacity and existing capacity to import liquefied natural gas are sufficient to cover winter demand (see: http://www.nescoe.com/uploads/Phase_III_Gas-Elec_Report_Sept._2013.pdf). That scenario assumed no growth in natural gas demand "predicated largely on substantial, ongoing gains in natural gas and energy efficiency, and other demand-side management programs, distributed resources, and RPS, which result in retreat from expanded gas use across all sectors." Phase III, at 9. An illustrative assessment by ENE finds that a combination of resources, including combined heat and power, energy efficiency, renewable generation, energy storage, and electric transmission are capable of providing more than the equivalent of the 600 million cubic feet of capacity per day that states are currently pursuing (see: http://www.env- ne.org/resources/detail/pipeline-alternatives-assessment).

[3] See: http://www.ferc.gov/CalendarFiles/20130424150622-Lander,%20Skipping%20Stone%2004-24-13.pdf

[4] Incorporating the impact of energy efficiency on demand projections allowed the regional grid operator ISO-New England to defer and possibly avoid plans for $416 million in infrastructure upgrades (see: Regional System Plan Transmission Projects, June 2013 Update, Presentation to the Planning Advisory Committee, June 19, 2013, slide 11 available at http://www.iso-ne.com/committees/comm_wkgrps/prtcpnts_comm/pac/mtrls/2013/jun192013/a5_rsp13_project_list_update.zip.

[5] CLF Winter Reliability Proposal available on the ISO-NE website at http://www.iso-ne.com/key_projects/win_relblty_sol/mc_mtrls/ and is entitled *A2.2 CLF Winter 2013/2014 Reliability Solution Proposal.*

[6] http://www.synapse-energy.com/Downloads/SynapseReport.2013-06.E4-Group.DG-in-New-England.11-052.pdf

[7] ICF, 2013 *Implications of Demand Side Management Programs for Natural Gas Use In New England,* available at: http://www.iso-ne.com/committees/comm_wkgrps/prtcpnts_comm/pac/mtrls/2013/nov202013/icf_natural_gas_dsm_in_new_england_white_paper_11-18-2013.pdf

[8] Targets proposed during 3/26/14 meeting of the Global Warming Solutions Act Implementation Advisory Committee Thermal Working Group. For additional detail on Massachusetts Renewable Thermal Heating and Cooling policy see: http://www.mass.gov/eea/energy-utilities-clean-tech/renewable-energy/renewable-thermal/

These opportunities could be lost or significantly delayed if natural gas is given an unprecedented subsidy as contemplated via the Infrastructure Initiative.

- **Demand Response** – Reducing power demand during peak periods can help to address both our winter and summer peak demands, yet demand response was only evaluated in conjunction with utilization of dual-fuel power plants.[9]

It is also important that states prioritize energy resources that maintain state air quality, pollutant, and site-specific environmental requirements and protect natural resources, people, and public and private investments from the impacts of energy transmission and generation on sensitive ecosystems, including land, rivers, wetlands, and rare species habitat, and the public health functions they support. For example, the approximately 250 miles of new pipeline proposed in the Tennessee Gas Pipeline Northeast Expansion project would cut through, disrupt, and alter thousands of acres of wetlands, ecologically significant parcels, and lands protected for conservation,[10] raising significant concerns about the impacts on natural resources permanently set aside for current and future generations.

The New England states themselves have acknowledged that an approach utilizing a combination of resources has not yet been adequately evaluated. Specifically, the final report from the States' working groups says:[11]

> *"Successfully implementing natural gas and electricity energy efficiency programs, renewable thermal heating applications, and distributed electric generation that cause the demand for natural gas and the net electric load to decline in the long-term* **could eliminate any need for additional infrastructure**. *The associated cost of achieving a Low Demand Scenario is not known.* **Further analysis would be required to determine whether policies that would result in a Low Demand Scenario are cost-competitive with infrastructure investments**." (Emphasis added.)

Our energy system as a whole and electric system in particular is entering a transformative period, as consumer-centric resources and smart energy management systems reduce reliance on highly centralized energy infrastructure. Before being called upon to support billions of dollars in new infrastructure choices, New England ratepayers need to have confidence that all viable options have been considered, and that the options selected are designed to minimize risks and maximize economic and environmental benefits in alignment with existing state policy objectives.

Accordingly, to minimize ratepayer exposure to expensive infrastructure bets that risk becoming uneconomic,[12] and to fulfill environmental and climate change targets,[13] we urge you to ensure that all tools in the region's energy toolbox – on both the demand and supply sides – be fully, fairly, and publicly evaluated before proceeding with efforts to advance new large-scale publicly-financed natural gas pipeline infrastructure.

Respectfully,

---

[9] Black & Veatch, p. 62, at: http://www.nescoe.com/uploads/Phase_III_Gas-Elec_Report_Sept._2013.pdf

[10] Including by Article 97 of the Massachusetts Constitution, at: http://www.mass.gov/eea/docs/eea/dcs/dcsarticle97.pdf

[11] *New England Gas-Electric Focus Group Final Report*, p. 14, available at: http://www.nescoe.com/uploads/NEGas-ElectricFocusGroup_FinalReport_31Mar2014.pdf

[12] Domestic natural gas prices could rise toward global levels – currently three to five times higher than the U.S. price – (http://www.iea.org/media/files/WEO2013_factsheets.pdf) if we begin to export natural gas for economic and geopolitical reasons. Higher base prices for natural gas would affect demand for gas and the economics of gas pipelines.

[13] Each of the New England states has GHG reduction targets that could be more difficult and costly to achieve if long-lived investments in natural gas are made. For example, 2011 emissions from natural gas combustion in Massachusetts, (24.4 million metric tons), would comprise 129% of the total 2050 emissions budget established by the Global Warming Solutions Act (http://www.mass.gov/eea/docs/dep/air/climate/maghginv.xls and ENE analysis).

350 Maine
Ambri, Inc.
Appalachian Mountain Club
Appalachian Trail Conservancy (ATC)
Arise for Social Justice
BCC Solar Energy Advantage
Berkshire Environmental Action Team (BEAT)
Berkshire Litchfield Environmental Council
Berkshire Natural Resources Council
Better Future Project
Biodiversity for a Livable Climate, Inc.
Birch Tree Capital, LLC
Bolton Citizen Environment Committee
Breathe Easy Susquehanna County (BESC)
Charles River Watershed Association
Citizens Campaign for the Environment
Clean Water Action
Connecticut Citizen Action Group
Connecticut Fund for the Environment
Connecticut League of Conservation Voters
Connecticut Public Interest Research Group
CT Interfaith Power & Light
CT Sierra Club
Delaware Riverkeeper Network
ENE
Energy PRZ LLC
EnerNOC, Inc.
Ensyn Corporation
Environment Connecticut
Environment Council of Rhode Island
Environment Maine
Environment Massachusetts
Environment New Hampshire
Environment Rhode Island
Environmental Justice League of Rhode Island
Environmental League of Massachusetts
Evergreen Consulting
Fossil Free Rhode Island (FFRI)
Franklin Land Trust, Inc.

Greater Boston Chapter, Trout Unlimited
Greater Worcester Land Trust
Green Party of Rhode Island
Green Star Energy Solutions
Harvest Power, Inc.
Health Care Without Harm
Hilltown Community Rights
Home Performance Alliance of CT
Interreligious Eco-Justice Network
Kestrel Land Trust
Lantern Energy
Mass Audubon
Mass Energy
Massachusetts Association of Conservation Commissions
Massachusetts Land Trust Coalition
Massachusetts Pipeline Awareness Network (MassPLAN)
Massachusetts Rivers Alliance
Merrimack River Watershed Council
Millers River Watershed Council
Mothers Out Front
Mount Grace Land Conservation Trust
Nashoba Conservation Trust
National Consumer Law Center
New England Chapter of Environmental Entrepreneurs (E2)
New England Clean Energy Council
New England Conservation Services
New Hampshire Sustainable Energy Association
Newport Solar
Next Step Living
No Fracked Gas in Mass
No Pipeline Expansion (NOPE)
North Quabbin Energy
North Quabbin Pipeline Action
Northeast Energy Efficiency Partnerships (NEEP)
Ocean River Institute
Pascommuck Conservation Trust
People's Action for Clean Energy, Inc.
People's Power and Light
Phillipston, Massachusetts Open Space Committee

Plainfield Conservation Commission
Professor Nathan Philips, PhD, Department of Earth and Environment of Boston University
Professor Ralph M. Bradburd, Director of the Center for Environmental Studies, Williams College
ProsperityForRI.com
Public Citizen
Rabbi Katy Z. Allen, Ma'yan Tikvah
ReVision Energy
Rhode Island Student Climate Coalition
Sierra Club - Massachusetts Chapter
Sierra Club Maine
Sierra Club of Rhode Island
Sierra Club Vermont Chapter
Solar Design Associates
Stop the Algonquin Pipeline Expansion (SAPE)
Stop the Pipeline
Squan-A-Tissit Chapter of Trout Unlimited
Sunhaus Solar, LLC
The Saunders Hotel Group
The Trustees of Reservations
Toxics Action Center Campaigns
Toxics Information Project (TIP)
Vermont Energy Investment Corporation
Vermont Natural Resources Council
Vermont Public Interest Research Group
Wesson Energy
Westfield River Watershed Association
Wildside Cottage & Gardens