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June 5, 2014

**VIA ELECTRONIC MAIL**
Heather Hunt
Executive Director
New England States Committee on Electricity
655 Longmeadow Street
Longmeadow, MA 01106
RegionalInfrastructure@nescoe.com

Re: Comments on Governors' Infrastructure Initiative In New England – Incremental Gas for Electric Reliability ("IGER") Concept and Electric Distribution Companies' Proposal ("EDC") for Management of Pipeline Capacity

Dear Ms. Hunt:

ENE (Environment Northeast) appreciates this opportunity to provide comments on the Governors' Infrastructure Initiative, outlined in the April 30, 2014 memorandum by the New England States Committee on Electricity ("NESCOE") to the New England Power Pool ("NEPOOL"), soliciting comments on these topics. ENE recognizes that NESCOE anticipated receiving comments on these topics by May 30, 2014, and apologizes for the slight delay. Given the technical and complicated nature of these issues and the importance of gathering public input on such significant and critical infrastructure issues, we ask that you consider these comments in formulating NESCOE's anticipated proposal to NEPOOL, sometime later in June.

ENE is a non-profit organization that researches and advocates innovative policies to address our energy and environmental challenges, while promoting sustainable economies. ENE supports the regional approach to meeting New England's energy needs set forth in the Governors' Energy Infrastructure Initiative. The Initiative appropriately recognizes that our increasing dependence on natural gas for both heating and power generation exposes the region to price volatility during cold snaps.

However, ENE believes the current fervor to build new natural gas infrastructure is entirely premature and unwarranted, primarily because an approach utilizing a combination of resources, in lieu of pipeline expansion, has not been adequately evaluated. It is likely that an array of lower risk, market-based options could mitigate winter price pressure and improve energy reliability at lower cost and risk, and with greater economic and consumer benefits, than expensive new supply infrastructure. Furthermore, such an approach will not exacerbate and perpetuate the region's overreliance on natural gas or increase the difficulty of achieving our near- and long-term objectives to reduce greenhouse gas emissions. ENE encourages NESCOE to conduct the necessary comprehensive analysis of potentially lower cost and cleaner alternatives to the Incremental Gas for Electric Reliability (IGER) and Electric Distribution Companies (EDC) pipeline proposals.

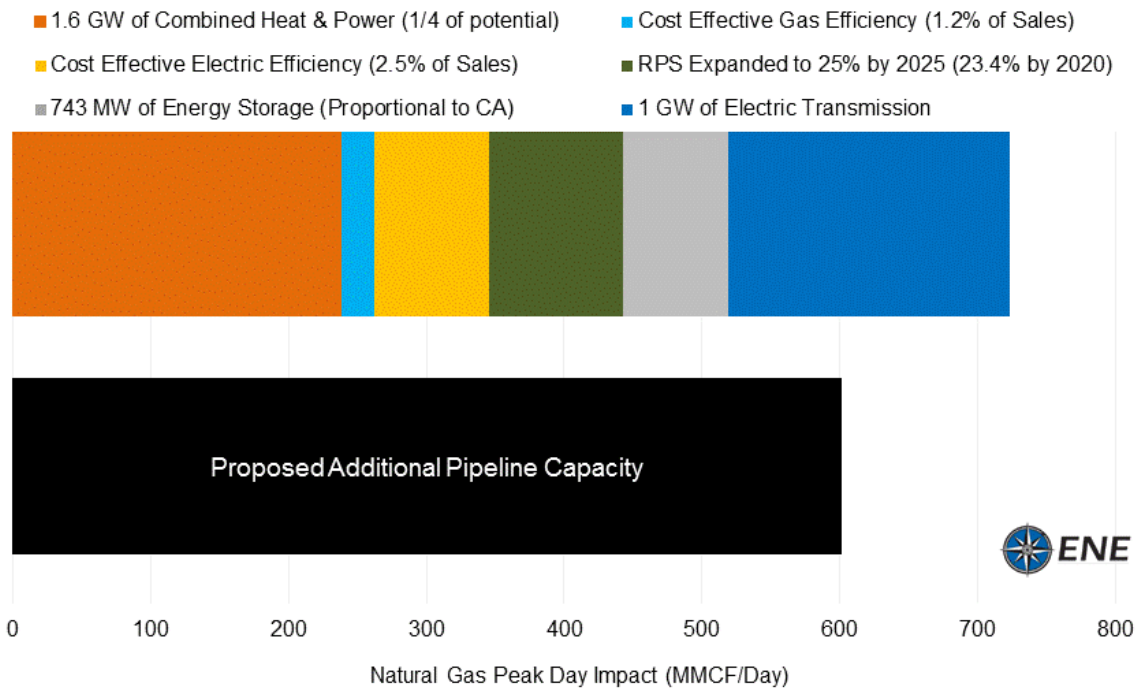
The principal study commissioned by the states regarding winter price volatility found that no new infrastructure would be needed if energy efficiency and distributed renewable generation

were to keep gas demand low.[i] The New England states have acknowledged this, but, thus far, have failed to evaluate the costs and benefits of achieving low natural gas demand. Specifically, the final report from the States' working groups says:[ii]

> 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.)

NESCOE simply must conduct the further analysis of the low demand scenario called for in the Black and Veatch study, before taking steps that would saddle consumers with expensive, long-lived, and potentially unnecessary natural gas infrastructure. ENE offers the below assessment as an example of how an array of energy resources could be utilized to meet our energy needs, without relying on a new natural gas pipeline.

The assessment below compares the proposed pipeline capacity expansion of 600 million cubic feet (MMcf) per day[iii] to a combination of energy resources capable of reducing peak natural gas demand from electric generation, heating, and other uses.[iv] Given the lead time needed to approve, permit, and construct a new pipeline, the assessment compares the alternatives in 2020. Additional information on assumptions and data sources is appended.




Reducing gas demand across the energy system would free up capacity for natural gas generation that is likely to replace retiring oil, coal, and nuclear generation in the near term. Reducing electric demand and increasing clean electric generation would further alleviate the problem of over-reliance on natural gas for electric generation. With lower demand and better utilization of

existing pipeline capacity (through coordination of gas and electric trading markets) peak winter demand could be met using existing liquefied natural gas (LNG) import terminals and additional peak shaving facilities.

In addition, it is worth noting that many of these energy resources would produce consumer benefits regardless of the future price of natural gas. On the other hand, higher natural gas prices due to exports[v] or other factors would undermine the economic benefits of new pipelines. Furthermore, most of these alternative resources would produce less GHG emissions than natural gas.

In its April 30th memo, NESCOE notes that the states would strongly prefer that New England not have to take state action to build additional infrastructure, but do not believe that there are any other options. We believe that other options, including but not limited to those outlined above, merit more in-depth analysis to determine more precisely the potential costs and benefits of utilizing an integrated approach. ENE encourages NESCOE to conduct a more thorough analysis of alternatives to determine the lowest risk, highest benefit means of addressing New England's over-reliance on natural gas in a manner that does not merely exacerbate and perpetuate that over-reliance. Approval of the IEGR and EDC pipeline proposals without undertaking the proper comprehensive cost-benefit analysis is not the right answer for New England.

For more information, please contact us as noted below.

Respectfully Submitted,

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Sources and Methodology for Assessment

ENE is not specifically endorsing any of the alternatives described below; it has simply identified candidates for inclusion in a true integrated alternatives analysis.

**Combined Heat and Power (CHP)** – 1.6 GW of CHP across the region represents one quarter (25%) of the available potential.[vi] The increase in natural gas demand for CHP plants is more than offset by decreased consumption of grid electricity, which in turn decreases demand for natural gas to generate electricity.[vii]

**Cost-Effective Natural Gas Efficiency** – 1.2% annual reductions in gas demand are used to approximate cost-effective energy efficiency program savings levels based on savings achieved through natural gas efficiency programs in Massachusetts and Rhode Island.[viii] Savings depicted are incremental to current savings levels.

**Cost-Effective Electric Efficiency** – 2.5% annual reductions in electricity demand are used to approximate cost-effective energy efficiency program savings levels based on savings achieved through electric efficiency programs in Massachusetts and Rhode Island[ix]. Savings depicted are incremental to current savings levels.

**Renewable Portfolio Standard (RPS) Expansion** – Expanding the cumulative regional RPS target to 25% by 2025 would require an increase of 3.7% (4.5 TWh) from the current effective target of 21.3% by 2025.[x] A 25% by 2025 target translates into 23.4% by 2020 (an increase of

4.2 TWh from current requirements). Added renewable generation is assumed to replace natural gas generation[xi].

**Energy Storage –** 743 MW of energy storage deployed across ISO-New England in 2020 is proportional to the recently established energy storage mandate in California. Because energy storage alternates between periods of charging and discharging, the storage is assumed to replace 372 MW (50% of 743 MW) of natural gas on average during peak periods.[xii]

**Electric Transmission –** 1 GW of new electric transmission is below the low end of New England Governor's planned procurement of 1.2 GW to 3.6 GW "clean energy" imports into the region.[xiii] Transmission proposals include a mix of onshore and offshore wind and new and existing hydroelectricity from New England, New York, and the Canadian Provinces of Labrador and Quebec.[xiv] Added transmission capacity is assumed to replace natural gas generation[xv].

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[i] In analysis for the New England States Committee on Electricity, Black & Veatch found 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).

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

[iii] The *New England Gas-Electric Focus Group Final Report* calls for "600 MMcf/day beyond what has already been announced for the Algonquin Incremental Market Expansion ("AIM") and Tennessee's Connecticut Expansion ("CT") projects." See: http://www.nescoe.com/uploads/NEGas-ElectricFocusGroup_FinalReport_31Mar2014.pdf. This is roughly equivalent to increase of 1,000 MMcf/day of capacity over 2013 regional levels contained in the April 22, 2014 EDC proposal.

[iv] Other resources such as demand-response and renewable heating and cooling could also reduce peak natural gas demand, but were beyond the scope of this assessment. For example, Massachusetts is considering establishing a target to meet 5% of thermal load through renewable technologies by 2020, increasing to 26% by 2030, and similar opportunities exist in other New England states. 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/.

[v] 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.

[vi] Analysis commissioned for ISO-New England found 6,433MW of CHP potential in the region. See: 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.

[vii] The EPA CHP emissions calculator (http://www.epa.gov/chp/basic/calculator.html) is used to evaluate net fuel reduction achieved by deploying a 1.7GW of CHP capacity on existing gas pipelines. Average natural gas power plant efficiency is assumed to be 40% see: http://www.eia.gov/electricity/annual/html/epa_08_01.html.

[viii] For information on Massachusetts' energy efficiency programs see: www.ma-eeac.org/Thre%20Year%20Plans.htm, For information on Rhode Island's energy efficiency programs see: www.rieermc.ri.gov.

[ix] For information on Massachusetts' energy efficiency programs see: www.ma-eeac.org/Thre%20Year%20Plans.htm, For information on Rhode Island's energy efficiency programs see: www.rieermc.ri.gov.

[x] From ISO-NE Renewable Portfolio Standards Spreadsheet, available at: http://www.iso-ne.com/committees/comm_wkgrps/prtcpnts_comm/eag/usr_sprdshts/2012_rps_spreadsheet.xlsx

[xi] Renewable electricity is assumed to offset generation from natural gas power plants with average efficiency of 40%, see: http://www.eia.gov/electricity/annual/html/epa_08_01.html.

[xii] Energy storage is assumed to offset generation from natural gas power plants with average efficiency of 40%, see: http://www.eia.gov/electricity/annual/html/epa_08_01.html.

[xiii] The *New England Gas-Electric Focus Group Final Report* calls for at least 1200MW and as much as 3600MW of transmission infrastructure. See: http://www.nescoe.com/uploads/NEGas-ElectricFocusGroup_FinalReport_31Mar2014.pdf

[xiv] For additional information on the six transmission proposals under consideration see presentation of Steven Clarke, Assistant Secretary of Energy for Massachusetts, to the April 11th Restructuring Roundtable, available at: http://www.raabassociates.org/main/roundtable.asp?sel=128

[xv] Electricity imported into the region is assumed to offset generation from natural gas power plants with average efficiency of 40%, see: http://www.eia.gov/electricity/annual/html/epa_08_01.html.