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ACADIA CENTER Offers Rebuttal to Key Points in Flawed Analysis on New England Energy Policies and Costs

Key elements of report fail to withstand basic analytical scrutiny, present inaccurate picture of valuable energy infrastructure investments. Misleading analysis grossly inflates the cost of energy storage, overlooks enormous costs borne by ratepayers under today's fossil grid. Policymakers around the region are justified in taking recent legislative action, must stay the course through expected absence of federal leadership.

Today, a new report entitled "The Staggering Costs of New England's Green Energy Policies" – released by The Massachusetts Fiscal Alliance, Maine Policy Institute, Josiah Bartlett Center for Public Policy, Rhode Island Center for Freedom and Prosperity, Ethan Allen Institute, Yankee Institute, and Americans for Prosperity Foundation – presents a deeply flawed analysis and distorted view of the region's future energy outlook. The report, which was conducted by Always on Energy Research (AOER) "concludes that if every New England state maintains their green energy mandates, it will double electric rates and cause rolling blackouts in the region." Always on Energy Research describes itself as "a policy group dedicated to ensuring that every state in America has affordable, reliable energy." Their staff have current or past affiliations with groups such as the John Locke Foundation, the American Petroleum Institute (API), the State Policy Network (SPN), and the Center for the American Experiment.

Their analysis and conclusions fail to stand up to even the most basic scrutiny, which is also the case for the related "analysis" and messaging put forward by the Massachusetts Fiscal Alliance in a Commonwealth Beacon OpEd earlier this month – which, **based on Acadia Center analysis**, overestimated the annual cost of a recently enacted energy storage policy in Massachusetts by *more than 25x to 30x*, as detailed further below. It is incredibly unfortunate that this report

continues to rely upon similar ill-informed assumptions and questionable calculations to vastly inflate the cost of the energy transition by multiple factors.



Breaking Down Misleading Calculations on Energy Storage

The press release for the AOER report states that "the cost of reducing carbon dioxide emissions under these plans exceeds the benefits of doing so, meaning the New England states are imposing a net harm on their economies after accounting for the financial impacts of climate change." This characterization could not be further from the truth, and in fact fails to recognize the once-in-a-generation opportunity that New England has: to redesign and revolutionize its energy system and localize the job-creation and GDP impact of energy expenditures within the regional economy rather than export them afar.

Furthermore, the AOER analysis ignores the impossibly high cost of business-as-usual. New Englanders withdraw billions of dollars out of the regional economy each year to purchase fossil fuels sourced outside New England. Vermont, New Hampshire, and Maine alone <u>spend</u> \$8.2 billion annually importing fossil fuels. The cost of ignoring the climate crisis is fast becoming incalculable: in 2023 alone, the United States experienced a record-setting 28 separate weather and climate disasters costing at least \$1 billion, totaling a <u>cumulative \$92.9 billion</u>. The cost of those disasters was also tallied in human lives. This underscores the clear and imminent risk that this region and the nation at large face by not taking the climate crisis seriously. Anything less than urgent action on energy and climate issues is fiscally imprudent and threatens to leave New England families and businesses exposed to both the much larger, hidden costs of unabated climate change as well as the billions of dollars of fossil fuel infrastructure operating today and facing stranded-asset risk.

Let's be candid: there will be significant costs from the energy transition (and significant benefits as well) – Acadia Center has been clear-eyed about <u>this reality</u> and what it means for our public policymaking. However, using intentionally misleading information to fearmonger on behalf of the fossil fuel industry and advance its interests does not serve the best interests of New England ratepayers. Furthermore, the fact that the region's GDP has grown while it simultaneously bends the curve on carbon emissions belies the canard that New England state climate policies spell doom for the regional economy. We can address the climate crisis while growing the regional economy and preserving the region's prosperity. That much has been proved. We look forward to engaging with policymakers and stakeholders constructively on these important public policy debates with a shared set of facts and sound analysis.

Acadia Center presents the following point-by-point rebuttal of several erroneous and misleading claims put forward by the report:

Claim #1 Made by AOER Report: Compliance with the New England Decarbonization Plans would cost \$815 billion through 2050

Acadia Center Response #1: The AOER analysis suggests an annual average of \$31.3b per year over 26 years (2024-2050). In 2022, the six New England states <u>spent</u> \$76b on total energy under the status quo/'business as usual' approach. Even if the AOER figures were sound – and they are not – it would be vastly preferable to invest \$31.3b per year on clean energy in our region rather than spend the majority of \$76b per year on fossil fuels from outside the region, as our current energy system does. In analysis undertaken by Massachusetts, findings showed that the total cost increase of a representative mitigation pathway in 2050 (\$1.5 billion annual spending) compared to a non-decarbonized reference case in 2050 was actually less than the expected increase in statewide energy costs resulting from population and economic growth (\$2.4 billion annual spending). Finally, the AOER analysis also expressly *excludes* the impact of federal tax credits, omitting a huge source of likely 'cost-share' from the federal government that will make the transition even more affordable for ratepayers.

Claim #2 Made by AOER Report: Residents and businesses can expect electricity rates to double...New England families would see their electric bills increase by an average of \$99 per year.

Acadia Center Response #2: Previous extensive modeling conducted by Massachusetts for the Commonwealth's <u>'2050 Decarbonization Roadmap'</u> and <u>Clean Energy and Climate Plans (CECP)</u> provide evidence for a much different trend for regional energy prices in the coming decades.

These studies included granular region-wide energy system modeling to arrive at their results for Massachusetts customers.

- The Roadmap found: "Rates increase out to 2030, then decrease in the subsequent 20 years.... After 2030, growth in electricity load, and vehicle electrification in particular, allows for a reduction in the per-unit cost of wires on the system," including thanks to flexible EV charging adding load at night and increasing the load factor in all parts of the system.
- The 2025/2030 CECP found: "The increased adoption of electrified transportation and heating systems means that **the average Massachusetts household will spend less money on energy every year.** Average overall household energy expenditures, which include transportation-related fuel costs (included as "energy" cost in this analysis), are **projected to decline 8% by 2030 relative to 2019 levels, for an average household savings of \$400 per year**."
- The 2050 CECP found: "the efficiency gains of electrification will result in lower household energy expenditures through 2050 (monthly bills for electricity and fuels). Transportation and household-related electricity and fuel expenditures are projected to decline by roughly 13% between 2030 and 2050, representing an average of nearly \$600 (in 2021 dollars) in 2050 compared to 2030.

Claim #3 Made by AOER Report: The cost of reducing carbon dioxide emissions under these plans exceeds the benefits of doing so.

Acadia Center Response #3: Pathways that invest in local energy resources, including renewable electricity generation and energy efficiency, create more jobs and demonstrate greater economic benefits by keeping money local compared to pathways more reliant on imported energy. For example, the "All Options" pathway from the Massachusetts 2050 Decarbonization Roadmap Study Economic and Health Impacts Report (which emphasized deep electrification and broad renewable electricity buildout) had 17% higher economic "output" (the broadest measure of economic activity) in Massachusetts per dollar invested than the "Pipeline Gas" pathway (which relied heavily on imported alternative fuels). Evidence of these benefits in action is highlighted throughout state clean energy industry reports conducted regularly, such as in Massachusetts, where in 2022, the industry contributed over \$14b to Gross State Product, and in Maine, where the clean energy economy now <u>accounts</u> for over 2% of the state's total workforce, more than 15,000 jobs.

Claim #4 Made by AOER Report: ISO-New England may be unable to coordinate electricity to power the region within 11 years. [Green energy mandates will] cause rolling blackouts in the region.

Acadia Center Response #4: ISO-NE's own extensive analysis on reliability and resource adequacy have found no such imminent threats to the region's grid. To the contrary, earlier this year, the largest fossil fuel generating facility in the region (Mystic Generation Station in Everett, MA) was allowed to safely retire without reliability issues, enabled by low-lost local transmission upgrades. Furthermore, findings from ISO-NE's Probabilistic Energy Adequacy Tool (PEAT) and Regional Energy Shortfall Threshold (REST) workstreams indicate that, in the near-term, the winter energy shortfall risk "appears manageable" over a critical 21-day winter cold-snap period that was the main subject of the analysis. Examination of worst-case scenarios in 2032 indicated an increasing shortfall risk profile in the back half of this decade (2027-2032); however, ISO-NE's core findings hold true: "Timely additions of behind-the-meter and utility-scale solar, offshore wind, and incremental imports from New England Clean Energy Connect (NECEC) are critical to mitigate energy shortfall risks that result from significant winter load growth and retirements." In other words, new clean energy is proving vital for reliability and keeping the grid's peaks manageable. New procurements of energy storage resources (also the subject of questionable analysis, highlighted further below) will also materially improve the resource adequacy and reliability conditions as those resources come online in the years ahead.

Stepping back, "change" has been the sole constant for electric grids since their inception. For example, the US electric power sector <u>delivered</u> 329 terawatt hours (TWh) of electricity in 1950 and 4,090 terawatt hours of electricity in 2022: a 12.4x increase. But dramatic growth alone does not account for all the notable changes to the grid. Due to increasing rates of energy efficiency, the nation is producing more goods and providing more services with improved efficiency, constituting a notable <u>decoupling</u> of GDP growth and electricity consumption. In other words, as dramatic as the growth of the electric grid has been over the last 70 years, that growth has been moderated by cost-effective energy efficiency. There are ample more opportunities to realize such savings from energy efficiency in the years ahead.

Claim #5 Made by AOER Report: Powering New England without interruption during a year in which wind and sunshine are plentiful would require 225 gigawatts (GW) of renewables

Acadia Center Response #5: Acadia Center analysis of five recent leading studies of deep decarbonization in New England identified an average of 150 GW of installed capacity by 2050, including only 95 GW of solar and wind – backed by storage, increased interregional transmission, nuclear capacity, and some remaining combustion resources. See graphic below

from the forthcoming Acadia Center analysis, being released in the next week (stay tuned for more).



Claim #6 Made by AOER Report: New England is responsible for less than 0.4% of global emissions; it is unclear just how much cleaner the environment will become in exchange for the costs that have been imposed on the region and its people

Acadia Center Response #6: Given the enormous benefits to be reaped from economic output and avoided health care costs, it would be preferable for the region to pursue a low-carbon economy even if climate change were not a global crisis. But the latter is also true, and so it is doubly important for the region to do its part to participate in coordinated global action to reduce carbon emissions. Even the full U.S. as a whole only represents about 13.5% of global emissions – should the largest economy in the world therefore also cease all climate mitigation activities since it can't solve the global crisis through its own actions? Clearly not. Finally, again, the region has so many engines of clean economic activity coming out of its universities, research laboratories, startup incubators, and beyond, whose full economic opportunity lies in the much more vast work of decarbonization that must occur outside this region. If New England can help prove the case for the cost-effective application of their technologies here, then the world's energy markets will be theirs to conquer next – and all global critizens will benefit while the New England economy grows.

Claim #7 Made by AOER Report: Battery systems today run around \$500,000 per megawatt hour, which yields a total cost of \$10 billion, which equals roughly 17 percent of the current state budget (from <u>Commonwealth Beacon piece</u>).

Acadia Center Response #7: The cost of a four-hour "megapack" battery pack from Tesla is <u>publicly</u> <u>available</u>, and it reveals a dramatically lower cost of approximately \$250,000/MWh. A 30% federal investment tax credit (ITC) is also available to battery storage projects of this nature. Furthermore, the legislation in Massachusetts requires utilities to enter into cost-effective long-term contracts for storage services, not to purchase storage systems and pay for them outright in one year. Spreading out the systems' remaining costs over ten years **reveals an annualized cost of approximately \$350M, or 3.5% of the \$10b price tag found by MFA**. (See graphic above for more detail illuminating their substantial overestimate of >25-30X.) Even this still overstates the annual cost that would be borne by ratepayers, since contracts would be for only a portion of the full system costs, and since this analysis says nothing about the savings ratepayers would reap by using storage to mitigate the costly and dirty peaks on the grid today. Their discussion also completely ignores numerous cost-control mechanisms directly embedded in the approval process, including the directive to the D.P.U. to ensure contracts are cost-effective, meaning benefits to ratepayers exceed costs incurred.

