

July 30, 2021

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Dear Mr. Richards:

Acadia Center appreciates the opportunity to submit written comments in response to National Grid's draft FY 2022 Energy Efficiency Plan. Acadia Center respectfully restates its general recommendations in response to the earlier Energy Efficiency Plan Outline Memorandum that National Grid pursue a model of Next Generation Energy Efficiency, including efforts to:

- Design air- and ground-source heat pump incentives to reflect the electric energy and summer peak demand savings that cold-climate heat pumps can achieve compared to standard or single-stage heat pumps.
- End incentives for new gas space heating and water heating equipment in new construction.
- Include all the health, safety, comfort, and environmental benefits associated with energy efficiency and electrification investments in all marketing materials.
- Fully incorporate the value of health and safety benefits of energy efficiency in cost-effectiveness accounting.
- Devote resources to coordinating remediation of pre-weatherization barriers, especially in underserved and environmental justice neighborhoods.
- Embrace whole-home electrification and weatherization measures to increase savings from retrofits.
- Offer the same robust incentives for weatherization to every home, regardless of fuel.

### **Increase Energy Savings Targets and Program Budgets**

Acadia Center recommends the Company increase its energy saving targets and program budgets to better reflect the Maximum Achievable Scenario illustrated in the [Rhode Island Energy Efficiency Market Potential Study](#). The Company should continue to accelerate energy efficiency investments in both the gas and electric programs to help meet the Act on Climate's mandatory emissions reduction mandates and to, in coordination with the System Reliability Procurement (SRP) program, avoid new electric and gas infrastructure where possible.

In particular, the Company should seek to build upon the strong 2021 performance of the EnergyWise Gas Programs to establish new energy savings goals. The forecasted success of the 2021 programs demonstrates gas customers are ready, willing, and able to install measures that reduce their energy consumption. Likewise, the vendor community has demonstrated it can meet increased demand for services. This represents an opportunity to set new baseline standards of achievement in the gas program and significantly reduce fossil fuel combustion throughout the state.

### Next Generation Energy Efficiency Can Maximize Benefits for Customers

Rhode Island is a national leader in energy efficiency. But far more must be done to improve the efficiency of our homes and businesses and to ensure that all communities reap the full benefits of energy efficiency. Despite the substantial progress made to date, there is still more that can be done to ensure that efficiency programs deliver benefits equitably across all communities and income levels. At the same time, Rhode Island has an opportunity to elevate energy efficiency programs as a key tool for reducing emissions, including through improved electrification efforts and more weatherization jobs.

Acadia Center's Next Generation Energy Efficiency Initiative brings together these complex but overlapping issues. Next Generation Energy Efficiency addresses these challenges through a new approach—one that focuses on energy savings as a core energy system resource, but is also centered on meeting climate, environmental justice, and electrification goals. The four pillars of Next Generation Energy Efficiency are:

- **Strengthen the role of efficiency in improving housing quality.** Rhode Island's efficiency programs have not delivered benefits equitably across all communities and income levels. Renters, low-and-moderate income households, and non-English speakers often face the worst impacts of climate change and poor housing quality, but many have been unable to access program incentives. Both poor insulation and indoor pollution from heating and cooling systems negatively impact health, leaving residents, especially in poorly ventilated buildings, vulnerable to toxic pollutants.
- **Reduce emissions and support environmental justice.** Energy efficiency programs are a crucial tool for reducing emissions in Rhode Island. However, because program investments are screened through outdated cost-effectiveness tests that only measure certain benefits and costs, efficiency programs are increasingly misaligned with other important state policies. It is time to update cost-effectiveness testing to fully account for emissions, equity, and public health benefits.
- **Align energy efficiency and electrification.** Efficiency programs must be better aligned with opportunities to electrify buildings—a key strategy for accelerating the deployment of clean energy resources and transitioning away from fossil fuels. Existing program designs and cost-effectiveness tests are not fully aligned with accelerating building electrification.
- **Sustain investments in energy efficiency as a leading energy resource.** Rhode Island is a leader in energy efficiency savings and going forward we must maintain and grow investments in energy efficiency as the least-cost energy resource.

The recommendations below bring together these four priority areas with specific recommendations informed by the draft FY 2022 Energy Efficiency Plan.

## **Propose New Measures That Advance Heating Electrification**

### **Divert Gas Connection Requests and Encourage Electrification**

The FY2022 Plan serves as an opportunity to propose new measures designed to encourage more efficient energy consumption in the heating sector. In coordination with the SRP program, the EE programs should include a diversionary program to encourage or simply require customers seeking new gas connections to instead transition that customer to electric heat pumps and other electric appliances as necessary. Heating electrification and weatherization are cost-effective strategies, and heat pumps are at least 300% more energy efficient than even the most efficient gas furnaces. This approach will help leverage energy efficiency investments to achieve the energy saving goals of Least Cost Procurement, the decarbonization goals of the Act on Climate, and reduces ratepayer costs by avoiding the unnecessary and expensive buildout of energy infrastructure including gas connections to individual buildings already served by the electric distribution system.

Acadia Center [analysis](#) prepared in response to the Company's gas infrastructure proposals on Aquidneck Island demonstrate investments in energy efficiency, electrification of gas end uses, and demand response programs are proven, lower-cost strategies that meet consumer energy needs while reducing overall energy consumption. The Company should repurpose its marketing budgets that currently promote gas connections and system expansion to instead aid in the delivery of this diversionary effort.

### **Encourage Central Heat Pumps in Lieu of Central Air Conditioning**

The Company should adapt and/or leverage existing high efficiency central air conditioner incentive offerings already available in the Residential High-Efficiency, Cooling, and Hot Water Program. Central air conditioning systems and central heat pump systems share much of the same installation requirements and evidence suggests the incremental costs for heat pump technology are nominal in terms of overall project costs. The Company could offer incentives through the Energy Efficiency Programs where possible and supplement incentives with available funding from the Regional Greenhouse Gas Initiative or other sources.

The Company should incorporate opportunities to divert the installation of central air conditioning systems that only provide cooling and dehumidification capabilities to electric heat pump systems that provide customers with an additional, highly efficient heating technology. In the case of a gas customer, the installation of a central heat pump system (or any heat pump systems) also provide the gas distribution system with a peak-shaving and resilience opportunity that is not available with a cooling-only technology. Similarly, as the price of delivered fuels like oil and propane can fluctuate significantly from year to year and even month to month, the installation of electric heat pump systems in lieu of cooling-only systems provide consumers with more options to control their energy budgets. As these appliances can be long-lived, it is imperative to help customers avoid installations of less capable and less beneficial technologies.

### **EnergyWise and EnergyStar HVAC Program**

As the Company realizes fewer savings from lighting measures, it has an opportunity to pivot to impactful new strategies in 2022, including:

- Accelerated conversion of electric space heating to heat pumps.

- Conversion of fossil fuel-fired and electric resistance water heaters and clothes dryers to electric heat pump water heaters and clothes dryers.
- Workforce development and other vendor support in the air-source and ground-source heat pump market segments.
- Development/review/refinement of approved contractor lists for heat pump water heaters and ground-source heat pumps.
- Continuing education for vendors on “Approved Contractor” lists.
- Pathways for contractors delivering measures as part of the “Bring-your-own-contractor” program to join the “Approved Contractor” lists.
- Education opportunities for sales staff at retail locations to better inform customers on the energy-efficiency, health, safety, and climate benefits of products, particularly the higher efficiency offered by technologies like heat pump water heaters, heat pump clothes dryers, and induction stoves.
- Education opportunities for contractors that work to install appliances on behalf of or in partnership with retail locations, to ensure they understand how to properly install “newer” technologies like heat pump water heaters, heat pump clothes dryers, and induction stoves.

### **Residential New Construction Should be All-Electric**

The Company should immediately end any incentives or code support for gas space heating and water heating equipment in new residential construction. As noted above, air-source heat pumps are at least three times as energy efficient than gas furnaces, and ground source heat pumps are even more efficient than that. Allowing new construction to connect to the gas system commits that building and its occupants to decades of inefficient energy consumption in direct opposition to clear public policy mandates. Furthermore, all-electric construction is cost-competitive with new fossil-fuel construction across all housing types. There are many grounds on which the Company should work to disincentivize fossil-fuel construction, and specifically new gas connections, including:

- Achieving mandatory greenhouse gas emissions reductions under the Act on Climate law
- Forecasts of limited availability and higher prices for so-called “decarbonized” gas
- Risks of stranded infrastructure assets given state climate mandates
- Additional customer charges for connecting to the gas distribution system when the electric system could be more economically utilized to meet customer energy needs
- Considerations for health and public safety

### **Large C&I and Building Code Support**

On Page 32, under the program description of Large C&I and Building Code Support, the description concludes with “Finally, the program supports the State’s Zero Energy Building (ZEB) goals through engagement and development of ZEB programs in the future.” Is this something currently being developed and engaged upon in the present? If this is a current workstream, is there additional information that could be incorporated into the plan and into the “Changes for 2022 Column” discussion. If it is not a current workstream, please provide additional information as to that decision as well.

### Equity & Inclusion Must be Central Considerations

Energy efficiency can be a key tool in improving housing quality and alleviating housing quality burdens that are disproportionately borne by low-income populations and communities of color. These communities also face higher energy burdens, as well as more significant barriers to participation in efficiency programs.

- The Company must ensure that low- and moderate-income households and renters have a meaningful opportunity to participate in programs. Building relationships with community organizations, social service agencies, and municipal governments in multiple languages can help to make sure that the benefits of the Company's programs accrue more reliably to the people who need them most.
  - On Page 28 of the Draft EE Plan, the Company states, "This support will help improve greater equity for improving equity by serving customers equitably across CAP territories and will improve the timelines for completion of weatherization jobs." This is one example where the Company should provide greater detail on specific efforts and how new strategies will succeed in serving historically underserved customers.
  - During TWG meetings, the Company and stakeholders have engaged in ample discussions of how to overcome barriers to participation in these historically underserved customer segments. Some ideas have included developing community energy efficiency outreach teams, including multilingual teams, to engage directly in underserved neighborhoods. Is the Company planning to pursue this strategy in the Residential programs as it has noted it will pursue a similar strategy in the Small Business Direct Install program reference on pages 35-36? What other strategies is the Company contemplating to increase engagement with underserved communities? Will the Company consider opening physical customer service locations for customers where they can conduct transactions and also find out information about energy efficiency opportunities?
  - On Page 46, the Company states it will continue its efforts to reach customers that have never participated in its EE programs as well as those that have previously participated. It also states it will "continue to deliver innovative strategies to increase customer participation and reach customer segments that are historically underrepresented." Can the Company provide more specific detail on these efforts, both in the main text and in the Annual Plan Attachment that covers Residential Program Marketing and Outreach? Acadia Center is especially interested in seeing more content regarding the Company's proposed innovative strategies to reach historically underrepresented customer segments in the final FY 2022 EE Plan.
  - On the same page, you mention landlord outreach alongside engagement with landlords on behalf of interested tenants. What specific actions has the Company done to initiate landlord outreach independent of a particular tenant's interest, or lack thereof, in the programs? What additional actions can the Company take to reach more landlords?
- Low- and moderate-income households, people of color, rural, and English-isolated families tend to live in older and draftier housing units with higher heating bills. These buildings have the greatest potential for energy savings and emissions reduction, but they are occupied by the people who can least afford to shoulder

the cost of energy upgrades. A detailed on-site study of the energy impacts of efficiency upgrades in low-quality housing could reveal important information about efficiency challenges in this market segment, which would help National Grid claim greater savings commensurate with the greater difficulty of reaching and serving these ratepayers.

- The Company should fully incorporate the health and safety benefits<sup>1,2</sup> of energy efficiency into program offerings and cost-effectiveness measurements. For example, asthma is one of the main reasons for missing school and work, imposing significant health and lost productivity costs on Rhode Islanders. By valuing the non-energy benefits that energy efficiency provides and the role it can play in alleviating health and safety burdens, National Grid could help Rhode Island save money and improve the health and comfort of its most vulnerable citizens.
- Marketing efforts for the multifamily programs should specifically include the value of health, safety, comfort, and environmental benefits associated with energy efficiency and electrification investments for landlords, property managers, condominium owners, and renters.

### **Pre-weatherization Barriers**

- Acadia Center encourages the Company to coordinate the delivery of measures to overcome pre-weatherization barriers, leveraging other available sources of funding where available. Customers, particularly in the income-eligible segment, may not have the time, knowledge, or authority to coordinate those services, nor the funds to pay for them.
- Low-income communities also face disproportionate impacts from indoor and outdoor air pollution, further emphasizing the need for housing repairs. In neighboring states, pre-weatherization barriers for low- and moderate-income customers are paid for through federal funding—such as from the Weatherization Assistance Program (WAP)—state grants, and Regional Greenhouse Gas Initiative proceeds, enabling the delivery of much-needed weatherization services to these vulnerable populations. The Company should pursue similar types of funding to help remediate pre-weatherization barriers.

### **Triple-Decker Unit Weatherization and Electrification**

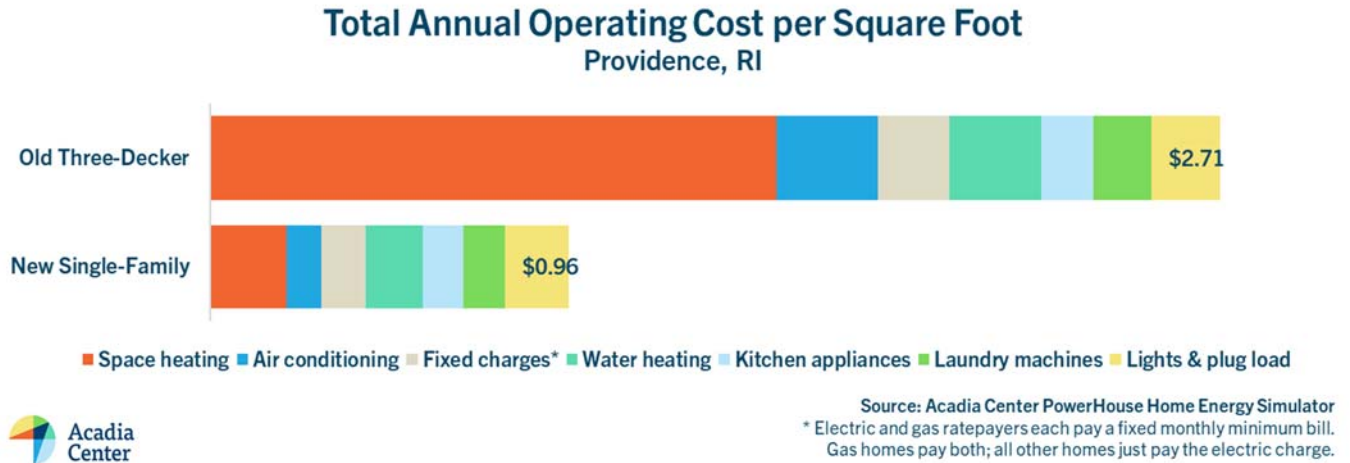
Acadia Center supports efforts to increase HVAC, hot water, and envelope savings for Income Eligible customers, particularly in triple-decker units. This effort should not be limited to customers with electric resistance heat or oil/propane heating systems. As Figure 1 below demonstrates, residents of older, draftier housing units in Rhode Island can pay nearly three times as much for energy as the occupants of a single-family home built under today's building energy code.

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<sup>1</sup> Three<sup>3</sup>, Inc. and NMR Group. "Low-Income Single-Family Health- and Safety-Related Non-Energy Impacts (NEIs) Study." August 5, 2016. [Accessible here.](#)

<sup>2</sup> Three<sup>3</sup>, Inc. and NMR Group. "Low-Income Multifamily Health- and Safety-Related NEIs Study: Preliminary Findings Report. October 15, 2018. [Accessible here.](#)

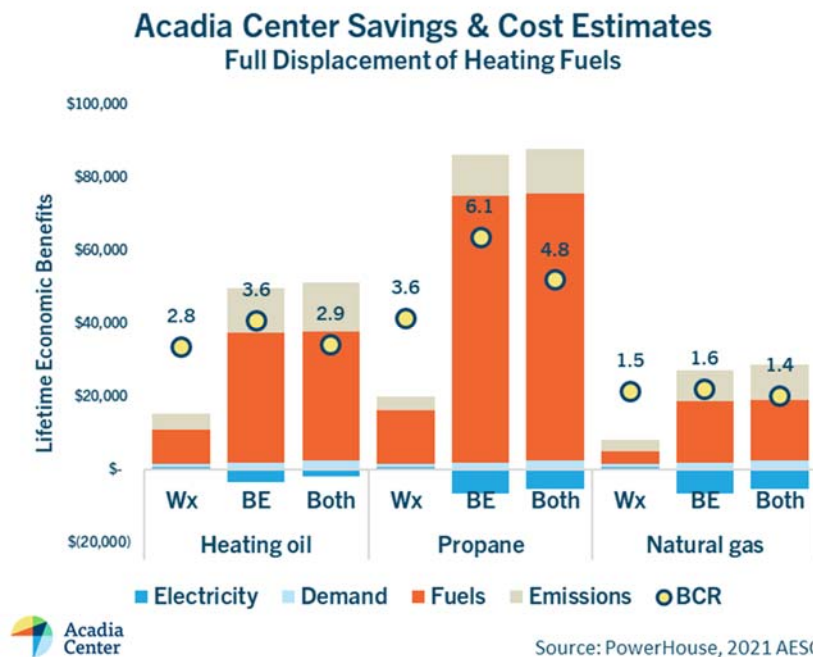
Figure 1: Triple Decker Energy Costs



### Whole-Building Residential Measures

Acadia Center analysis of the 2021 AESC avoided costs shows that whole-home electrification and weatherization projects would generate more net benefits than current measure categories while remaining cost-effective for every fuel type, as demonstrated by Figure 2 below. Meeting Rhode Island’s climate targets will require displacing not just fossil fuels used for heat, but fossil fuels used for any purpose in a building. A whole-home electrification and weatherization offering from National Grid would demonstrate the value of this type of retrofit.

Figure 2: Savings From Full Displacement of Heating Fuels



### **Weatherization Incentives by Fuel Type**

Page 23 of the Annual Plan notes that the Company may offer “different” incentives for weatherization to non-electric and non-gas heated homes to “control program costs.” The Company should offer the same robust incentives for weatherization to every home, regardless of fuel.

## **Commercial & Industrial Segment**

### **Small Business Direct Install Program**

Is it possible to have the Small Business Direct Install (SMDI) program auditors also reach out to other customer segments, perhaps in the same geographic area, if appropriate, to discuss energy efficiency opportunities? Could the Company develop and distribute leave-behind materials about residential energy efficiency offerings as something that small businesses could share with their own customers? If these business owners see the benefits and are willing to share their experiences with customers, that could be a low-cost marketing strategy that increases awareness in historically underserved communities.

If a SMDI customer is more comfortable discussing their services in a language other than English, Spanish, or Portuguese, does the Company or the program’s auditors have access to translation services? How does the Company make sure this barrier is overcome? With regards to the survey mentioned on Page 36, will the survey be offered in multiple languages?

### **Gas System Peak Shifting**

Throughout the C&I program discussion, it doesn’t appear to mention programs designed to shift or avoid gas consumption during periods of peak demand, as there are for the electric system. This could be helpful particularly when approaching businesses which may use gas for non-heating purposes and could conceivably defer some of their gas consumption to periods of lower gas demand, or have fuel-switching capabilities they could use during periods of high gas demand. Can you provide more information why that approach is not included in this EE plan?

### **Wider Applicability of RI Grows Combined Heat & Power**

Acadia Center recognizes the 13.3 MW CHP system discussed in this draft is currently before the Division for review and that the Company has provided and is still developing additional, project-specific technical assistance studies in that venue. Does the Company have any sense of how many other customers in the state could have a similar use for CO<sub>2</sub> as part of their business operations and could similarly employ this technology? Is there any additional treatment to the waste CO<sub>2</sub> required to make it food quality and, if so, does that process have its own energy consumption considerations or further energy efficiency opportunities?

### **HEAT Loans for C&I Multifamily**

While supportive of any effort to make energy efficiency investments more attractive and accessible to all customer segments, Acadia Center recommends a future discussion of whether the HEAT loan program is the best option for C&I multifamily or whether a program like C-PACE might be a better fit for larger entities that have access to other forms of capital financing. It may be more appropriate to maximize HEAT loan participation, marketing, and loan processing resources for customers that have fewer alternatives.

### **Quonset Industrial Park**

On page 40, when discussing energy savings at Quonset, the text reads that “In 2020, these businesses received more than \$2 million in incentives, resulting in savings of over 8 million kWh and 120,000 therms per year, valued at over \$1.4 million in cost savings.” It may benefit readers to understand the annual and lifetime projections of cost savings, assuming that the \$1.4 million figure is only a reflection of a single year of cost savings and that total lifetime cost savings will exceed the incentive costs.

If other identified funding programs, sources of incentives, or financing were also utilized, or could have been utilized, that information would also help readers understand how these customers have access to different forms of capital compared to the residential customers segment.

### **Self-Directed Gas Energy Efficiency Programs**

Referring to Page 68, Section 10.2, can the Company provide information regarding the number of manufacturing customers that have established, or attempted to establish, a self-directed gas energy efficiency program and any learnings the Company has gained from this process or from observations of the PUC’s review and approval or rejection of these plans?

### **Miscellaneous Comments on the FY 2022 Draft Energy Efficiency Plan**

#### **Equity Working Group**

Please add a footnote detailing the specific members or member organizations of the Equity Working Group, similar to the footnote that details Technical Working Group participants.

#### **On-Bill Financing**

Could the Company explore zero-interest, on-bill financing for the residential segment to fund EE upgrades, including potentially, the incremental cost differential between a central air conditioning system and a central heat pump system discussed above?

#### **Systems Benefit Charge**

Referring to Page 55, Section 7.1.4, the second paragraph mentions that “other factors have contributed to increases in the systems benefits charge of greater than 5% year-over-year.” Is that referring to the PUC decision in the FY 2021 Plan to lower the SBC compared to FY2020 in light of the pandemic’s economic impacts? While there may be sensitivity around highlighting that decision, perhaps the Company can include a table that shows multiple years of the SBC to better illustrate that the FY2022 SBC is more properly evaluated against pre-pandemic SBCs. In any case, Acadia Center reiterates its recommendation to go well beyond previous program ambitions in light of the Least-Cost Procurement law, available opportunities identified in the Potential Study, and the demonstrated potential for the EnergyWise gas programs to grow in impact.

### Conclusion

Acadia Center appreciates the opportunity to provide feedback on the Outline Memorandum and looks forward to working with National Grid and stakeholders to finalize the 2022 Energy Efficiency Plan over the coming months.

Sincerely,



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