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The Impact of Energy Circuit Riders on New Hampshire Small Businesses

I appreciate the opportunity to share the experience we've accumulated through our small business energy circuit rider (ECR) program, and its impact on rural New Hampshire. At Clean Energy New Hampshire (CENH), we have witnessed firsthand the transformative impact of federal funding streams through the Inflation Reduction Act (IRA) and Infrastructure Investment and Jobs Act (IIJA) on rural small businesses and agricultural producers across the state. I am grateful for the chance to share these observations and I hope you'll agree that these vital programs are making the clean energy transition possible.

Clean Energy New Hampshire is uniquely positioned because our programming spans various incentive regimes, which gives us a "bird's eye view" of what motivates small businesses to invest and what doesn't. We have two full-time staff members dedicated to traveling across the state and providing no-cost technical assistance to rural small businesses and agricultural producers, helping them address their energy and business needs. These staff are funded by a Rural Business Development Grant (RBDG) and a Rural Energy for America Program Technical Assistance Grant (REAP-TAG). RBDG allows us to offer incentive-agnostic training and technical assistance to small businesses in rural areas in the North Country of New Hampshire. REAP offers grants and loan guarantees to agricultural producers and rural small businesses to help them purchase renewable energy systems and energy-efficient technologies.

These grants give us the privilege to get a glimpse into the lives of many rural farmers and small business owners. It's incredibly eye-opening to see the passion, hard work, and respect they pour into their communities. Their role in New Hampshire is vital but fragile. Small businesses are incredibly vulnerable to changes in energy prices, and owners often cite increasing energy costs as a threat to their economic viability. From February of 2022 to February of 2023 we saw the cost of electricity for commercial end users spike by 27.5 percent.¹ Because businesses are subject to different rate structures than homeowners, and a substantial portion of their monthly bill is composed of demand charges which can be difficult to avoid, this hit small businesses particularly hard. While this rate shock has since subsided, these high price periods are a significant ongoing risk to our small businesses, and highlight a need to diversify our energy sources away from fossil fuels, whose prices are dictated by volatile global market forces.

On top of a volatile market, New Hampshire's small business owners are already beginning to feel the effects of climate change. Just this summer New Hampshire faced severe

¹ *Electricity data browser - Average retail price of electricity.* (n.d.).
<https://www.eia.gov/electricity/data/browser/#/topic/7?agg=0,1&geo=001&endsec=vg&freq=M&start=200101&end=202406&ctype=linechart<ype=pin&rtype=s&pin=&rse=0&matype=0>

flooding around the state.² Statistics from a FEMA-sponsored study highlight that following a natural disaster, 40 percent of small businesses will not reopen their doors.³ It has become increasingly apparent that our farmers and small businesses need support confronting the impacts of climate change, while also assisting them in reducing their contribution to it.

While the new federal programs are providing fantastic opportunities, they have made the need for comprehensive technical assistance very apparent. CENH was awarded RBDG funds in both 2022 and 2023 to focus direct aid to businesses in the North Country. The RBDG program allows CENH to provide technical assistance to promote state and federal incentives for economic growth in tandem with clean technologies. This type of technical assistance is designed to be broad and all encompassing, acting as a net to catch any available incentives and direct them to the people who need them the most. There is a significant gap between federal programs and their audience. Many business owners don't receive federal notices of funding opportunities (NOFO) and rely on community organizations to make them aware of opportunities. Without significant outreach and assistance in navigating the federal funding landscape, these funding opportunities will tend to flow to already well-established businesses that have the capacity and wherewithal to pursue them and not to the struggling businesses that need them most.

In 2023, the IRA infused additional funds into REAP. The IRA, the United State's largest-ever investment in fighting climate change, increased the maximum grant size from \$250,000 to \$500,000 for energy efficiency projects and from \$500,000 to \$1 million for renewable energy systems.⁴ In addition, "the federal share was raised to 50% for all energy efficiency projects, all zero-emission renewable energy projects, and all projects in designated energy communities and projects submitted by eligible tribal entities."⁵ Without this 50% funding share, many of the projects that we assist business owners to pursue would not be viable, as their payback period would be too long. The high upfront costs of solar panels, anaerobic digesters, wind turbines, small-scale hydropower, heat pumps, and weatherization measures often deter small business owners from investing, even when the measures are cost-effective.

By facilitating investments in energy-efficient equipment and renewable energy systems, REAP helps reduce operating costs and improves energy independence for farmers and rural businesses, which increases profitability and leads to job creation. An example of a small business utilizing REAP funds is Super Secret Ice Cream in Bethlehem, New Hampshire. They were awarded REAP funds in the early Summer of 2024 to install a 10-kW roof-mounted solar array to offset 86% of their annual electrical use. They will save roughly \$41,765 over the useful life of their solar project. This additional income can be used to pay staff salaries or be reinvested into their business and other energy saving measures around the store. The Clean Energy NH small business circuit rider team was able to assist them in the solicitation of solar proposals, aided in gathering the necessary information for their REAP application, and was able to construct their REAP application for them.

² *DR-4812-NH*. (2024, August 21). FEMA.gov. <https://www.fema.gov/disaster/4812>

³ National Weather Service, et al. "HURRICANE TOOLKIT." *www.ready.gov*, 2014, www.ready.gov/sites/default/files/2020-04/ready_business_hurricane-toolkit.pdf.

⁴ "Rural Energy for America Program (REAP)." Rural Development U.S. Department of Agriculture, www.rd.usda.gov/inflation-reduction-act/rural-energy-america-program-reap.

⁵ *Ibid*.

Investments in renewable energy sources, such as solar and wind, reduce reliance on fossil fuels and lower greenhouse gas emissions. For instance, Spring Ledge Farm in New London, New Hampshire used a REAP grant to install a 105-kW solar array to offset 109% of their annual electrical needs and replaced four fossil fuel furnaces that heat their greenhouses with a more sustainable wood chip boiler.⁶ These projects lead to savings of \$29,600 annually which can be used to go towards staff salaries of seasonal employees. The solar array will offset over 110,000 kWh of electricity annually which is equivalent to 76.8 metric tons of Carbon Dioxide (CO₂). The energy generated is enough to power the equivalent of 10 homes each year, and the biomass usage helps to create markets for waste wood that otherwise would decay on the forest floor, releasing greenhouse gasses into the atmosphere.

Clean Energy New Hampshire adopts a holistic approach to advancing a clean energy future for businesses throughout the state, addressing the diverse needs of the businesses we work with. We collaborate closely with a network of key organizations, including the Community Development Finance Authority (CDFA), the Plymouth Area Renewable Energy Initiative (PAREI), the NH Small Business Development Center (NH SBDC), New Hampshire's ratepayer funded energy efficiency programs (NHSaves) and the NH Small Business Administration (SBA). This collaborative effort allows us to offer a multifaceted support system for energy projects. We assist businesses in obtaining energy audits, identifying additional funding opportunities to support their projects, and writing the grant application when REAP is a good fit. Our partnerships and networks of clean energy service providers also enable us to facilitate access to loans, connect businesses with experienced developers, and provide tailored business counseling. By leveraging these resources and expertise, Clean Energy NH helps ensure that businesses can successfully navigate the complexities of implementing energy-efficient and renewable energy solutions.

Some programs can be combined with REAP such as the CDFA's Clean Energy Audit Fund, NHSaves, and the Investment Tax Credits (ITCs). CDFA offers grant funds through the USDA to cover 75% of audit costs up to \$6,000, which helps limit the upfront costs of a business looking to apply for a REAP energy efficiency application. Businesses can also take advantage of the Investment Tax Credits (ITC) which "reduces the federal income tax liability for a percentage of the cost of a solar system that is installed during the tax year."⁷ However, if a business has little to no tax liability—which is often the case for new entrepreneurs who are just starting out—the tax credits add little benefit or are a highly uncertain benefit, given that business owners may be uncertain of their revenue outlook during the carry over period.⁸ NHSaves is funded by New Hampshire's electric ratepayers and is "a statewide energy efficiency program to provide New Hampshire customers with information, incentives and support designed to save energy, reduce costs, and protect our environment statewide."⁹ Unfortunately, the NHSaves commercial programs are not as lucrative for small businesses as they are for residential customers. Most commercial rebates are for kitchen equipment such as refrigerators

⁶ "USDA Rural Development FY 2022 Awards Rural Energy for America Program." *USDA Rural Development*, 2022, www.rd.usda.gov/media/file/download/usda-rd-nr-climatechangechart.pdf.

⁷ "Federal Solar Tax Credits for Businesses." Energy.gov, www.energy.gov/eere/solar/federal-solar-tax-credits-businesses.

⁸ Ibid.

⁹ "Efficiency." *New Hampshire Department of Environmental Services*, www.des.nh.gov/climate-and-sustainability/energy/efficiency#:~:text=NHSaves%3A%20New%20Hampshire's%20electric%20utilities.and%20protect%20our%20environment%20statewide.

and coolers which do not apply to most non-restaurant businesses. The incentives provided for lighting retrofits are essentially not worth the hassle for businesses to apply for. It may not be cheaper, but it is certainly easier for businesses to just buy LEDs than to try and navigate the NHSaves offerings. Furthermore, most of the measures that score well for REAP, such as weatherization, are not eligible for NHSaves commercial rebates without doing a custom project application. This means that NHSaves tends to not be “coincident” with REAP funding.

While REAP has achieved remarkable success across the state, several key administrative challenges remain: funding limitations, awareness, accessibility, and transparency into what yields successful applications.

1. Funding Limitations And Competitiveness

The demand for REAP funding often exceeds available resources, a challenge which unfortunately has been exacerbated by the decision to increase the individual grant maximum to fifty percent. This has the potential to lead to an increase in the number of small businesses who are frustrated with the REAP program, and unwilling to apply in the future. The grant pool has become increasingly competitive, allowing for applicants who have time and resources to be rewarded more often than struggling small businesses. Additionally, many rural small businesses are unaware that the program exists or lack the time to dig into program specifics. Lastly, many small business owners and farmers do not have the time or resources to submit an application. These challenges point to the essential nature of ongoing and continued support for technical assistance grants, such as REAP-TAG, which helps to overcome both awareness and capacity hurdles that limit access to the program.

2. Payback Period Calculation and Consideration of Demand Charges

The USDA's simple payback period calculation for renewable energy system projects is defined as: “(total project costs) ÷ (dollar value of energy units replaced, credited, sold, or used, and fair market value of byproducts as applicable in a typical year).”¹⁰ This calculation includes ineligible project costs, such as roof upgrades, which are not part of the requested grant funds. These additional costs can adversely affect the payback period calculation, leading to lower project scores. The grant form also auto-populates the replacement or generation value without accounting for the percentage of historical energy usage being offset, only considering the cost to offset 100% of a business’s historical use. However, when scoring grants, the USDA considers what percentage of historical usage is being offset. Fixing the grant form to auto-calculate the number that the USDA’s scoring rubric calculates would eliminate this discrepancy.

Demand charges, which often constitute a significant portion of a business’s monthly electricity bill, are not factored into the REAP grant calculations. This omission can reduce the scored economic benefits of certain projects. Certain types of projects, particularly energy efficiency and energy storage, can reduce demand charges in ways that dramatically improve the payback modeling of the intervention. However, the REAP calculation does not consider these benefits, which biases towards projects that save the highest number of kilowatt-hours. For a variety of reasons, this means that the REAP scoring rubric is not aligned with interventions that

¹⁰ “Federal Register.” *United States Department of Agriculture Rural Development*, Vol. 86, No. 79, 17 Apr. 2021, www.rd.usda.gov/sites/default/files/rep_rule_4_27_21.pdf.

will result in a least-cost grid, and can be at odds with what is needed to achieve the clean energy transition.

3. Long Delays in Award Notice, and Difficulties with Reimbursement Grant Structure

After submitting a complete REAP application, small businesses can expect to wait six to nine months to hear back if their project was awarded funds. For some projects where an applicant needs a new refrigerator for their summer season or to weatherize a building for the winter, applicants cannot wait for the turnaround time to hear back to begin a project. Applicants are advised not to begin construction until they have heard from the agency that their application is complete and that they have been awarded funds. For many small businesses this hurts their ability to enjoy the benefits of energy independence and conservation, and increases the likelihood that they will simply “replace like with like” and replace failing equipment with the lowest-cost option.

Moreover, small businesses frequently encounter difficulties in covering 100% of project costs upfront. REAP operates as a reimbursement grant, meaning businesses are reimbursed 30 days after the project is completed and operational. Businesses lacking sufficient cash on hand must seek additional funding sources, such as loans and lines of credit, which often come with high interest rates that can undermine the project’s financial viability. Even after receiving a 50% reimbursement, businesses are left with significant loan payments, which can further strain their finances.

4. Priority Projects are Not Getting Funded

Additionally, the types of projects that we have been asked to prioritize under our REAP-TAG award—small projects under \$80,000—are not the ones being funded under the REAP scoring rubric. According to the USDA’s Rural Development Funding Chart released in July of 2024, only three projects under \$80,000 were funded for a total of \$93,421 in grant funding.¹¹ The other \$930,526 was allocated to five projects greater than this \$80,000 marker.¹² The average grant amount was \$127,993 for this funding cycle. Similarly in the January 2024 announcement of projects funded in Q4 of 2023 (September 30th deadline), the average grant awarded was \$134,695.¹³ Only three of the 11 projects were under the \$80,000 project size with a total funding towards these three projects of \$79,417.¹⁴ Smaller projects struggle to score well against larger projects because they typically offset a smaller portion of a business's annual electric load and because they are smaller they have a longer payback period. While it’s admirable that the USDA is hoping to use the REAP-TAG program to direct more funding to smaller businesses, unless this situation is remedied, that effort will go to waste.

Efficiency projects, such as those improving insulation or upgrading lighting, frequently struggle to compete with solar projects in the scoring process, despite their crucial role in

¹¹ “07/17/24 Funding Chart.” *Rural Development U.S. Department of Agriculture*, 17 July 2024, www.rd.usda.gov/media/file/download/rd-nh-bp-cp-depsec-071724-funding-chart.pdf.

¹² Ibid.

¹³ “VT NH REAP FY23 Q4.” *U.S Department of Agriculture Rural Development*, 22 Jan. 2024, www.rd.usda.gov/media/file/download/vt-nh-reap-fy23-q4.pdf.

¹⁴ Ibid.

reducing overall energy consumption. For efficiency projects, the USDA scores payback periods as follows: “less than 4 years, 15 points; 4-8 years, 10 points; 8-12 years, 5 points; longer than 12 years, no points.”¹⁵ Conversely, for renewable energy systems like solar, the scoring is: “less than 10 years, 15 points; 10 years up to but not including 15 years, 10 points; 15 years up to and including 25 years, 5 points; longer than 25 years, no points.”¹⁶ Efficiency projects must therefore achieve a much shorter payback period compared to solar projects to score well. Additionally, efficiency projects have strict energy-saving criteria: “under 20%, 0 points; 20-35%, 5 points; 35-50%, 10 points; greater than 50%, 15 points.”¹⁷ As efficiency projects aim to offset more of a building’s total energy usage, they often face longer payback periods, creating a dilemma where only smaller, low-hanging fruit projects can achieve shorter payback periods, while more comprehensive projects result in longer payback periods. Solar projects typically do not face this same challenge, as larger arrays that offset more of a business's energy usage often have a lower cost per watt and a shorter payback period. Additionally, efficiency projects require an energy audit which requires an upfront cost for the business. According to the USDA’s Rural Development Funding Chart released in July of 2024, all eight funded projects were solar and not a single efficiency project was funded.¹⁸ In the January 2024 announcement of projects funded in Q4 of 2023 (September 30th deadline), only two of the 11 projects were efficiency projects, eight were solar, and one was geothermal.¹⁹ Scoring efficiency projects in their own category instead of against solar projects would help alleviate this issue and get more efficiency projects funded.

In conclusion, we are in the process of realizing the transformative potential of the federal funding opportunities created by the Inflation Reduction Act (IRA) and Infrastructure Investment and Jobs Act (IIJA) for rural New Hampshire, in combination with state programs and incentives. Clean Energy New Hampshire is dedicated to leveraging these funding streams to support local businesses and agricultural producers, recognizing the profound impact these investments have on the long term viability of our local small businesses. Our experience highlights the crucial role of comprehensive technical assistance in navigating the complexities of these programs and the significant benefits they provide, from reducing energy costs and creating predictability, to reducing emissions and combating the climate crisis. However, as we advance, it is clear that addressing ongoing challenges—such as the payback period calculations, the exclusion of demand charges, and the gap between program availability and business capacity—will be vital to fully unlocking the power of these laws. Ensuring that these programs effectively meet the needs of all small businesses will require ongoing collaboration, targeted outreach, and a commitment to refining the support mechanisms. By continuing to adapt and enhance our approach, we can help bridge gaps, improve program accessibility, and ultimately drive a more inclusive and impactful clean energy transition across New Hampshire.

¹⁵ “Federal Register.” *United States Department of Agriculture Rural Development*, Vol. 86, No. 79, 17 Apr. 2021, www.rd.usda.gov/sites/default/files/reap_rule_4_27_21.pdf.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ “07/17/24 Funding Chart.” *Rural Development U.S. Department of Agriculture*, 17 July 2024, www.rd.usda.gov/media/file/download/rd-nh-bp-cp-depsec-071724-funding-chart.pdf.

¹⁹ “VT NH REAP FY23 Q4.” *U.S Department of Agriculture Rural Development*, 22 Jan. 2024, www.rd.usda.gov/media/file/download/vt-nh-reap-fy23-q4.pdf.



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Clean Energy NH is a 501(c)(3) nonprofit organization. Our membership includes 130+ businesses, 41 municipal members—comprising over 430,000 NH citizens—and 400+ individuals in every corner of the Granite State. We advocate for the adoption of clean energy initiatives through a non-partisan, fact-based lens.

Sam Evans-Brown Biography

Sam leads Clean Energy New Hampshire in its effort to create a cleaner, more affordable, and more resilient energy system in the Granite State. Prior to joining Clean Energy New Hampshire in 2021, he was a podcast host and radio journalist for nearly ten years, during which he wrote stories about New England energy issues extensively and won several regional and national awards. Outside of work, he is an excellent bike mechanic, a Spanish speaker, and a father of two.