

Senate Small Business Committee Field Hearing

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Draft Testimony

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Introduction

Thank you for this opportunity to testify before the Senate Small Business Committee about energy-related challenges and opportunities facing small and independent businesses in New Hampshire. As a co-owner of one such business, ReVision Energy, my team and I are fortunate to work with other business owners across the state to understand and address their energy needs while advancing our company's mission to "make life better by building our just and equitable electric future."

As I will try to detail in this testimony, New Hampshire businesses face significant challenges when it comes to the high direct cost of energy and the high indirect cost of climate damage, both of which are affecting our employees, communities, and bottom lines. At the same time, small businesses are benefiting in tangible ways from clean technologies that lower energy costs and carbon emissions, thanks in part to the federal government's historic investments in the energy transition through the 2022 Inflation Reduction Act (IRA) and other legislation. The benefits vary considerably between onsite solar projects that power business loads directly and offsite projects that are designed to extend the benefits of solar to businesses that cannot install solar panels of their own. Fortunately, the federal and state government have levers they can pull to better enable both types of projects and thereby enable small businesses of all kinds to participate in the clean energy transition.

High Energy Costs and Climate Damage

For years, New Hampshire businesses and families have struggled to pay some of the highest energy rates in the United States. According to the U.S. Census, [one in five](#) New Hampshire households could not afford to pay their energy bills in the last year and nearly a third had to forego other basic needs just to keep the heat and lights on. The pain was particularly acute for businesses and families in 2022-2023, when electric rates doubled to become the [highest in the continental U.S.](#) The price of natural gas, a major source of both heating and electricity generation, has also [spiked in recent years](#) in New Hampshire, according to the U.S. Energy Information Administration (EIA). In fact, New Hampshire's total energy expenditures are currently the [highest in the region](#) at [\\$6,440 per capita](#) or \$9 billion statewide per year. For our part, my family was shocked to see our utility bills skyrocket to over \$1,000 a month for the first time ever last year, and I know we weren't alone.

Studies show that high energy costs are largely a function of our dependence on imported natural gas and other price-volatile, non-renewable energy sources, a [leading cause of inflation](#) nationwide. Fully [86%](#) of New Hampshire's energy currently comes from non-renewable imports like oil, gas, and nuclear, and we rank near the [bottom of states](#) when it comes to deploying local, low-cost renewables. That means most of the \$9 billion in hard-earned money Granite State businesses and families spend on energy each year leaves our state's economy.

At the same time as New Hampshire businesses and families face high energy costs, the price we are paying for climate damage caused by fossil fuel combustion is also steadily increasing. This is particularly true when it comes to flooding and other extreme weather events, which cost businesses, families, and towns millions of dollars a year in New Hampshire. According to the [Fifth National Climate Assessment](#) released in 2023, extreme precipitation has increased around 60% in the Northeast since the 1950s, with the latest New Hampshire examples including washed out roads and bridges and extensive flood damage this past summer. Nationwide, the Assessment found that the United States is facing a billion-dollar climate disaster every three weeks, on average, compared to every four months in the 1980s.

The New Hampshire Department of Environmental Services has also estimated that [around 1,300 Granite Staters die each year](#) from asthma and other preventable health problems directly linked to fossil fuel air pollution. This is a tragedy for the individuals and families affected, and also harms our businesses by raising healthcare costs and reducing worker productivity due to poor health and lost work days. NH DES

estimated that the public health cost of manmade air pollution was \$5.1 billion in 2024 dollars. When combined with the mounting costs to our economy, infrastructure, and way of life from climate damage, I believe the need to transform our energy system is clearer than ever.

Fortunately, American cleantech innovation has made solar, wind, and battery storage the cheapest forms of energy on earth. Combined with hydropower, these renewable options are also the cleanest and most abundant homegrown energy resources in New Hampshire. They have the potential to significantly reduce energy costs for businesses and families while helping combat climate damage. This is true for both individual electricity consumers and the rate-paying public at large, as shown in the official Value of Distributed Energy Resources report released by the New Hampshire Department of Energy in 2022 and revised in 2023. Federal energy and tax policies are increasingly important components of the energy transition.

Onsite Solar for New Hampshire Businesses

For small and independent businesses in New Hampshire faced with rising energy costs, clean technologies like onsite solar generation, battery storage, and efficient building and transportation electrification are critical means of managing both costs and carbon emissions. In this testimony, I will focus on the primary cost-saving technology currently available to businesses, solar power, although ReVision Energy also assists businesses with battery storage, air-source heat pumps, and vehicle/fleet electrification. (These solar-adjacent technologies are fully commercialized but face state-specific regulatory/permitting hurdles that make them more difficult to deploy at scale in New Hampshire, in spite of significant private investment and federal incentives.)

Installing solar panels directly on business rooftops or adjacent land reduces reliance on grid electricity and provides the lowest available cost of energy in New Hampshire. The average retail price of electricity for small commercial customers in New Hampshire's major utility service territory (Eversource G rate class) over the past three years is 17.9 cents per kilowatt-hour (kWh), including supply, delivery, and other volumetric (per-kWh) charges. Time-of-use demand charges (measured per kW) can raise the effective rate another 25-50%. By contrast, solar energy that is generated and used onsite by small

businesses in New Hampshire typically provides a long-term levelized cost of energy (LCOE) between 2-5 cents per kWh, or 80-90% less than utility rates. This LCOE is inclusive of the upfront engineering, procurement, and construction (EPC) costs as well as annual operations and maintenance costs and inverter replacement midway through the system life. It also factors in local weather conditions and gradual degradation of the solar panels, which are guaranteed by manufacturers to produce at least 99.5% of the power generated in the prior year (0.5% annual degradation) over a 25-year standard warranty term.

As a result, businesses that are able to installing solar panels directly on their facilities typically enjoy a payback period of around 10 years or less in New Hampshire and sometimes as short as 5-7 years, a fraction of the 25-year warranty period and 40+ year commercial lifespan of today's solar panels. This translates to an internal rate of return (IRR) on their investment of between 10% and 15%, higher than the average performance of the stock market and well above even the current elevated cost of capital. When businesses choose to finance their onsite solar through local banks or other lenders, they are often cashflow-positive throughout the 10-15 year loan period. My company, ReVision Energy, has benefited in this way from rooftop solar generation at our branches and we have seen similar benefits across the nearly 1,000 onsite commercial projects we have installed in New Hampshire and neighboring states since 2003.

Offsite Solar for New Hampshire Businesses

The picture is significantly more complicated when it comes to offsite community solar farms in New Hampshire, which deliver clean electricity directly to the grid to offset the needs of small businesses and other designated energy users elsewhere in the utility service territory. Community solar projects are typically located on municipal landfills, brownfields, or other vacant lands, although neighboring states are also encouraging the use of parking lots and rooftops for such community-scale projects. Because of their versatility and scale, these projects are essential for both expanding access to cost-saving solar and accelerating the clean energy transition – especially for very small businesses and families that do not own their facilities or whose roofs/grounds are not suitable for onsite solar.

Small businesses can participate in offsite community solar farms as either a subscriber with no upfront capital cost and modest energy savings or as a shareholder with an upfront cost based on scale and

substantial energy savings. In the former case, the business subscribes their annual electricity load to the solar farm and receives monthly bill credits for a small portion of the value of energy delivered to the grid, while the bulk of the energy value goes to the system owner who financed and maintains the project. In the latter case, the business is a part-owner of the community solar farm and generates a reasonable return on their investment through the full energy payments they receive on their utility bills – provided the project can overcome a range of net metering, permitting, and interconnection hurdles. These three sets of hurdles are often prohibitively high in New Hampshire, which has yet to see community solar take hold even as other Northeast states are rapidly deploying both offsite and onsite projects. For our part, ReVision Energy has installed numerous community solar farms in neighboring states, which has allowed us to invest and hire more people outside than inside New Hampshire.

When it comes to the first hurdle, net metering policy, New Hampshire's PUC 900 rules effectively discourage offsite community solar projects by valuing electrons delivered to the grid between 25% and 50% less than those consumed onsite (depending on the utility and time of year). In practical terms, this means solar energy generated by a community solar farm today is valued at just 10.4 cents per kWh, roughly half the empirical value of solar according to the NH Department of Energy and roughly half the value paid under net metering in other states. This in spite of the fact that both onsite and offsite projects serve the same basic function of reducing system load around periods of high demand, thereby reducing our reliance on costly and polluting peaker power plants which increase electricity rates for everyone.

A related net metering hurdle is New Hampshire's arbitrary 1 megawatt (MW) AC cap on the size of community solar farms that serve businesses, families, and nonprofits – far below the standard 1-5 MW range for offsite projects in other states. This arbitrary cap corresponds to approximately 4 acres of land or 2 acres of roof/parking lot area, which is smaller than the size of most landfills or big box store roofs, and makes it difficult for projects to achieve meaningful economies of scale. Aligning net metering rates for both offsite and onsite projects with the empirical value of solar to the grid, and raising the arbitrary 1 MW cap to 5 MW, would create significant incentives for more community solar development and directly benefit small businesses. The New Hampshire Legislature has passed bipartisan legislation to expand net metering multiple times since 2018 only to see it vetoed each time by the current governor.

Permitting is also a large and growing impediment to offsite community solar farms in New Hampshire. During the past decade in which ReVision Energy has been actively developing community solar farms in New England, we have learned that scale is essential to making projects pencil given the largely fixed permitting and associated site preparation costs on projects between 1-5 MW. It is now common for civil/environmental permitting in New Hampshire to cost \$100,000 or more on account of the state's unusual civil/environmental engineering requirements for projects as small as 2.5 acres; in Maine and other states, such stringent requirements only apply to projects 20 acres or larger and federal permitting is rarely at issue on smaller projects. Meanwhile, site preparation can reach as high as \$1 million for community solar farms. Even when New Hampshire projects can afford permitting and site preparation costs, they have no assurance of actually receiving the required local and state permits as there are multiple veto points based on highly variable, localized zoning procedures. As a case in point, solar farms are sometimes treated like traditional commercial developments such as shopping malls, without due consideration of their actual environmental and community impact. We have had multiple community solar projects blocked in New Hampshire after years of development work based of seemingly arbitrary standards and local preferences.

Finally, the utility interconnection process is a major hurdle for offsite community solar farms and certain large onsite projects in New Hampshire. Historically, onsite solar projects were approved for interconnection by the local utility within a matter of weeks for a nominal cost while larger offsite projects took 3-6 months at a cost of \$3,000-\$10,000. Today, onsite projects as large as 1 MW can still be approved relatively efficiently while larger offsite projects are routinely held up for multiple years and required to pay \$25,000-\$50,000 for utility system impact and related studies, particularly in New Hampshire's largest utility where most community solar development is taking place. Interconnection approval is generally conditioned on the project developer paying the utility to make substantial upgrades to the local distribution grid, which cost between \$250,000-\$1 million for projects as small as 0.5 MW. Many of these system upgrades are far removed from the solar project itself and provide tangible benefits to the utility and the public, such as increased grid capacity and resiliency. The duration, cost, and scope of utility studies and upgrades in New Hampshire is significantly greater than those for comparable projects our company regularly builds in neighboring states, thanks to the absence of statewide interconnection rules or procedures utilities must follow here.

If New Hampshire policymakers wish to increase the amount of overall solar generation from its current low level of 1.84% of state electricity supply and enable small businesses that lack onsite generation potential to benefit from solar, they will need to address the net metering, permitting, and interconnection hurdles above. The current net metering docket at the NH Public Utilities Commission (DE 22-060) is unlikely to increase, and may decrease, the value of net metered solar electricity (against the findings of the NH Department of Energy) and there is little sign of improvement on permitting or interconnection in the next year. Utility interconnection rules are expected in 2026.

Federal Solar Policy

As I have tried to show above, there are significant gaps between onsite solar projects businesses install to power their electricity loads directly and offsite projects intended to share the benefits of solar with multiple participants. Federal solar policy, especially the Inflation Reduction Act, has been a game changer for small businesses going solar by reducing the upfront cost for projects of all kinds. It has resulted in onsite projects becoming highly economic in most cases, even for very small businesses that own their roof or land, and has expanded the range of feasible offsite projects in spite of persistent hurdles in New Hampshire.

When my team and I evaluate solar opportunities for a small business, one of the first questions we ask is whether the business or its owner(s) have sufficient tax liability to take full advantage of the Section 48 investment tax credit (ITC) since it was restored to its prior full value of 30% under the IRA. In most cases, the answer is yes, especially since the IRA extended the ITC carry-back period from one year to three while maintaining the 20-year carry-forward provision. Being able to reduce the upfront cost by 30%, instead of the nominal 10% scheduled ITC credit prior to passage of the IRA, is crucial for many businesses. It can often make a (non-essential) solar investment highly competitive with other capital projects, which might otherwise be higher on their priority list but which generally cannot deliver the same financial and environmental benefits over the long term.

In addition to restoring the 30% ITC for 10 years and providing much-needed certainty for business planning, the IRA also established "bonus" tax credits of 10-20% each, which are generally targeted to

low-moderate income communities but which can also be accessed by small businesses in certain cases. Businesses located in coal closure communities or on federally-recognized Indian lands are eligible for a 10% bonus ITC (currently not applicable in New Hampshire) and those which utilize domestically-manufactured solar equipment are eligible for the same. Fortunately, the American solar supply chain is rapidly expanding post-IRA, with several multi-billion dollar domestic investments in new solar manufacturing now underway; we expect to be able to provide customers with eligible domestic content in early 2025.

Federal REAP grants under the Renewable Energy for America Program at the U.S. Department of Agriculture (USDA) have also been crucial to solar adoption by small businesses, especially farms and other rural businesses that often lack the tax "appetite" to monetize the ITC and depreciation. The IRA doubled the amount of REAP grants eligible businesses could receive from 25 to 50% of project costs, capped at \$1 million, and increased the total pool of available funds substantially. As a result, several dozen small New Hampshire businesses were encouraged to seriously consider solar with ReVision Energy for the first time. Although the spike in demand produced a sizable backlog of applications, we were able to secure REAP grants, in partnership with the local USDA branch, for more than ten small businesses across the state. Unfortunately, this month, September 2024 marks the last month in which businesses can even apply for REAP grants and we do expect a significant drop-off in interest in solar from rural businesses unless Congress is able to extend the program under the pending farm bill or other legislation.

Given the limited availability of REAP grants to-date and the possibility that they will be discontinued going forward, small businesses in New Hampshire will be in need of other financing or incentive programs to help them make the upfront solar investment. Interest rate buydowns or other financing mechanisms that bring the cost of capital below its current historically high rates would make a major difference. We are eagerly awaiting more information about such financing opportunities coming out of the Greenhouse Gas Reduction Fund at the Environmental Protection Agency, which was also established under the IRA.

Finally, we believe the federal government could play a significant role in incentivizing states like New Hampshire to remove unnecessary barriers to especially offsite community solar projects by adopting

established net metering, permitting, and interconnection best practices. It could also make more resources available for badly-needed upgrades to our outdated utility grid, not just at the transmission level for utility-scale projects but also at the distribution level for community solar. We are already seeing funds for utility upgrades flow into neighboring states and hope New Hampshire will also benefit so that more small businesses have the opportunity to participate in community solar.

Solar Industry and Economic Impact

In spite of the hurdles discussed above, solar has become a major contributor to New Hampshire's economy with an estimated investment of \$187 million in 2023 alone, according to the latest 2024 [Solar Market Insight report](#). As of Q2 2024, there are 287 megawatts (MW) of installed solar capacity in New Hampshire – enough to power 45,902 homes. This represents substantial growth although it is also a small fraction of the more than 5,300 MW and 1,100 MW deployed to date in Massachusetts and Maine, respectively. New Hampshire currently ranks 45th in the United States for solar capacity. Approximately 64 solar companies currently operate in New Hampshire, including 19 solar manufacturers and 22 installers/developers.

As one of New Hampshire's leading solar installers and a certified B Corporation, ReVision Energy is proud to employ approximately 100 solar professionals in state, including licensed electricians, electrical apprentices, engineers, project managers, and sales, marketing, permitting, and finance specialists. We are also a 100% employee-owned business, meaning each team member enjoys a shared stake in the success of ReVision Energy via our Employee Stock Ownership Plan (ESOP), an ownership structure that is encouraged by federal tax policy. We have learned over the years that socially-responsible business practices, as represented by our ESOP and B Corp certification, help our business thrive, especially when it comes to recruiting and retaining top talent over the long term.

As part of ReVision's commitment to our employee owners and workforce development broadly, we took the initiative in 2017 to launch the nation's first in-house electrical apprenticeship program at a U.S. solar company. Under ReVision Energy Training Center (RETC), individuals without prior experience in solar or the trades can earn competitive full-time wages and enjoy the full benefits of employee-ownership

while completing their mandatory 8,000 apprenticeship hours to earn their electrical license. More than 50 individuals have graduated from our electrical apprenticeship program to-date and we recently added additional apprenticeship programs in partnership with the U.S. Department of Labor. Through these and other initiatives, including daily educational programs offered to K-12 schools, ReVision Energy is committed to repositioning the trades out of our belief that “electricians will save the world.”