

Large Business Program

Kenyon Hill Farm

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Kenyon Hill Farm is a family-owned dairy farm milking 430 head, located in Cambridge, NY, an hour north of Albany.

In 2015 the Nolan family embarked on an effort to improve the efficiency of their farm to decrease costs, while also adding improvements that would increase the productivity of their herd. National Grid played an integral role in helping the Nolans achieve both objectives through over \$18,000 in energy efficiency incentives, and a \$50,000 grant through our Economic Development Agribusiness program.

Energy Efficiency upgrades for reduced costs and improved safety

Plate Cooler — reduced costs and improved quality

The farm's stainless steel plate cooler uses water to pre-cool the milk, saving significant refrigeration costs. This low-cost cooling method results in a higher quality product and reduces the run time and stress on their cooling system. As an added bonus, the cows will drink more of the slightly warmed water in the cold winter months, providing added milk production.

Freestall lighting for improved safety

Like many older freestalls, lighting in this large barn was a challenge. The older 400 watt metal halide lights were inadequate for the task and consumed significant energy as they were on 24/7. National Grid partner, The Radiant Store in Troy, NY, installed new 70 watt low bay LED lights that improved the lighting and perform better in the cold weather. In addition to dramatic savings, the improved lighting makes a safer work environment, allows for easier completion of tasks within the barn, such as manure cleanout, and the Nolans have found that better lighting allows them to spot any issues with their cows much quicker.

Plate Cooler result:

KWH Savings: 24,076 kWh

Simple Payback: 1 year

Annual electric savings: \$2,672

National Grid Incentive: \$1,400

Freestall Lighting result:

KWH Savings: 198,677 kWh

Simple Payback: 1 year

Annual electric savings: \$23,841

National Grid Incentive: \$12,000



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Exterior Lighting – LEDs for savings and security

Following on the success of their freestall lighting project, the Nolan family again enlisted the services of the Radiant Store to convert their exterior high pressure sodium and mercury vapor lights with LEDs. The comparison is dramatic as the LED lights provide excellent color rendition, making many areas appear far brighter even though the light levels are roughly the same. In addition to the savings realized, safety and security have been greatly enhanced. As many winter tasks are performed during Standard Time when it is dark, being able to see trip hazards and obstacles is an added benefit.

Economic Development Grant to Kenyon Hill Farm

National Grid's Agribusiness Productivity Programs provided a \$50,000 grant to Kenyon Hill Farm. National Grid's economic development efforts focus on facilitating customer growth through infrastructure assistance, energy efficiency and productivity improvement. The Agribusiness Productivity Program provides a reimbursement grant to help fund energy efficiency, renewable energy delivery and/or productivity improvements undertaken by dairy businesses, dairy farms and agricultural facilities located within National Grid's service territory in Upstate New York.

Through the Agribusiness Program, National Grid helped Kenyon Hill Farm with its recent energy efficiency project, which included the construction of a new dairy milking facility utilizing robotic machinery. The facility has LED lighting, high efficiency HVAC, renewable energy and related building efficiency measures. As part of the equipment purchases, the Farm installed an air compressor system utilizing scroll technology as well as an energy efficient plate cooler incentivized in part through National Grid's traditional energy efficiency programs.

This expansion allows the farm to increase its productivity and output, while employing energy efficiency measures.

The project resulted in increased productivity, energy efficiency, job retention and more than \$500,000 in capital investment. The ability to pool economic development resources with traditional energy efficiency incentives frees necessary private capital for farms to reinvest in additional machinery and equipment, productivity measures and employees – leading to a more competitive and stronger Upstate New York economy.

Exterior Lighting result:

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|---------------------------------|------------|
| KWH Savings: | 38,325 kWh |
| Simple Payback: | 2.2 years |
| Annual electric savings: | \$4,599 |
| National Grid Incentive: | \$5,000 |

"We had been dissatisfied with our freestall lighting for quite a while but knew it was an expensive project to switch out all the lights. With the National Grid incentives, we were finally able to make the change and we really love the new lighting."

- Mike Nolan, Partner

Strategic Partners

Lighting Partner - The Radiant Store, Troy, NY

