## fter Ten Years, Putney Co-op's Solar Dream is Coming True

There are times when people enjoy their work so much that it shows. Interviewing Victoria Roberts of Southern Vermont Solar (SVS) about the installation her company is doing at the Putney Co-op, in Putney, Vermont, was one of those times. We might suspect that Roberts always likes her work. but in this case, the solar system is going up on the roof of her own co-op. She was clearly enjoying herself when she told us, "We do the majority of our food shopping at the Putney Co-op. They give so much for our community. I am a member there I am part of it."

The Putney Co-op has been considering renew-

able energy for quite a while. Michael Wells, the vice president of the board of directors, told us they had been working on a solar array ten years ago, but "various snafus" had prevented the project from moving forward. Unable to install their own system, they bought into an offsite array for some of their electricity. The idea of having an array of their own never died, however. Wells said, "We are a co-op, and we like to be a model business, setting a good example for the commu-

The Putney Co-op's system will have 82



The highly visible and well-known Putney Co-op on Route 5 in Putney, Vermont.

Hanwha Q Cells solar panels, each with a capacity of 400 watts. This produces a system of 32.8 kilowatts (kW), DC, or 30.0 kW, AC. The design includes three inverters, made by SolarEdge. The solar panels will be mounted on the roof of the building using an IronRidge racking system.

As a food facility, the Co-op uses a lot of electricity, and its average monthly electricity bill was \$1,748. Including the 30% Federal incentives, the solar system is expected to save \$556 per month, offsetting 32% of the cost for the system.

The result of these figures is a payback

Saving the environment costs less than polluting it.

time of 8.2 years. The system is expected to last at least 25 years, however, and two-thirds of the time the solar array is in use will be after it is paid off. This means a net saving over the lifetime of the equipment of \$205,230, for a 275% return on the investment. We were interested to see that the levelized cost of energy from the system is 16¢ per kilowatt-hour, making it an example, showing that saving the environment

costs less than polluting it.

The Hanwha Q Cells model used for the Putney Co-op, is the Q.PEAK DUO BLK ML-G10. Its zero gap cell layout boosts module efficiency up to 20.9%, a value that is unusually high. It is also designed to deliver optimal yields of energy, regardless of the weather. This means that the cells will do about the best job possible during periods of low light, such as overcast or rainy days. The panels are warranted for a 25-year lifetime, and they are expected to deliver 86% of their original output after 25 years of use.

The Putney Co-op is in a highly visible location, just off Route 5. About a third of its trade is from people on the road, many of whom stop in while they are on trips. That makes the solar array on its roof a great advertisement for solar power, achieving Michael Wells' goal of being an example for the broader community.

The Southern Vermont Solar website is svtsolar.com. The Putney Co-op website is https://putneyfood.coop. 🛟

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