



OCCUPANCY SENSORS

for Small Businesses During COVID

Bowling alleys and many other businesses across Massachusetts were shut down during the height of the pandemic, but because of National Grid's COVID-19 Pandemic Small Business Recovery Grant Program, Cove Bowling and Entertainment used a lighting project to bring new life and vitality to its business without paying a penny.

When the owners of the business first started to have discussions with National Grid about ways to improve lighting at their facility, the exterior was a major focus. The only sign of night life at the Great Barrington-based facility was a softly lit red neon sign that said "COVE." Light was missing altogether from the parking lot, and the exterior soffit lights near the entrance were extraordinarily dim.

"The exterior signage was something we very much wanted to fix," said Tom Hankey, co-owner of Cove Bowling and Entertainment. "Many people thought the property had been abandoned because the sign was out. I received so many calls from customers asking if we were still open."

The 26,000-square-foot facility was also in need of lighting upgrades in the interior. The whole premises was very dark, especially in the pinsetting pit, where maintenance repairs were sometimes required. The two-level, nine-hole indoor minigolf course had especially dark shadows in the corners that made it hard to see.

The breaker box setup on the property also brought unique energy usage challenges because the offices, restaurant, pro-shop and bathrooms were all tied together on one circuit, making it impossible to institute controls that could turn off lights in areas of the building that weren't in use.

"We were in discussions with National Grid about a lighting project, and then COVID hit," said Juanita O'Rourke, co-owner of Cove Bowling and Entertainment. "Shutting down put us in a position that made it hard to make a capital investment.

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"Our electric bill has gone down significantly and met all the projections. That's made an enormous difference for our business. It has helped us make other improvements beyond just the lighting. It has been a winwin all around."

- Tom Hankey, co-owner of Cove Bowling and Entertainment.



Walt Pazderski (left) from Energy Source discusses the results of the lighting project with Tom Hankey, co-owner of Cove Bowling and Entertainment.

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That is until we heard about a National Grid program that was designed to help small businesses that were struggling because of the pandemic. We called to learn more."

The outreach led to a virtual energy assessment conducted by National Grid's energy partner, Energy Source. The thorough assessment reviewed the energy usage on the premises, the types of lamps and fixtures used, some of the challenges with the breaker box, and even explored solutions for a vintage Coca-Cola wall clock that was no longer lighting up.

It was determined that the bowling alley sign used fluorescent lamps that faded over time, but were still drawing 100% of the power required—a significant energy drain. Energy Source recommended customized LED lamps that would fit the quadrilateral shape of the sign and avoid dark spots that would have appeared in the past. They also recommended a switch to brighter and less energy-draining LED canopy lights for the soffits and the addition of two floodlights mounted on the side of the building to brighten the parking lot.

"It was very important to me to make the signs and exterior much more appealing, and the work they did was tremendous," Hankey said. "It certainly has made a big impact on our business. If they had only done that, they would have been my heroes, but they recommended and did so much more."

The dim fluorescent lamps on the concourse and over the bowling lanes were replaced with LED bulbs after some minor rewiring. The fluorescent lamps that shine on the pins were also replaced.

"The lights are much brighter than the dull look we had before," Hankey said. "The scoring systems and cameras near the pinsetters are now more accurate and running better."

179

LED lamps/ fixtures replaced fluorescent lights



ost annual savings

"We also had to make sure the bulb color temperatures were similar to what the league bowlers prefer," said Walt Pazderski, a senior energy-efficiency consultant at Energy Source, who conducted the energy assessment. "The whole customer base like their lights a certain way, so the LEDs we used to replace the fluorescents were at 4,000° Kelvin. The bowlers definitely saw the difference and were happy with what was done."



New LED lamps help the pins look brighter and even enhance the scoring systems and cameras near the pinsetters to run better and be more accurate.

The pinsetting pit may have been the darkest place in the facility before the retrofit, but after replacing the lamps with LED bulbs, it became much easier to see and a safer place to take care of any needed repairs. Maintenance efficiency improved significantly with the upgrade.

Energy Source identified key circuits for the restrooms and utilized special control strategies to isolate the lights to turn on only when someone was actually in the space. Before the control changes, the lights in the restrooms were on continually for an average of 11 hours a day, seven days a week.

The simple replacement of LED lamps in the nine-hole mini-golf area of the building made it much easier to see and immediately enhanced the space. Energy Source even found a way to get a special-sized LED lamp that could fit in a vintage Coca-Cola clock that had been burnt out for years. The iconic clock was a staple of the bowling alley, something that bowlers loved and were thrilled to see come back to life.

In the end, 179 lamps were replaced at the bowling alley, and the project cost \$44,903. But because of National Grid's program, which provided incentives of 100% of the cost, Cove Bowling paid \$0. Not only that, they save about 57,700 kWh annually, which is worth approximately \$10,400 per year.

"Our electric bill has gone down significantly and met all the projections," Hankey said. "That's made an enormous difference for our business. It has helped us make other improvements beyond just the lighting. It has been a win-win all around, and we're really happy with the work National Grid, Walt Pazderski and Energy Source have done for us to make this happen."

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