

Case Study: Mi Casita, Carbondale

By Bob Ward/CLEER



Mi Casita cutting energy costs with efficient lighting, cooling

With a recent investment in energy-efficient lighting and refrigeration, Mi Casita in Carbondale was able to cut its utility bills by 15–25 percent.

Owner Kiko Peña has replaced all 67 light bulbs in his authentic Mexican restaurant—a combination of multi-lamp chandeliers and recessed cans in the ceiling—along with several fluorescent kitchen fixtures as well.

In the bar and dining areas, he gave up his old incandescent bulbs for energy-saving LED lights. In the kitchen work area, he ditched 16 old T12 fluorescent tubes (each fixture had four bulbs) and substituted new, energy-efficient T8 fixtures, which put out just as much light with just three bulbs per fixture.



Kiko Peña shows off the new lights in his restaurant, Mi Casita, in Carbondale. Photos by Bob Ward

“This was something we needed to do in order to lower our bills and also to do our part to lower our [carbon] footprint,” he said.

In the kitchen especially, the benefits associated with the new lights go beyond efficiency and cost savings. The T8 bulbs emit a clearer, brighter light that is easier on his employees’ eyes and helps them see exactly what they’re doing. And those details are important in food preparation.

Peña first began exploring the upgrades late last year but didn’t pull the trigger till he spoke with Clean Energy Economy for the Region

Lessons Learned

- New T8 bulbs greatly reduce energy demand and offer brighter, clearer light for workers
- Rebates covered more than two-thirds of the upgrades’ costs
- Owner’s investment will pay for it self in about a year

The Upgrades

- Replaced old fluorescent lamps with electronic T8 lamps
- Replaced fridge motors with super-efficient models
- Fan speed controllers run the fans only when cool air is needed



(CLEER), which got him signed up for the Garfield Clean Energy Challenge and then helped him choose the right improvements to make and find rebates to offset his costs. CLEER makes a point of steering business owners to the easiest, most cost-effective energy upgrades. In Peña's case, his 14-year-old building is well-insulated and retains heat, but the lights and refrigeration equipment were outdated.

"Kiko is a great example of a local businessman who was convinced by the savings predictions and understood that these rebates won't be around for long," said Maisa Metcalf, CLEER Energy Coach, "hopefully more Carbondale businesses will take advantage of the services and rebates we have available right now."

R&A Enterprises of Carbondale did the electrical work for Mi Casita, and FridgeWize from Glenwood replaced the fans and motors in Peña's refrigeration system. The new refrigeration components include super-efficient motors and fan speed



Left: Kiko Peña out front.
Right: Modesto Magadan works in the well-lit kitchen.

controllers that power the fans only when cool air is needed.

"Before I would walk in (to the cooler) and the fans would always be on," Peña said. "Now sometimes it worries me that I don't hear anything."

Of course, the silence is a sign that the cooling system is working correctly, on an as-needed basis. Couple that with energy-efficient "electronically commutated" motors, known as EC motors, and it all adds up to energy savings for Mi Casita.

The total cost of the lighting and refrigeration work was \$5,500. Rebates from Garfield Clean Energy via the Town of Carbondale's dedicated pool of rebate funds and Xcel Energy covered \$4,000 of the total.

"Without the rebates, I doubt I would have done it," said Peña, whose out-of-pocket cost amounted to about \$1,500.

Thanks to the rebates, Peña's util-

ity savings will cover the cost of his investment in roughly one year, and he says, "I'll be happy with that."

"Right now we're seeing savings in energy usage up to about 25 percent," Peña said. "But since the cost of electricity is going up every year, the actual cost savings are around 20 percent."

Lighting and refrigeration were the easiest and most cost-effective improvements available to Mi Casita. Peña isn't planning to do more upgrades right away, but when the time comes to replace his water heater and boiler, however, he'll talk to CLEER first and look to reduce his power bills even more.

Garfield Clean Energy/CLEER
520 S. Third St., Ste. 29
Carbondale CO 81623
970-704-9200
info@cleanenergyeconomy.net
www.cleanenergyeconomy.net
www.garfieldcleanenergy.org