

AC vs. swamp: Cost is the question

By David Crowder El Paso Inc. staff writer | Posted: Sunday, June 24, 2012 6:00 pm

After another month or more of hot days and even hotter ones with some humidity thrown in, numbers of El Pasoans will have vowed to trade that troublesome evaporative cooler for refrigerated air before next summer.

Some might even follow through, while others will put up with temperatures in the 82-degree range inside their home in late July and August, dreaming of cool rooms and air-conditioned nights.

The cost is the only thing stopping us.

Retrofitting a standard, three-bedroom, 1,600-square-foot house with a new refrigerated-air and heating system will generally cost from \$6,000 to \$15,000, depending on the system. More efficient systems cost more to buy and less to run.

“You’re talking about \$40 to \$60 more a month in summer for refrigerated air, but your water bill will come down,” said Alex Berumen, a salesman for Gray Heating and Air Conditioning.

Gray Heating and Air Conditioning specializes in retrofits.

But operating costs depend a lot on how careful the people inside the house are with that new unit when it comes to the temperature and routine maintenance.

Setting the thermostat at 78 degrees and changing the air-conditioner filters regularly can make a great difference in the monthly electric bills.

Berumen added that an air-conditioning system will raise the value of the home and make it easier to sell – something that new home builders in El Paso have already learned.

Made the switch

Westsider Elena Daily said last summer convinced her and her husband that it was time to make the switch.

“It got to the point last August that it wouldn’t cool off the house and we were getting more and more uncomfortable in our own home, so this March we did it, and we don’t regret it at all,” Daily said.

She said she hesitated because she had always heard that moister air is better for people with allergies. But she has found that in two months with refrigerated air, her daughter has less need for her inhaler than before.

And their two-story house stays cleaner because the windows stay closed, keeping dust and pollen out.

“I set it at 75 and it feels cooler than that, which is just right,” she said.



Gray Heating

Employees of Gray Heating and Air Conditioning unload an air conditioner from a truck.

As for the electric bill, she said, last month's was lower than the one from May 2011, which was surprising and may or may not hold true for the next bill.

But they spent about \$18,000 on a high-efficiency, two-unit Rheem system for their two-story home.

Though it's a lot of money, Daily said she keeps remembering what a hassle the evaporative cooler was – from not knowing when to get it ready for summer to the maintenance.

“Now, I do everything with the push of a button,” she said.

EPE's expert

The resident expert on swamp vs. AC at El Paso Electric, Mike Graniczny, said the growing interest in refrigerated air isn't surprising.

It's not so much that people are becoming spoiled – though many who work in air-conditioned offices do find their swamp-cooled homes a bit too warm and damp. It's that conventional evaporative cooling doesn't work as well as it used to, he said.

“El Paso's going through the same thing Phoenix went through 30 years ago,” said Graniczny, manager of the utility's customer technical resource unit.

Once, El Paso and Phoenix were equals – desert cities with an average humidity of about 12 percent.

But Phoenix grew faster and wealthier, planted more grass and trees and literally changed its own climate by making it more humid and less hospitable for the old swamp cooler.

“El Paso has done the same thing,” Graniczny said, noting that the city is pressing toward a population of 800,000, with close to 2 million in Juárez.

“When you have low humidity, an evaporative cooler is ideal,” he said. “I have seen it alluded to that the average humidity in El Paso now is about 25 percent, and an evaporative cooler starts losing its effectiveness at about 25 percent,” he said.

On a 95-degree day with 10 percent humidity, the air coming out of a standard evaporative will be about 70 degrees, which no one would complain about unless that's uncomfortably cool.

“But if we get up to 40 percent humidity, which we can get in our monsoon season in late summer, you get 81-degree air,” he said.

“When we start getting into humidity, people turn the evaporative cooler on and don't turn it off. But that doesn't help because you can only remove so much heat from the air.”

So on that hot muggy day in August, everyone with evaporative cooling is uncomfortable and those with refrigerated air aren't.

Whether the former make the switch depends on economics and demographics. That is, how much can you afford and how valuable your comfort is.

Graniczny said refrigerated air will cost three to five times more than an evaporative cooler.

On the other hand, evaporative cooling is less efficient, and a unit can use up to 100 gallons a day, which always has been an issue for El Paso Water Utilities.

Next to landscape watering, evaporative coolers use the most water in summer.

A few years ago, the water utility offered cash rebates to people who switched.

The rebate program is long since over, but the utility has commissioned UTEP professor Tony Tarquin to do a study of the advantages and disadvantages of the two systems and to find out how many people are using each.

“We’re not encouraging people to go to refrigerated air,” said Graniczny with El Paso Electric. “They’re going to refrigerated air because it’s more comfortable.”

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