



Pink, red and white peonies are symbols of renewal in Lunar New Year celebrations.

Lunar New Year off to a colorful start

HOMELIFE



KAREN SULLIVAN

Last week we were buried in roses. This week, keep your eyes open for peonies, branches of flowering plum trees and lucky bamboo. These will decorate homes around the world as more than 1 billion people celebrate Lunar New Year.

"The Chinese new year is almost like a combination of Christmas, Thanksgiving and New Year's," said John Chen, a Charlotte resident who was born in China's Sichuan province. "You visit friends and relatives and you eat. It's almost a nonstop thing."

The 15-day spring festival to kick off the year of the goat (or sheep, depending who you ask) began Thursday.

While Christians bring pine-scented trees home to celebrate their big winter event, Asians choose flowers for the spring festival as a symbol of renewal.

Families also hang garlands and red banners painted with good wishes. They eat special foods and follow other traditions to bring a year of health, prosperity and good fortune.

Yet the sentiment that keeps coming up when Chen talks about the festivities is reunion. "You socialize with family and friends - that's the priority," he said.

After time with your family, the community celebrates the final day together with a lantern festival, this year on March 5. You'll see the red lanterns hanging outside near doorways or elsewhere.

"We are brightening up the evening," he said. "Instead of fizzling it out, you celebrate going into the new year."

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REACH OUT

SmarterLiving explores trends and innovations for the home.

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Renovation combines charm, efficiency

A couple's 1940s Plaza Midwood home now makes the most of modern ways to save energy

BY KAREN SULLIVAN
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Most of us take small steps to cut heating and cooling costs - high-tech thermostats or an extra sweater after tucking down to a setting of 65 degrees in winter.

This homeowner's strategy was more like the long jump.

A fire in 2012 left Michael and Kelly Gervais with a 1940s Plaza Midwood home in need of a full renovation. Mike Gervais, a structural engineer, saw it as an opportunity to invest more thoughtfully in materials and equipment and, most importantly, in a well-conceived design for his home's heating and cooling system.

The setup that Gervais created with the help of a mechanical engineer is not one you can buy off the shelf. You'd need an engineer who specializes in HVAC systems to produce a similar design.

Gervais invested \$40,000 for an engineer's design, an energy-saving heating and cooling system, insulation and solar panels. He estimates he spent \$15,000 for upgrades not required by building codes.

While in a condo for seven months during renovation, Kelly Gervais suffered from allergy and asthma attacks. That convinced Mike Gervais to add an air filtration system as a part of those costs. She's had no more Claritin binges and no more asthma attacks since moving into the house.

Yearly energy costs before the renovation were \$126 per square foot, compared to \$47 cents per square footage afterward. That's nearly a 63 percent difference.

The savings are nice, but Gervais had other reasons for wanting the upgrades.

"I invest in saving energy because I feel we have a moral obligation to do so," said Gervais, 39. "I invest in a better HVAC system for the better comfort and indoor air quality it provides."

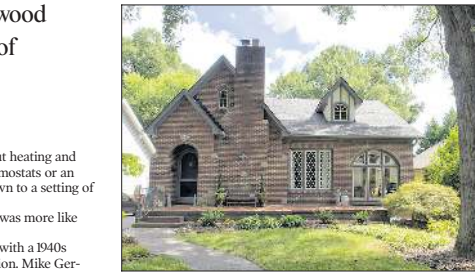
Here's how he did it:

1 Roof: Twenty solar panels produce, on average, about 20 kilowatt hours of power per day. One kWh of energy will power a 100-watt light bulb for 10 hours, according to Duke Energy.

2 Insulated attic: The temperature stays within 5 degrees of that in the basement, even in summer. Gervais accomplished that by having insulation on the roof's interior instead of on the attic floor. Putting insulation inside the roof cavity prevents the hotbox or greenhouse effect, where temperatures in the attic can rise well above the temperature outside. The attic walls have spray-foam and fiberglass batt insulation covered with a foil-like heat shield. Keeping attic temperatures moderate also can reduce energy loss when you have ductwork in the attic.

3 Walls: Added R-13 batt insulation to walls that had been mostly uninsulated. A foil-like heat shield covers the insulation. Tape at the radiant barrier's seams is an extra protection against air and moisture. Caulk prevents air leaks at the joints where the floors and walls meet.

4 Custom heating and cooling system: The system includes an electric heat pump and an energy recovery ventilator. Air from outside is heated or cooled to a moderate temperature before going into the system. As a result, it takes less time and energy to heat or cool air before it flows into the house. A variable-speed blower motor keeps the system from working at full capacity unless temperatures are extreme. Those adjustments can keep costs lower and extend the system's life. High-quality (Merv 16) air filters strip out impurities and UV bulbs help kill germs. A motorized damper can adjust air flow to rooms based on demand.

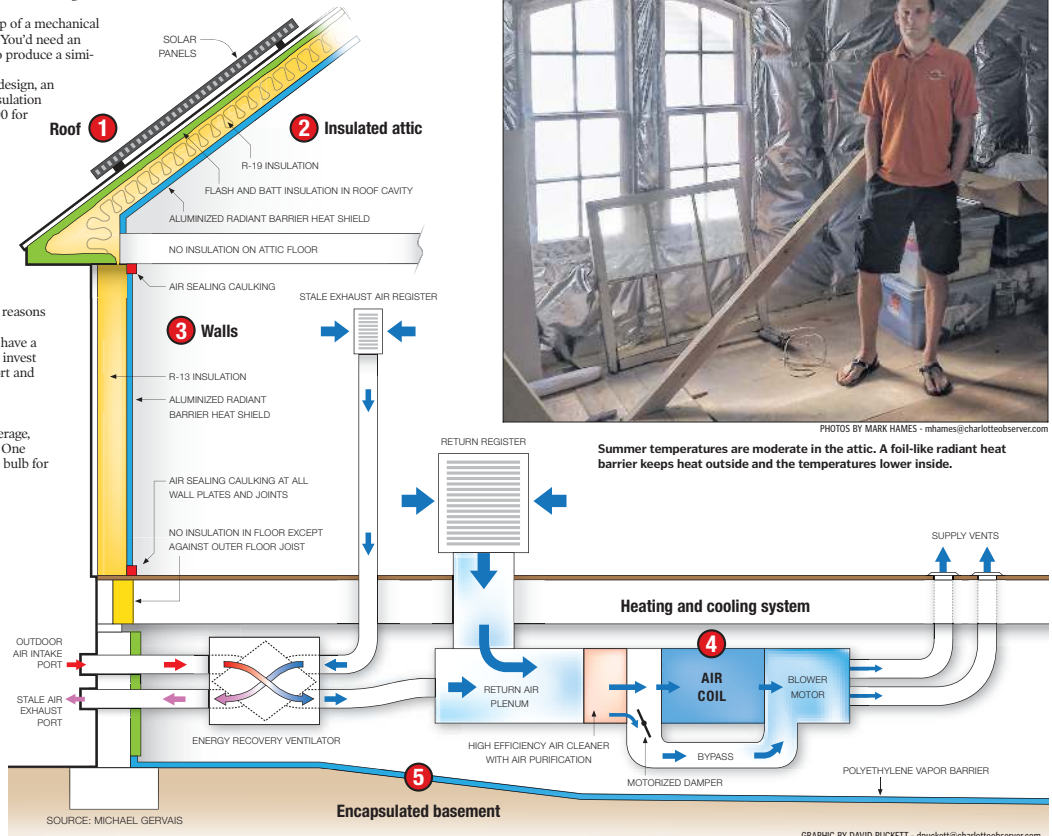


After a fire in 2012, homeowner Michael Gervais made this 1940s Plaza Midwood home more energy-efficient.



PHOTOS BY MARK HAMES - mhames@charlotteobserver.com

Summer temperatures are moderate in the attic. A foil-like radiant heat barrier keeps heat outside and the temperatures lower inside.



SOURCE: MICHAEL GERVAIS

GRAPHIC BY DAVID PUCKETT - dpuckett@charlotteobserver.com

5 Encapsulated basement: Foil-like R10 bubble wrap is draped on walls to insulate and keep moisture out. A sheet of plastic covers the floor as a vapor barrier.

The house

Area: Plaza Midwood **Year built:** 1941
Year purchased: 2007 **Renovation completed:** 2013
Square feet: 2,300 (heated)

RIGHT: Twenty solar panels on the roof produce, on average, about 20 kilowatt hours of power per day at Gervais' house.

See more photos of this home at www.charlotteobserver.com/smarterliving

