

THE

# green Life

IT'S  
EASIER  
THAN  
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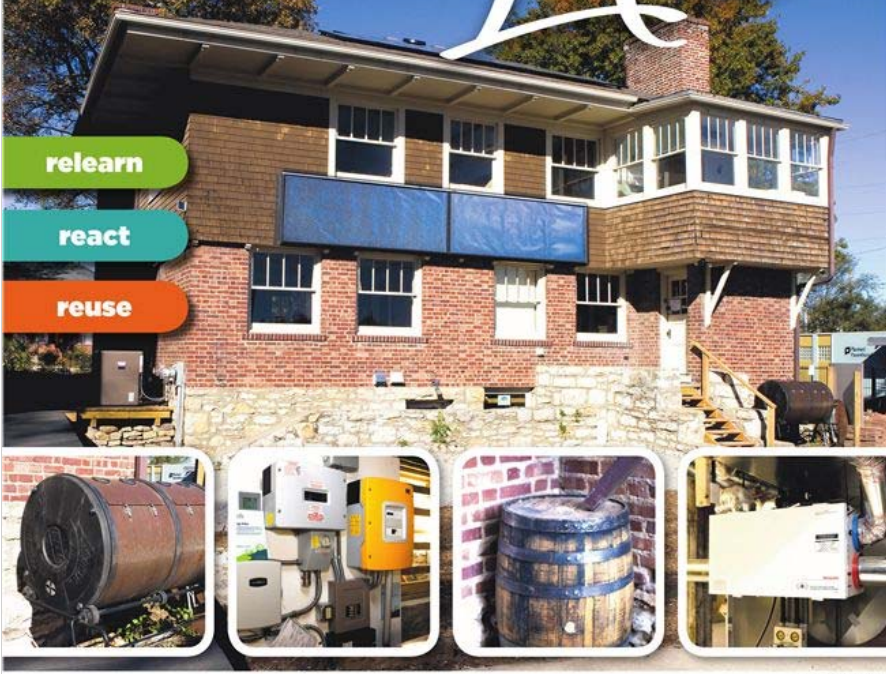


PHOTO: Judy Reveneggi

## One-of-a-kind house offers ideas for a green life

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If you're ready to take steps to living a greener life, a home at the corner of Troost Avenue and Emanuel Cleaver II Boulevard can get you started.

Unlike any other house in Kansas City, Project Living Proof House is a fully-functional home that is filled with ideas for green living both inside and out.

Starting later this month, you can get ideas for environmental improvements to your own home from the century-old renovated house — projected to be 67 percent more efficient as a result of the improvements.

Let's say you're interested in alternative energy sources for heating and cooling your home. Among the options you'll find in the house are a solar air heating system, solar water heating, a biomass pellet stove and a

geothermal heat pump.

Concerned about energy? Energy-efficient lighting, appliances and bathroom fixtures are featured along with a display of Kansas City Power & Light's new smart grid system, including smart grid meters and thermostats.

Would you like to make your home air-tight? Window and door restoration and replacement and several varieties of insulation will be on display.

How about water conservation?

Learn about a water management strategy that will provide for the infiltration of more than 90 percent of the rainwater that falls on the site each year and how to use rainwater in place of potable water.

The project is being spearheaded by the Metropolitan Energy Center, a nonprofit organization with nearly 30 years of experience in energy efficiency and alterna-

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## Here's what you'll find in the Project Living Proof House:

### ENERGY EFFICIENCY ELEMENTS WILL INCLUDE:

- Air sealing at wiring, plumbing, chimney, and fixture penetration and wall joints;
- Attic floor insulation and attic deck insulation with radiant barrier;
- Dense packed, sprayed, and batting insulation for walls;
- Basement wall and rim joist air sealing and insulation options;
- Historic window and door restoration, including weather strip, glazing compound, and storm windows and doors;
- Window replacement using various techniques;
- High efficiency gas furnace with an air source heat pump air conditioner;
- Electric ductless heat pump;
- High efficiency gas-fired tankless water heater;
- High efficiency gas-fired direct-vent fireplace insert;
- Energy or heat recovery ventilator to reduce the heating load;
- Desiccant dehumidifier to reduce the cooling load;
- Smart appliances that will be programmable and provide usage feedback through displays;
- Energy efficient lighting using various technologies;
- Low flow water fixtures in the kitchen and bath with efficiently sized plumbing; and
- Water efficient landscape with native plants, and a smart irrigation system for edible plants.

### ALTERNATIVE ENERGY ELEMENTS WILL INCLUDE:

- Geothermal heat pump with a desuperheater water heater coil;
- Solar air-heat panel system;
- Solar photovoltaic arrays that are net metered with battery backup or grid tied;
- Solar water heating system;
- Air source water heater;
- Solar light tubes;
- Solar powered attic fan;
- Clothesline;
- Biomass pellet space heating stove;
- Electric vehicle charging station; and
- Low pressure natural gas vehicle fill station.

### INDOOR ENVIRONMENTAL QUALITY ELEMENTS WILL INCLUDE:

- Observation of lead safe and asbestos safe renovation guidelines;
- Radon system that will further dehumidify the basement;
- Paints, finishes, and materials that have little or no volatile organic compounds (VOCs);
- Electronic or high media filtration systems on the air handlers in conjunction with a recovery ventilator for the kitchen and bathrooms, and a whole-house dehumidification system;
- Integrated pest management protocol;
- Central vacuum and door mats;
- Central return air with verified room-by-room air exchange rates; and
- All combustion appliances are closed systems - indoor air is not affected by combustion. ○

— Provided by the  
Metropolitan Energy Center

## One-of-a-kind house

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tive energy systems. The house was renovated under the Home Performance with ENERGY STAR program, a partnership between the Environmental Protection Agency and the Department of Energy, with support from Missouri Gas Energy and KCP&L.

Visitors to the home can see first-hand ideas for improving energy efficiency, using alternative energy sources and increasing indoor environmental quality. They can also learn about rain gardens - in the front and back of the house - and even view the first electric vehicle charging station in Kansas City.

The house is adjacent to the green zone project, a 150-block area filled with homes that will be remodeled in environmentally progressive ways.

Dustin Jensen, associate executive director of the Metropolitan Energy Center, the home's project manager, said the house provides useful examples for anyone interested in sustainable and green living, including individuals, builders and remodelers.

"It's more than just a demonstration of mechani-

cal solutions," Jensen said. "It demonstrates an entire system of living green."

Jensen said the home was developed because of a need for a central source of green living demonstrations. "There were not a lot of tangible residential demonstrations, and those that existed were all spread out," he said. "Our idea was to provide a concentrated demonstration of sustainable energy features."

Jason Fulp, community affairs representative for Missouri Gas Energy, said the house provides a real-life demonstration model for residents to "walk through, touch and feel," he said. "Our goal is to teach people how to become energy-efficient without sacrificing comfort."

The project has been designated as the demonstration home for the Kansas City Power & Light Smart Grid Pilot Project, with support from the Department of Energy.

Paul Snyder, KCP&L spokesman, said the smart grid is designed to control appliances at consumers' homes to save energy, reduce cost and increase reliability.

Snyder said smart meters were installed at customer's homes beginning

in late October. "The meter roll-out began in late October, and everyone is expected to have smart meters by the first of the year," he said.

Consumers can access the grid using the MySmart portal website or through in-home devices that operate off radio signals and don't require internet access.

"The grid will offer customers information about their energy use and provide them tools to lower their energy bills," he said.

Snyder said during periods of peak power usage, the smart grid can lower condensers and turn off selected appliances to reduce demand. Smart grid thermostats - which can be programmed to make homes more energy-efficient - will be available free of charge. Jensen said a Metropolitan Energy Center staff member will reside in the house, and tours will be led by staff and student interns that live in a neighboring residence.

A grand opening will be scheduled at the Project Living Proof house later this month. In addition to set hours open to the public, tours will be available by appointment. Call 816-531-7283 for more information. ○



PHOTO: July Borenwegh