

“The extensive remodel and energy-efficiency technologies have brought our house into the 21st century.”

– Michael Wolf, South Park homeowner

“Our house is quiet, comfortable and the air is nice and clean.”

– Jessica Wolf



Home of Michael & Jessica Wolf

Home Profile:

Year Home Built.....	1911
Square Footage.....	1,832
Number of Floors.....	2
Number of Occupants	2
Number of Bedrooms/Baths.....	3/2
Location.....	South Park community of San Diego

Costs and Rebates of Initial Measures:*

Total Pre-Rebate Project Cost.....	\$15,000
Energy Upgrade California Home Upgrade Rebate	\$3,500
Total Post-Rebate Project Cost	\$11,500
Total Modeled Annual Energy Savings.....	35%

Contractor: Energy Integrity

*Energy Upgrade California/SDG&E Project Completion Data



The complete remodel of Michael and Jessica Wolf’s 1911 Craftsman home incorporated Energy Upgrade California™ Home Upgrade energy-efficiency improvements at the design stage and throughout the construction process. They wanted to make their home more comfortable, efficient and modern while maintaining the charm of a turn-of-the-century house. To accommodate some energy improvements, additional construction was required. This included removal and replacement of knob and tube wiring, a building code requirement and a prerequisite for installing insulation, and a new furnace in the attic, replacing a nonworking floor furnace. Wall construction was required to make space to run ducts from the attic to each room. These remodeling costs are not included in the Home Upgrade project costs.

Energy-Efficiency Improvements Completed

- | | |
|--------------------------------|--|
| ① Whole House Air Sealing | ⑥ Dual-pane, Insulated Windows and Doors |
| ② Sealed, Insulated Ducts | ⑦ ENERGY STAR Kitchen Appliances |
| ③ Attic Insulation | ⑧ LED Lights |
| ④ Wall Insulation | |
| ⑤ Tankless Hybrid Water Heater | |

Additional Improvements

- New Furnace
- High-efficiency Clothes Washer
- New Clothes Dryer
- Bathroom Fans
- Programmable Thermostat
- Variable-speed Pool Pump
- Additional LED Lights (interior/ exterior)



No endorsement for any companies or services is intended or implied. This is a project of the San Diego Regional Climate Collaborative. More information on the Climate Collaborative can be found at www.sdcclimatecollaborative.org. The California Center for Sustainable Energy is an independent nonprofit that accelerates the adoption of clean and efficient energy solutions. Energy Upgrade California™ is a program of the California Public Utilities Commission in collaboration with the California Energy Commission, California counties, cities, nonprofit organizations, and the state’s investor-owned utilities. Funding comes from the utilities’ ratepayers under the auspices of the California Public Utilities Commission in addition to incremental funding from the Department of Energy. © 2013 Energy Upgrade California. Trademarks are property of their respective owners. All rights reserved.

Home Upgrade

Michael and Jessica Wolf bought their South Park Craftsman house in August 2012 and were determined to remodel it to their liking before moving in. They also wanted to take advantage of benefits offered by the Energy Upgrade California™ Home Upgrade program to make their home more comfortable and energy efficient.

The remodel involved extensive reconstruction, including an overhaul of the kitchen, bathrooms and many other features. They relied on the expertise of a whole-house home energy rater to help determine specific energy upgrades for their home. Overall, they wanted to have a modern, efficient home with modern amenities, yet maintain the classic beauty and unique features of a turn-of-the-century Craftsman home.

“Our house was built in 1911 and in need of numerous repairs and upgrades,” Michael said. “The extensive remodel and energy-efficiency technologies have brought this house into the 21st century.”

The Wolfs were able to buy their home and make the energy upgrades with a 203-K (FHA) loan, a type of purchase loan based on the value of the home after improvements are completed. This allowed them to make the improvements they desired without undue financial strain. Such loans require an above-board approach, transparency and expertise of a contractor, home inspector and rater to act as liaisons between the homeowner and the lender. Refinances can also be done with a 203-K loan.

The Wolfs considered the energy-efficiency upgrades to be a key part of their remodeling strategy. To accommodate the installation of some Home Upgrade improvements, additional construction was performed as part of the home remodel. The removal and replacement of knob and tube wiring, a building code requirement and a prerequisite for installing insulation, was completed. A new furnace



The attic was sealed and air ducts, a new furnace and blown-in insulation were installed. The canned lights were covered and sealed. To the left of the closet door is one of the shafts constructed to house ducts from the attic to the first floor. A tankless water heater replaced the old water heater. Dual-pane windows were installed on the back of the house.

was installed in the attic, replacing a nonworking floor furnace. Wall construction was required to make space to run the ducts from the attic to each room in the house. These necessary remodeling costs are not included in the Energy Upgrade California Home Upgrade project costs (listed on the front side) but were covered by the 203-K loan.

“The house was over 100 years old and very drafty with air coming in through the windows and floors, and there were visible holes in the house,” Jessica said. “The 1911 furnace did not work, and the previous owners used the kitchen oven and fireplace for heat.”

When the Wolfs moved in, not all of the energy upgrades had been installed. “The air was stuffy but now it is nice and clean since the air sealing in the attic was completed and the ducts and insulation were installed,” Jessica said. “In the winter, we no longer have to bundle up to sleep, and when we use the furnace the warm air stays in the house.” Michael added, “The temperature throughout the house is fairly consistent now.”

Other upgrades that increase the energy efficiency of the Wolf’s home include dual-pane windows, ENERGY STAR appliances, a tankless water heater, LED lights throughout the house and a variable-speed pool pump.

“We are proud of what we did and are pleased to show our family, friends and neighbors the opportunities available to fix up their homes and make them energy efficient,” Michael said.