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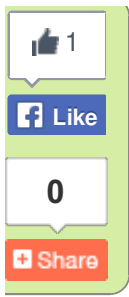


Minneapolis Furnace-Free House Heats with Two Target Space Heaters, Stays Warm

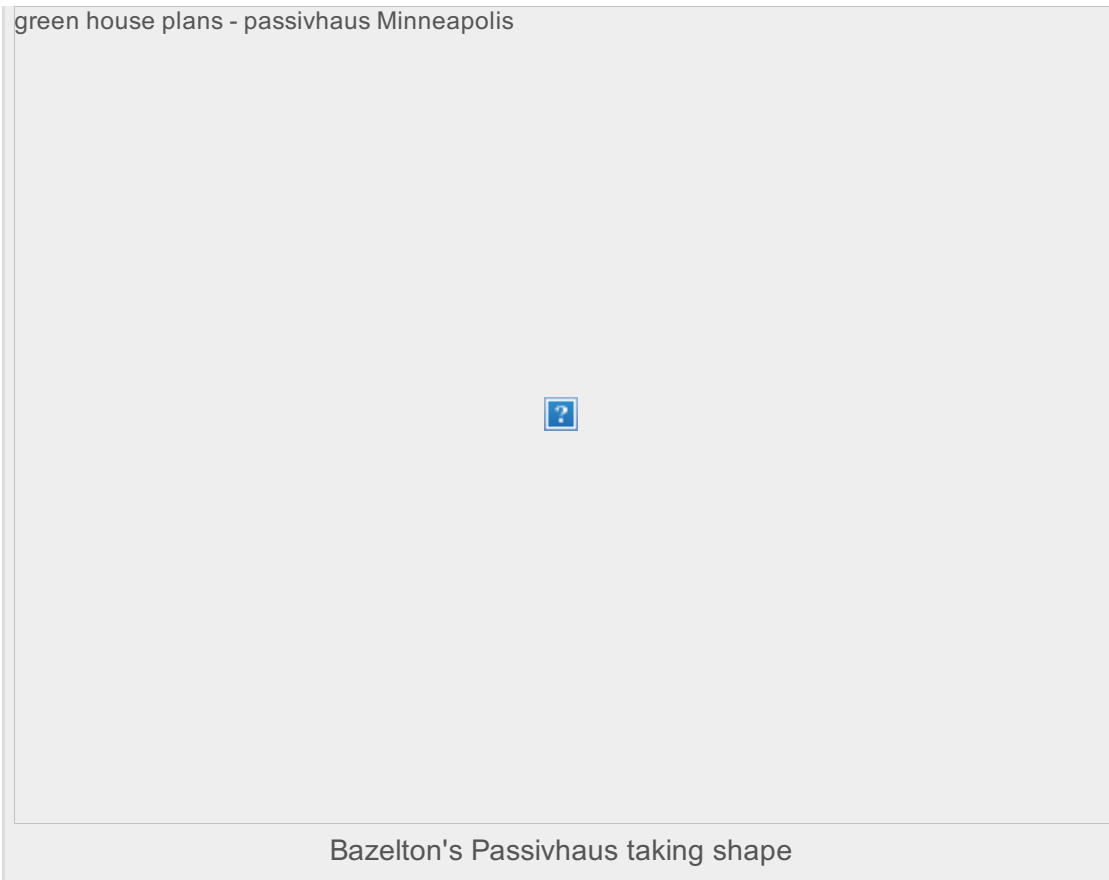
Posted on 12. Dec., 2011 by [Maryruth Belsey Priebe](#) in [Articles](#)

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green house plans - passivhaus Minneapolis



Bazelton's Passivhaus taking shape

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Apparently you can live in Minneapolis without a furnace! Paul Brazelton and his family will be moving into a 1935 furnace-free house, but they won't be freezing this winter. In fact, the family will be living without both the boiler and the fireplace, thanks to using [green house plans](#) for the renovation that will meet the stringent Passivhaus standards for energy efficiency.

This 2,000 square foot home will be warmed by using just two space heaters from Target. The Brazeltons also plan to incorporate the hot water heater into the basement floors for in-floor heating where they'll home school their kids. Of course, the house will also be fitted with high-efficiency insulation over every inch of surface and super efficient doors and windows, too.

Combined, these features will keep in what little heat they generate with the space heaters, which will drastically lower their heating bills compared to other traditional. Tutor homes, even in the dead of winter.

Four years ago, the house had an awkward layout and needed to have a mechanical overhaul. So when the family decided to make an investment in the house, the plans quickly grew from a simple addition to a full-blown green house makeover. This [green house plan](#) will meet the EnerPHit standard for existing homes, which helps to drive energy costs down by between 75% and 09% compared to conventional homes.

Some of the major changes that were made to the house, which might cost as much as \$50 to \$100 per square foot, include:

- Adding triple-paned windows.
- Tearing up the concrete slab to lay EPS foam insulation under the house.
- Adding vertical wooden ribs every few inches to the exterior walls where 9.5 inches of cellulose insulation would be added to meet R44 rating.
- Wrapping the attic in insulation to meet R80 rating.

Sounds like a ton of work, but apparently Brazelton and his builder worked together and despite having never done this type of renovation before, they have learned together the tricks of the Passivhaus trade. They were even able to work with some local supply companies to get discounts on building materials (see the companies listed here: www.minnephithouse.com). The suppliers hope the Brazelton house will serve as a model of this type of green renovation and encourage other homeowners to adopt the same principles.

Update: Apparently the *potential* to heat the home with two space heaters is just that: only a potential at this point. The family currently plans to install a heating system. Nevertheless, the heating system will use considerably less energy than would be the case in a conventionally built home.

green house plans - Brazelton family



Brazeltons family in front of their green house work-in-progress

Images via Minnephithouse.com and Bendbulletin.com



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