

GET AN ENERGY AUDIT YOUR HOUSE WILL LOVE IT

*Don't you suppose these old houses sometimes
wonder if they are all right?*

When we called Zump Urycki from High Desert Weatherization Services to do an energy audit on the WIB (Work in Beauty House*) we just wanted to make the house cozier.

We already have 1KW of PV. (You should get an energy audit before you install solar panels. But Gallup Solar had a name to fulfill.) We also have solar heating in one room, and compact fluorescent lightbulbs (CFLs) throughout the house. But the windows are single pane from the 30's with lovely wrinkles in them and the walls are solid un-insulated brick and stone, impractical to insulate.

*So it was with some trepidation that we welcomed
Zump at the front door.*



We had the utility bills for one year ready.



*Zump got right to work with them. There were no
electric bills, of course.*

We showed him the PV and our solar transport.



He begins by checking every appliance in the house.



He attached a Kill-A-Watt watt-meter to measure the amount of electricity the refrigerator was using in real time.



Next to the hot water heater and furnace to run a combustion analysis. He recommended that the brass flex gas line on the hot water tank be replaced for safety.



Might as well clean out the furnace filter while we are at it...

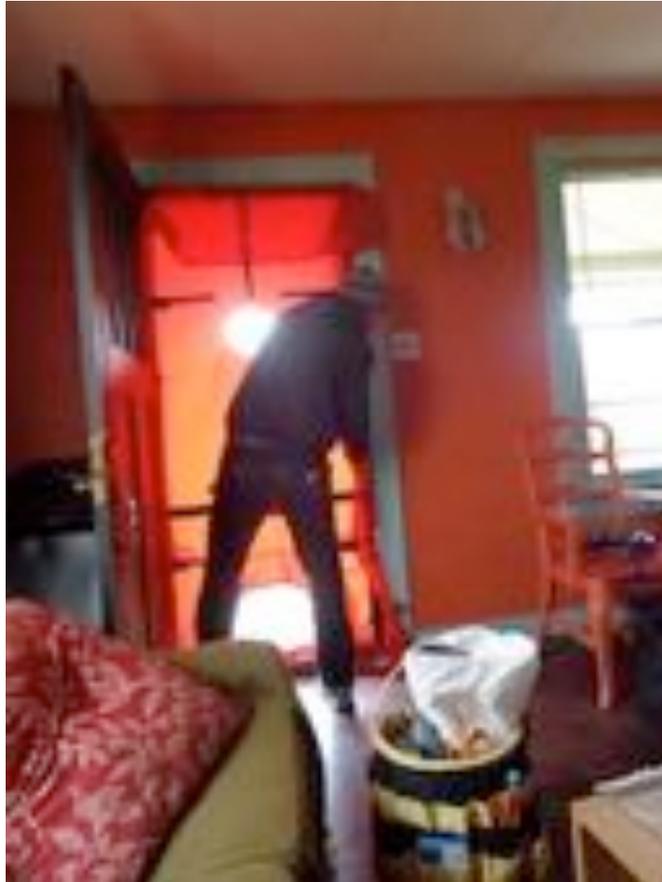


*The space heater in the basement...
Zump looks up and Zump looks down.*

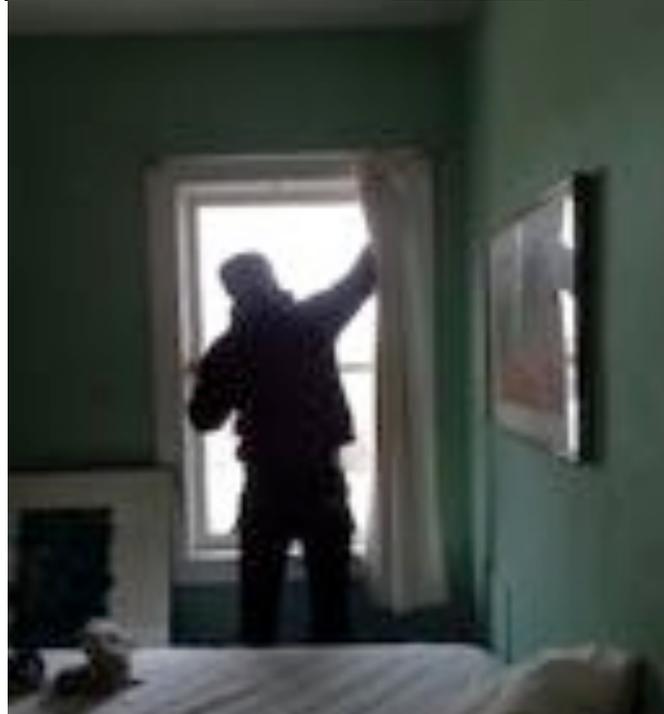


*He checks places that haven't been noticed in 50
years. I can feel the old house basking in the
attention.*

Now for the blower door, a diagnostic tool that measures the air flowing through a house in cubic feet a minute (CFM) at a specific pressure.



With a great whir it sucks air in thru all the nooks and crannies. The house says "this is refreshing but please do something about it."



The manometer, or pressure gauge, reads pressure on the left (50.0) and the airflow amount (4498), in CFM, on the right.



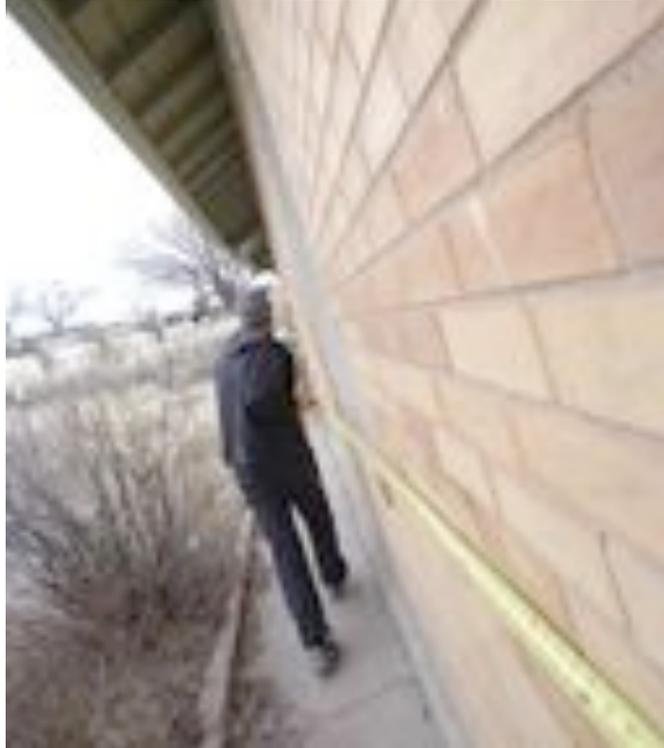
All this was duly recorded for later.

Next Zump donned his protective suit for the truly daunting job of examining the attic.



He is going from the 1920 original into the 1930 addition. He found functioning knob and tube wiring under a mess of rock wool. He emerged safely and recorded the experience.

To finish up he does a tour of the proud little old house, measuring every wall and window.



He draws it all to scale.



About ten days later we met to hear his conclusions. He had a set of recommendations as follows. (Note, they do not include replacing all the windows although he did suggest the possibility of storm windows or plastic, which might be created from the old screens that are in the basement.)

WORK ORDER

Change out brass flex line on DHW with code compliant gas line

Install smoke alarms- at least one per floor within 6' of sleeping rooms.

Install CO alarms- at least one per floor. Screw down DHW vent cap.

Secure DHW blanket with wire. Insulate H2O lines with self-sealing pipe wrap.

Seal return duct system with mastic.

Seal supply duct system with mastic

Foam/Caulk penetrations in kitchen walls/plumbing penetrations in kitchen/BR.

Seal all penetrations in thermal boundary.

Install set back thermostats. x2

Install jamb-ups on exterior doors. x4

Install sweeps on exterior doors. x4

Replace incandescents with LED's.

Replace CFL's with LED's as they go out.

Insulate rim sill box with rigid foam board & foam in place.

Alternative is to use FSK fiberglass R13 batts stapled in place. 152 linear feet

Replace knob & tube wiring. Must be done before attic insulation can be installed by High Desert Weatherization Services, HDWS.

Seal marriage seam between house and office with caulk or foam.

Insulate office floor with R19 FG batt insulation. 189 sq.ft.

Repair plaster ceiling.

Foam-seal ceiling penetrations in attic.

Dam around attic hatch with 1/2" plywood to 16" height. x2

Insulate attic hatch with foam board to at least r38. x2

Gasket attic hatch with foam tape. x2

Dam around chimney with RW batts. x2

Insulate attic to r49 adding 60 bags of cellulose. 1363 sq. ft.

**If you want to give your old house (or a young one!) a little love for a very reasonable price...
Call Joe Z. (Zump) Urycki, a Building Performance Institute (BPI) certified Professional Building Analyst, at High Desert Weatherization Services: 330-221-6668 (cellular) or write highdesertweatherization@gmail.com .**

**Work in Beauty House, inspired by the Navajo prayer,
Walk in Beauty.*