



HOME

PERFORMANCE

A BETTER CHOICE!!!

HAROLD COLEMAN

- O'Fallon Technical Center Graduate 1987
- Grew up in Laclede Town
- Jabari is 9 years old – 7.4 Billion
 - By his 22nd birthday – 8.5 Billion
- Studied Electrical Engineering @ Southern University, Baton Rouge
- ICF associate



WHAT IS “HOME PERFORMANCE”???

HOME PERFORMANCE IS AN APPROACH TO “HOME” IMPROVEMENT THAT CONSIDERS THE WHOLE HOUSE AS A SYSTEM. EVERYTHING THAT OCCURS UNDER THE ROOF, AND WITHIN THE WALLS HAS A DIRECT, LASTING, IMPACT ON THE OCCUPANT.

- The cost to operate the home
 - Mortgage payments, taxes, and insurance are pretty much fixed cost and only controllable at the outset.
 - Cost to operate the home is manageable, once measured.
- The impact on your health and well being
 - Indoor Air Quality - Mold, VOC's, Radon Gas, Carbon Monoxide, Allergens, and many other
 - Overall Comfort – The balance point occurs @ 65 degrees Fahrenheit.

WHERE DO YOU LIVE?

Of course you have an address. More importantly you live on Planet Earth.



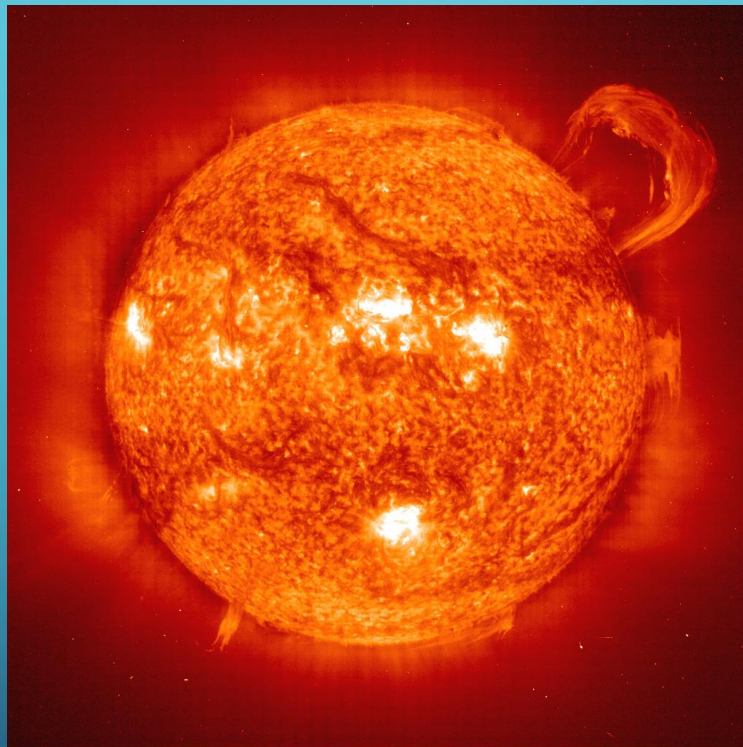
WHERE YOU ACTUALLY LIVE

Basic rules of science apply in keeping you comfortable.

- Laws of Thermodynamics
 - Heat is not created or destroyed.
 - Heat moves, from hot to cold
 - Kinetic and Potential Energy
 - Conduction, Convection, and Radiation
- BTW Gravity

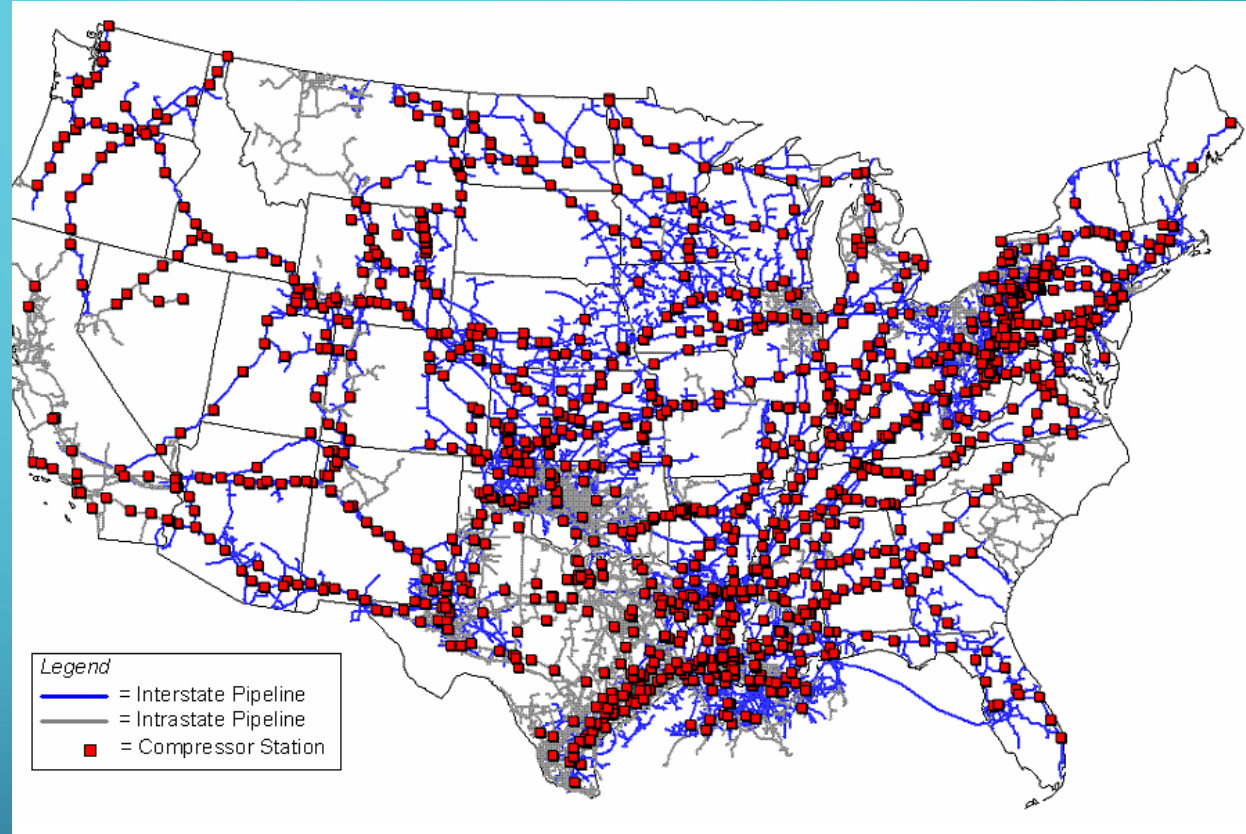


THE ENERGY WE USE - WHAT'S IT WORTH



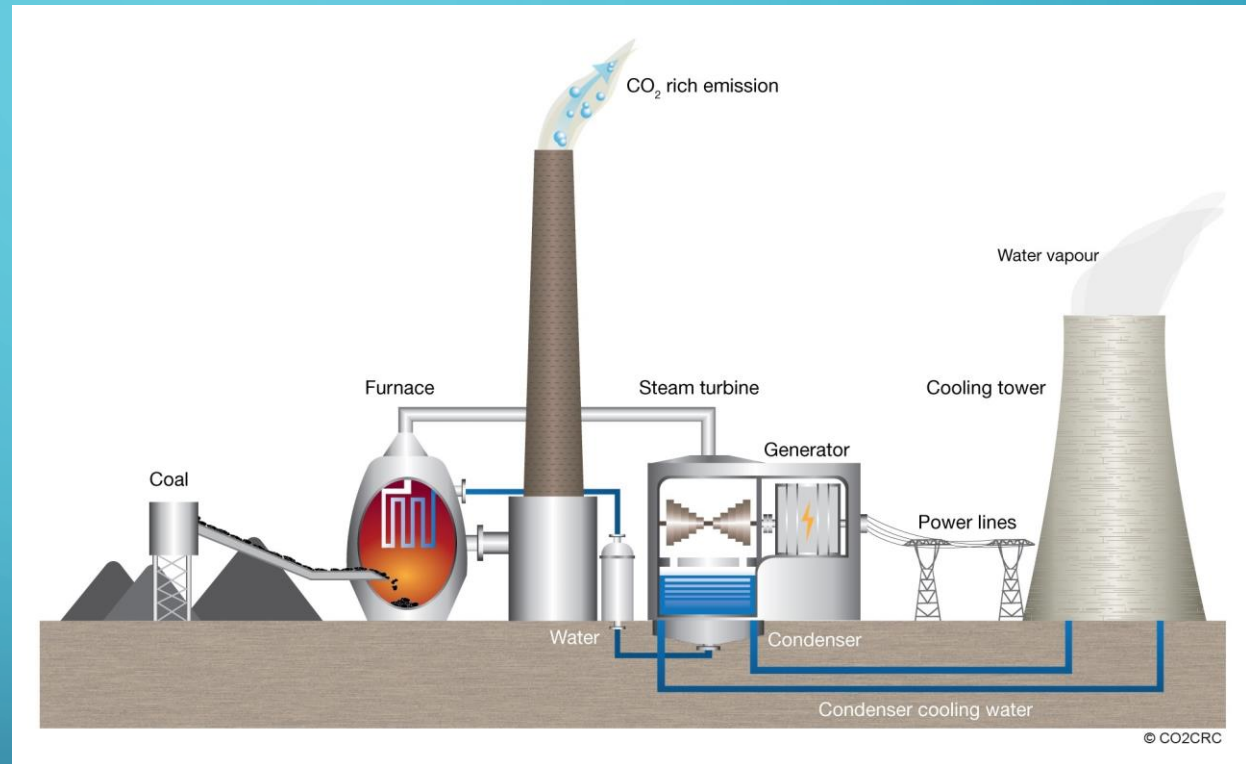
NATURAL GAS

- Widely used to provide heat throughout America.
- Currently being used to generate electricity.
- Increasingly used in the transportation sector.



COAL AND ELECTRICITY

The potential energy in coal is released when burned, and converted to electricity. That electricity is sent to your home through the power grid.



RENEWABLE ENERGY

There are also several sources of
“Renewable Energy”



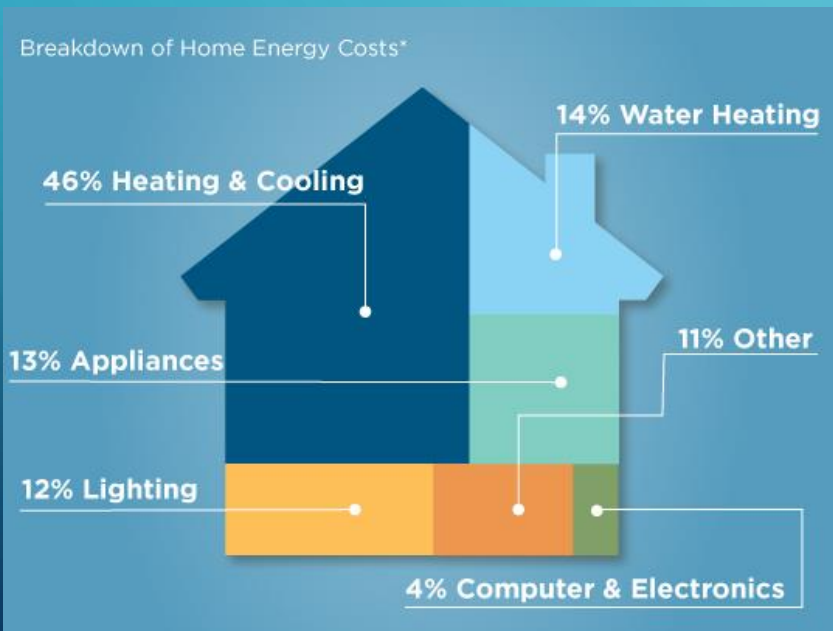
NUCLEAR ENERGY

- Considered “Clean” energy.
- Considered “inexpensive”
- Poses the biggest safety issued ever in human existence.



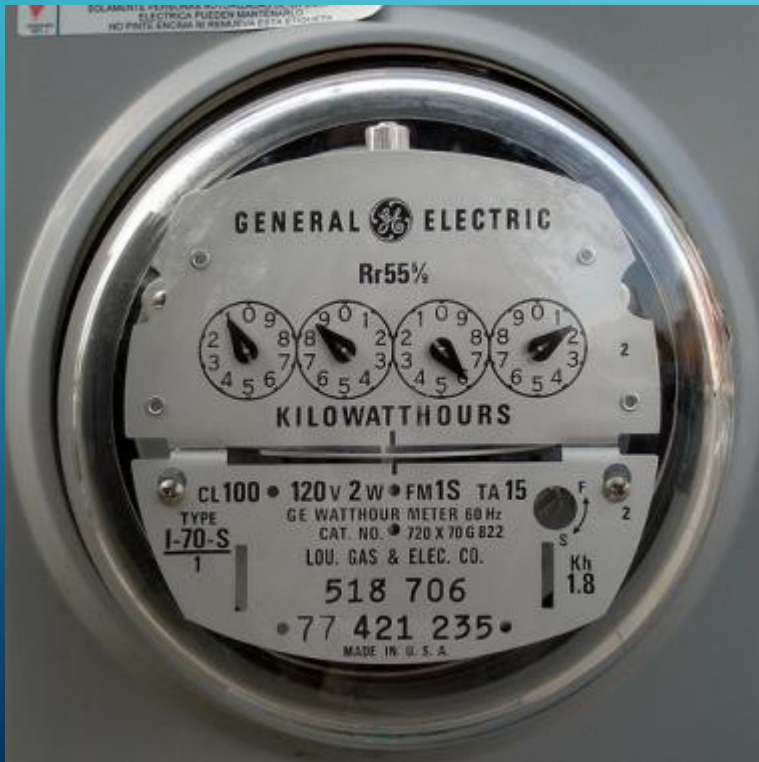
HOW IS ENERGY USED TO KEEP YOU COMFORTABLE

1. Seasonal Consumption
2. Baseload Consumption



IT'S METERED

Once delivered to your home, the energy that you use is metered.



AN ENERGY AUDIT

A home performance upgrade begins with an energy audit. The energy audit is intended to give a complete snapshot of the entire home. National standards have been established by the Building Performance Institute. They took knowledge, and information from several expert agencies to create standards:

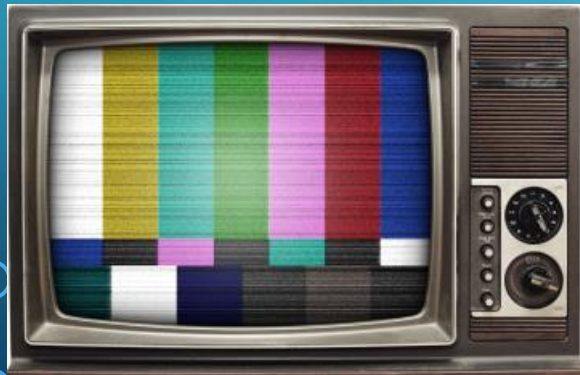
- Lawrence Berkeley National Laboratories
- A.S.H.R.A.E



BASELOAD CONSUMPTION

ENERGY USED ALL YEAR AROUND THAT'S NOT WEATHER DEPENDENT

- DOMESTIC HOT WATER – PIPE INSULATION, WATER HEATER BLANKETS, LOW FLOW AERATORS AND SHOWER HEADS, WATER HEATER BLANKETS, TEMPERATURE REDUCTION, TANKLESS WATER HEATERS
- LIGHTING – L.E.D. AND C.F.L. BULBS, TIMERS, MOTION SWITCHES
- ELECTRONICS – USE SLEEP TIMERS, AND POWER STRIPS
- REFRIGERATOR – MOVE AT LEAST ONE INCH FROM THE WALL, REMOVE UNUSED UNWANTED ITEMS, UPGRADE TO “ENERGY STAR MODELS”, REMOVE ADDITIONAL UNUSED REFRIGERATORS.



SEASONAL CONSUMPTION

ENERGY USED BASED ON WEATHER CONDITIONS THAT REQUIRE HEATING OR COOLING.

- NOT NECESSARILY THE LARGEST PERCENTAGE OF ENERGY USE



AND SO IT BEGINS

The most important component in a home performance upgrade is the building analyst. He has to have the knowledge and the technology to evaluate the home and write a work scope.



THE TECHNOLOGY TO MEASURE

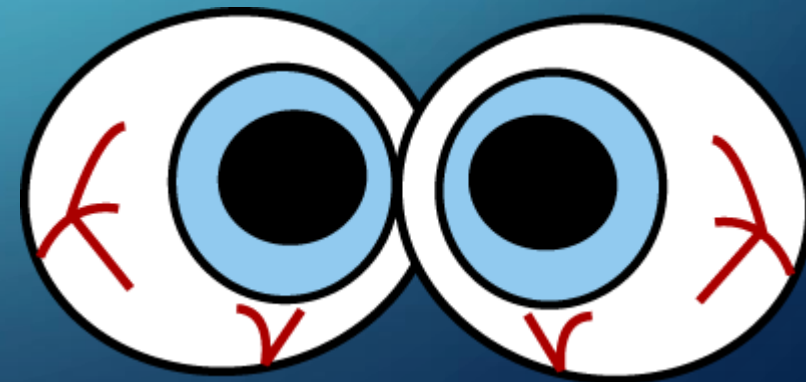
Combustion
Analysis



Gas Leak Detection



Infra Red
Thermography



THE SOFTWARE TO EVALUATE

No measure should be prescribed without being evaluated:

Savings to Investment Ratio: every proposed measure should have a net income effect. The savings generated should pay for itself over the effective lifetime.

Return on Investment: The yearly savings divided by the cost.


Simple Payback: The expense of the measure divided by the savings.

ADDED VALUE

Home Equity only adds value when selling, or refinancing a home.

For years there have been items deemed as value adding.



The background is a dark teal gradient. In the corners, there are decorative white line-art elements resembling circuit traces or data paths, with small circles at the end of the lines.

HOME PERFORMANCE UPGRADES ADD IMMEDIATE
VALUE. WHEN COMPLETE PROPERLY UPGRADES AY
COME OUT AS CASH FLOW POSITIVE.

CedarPoint

**MILLENNIUM
FORCE**
The future is riding on it.

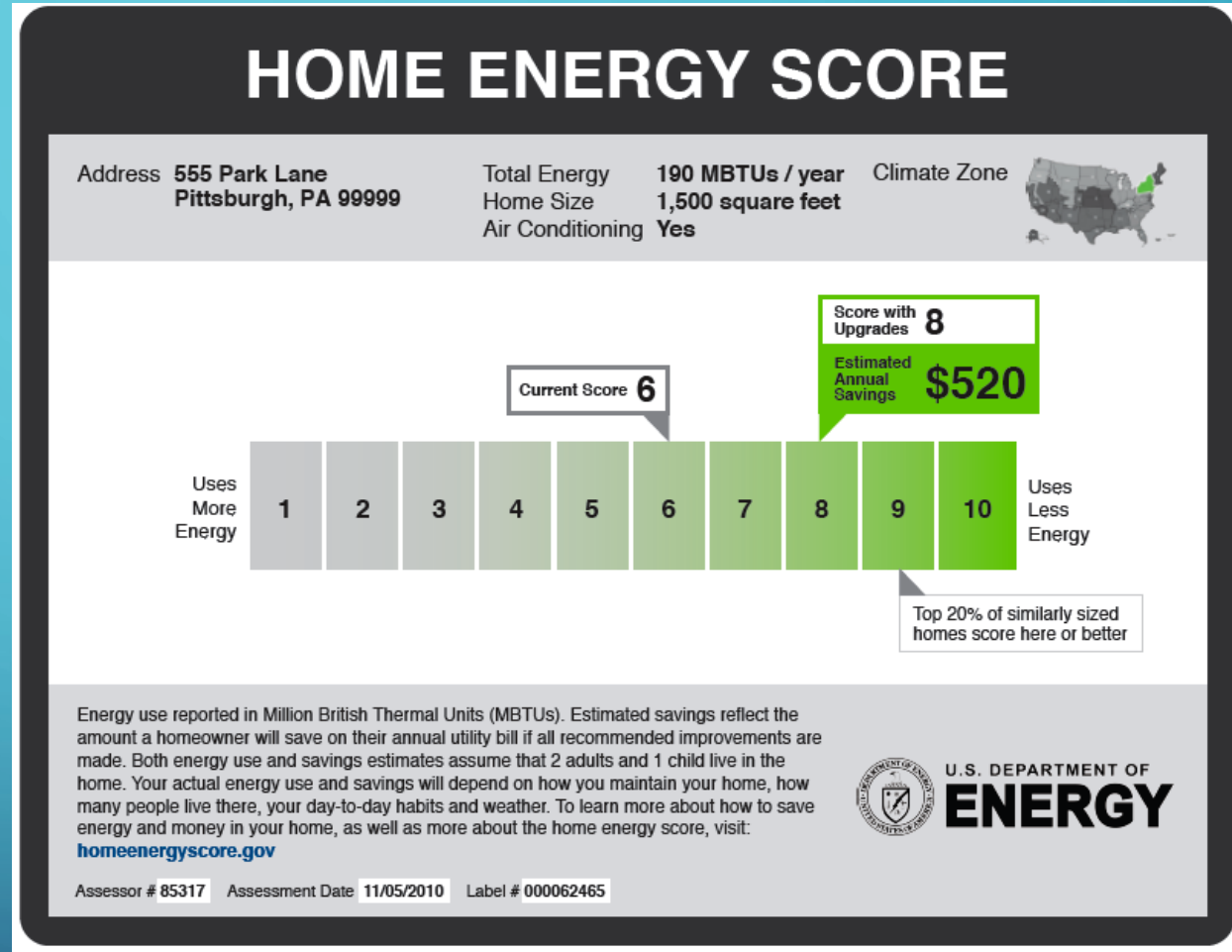


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THE SPOTLIGHT

- The U.S. Department of Energy has created the Home Energy Score.
- Home Performance with Energy Star has promoted a system to increase efficiency.
- The MLS system in some areas recognizes energy efficiency in valuation.
- States are involved – the Missouri Home Energy Certification program.



BANKS ARE GETTING INVOLVED

- FHA Power Saver Loan Program
- Qualified Energy Conservation Bonds
- Property Assessed Clean Energy districts



DEMAND SIDE MANAGEMENT

Energy companies are offering incentives to complete home performance upgrades.

- Energize Liberty Homes
- Ameren Illinois
- Ameren Missouri



I'M HAPPY TO HELP!!!

If anyone has questions, for me:

proenergyaudit@gmail.com

