



PASSIVE HOUSE in NE FLORIDA

Presented By

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PassivHaus to Passive House US



Passive House in NE Florida

Steve and Elaine Wyman

Passive House in NE Florida

Search for a Builder



Passive House LA

Lafayette, Louisiana



Passive House DC

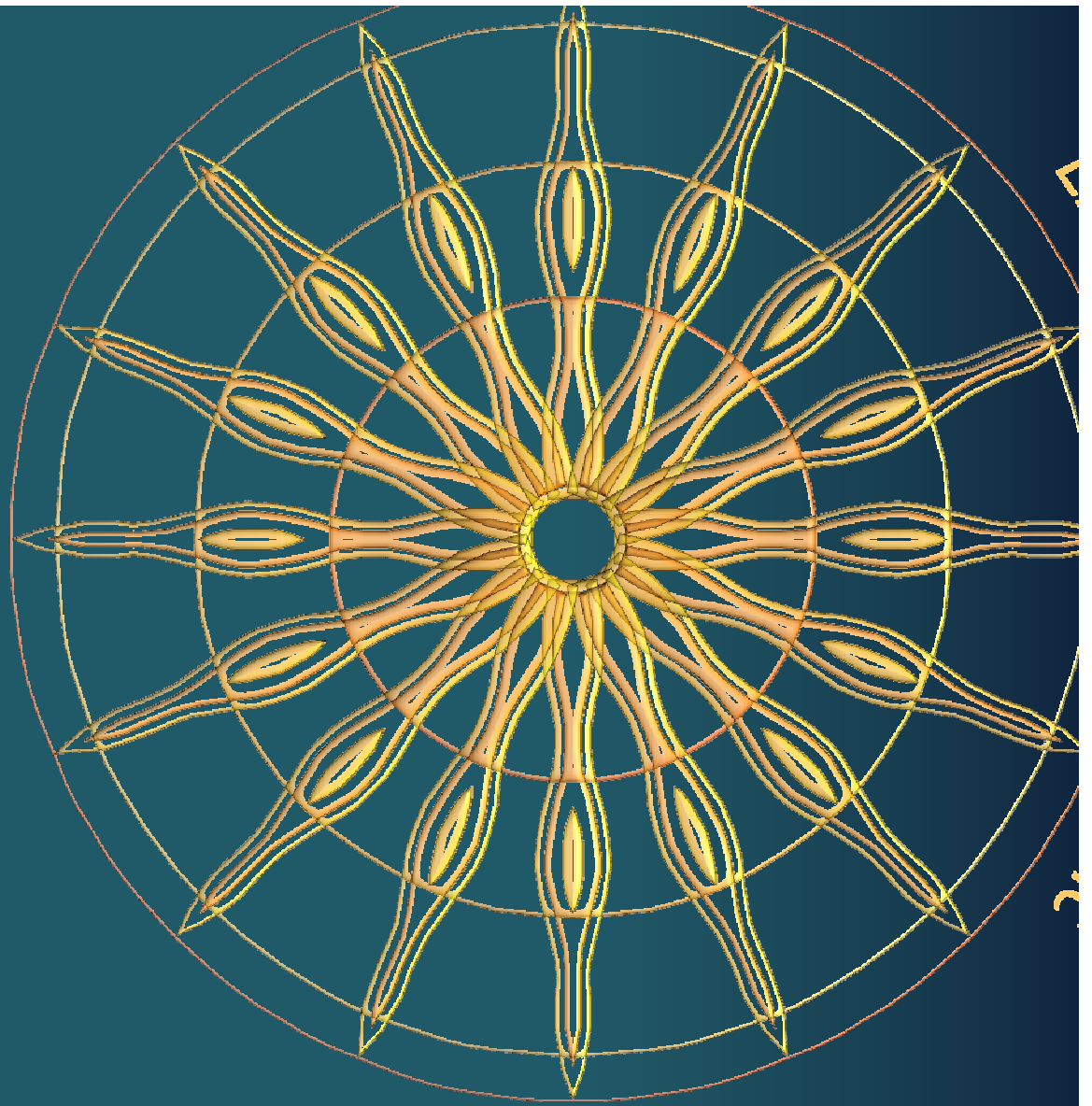
Bethesda, Maryland

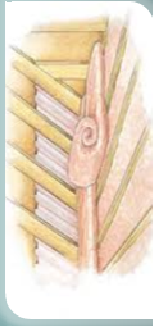


Passive House DC
Bethesda, Maryland

Lessons Learned

www.passivehouse/greenhaus.org

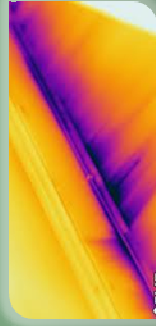




Superinsulate



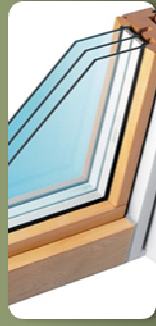
Eliminate thermal bridges



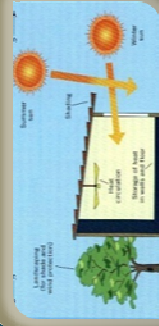
Make it airtight



Specify energy or heat recovery ventilation



Specify high performance windows and doors



Optimize passive-solar and internal heat gains



Model energy gains and losses using the Passive House Planning Package

Passive Solar Design vs. Passive House Standard

Courtesy of TE Studio, Ltd., 2009

Passive Solar Design	Passive House Standard
Building design concept	Certified building energy standard
Unlimited Energy Use	Limited energy use per square foot and year
Utilization of Solar Heat Gains (passive)	Utilization of solar heat gains and internal heat gains (passive)
Utilization of shading devices to control solar heat gains	Utilize shading devices and glazing to control solar heat gains
Use of thermal mass for absorption and storage of solar energy	Use of superinsulation for retention of space conditioning energy
Use of thermal mass for time-release of space conditioning energy (passive correction)/radiation or active distribution with mechanical system	Use of ventilation system for distribution and recovery of heating energy

Passive House US

Performance Characteristics

Airtight building shell ≤ 0.6 ACH @ 50 pascal pressure,
measured by blower-door test

Annual heat requirement ≤ 15 kWh/m²/year (4.75
kBtu/sf/yr)

Primary Energy ≤ 120 kWh/m²/year (38.1 kBtu/sf/yr)

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Recommendations, varying with climate

Window u-value ≤ 0.8 W/m²/K

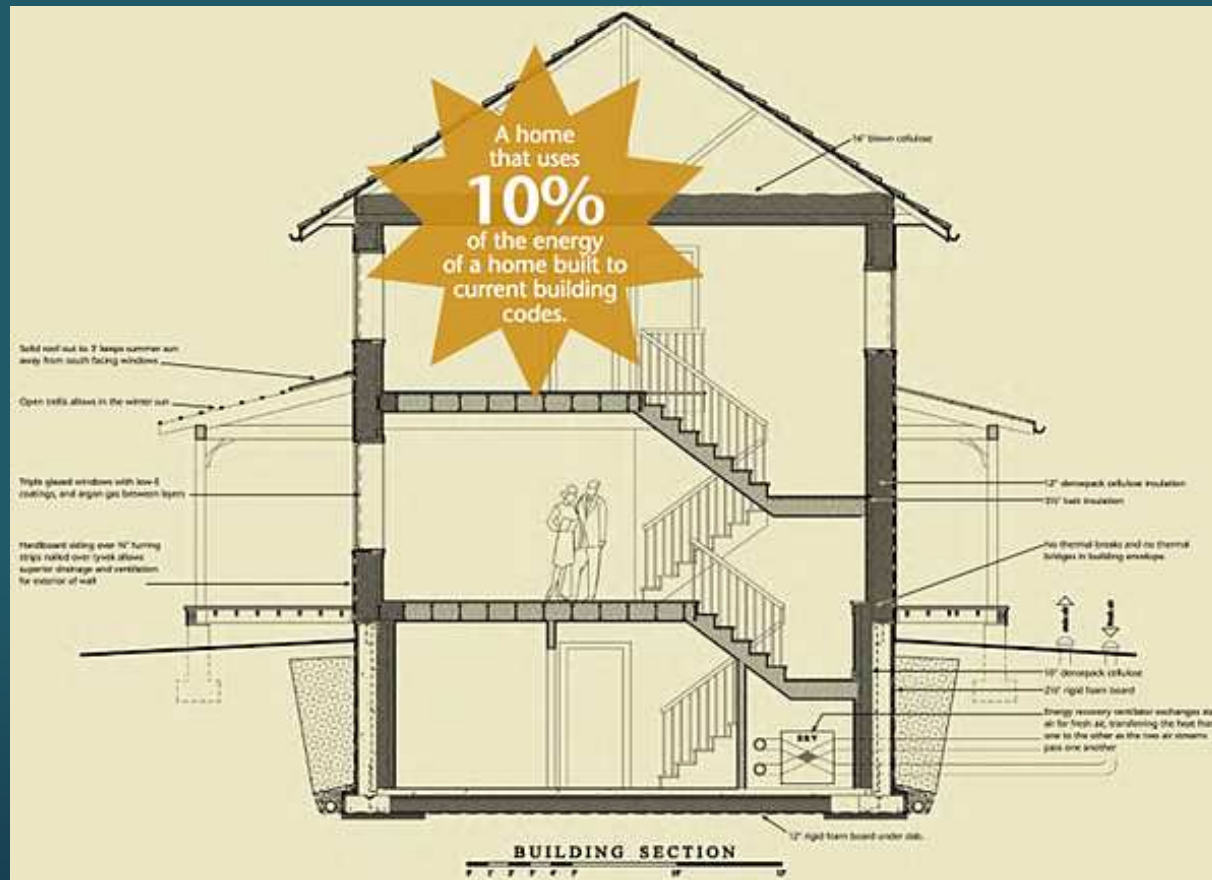
Ventilation system with heat recovery with $\geq 75\%$ efficiency with low electric consumption
@ 0.45 Wh/m³

Thermal Bridge Free Construction ≤ 0.01 W/mK

Passive House in NE Florida

Critical Components

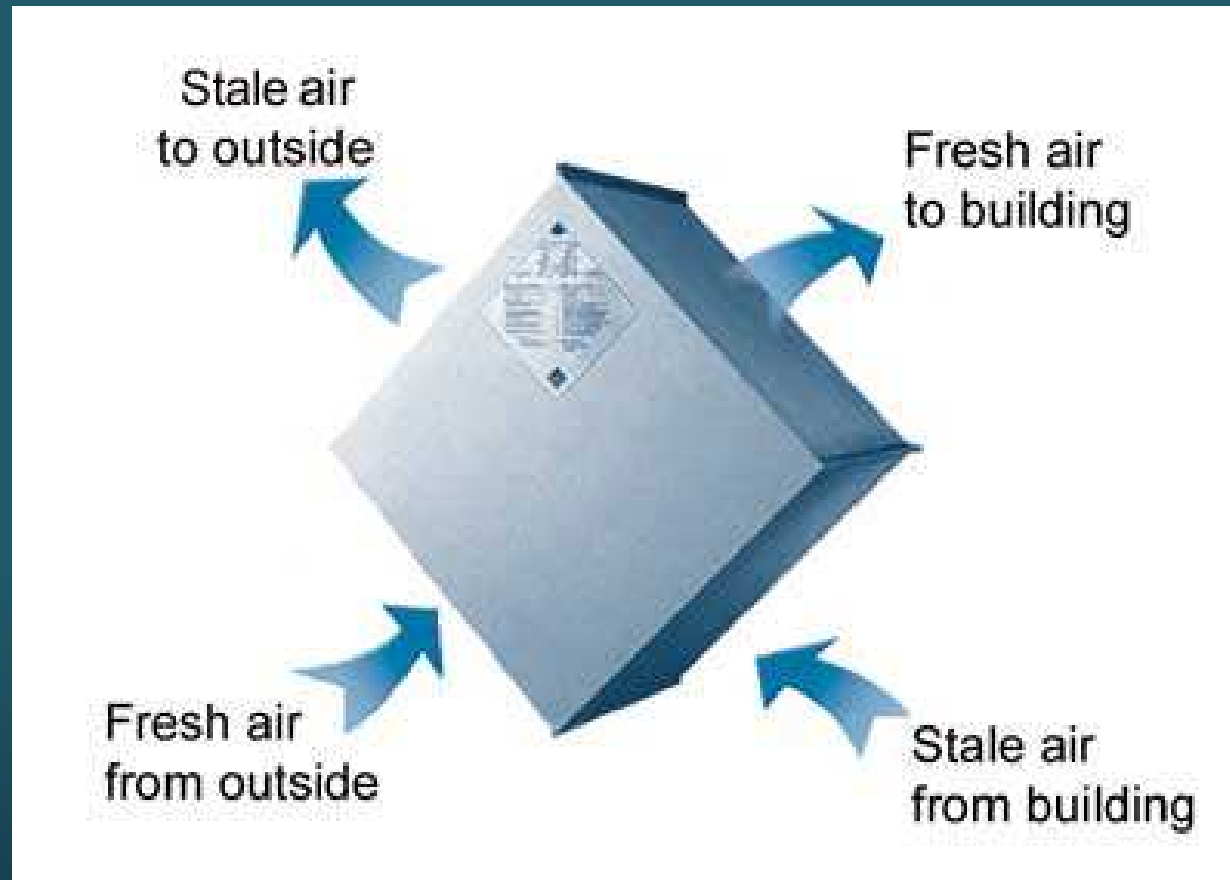
Passive House Institute US



Passive House in NE Florida

What is an ERV?

Passive House in NE Florida



Certified US Passive Houses

As of January 14, 2012

New Construction (29)

- Single Family
- Commercial
- Government
- School

Retrofit (1)

- Single Family

Certifications

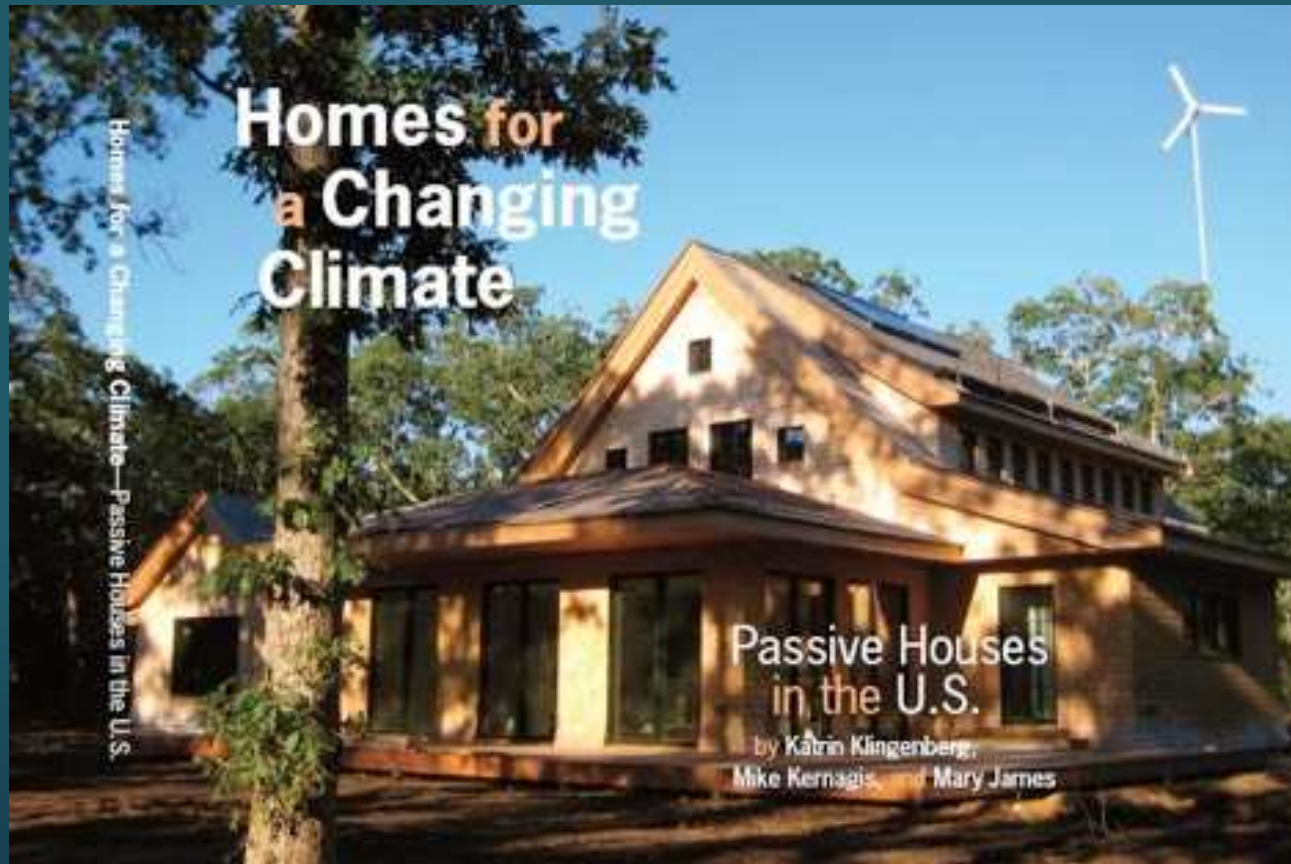
PHIUS
Certification

PHIUS+
Verification (QC)

Synergies with LEED®

- Current 'partnership' with USGBC
- Integrated Design
- Efficiencies
 - HERS/RESNET
 - Superinsulate
- IAQ
- GBCI CE Hours

Passive House Institute US and PassiveHaus



passivehouse.us

phalliance.com

gohomepro.com

breakinggroundcontracting.com