Building In & Building Out: Lessons Learned from Deep Energy Retrofits

Thursday, June 4, 2020

The Webinar Will Begin At 2:00pm

Brought to you by:

NESEA
BUILDING IN & BUILDING OUT:
Lessons Learned from Deep Energy Retrofits
POLL

When tackling a deep energy retrofit, what do you believe motivates yourself or your clients most?
PASSIVE HOUSE PRINCIPLES

Super Insulation
No Thermal Bridging
Triple Pane Windows
Air Tightness
Mechanical Ventilation
Energy Modeling
Passive Solar Gain
Restaurant: Oxford, Maine
Residence: Greenwood, Maine
OXBOW BEER GARDEN
FOUNDATION
BUILDING IN

Frost Wall
ALTERNATIVE FOUNDATION
BUILDING IN

Full basement
WALLS
BUILDING IN

Double Studs
ROOF
BUILDING OUT

Larsen Trusses
NEXT UP: JESPER KRUSE, OWNER OF MAINE PASSIVE HOUSE
KRUSE RESIDENCE
BUILDING OUT

Foam outside
BUILDING OUT

Larsen Trusses
Existing 2x6 wall

TJI

W RB

Air barrier

10" of new EPS foam
ALTERNATIVE WALL
BUILDING OUT

Homemade Larsen Trusses
BUILDING OUT

EPS foam
ROOF
BUILDING IN

Attic sealing
Worst day ever!
BACK TO:
ANNA HEATH,
CARPENTER WITH
MAINE PASSIVE HOUSE
ALTERNATIVE ROOF
BUILDING IN

Drop ceilings
MECHANICAL VENTILATION
DUCTED ERV

Pros
● Better quality
● Quiet

Cons
● Expensive to hide ductwork
LUNOS

Pros
● Less invasive
● Less expensive

Cons
● Noisy
● Condensation issues in cold climates
AND FINALLY:
JESPER KRUSE,
OWNER OF
MAINE PASSIVE HOUSE
INSULATION
**CELLULOSE**
- Recycled material
- Low toxicity
- Low embodied carbon
- Holds moisture without condensing
- Carbon sink
- Inexpensive

**EPS FOAM**
- Comparatively low embodied carbon
- Use below grade
- Impervious to weather
- Quick install
- No equipment rental

**SPRAY FOAM**
THE MONEY PART...
ROWE HILL ENERPHIT

Total Cost $159,000 ($81/SF)
OXBOW BEER GARDEN

Total Cost $447,000 ($172/SF)

Without Sitework $ 391,100 ($151/SF)

Without Electric & HVAC $269,900 ($104/SF)

Without and Interior Finishes $212,300 ($81/SF)
THANKS!
Q&A