Climbing Mount Sustainability with Passive Homes
Part 1: This is Not New!

Yudelson Passive (Solar) Home, 1982, SF East Bay Area
Contemporary Tucson Home

S.E.E.D. super Energy Efficient Design

1935 sq. ft. of living area
2-4 BedRms, 2 BathRms, LaundryRm
Spacious Great Room with split Bedroom plan
2 Car Garage with storage-work shop area
Superior Energy Efficient Structure
Passive Solar Oriented Site Plan
Solar Radiant Floor Heating
Solar Water Heating
Solar Electricity
Radiant Cooling
Grey Water Reuse
Rain Water Harvesting
Whole House Water filtration
Whole House fresh air exchange
All Energy Star rated appliances and fixtures
E-Scale Certified near Net-Zero Energy Use Home
Electric utility bill expected to be near 0 dollars
Hundreds of dollars saved each month
TEP Guaranty Program Certified
www.lamiradahomes.net
La Mirada Homes by
Michael Ginsburg
520-275-9992
ROC #57988
Sustainability: The Good News

• It is still possible to halt CO₂ concentration at 450 ppm (vs. 380 now) by 2040 with concerted effort (and at less than €40 per metric ton)
  - No new technologies!
• Buildings are the only Life Cycle Cost-positive solution
• 25% of total carbon solution can come from buildings, including homes
Sustainability: The Bad News

- We’re not going to get there without a PARADIGM SHIFT
- Can PH be part of that shift?
Part II: Climbing Mount Sustainability
Top Trends for Green Homes

• Incentives Missing
• Energy prices low
• There are successful green homes and developments
• Business case for builders is proven
• Government policies (~400 cities and 30 states)

• Reduced cost premium
• Government push for +50% energy-efficient homes
• Buyers respond to green offerings
• Certification programs in place
## Barriers to Going Green

<table>
<thead>
<tr>
<th>Issue</th>
<th>Percent Agreeing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confusion over green standards</td>
<td>59%</td>
</tr>
<tr>
<td>Increased costs</td>
<td>57%</td>
</tr>
<tr>
<td>Need to educate cities</td>
<td>47%</td>
</tr>
<tr>
<td>Finding the right products takes longer</td>
<td>45%</td>
</tr>
<tr>
<td>Specifying the right products takes longer</td>
<td>38%</td>
</tr>
<tr>
<td>Need to use new/specialty subs</td>
<td>24%</td>
</tr>
</tbody>
</table>

GreenBuilder, November 2008
Part III: Selling The Passive Home

Thomas Watson, IBM Founder:

“Nothing Happens Until Someone Sells Something”
Testable Propositions

• Markets are conversations
• Buyers and sellers co-evolve in each market
• Only small fraction of buyers truly “committed”
• Buyers prefer green as standard offering
• Builders need differentiation advantage
• Certification programs – too many!

BASF Net Zero House, Paterson, NJ
Markets are Conversations

- Marketing today two-way
- Buyer & seller interact continuously
- Information needs to be open, accurate, verifiable
- Word of mouth critical: 28% green homebuyers
- Social media, you engage conversation!

DR Horton, Rivercrest, CA, EFL Home
Buyers/Sellers Co-Evolve

• Marketing: what worked 2 years ago doesn’t work now
• Sophisticated buyers
• Budgets are tight
  • “Frugal green” era
• Authenticity prized
• Word of mouth & TV still critical media

Galleries at Turney, Phoenix, LEED
“Truly Committed” - A Small Group

• Hartman Group puts truly committed at 14% or less
• These people are already buying green in many ways
• Value authenticity
• How to appeal to others beyond the truly committed?
• Everything good still has to be “sold”
Green Should be Standard Offering

- When green is standard, it sells
- No resistance to a better performing home!
  - Healthier/quieter
  - More comfortable
- "Willingness to pay" numbers too high
- Cannot sell marginally better offering

Ideal Homes, Oklahoma, Energy Star
Is Passive House a Differentiator?

• Can builders find market advantage with passive homes?
• “Green” differentiator increasingly important
• Requires standard definitions
• Need to convince builders to re-design homes for performance

Glenwood Park, Atlanta, EarthCraft
Way Too Many Programs!

- ENERGY STAR, ENERGY STAR with IAQ
- NAHB, LEED and Environments for Living
- \textit{Plus}: EarthCraft, Earth Advantage, Built Green, Tucson Electric Power, CA Build It Green, Scottsdale, Austin Energy
- \textit{Plus}: CA Green Builder, CO Built Green (and 7 cousins), Local HBAs (11 to 15)
- \textit{Plus}: Am. Lung Assn, LEED-ND, Florida GBC, etc.
- \textit{Plus} Homebuilder Brands: Shea, KB, Lennar, Pulte, etc.
Lessons Learned: Commercial Buildings

- ≤2 certification systems required
- A good alternative keeps the market leader honest
- Market confusion
- Only need “good” and “best”
Part IV: What Do Buyers Want?

• Most highly requested features
  – More insulation: 18%
  – Instant tankless water heater: 18%
  – ENERGY STAR appliances: 13%
  – Air sealing/tight construction: 11%
  – Insulated foundation walls & floor: 10%
  – ENERGY STAR HVAC: 8%
  – Water-efficient plumbing: 8%
  – Insulated concrete forms (ICF): 8%
  – ENERGY STAR windows: 8%
  – SIPs: 6%
  – ENERGY STAR exterior doors: 6%
  – ENERGY STAR lighting: 5%

Lennar PowerSmart℠ Homes

- CA, TX, MN
- 10 States rollout
- 40% savings
- HERS rating
- 3rd party certification
- Solar: “Lennar is America’s #1 Solar Homebuilder”
What Do Buyers Really Want?

• What does "green" mean to you?
  – Being energy efficient
  – Choosing renewable resources
  – Creating a future for my children
  – Living a sustainable lifestyle
  – Saving the planet
  – All of the above

• What does "green" mean to you?
  – All of the above, 70%
  – Being energy efficient (16%)
  – Saving the planet, 6%
  – Choosing renewable resources, 3%
  – Living a sustainable lifestyle, 3%
  – Creating a future for my children, 2%

Source: Lennar Homes

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Demand for Passive Homes?

- Green residential market (McGraw-Hill)
  - Fivefold increase, 2005-2008
  - Triple increase 2009-2013
- Greatest percent demand (27%) in $50K-$74K range
  - 30% of total green home demand in lower income range
- Key drivers: cost savings & health benefits
  - Associate green with quality construction/healthy living
Incentives Count

- Guarantees 3 years A/C cost
- Inspect every home
- 30% to 50% market share

Armory Park del Sol, Tucson
• People want livable, walkable neighborhoods
• People buy neighborhood first
• Local examples:
  – Pringle Creek
  – Mosier Creek
  – Northwest Crossing
  – Issaquah Highlands
Future Trends to Watch

- Home energy labeling
  - ETO “Energy Performance Score”
- “Smart Homes”
- Financing support for energy efficient homes (PACE Financing)
- Zero Net Energy (Z0NE) homes
- Water Sense Homes

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Part V: The Business
Looking Ahead: What Should You Do?

- Look past ugly situation
- Promote significant changes in attitudes
- Figure out how to do more with less
- Show buyers what to ask for – create brand
- Measure & articulate results
- Raise goal posts
Develop a Passive Brand

- Recognizable brands in passive homes?
  - Architect
  - Builder
  - Standard
- A brand is always a safe selection
  - “You can’t go wrong with Apple”
- Don’t have to be a “signature” builder or architect to be a brand
- As a brand, the client experience is critical
  - How well do you manage it?
A Final Word

“An invasion of armies can be resisted, but not an idea whose time has come”

- Victor Hugo
More Resources

- www.greenbuildconsult.com
THANK YOU!
Discussion Questions
Q1: If Passive House is the Solution, What’s the Question?

Bucky Fuller: “A problem properly stated is solved 100% of the time in theory and 50% in reality”
Q2: Isn’t Energy Use Something Only Men Care About?

Are They the Real Buyers?
What about Health and Comfort?
Is Passive Home a Feature or a Benefit?
Q3: Isn’t “Passive” Anything Un-American?  

Shouldn’t We be Talking about High-Performance Homes?
Q4: Can We Move “from Feist to Feisty”?

How Can We Mainstream Passive Homes?

A: We Must Change the Narrative Around Building Performance and Raise The Stakes!
Once Again, THANK YOU!