

Resnet Conference

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Building Science for Quality and Durability

OBJECTIVES FOR TODAY

- Introduce ‘Engineered For Life®’
 - *What It Is...*
 - *What It Offers...*
 - *How It Works...*
 - *Why You Should Be Interested...*



ENGINEERED FOR LIFE®

What Is It?

- Quality Improvement Process Designed to Provide:
 - Healthy, Safe, Durable, Comfortable and
Energy Efficient Homes
 - The Implementation of Applied Building Science
 - Tool to Provide Differentiation and Higher Traffic Ratios
 - Tool to Reduce Call Backs and Warranty Claims
 - Process that Guarantees the Performance of a Home
 - ***Marketability...Quality...Performance***

INDUSTRY FACTORS

Applied Building Science
Energy Efficiency
Indoor Air Quality (IAQ)

Moisture Management
Risk Management

Sustainability...Green
Performance Systems
Code Compliance

-
- *How do we get there?*
 - *What role do you play?*
 - *How do you participate in the value equation?*
 - *How do you add additional value to your builders?*



QUESTIONS?



ENGINEERED FOR LIFE®

Why Is It Important?

- Changing Market Dynamics → Looking for the Edge
- Homeowner's Demand for Performance and Higher Quality
- Risk Management With Construction Defect
- Possibility for Revenue and Margin Improvements
- Competitive Differentiation
- Homeowner Satisfaction...*Now and Tomorrow*

ENGINEERED FOR LIFE®



*More Than a Program,
EFL Is About Process!*

BUILDER VALUE

- Improved Quality in Design and Construction
- Sales “Hook” → *Selling More Value*
- Shortens the Sale Cycle Time
- 3rd Party Testing and Verification
→ *Increases Buyer Confidence*
- Performance Is Guaranteed for 2 Years
- Can Provide Higher Margins → *Energy Savings to Buy Options*
- Fewer Callbacks
→ *Lowers Back End Costs*
- Homeowner *Peace of Mind*
- ***Homeowner Satisfaction***



An ENERGY STAR® Labeled Home

Address: _____


Built by: _____

Verified by/Date: _____

☐ Verified Individually ☐ Verified as part of a representative sample

Optional Information: _____


This home has been independently verified to meet Energy Star guidelines for energy efficiency. Energy Star labeled homes protect the environment by using less energy.
www.energystar.gov



ENGINEERED FOR LIFE
Building Science for Quality and Durability

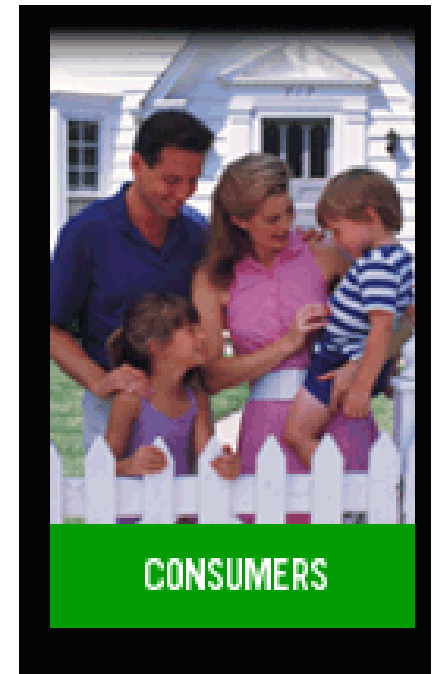
**Guaranteed Heating & Cooling*
Less Than \$____ Per Month**

*Based on estimated average energy use
See Guarantee for details



HOMEOWNER VALUE

- Peace of Mind
 - *Purchase a Performance Home that is Safe, Comfortable and Durable*
 - *Purchase a Home That Protects Our Most Valuable Assets → Family*
- Quality Has Been 3rd Party Verified
 - *Builds Buyer Confidence*
- Performance is **Guaranteed**
- Lower Operating Costs for Heating & Cooling
 - Cost Savings for the Life of the Home
 - More Available for Options and Upgrades
- Demonstrates Builder Commitment



EFL® SYSTEM FEATURES

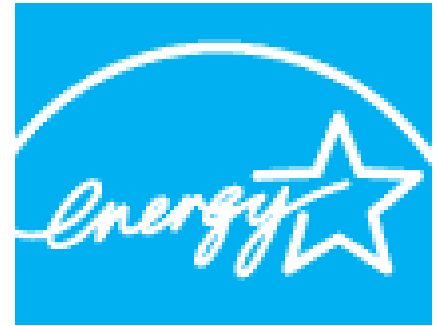
- Plan Analysis and Energy Rating
- Plan Summary → “*As Built*” to EFL Builder
- Ventilation Strategy
- HVAC “*Right*” Sizing
- 3rd Party Testing, Inspection and Verification
- Performance Guaranteed for 2 Years
 - *Heating and Cooling for ENERGY STAR*
 - *Heating, Cooling and Comfort for EFL Gold*
- Quality Improvement Tool → Across Trades

EFL SYSTEM SPECIFICATIONS

Guaranteeing Energy Star®

To Meet ENERGY STAR:

- HERS Rating Not Less Than 86
- House and Duct Tightness Testing (as stated)
- 3rd Party Testing and Verification



Additional Requirements for Heating and Cooling Guarantee:

- Insulation Installed to Rated R-value...*In Contact With Air Barrier*
- Ventilation Strategy
- No Vent-free Fireplaces
- CO Detector Every 1,000 Sq. Ft.
- Cocoon® Insulation in Attic and/or Walls
- 2-Year Energy Usage Guarantee for Therms & kWh

EFL SYSTEM SPECIFICATIONS

Gold Standards

To Meet ENERGY STAR:

- HERS Rating Not Less Than 86
- 3rd Party Testing and Verification

Required to Meet EFL Gold → 2 Year Heating, Cooling and Comfort

- All Insulation Installed to Rated R-value...*In Contact With Air Barrier*
- Fresh Air Ventilation
- No Vent-free Fireplaces
- CO Detector for Every 1,000 Sq. Ft.
- Cocoon® Insulation in Attics and/or Walls
- House and Duct Tightness (EFL defined)
- Duct Insulation @ R-6
- Specific Peak Heating and Cooling Load Requirements
- Airflow to Each Room +/- 10% of Design
- Pressure Balance Test
- Kitchen and Bathroom Fans Vented to Daylight Required
- Fuel Burning Furnace & Water Heater Must Be Sealed or Power Vented



HOW IT WORKS (Process Steps)

- Sample Plan Submitted
- Plan Analysis and Builder Review → *What Does It Take?*
- Builder Commitment → Executes MOU (Memo of Understanding)
- Models Committed to Program – *Plan Reviews for Guarantee*
- Construction Planning Review → *Scheduling Review*
- On-Site Training for Construction and Trade Partners
- Construction → *We Are Onsite for Process Reviews*
- Sales Training for Builders' Sales and Customer Service Team
- Houses Are Tested and Inspected
- Guarantee Certificates Issued When Passed



COST TO PLAY

•Commitment

–Philosophical...Emotional...Organizational

Must Be The RIGHT Builder

- Sample Plan Analysis Fee \$250.00
- Model Plan Analysis Fee \$250.00 + \$.10 sf
- Design Upgrades to Meet Standard Varies
- Testing and Inspection \$250.00 and up
- Fee Per Certificate Issued \$ 50.00 or \$75.00 ea.
- Complaint Investigations for Referenced Houses
- Assumption of Risk...*If Standards Are Not Enforced*

TESTING PROTOCOL & PROCESS

- Production Builder = 85 EFL Houses Built Per Year
 - Production Builder, Statistic Sample Protocol
 - *1st 10 Houses are Tested*
 - *Once Passed and Process is in Place, 1 in 7 of Each Model Per Subdivision are Tested*
 - *If Passed, the Entire Batch Receives Certificates*
 - *If Fails, the Entire Batch Is Tested*
 - Builder Is Responsible for Any Re-tests and for Testing of Reference Houses
- All Custom and/or Non-Production Houses Are Tested



EXPECTATIONS OF THE BUILDER

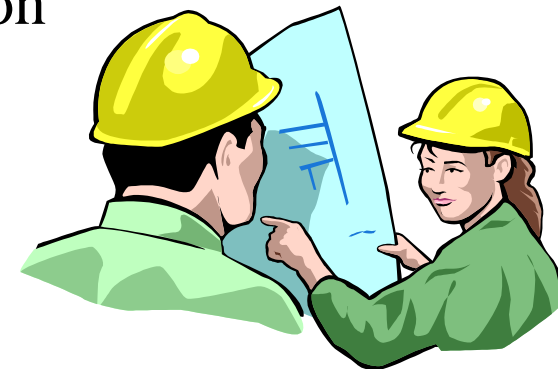
- Comply with the Standards
- Enforce Standards with Trade Partners
- Accountable to Build to the Specifications
- Use of Approved Testers



- ***Commitment and Continuous Improvement***

GREENFIBER COMMITMENT

- Plan Summary... "*As Built*" to EFL Standard
- Support Implementation of Process ➔ *Start to Finish*
- Implementation of Building Science Training
- On-Site Construction and Subcontractor Training
- Sales Team and Customer Service Training
- Model and Subdivision Collateral Materials
- Coordination of Energy Star® Certification
- 2-Year Performance Guarantee
- On-Going Technical Support
- On-Going Customer Service



NEXT STEPS

- Sample Plan Analysis
 - Completed Input Sheet
 - Plan to Be Analyzed
 - Check for \$250.00
- Plan Analysis Summary → *“As-Built” to EFL Standard*
- Builder Assessment → *Is EFL for Me?*

SAMPLE HEATING & COOLING GUARANTEE			
Plan	Energy Star Score	Heating & Cooling Guarantee	
		Annual	Monthly
1023	88.1	\$ 50.00	\$ 30.00
1120	87.0	\$ 50.00	\$ 30.00
1415	88.6	\$ 420.00	\$ 35.00
1415	87.5	\$ 444.00	\$ 37.00
1496	88.8	\$ 456.00	\$ 38.00

COMMITMENT

EFL AND RESNET

What Can Engineered For Life Mean To You?



Added Value

Solutions Provider

Market Positioning

Incremental Growth

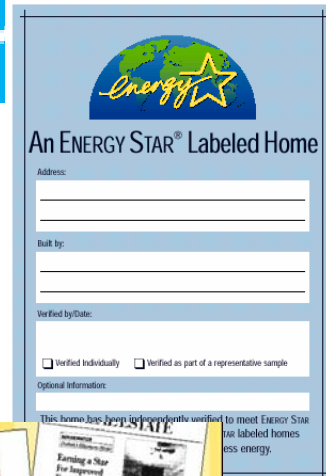
Portfolio Enhancement

Differentiation—For Rater and Customer

RESNET RATER

- *Considerations...*

- Commitment
- Qualification
- MOU—Accountability
- Builder Selection—Qualification
- Continuous Improvement
- Solid Business Proposition



QUESTIONS ? ? ?

Have We Addressed...

- *What It Is...*
- *What It Offers...*
- *How It Works...*
- *Why You Should Be Interested...*



EFL Certificates Have Been Issued To The Following Builders....

• HOMES •
BEAZER

SheaHomes

For Active Adults

GOLDEN HERITAGE
HOMES

COLUMBIA
COMMUNITIES


CAMBRIDGE HOMES
EXPECT TO BE IMPRESSED


**IDEAL
HOMES**


Pulte
Homes

CENTEX

EMERALD
HOMES



"THANK YOU"

***Building Science
for Quality and
Durability***

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