

Introduction
to

beyond green

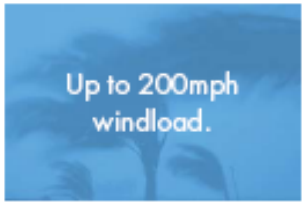
by

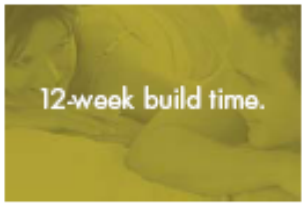
StalwartBuilt Homes, LLC

iGreenBuildingFab™

StalwartBuilt™ HOMES
beyond green™

What if green
was only the beginning?





Let's begin with the premise that Green is good. It's good for our health. It's good for the health of the planet. And Green, most assuredly, is our future. But what if there was something more? What if Green was merely the beginning?

Imagine a home engineered to the highest green standards and precision-built to be stronger, healthier and faster to complete than other homes.

Welcome to the future. StalwartBuilt homes represent the future of home building. Our unprecedented competitive advantages, along with a wide variety of plans and elevations, make the benefits of our systems-built method extremely appealing to homebuyers. Simply put, to achieve the profound environmental and energy standards available with Stalwart Built homes, there is only one way to build them: The Stalwart Built way.

We are Stalwart Built. We are beyond Green.

iGreenBuildingFab™

StalwartBuilt HOMES
beyond green

The Design Process

Until now, the commercial viability of sustainable homes with ultra-efficient energy systems has been almost nil because the methods with which the systems were integrated into the construction process were not cost effective.

THINGS HAVE CHANGED

High-quality systems-built construction combined with new technology has made it possible to build homes that are LEED certified (the most stringent green building certification) within a wide variety of price ranges to reflect all tastes and styles.

The Design Process

THE SCIENCE OF HIGH PERFORMANCE LIVING

StalwartBuilt homes are created to exceed most local, state and national green-building standards. From a minimum of LEED Silver, all the way to Platinum, the science of StalwartBuilt is performance-based, making the highest level of Green living, truly affordable.

StalwartBuilt tackles the real cost of homeownership—ongoing and rising costs like energy, water, maintenance and health. Beyond Green living provides you with comfort, peace-of-mind, return on investment and environmental sustainability, well into the future.

The Building Process

A BETTER WAY TO BUILD

"Systems-building" means StalwartBuilt home modules are precision constructed in a climate-protected factory environment by a consistent and experienced workforce.

Category specialists perform each craft:
framing, electrical, tile, cabinetry, plumbing, finish work, etc…lessening the need for transient labor or dubious subcontractors.

Computerized equipment and pneumatic tools are used to drive fasteners to precise depths and provide several times more fasteners than ordinary homes.

StalwartBuilt | HOMES

beyond green

HIGH PERFORMANCE HOMES

Project Examples & Accomplishments

iGreenBuildingFab™

High Performance Home

Demonstration Project

Ribbon cutting ceremony **Fairburn Commons** - 2000.

From left: Ga. Gov. Roy Barnes, Dennis Creech Executive Director Southface Energy Institute, Julius Poston, project designer and construction manager.

Atlanta's first energy efficient, healthy, affordable, community built with research grant funding provided by the Building America program.

Fairburn Commons was the first of it's kind a true landmark in the Atlanta market. A collaborative effort created by the developer, construction management team, Southface Energy Institute, U.S. Department of Energy, and Building Science Corporation.

Fairburn Atlanta, Georgia

Health-E Enterprises

1,400 - 2,100 sq. ft., 3 bedroom, 2 bath

$117,000 - 145,000 (including land)

Key Features

- Innovative termite-protected slab perimeter insulation
- Advanced framing
- Low-e spectrally selective windows
- Cellulose cavity insulation
- Carbon monoxide detectors
- Fully engineered HVAC system including all ducts sealed with mastic and in the conditioned space, correctly sized equipment, a simplified duct layout, transfer grilles for pressure relief, controlled mechanical ventilation and dehumidifier

iGreenBuildingFab™

SEE ENCLOSED CASE STUDY

StalwartBuilt™ HOMES

beyond green™

ZERO ENERGY HOME

LP behind the walls HOUSE

International Builders' Show
2002-Atlanta, Ga.

35,000 people in 2½ days, registered for information about this house.

Georgia's first "Zero Energy" home
Built with grant funding under the U.S. Department of Energy, Building America program as a public awareness and demonstration project.

DONATION

After the event the home was donated to the Captain Planet Foundation and moved to it's permanent location in Buckhead – Atlanta, Georgia to serve as an educational tool for six months to the general public.

Building AMERICA
U.S. Department of Energy
Research Toward Zero Energy Homes

CAPTAIN PLANET FOUNDATION

StalwartBuilt HOMES
beyond green™

Zero Energy Cottage

The Captain Planet Zero Energy SIPS Cottage - 2002
National Park Service Sustainability Fair at the National Mall in Washington

1,700 sq. ft. home with 2 bedrooms, 2 bath and a loft

Key Features:

- Photo - voltaic system
- Solar hot water heating
- Passive Solar design
- Ducts in conditioned space
- Controlled ventilation
- High performance envelope, windows and an integrated HVAC system
- Advanced framing with Structural Insulated Panels (SIPs)

BUILDING DONATION:

Department of Natural Resources - Fargo, Ga.

iGreenBuildingFab™

StalwartBuilt™ HOMES
beyond green™

0 net energy cost.

Zero Energy Fire Station

Union City Ga. Fire Station 1

Project Description:

A 9,000 sq. ft. fire station with 8 bunk rooms, 4 bath, kitchen, engine bay, offices, dayroom, storage and support areas.

Key Features:

High performance envelope, windows and doors
Integrated HVAC design
Controlled ventilation
Ducts in conditioned space
Designed to accommodate Photovoltaic System
Designed to accommodate Solar Hot Water Heating
Passive Solar design

DESIGNED BY:

Julius Poston

&

Brown Design Group

College Park, Ga.

Commissioned 2004

iGreenBuildingFab™

StalwartBuilt™ HOMES
beyond green™

Zero Energy Fire Station

Fire Station - A Green Power Generation Station

Union City Fire Station a Green Treasure in Georgia's Renewable Road show

Union City's new fire station No. 1 is the first fire station in Georgia (and one of very few in the nation) to be designed from the ground up to take advantage of solar power.

Kenneth B. Collins, Fire Chief

"The electric bills for the new 9,200-square-foot station No.1 are running $195 to $235 a month," Monthly bills for station No. 2 built to code are $500 to $600 per month, and it's a smaller 6,000-square-foot structure. We estimate that **we're saving approximately $5,600 per year in energy costs** by going solar," said Fire Chief Kenneth B. Collins

iGreenBuildingFab™

StalwartBuilt™ HOMES beyond green™

High Performance Home

Building America
U.S. Department of Energy
Research Toward Zero Energy Homes

Builders Challenge
Recognizing Energy Leadership in Homebuilding

Public Awareness
2008
International Builders Show
ORLANDO, FL.

Systems built home constructed by Palm Harbor Homes to Stalwart Built Homes standards. Approximately 45,000 attendees toured this home.

US Secretary of Energy Samuel Bodman places Energy Smart scale on the Waterview's Glen Cairn model.

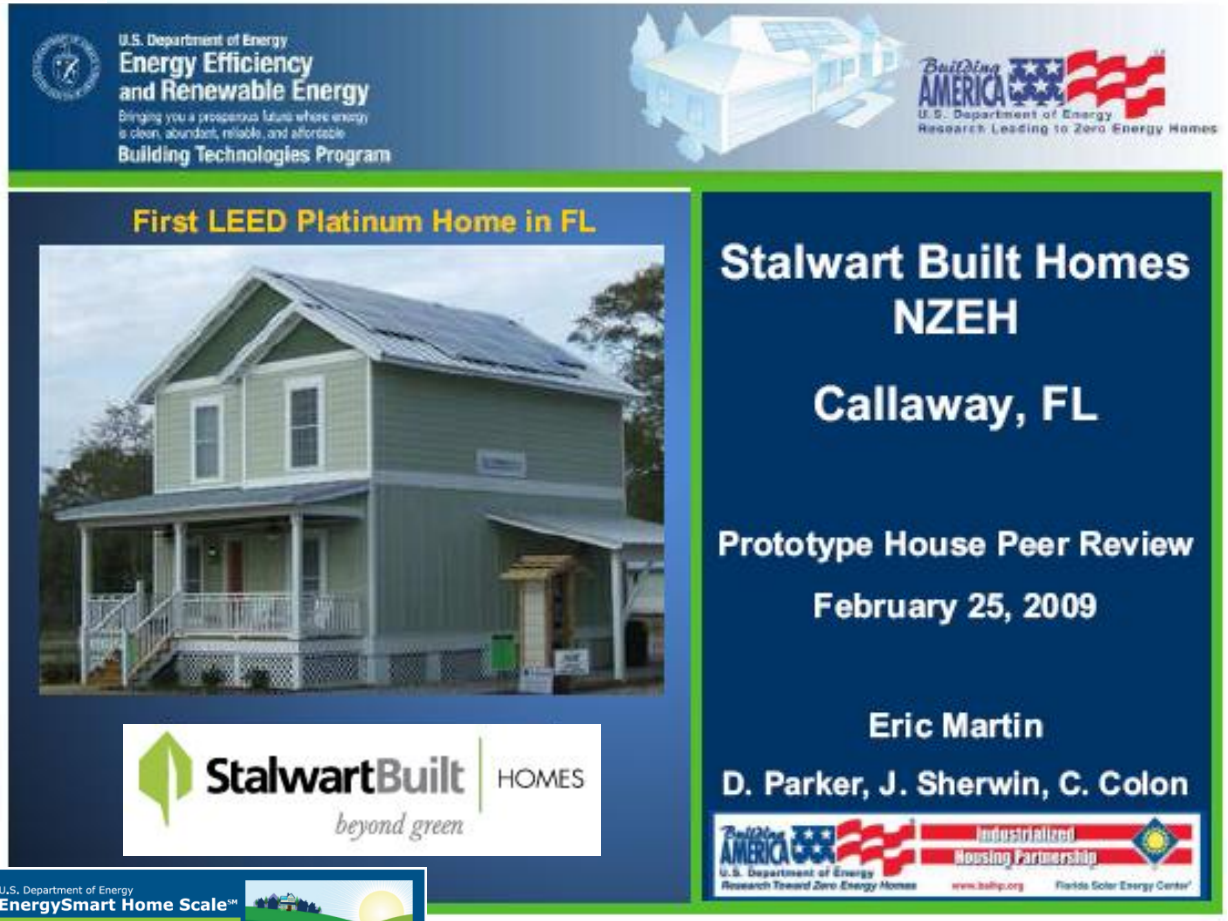
In 2008, Julius Poston, president of StalwartBuilt Homes, was honored as a pioneering green builder by the U.S. Secretary of Energy.

iGreenBuildingFab™

StalwartBuilt HOMES
beyond green

0 net energy cost.

ZERO ENERGY HOME



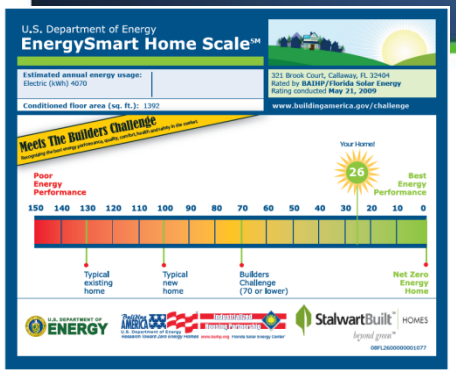
HERS Index = 27

LEED® Facts

Stalwart Built Homes
Panama City, Fl

LEED for Homes Program
Certified on: March 21, 2008

Platinum	86
Locations & Linkages	9
Sustainable Sites	12
Water Efficiency	7
Energy & Atmosphere	34
Materials & Resources	7
Indoor Environmental Quality	10
Innovation & Design	5
Awareness & Education	2



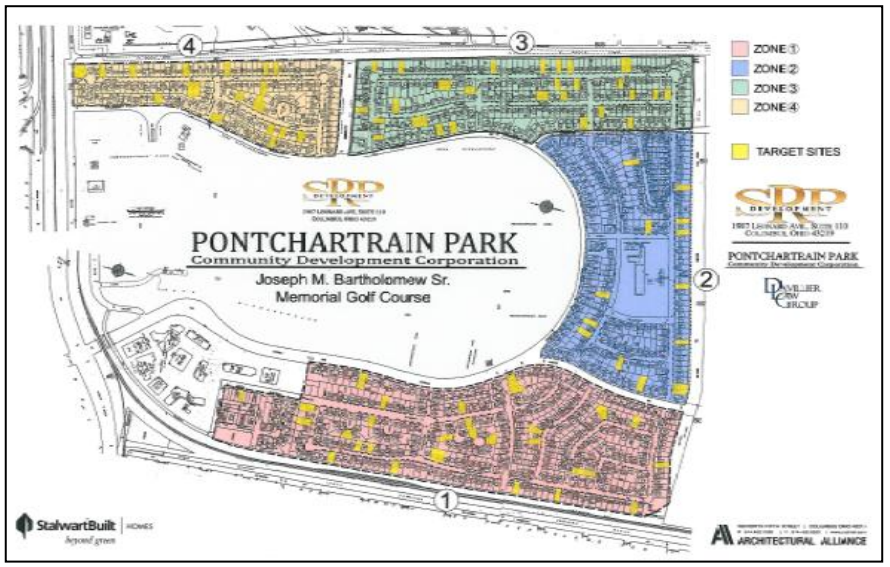
SEE ENCLOSED CASE STUDY

StalwartBuilt HOMES
beyond green

Imagine a home that could be built and ready to move into in only
12 weeks.

Building Solutions

PONTCHARTRAIN PARK
Community Development Corporation



Location: New Orleans, LA

Community destroyed by Hurricane Katrina. Urban redevelopment infill project. Re-built to Stalwart Beyond Green and LEED certification standards.

StalwartBuilt™ HOMES
beyond green™

Imagine a home that could be built and ready to move into in only 12 weeks.

Building Solutions

Pierce Home Site:
2,600 square feet
conditioned space

Grade elevated 6 ft. to meet FEMA requirements.
Garage: site built

One day set and dry in. Security system activation.

iGreenBuildingFab™

Imagine a home that could be built and ready to move into in only 12 weeks.

Building Solutions

iGreenBuildingFab™

StalwartBuilt HOMES
beyond green

Imagine a home that could be built and ready to move into in only 12 weeks.

Building Solutions

iGreenBuildingFab™

StalwartBuilt HOMES
beyond green

Building Solutions

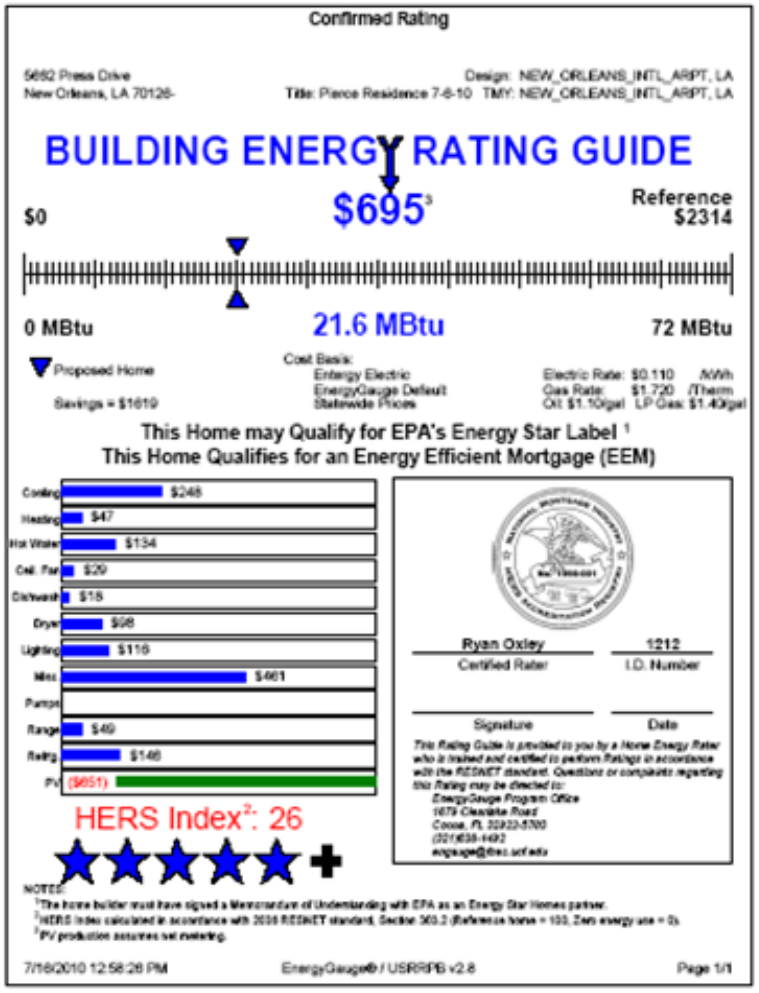
PONTCHARTRAIN PARK
Community Development Corporation

DISCOVERY CENTER

StalwartBuilt™ HOMES
beyond green™

ZERO ENERGY HOME

PONTCHARTRAIN PARK
Community Development Corporation



Confirmed Rating

5652 Press Drive
New Orleans, LA 70126-

Design: NEW_ORLEANS_INTL_ARPT, LA
Title: Pierce Residence 7-6-10 TMY: NEW_ORLEANS_INTL_ARPT, LA

BUILDING ENERGY RATING GUIDE

$0 — $695[3] — Reference $2314

0 MBtu — 21.6 MBtu — 72 MBtu

Proposed Home

Savings = $1619

Cost Basis:
Entergy Electric
EnergyGauge Default
Statewide Prices

Electric Rate: $0.110 /kWh
Gas Rate: $1.720 /Therm
Oil: $1.10/gal LP Gas: $1.40/gal

This Home may Qualify for EPA's Energy Star Label [1]
This Home Qualifies for an Energy Efficient Mortgage (EEM)

Cooling $248
Heating $47
Hot Water $134
Ceil. Fan $29
Dishwash $18
Dryer $98
Lighting $116
Misc $461
Pumps
Range $49
Refrig $146
PV ($651)

HERS Index[2]: 26

Ryan Oxley — Certified Rater
1212 — I.D. Number
Signature
Date

This Rating Guide is provided to you by a Home Energy Rater who is trained and certified to perform Ratings in accordance with the RESNET standard. Questions or complaints regarding this Rating may be directed to:
EnergyGauge Program Office
1679 Clearlake Road
Cocoa, FL 32922-5703
(321)638-1492
engauge@fsec.ucf.edu

NOTES:
[1] The home builder must have signed a Memorandum of Understanding with EPA as an Energy Star Homes partner.
[2] HERS Index calculated in accordance with 2006 RESNET standard, Section 303.2 (Reference home = 100, Zero energy use = 0).
[3] PV production assumes net metering.

7/16/2010 12:58:28 PM EnergyGauge® / USRRPB v2.8 Page 1/1

HERS Index = 21

LEED® Facts

Stalwart Built Homes
PPCDC

LEED for Homes Program
Pre-Certification Test August 2009

Platinum	87.5
Innovation & Design	6
Location & Linkage	7
Sustainable Site	11
Water Efficiency	11
Energy & Atmosphere	33.5
Materials & Resource	6
Indoor Environmental Quality	12
Awareness & Education	1

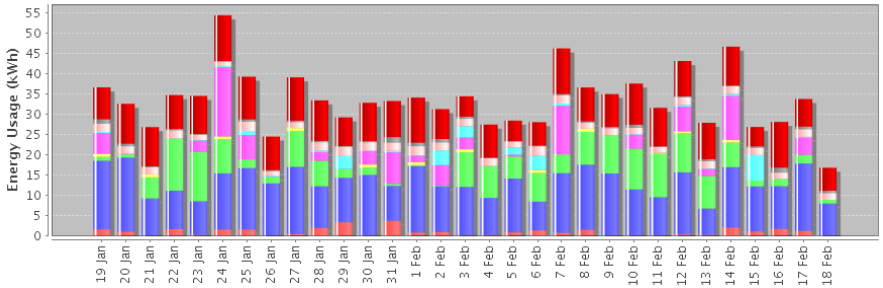
iGreenBuildingFab™

StalwartBuilt HOMES
beyond green

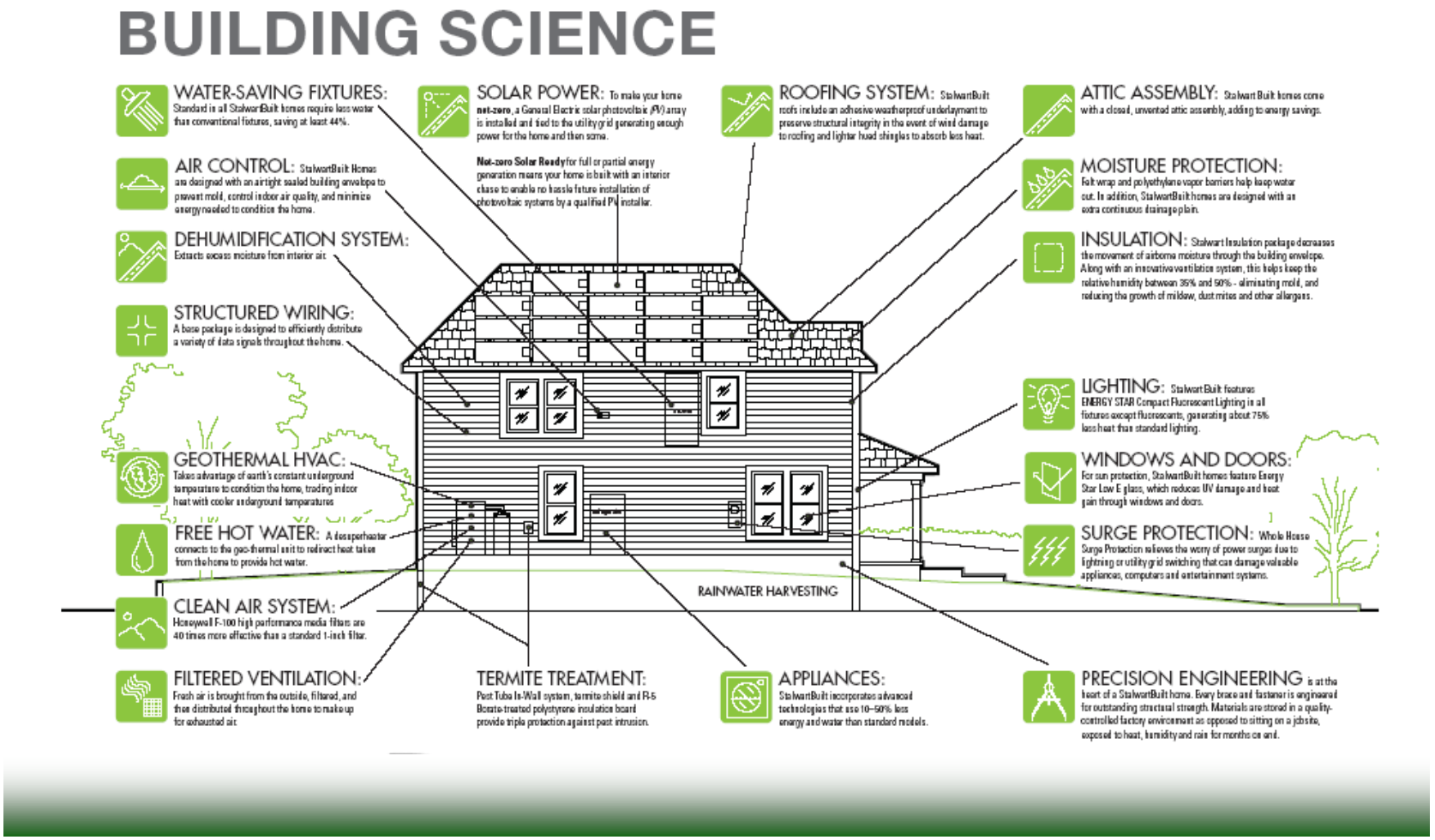
0 net energy cost.

iGreenBuildingFab™

Data Collection



The Building Systems Method



iGreenBuildingFab™

StalwartBuilt HOMES
beyond green

Zero Energy Home

HURRICANE RESISTANT

STALWARTBUILT HOMES: DESIGNED FROM THE GROUND UP TO RESIST STORMS AND HURRICANES

"Wind damage accounts for only a fraction of the destruction caused by storms. The greatest destruction was caused by water infiltration, not catastrophic structure failure."

— Partnership for Advancing Technology in Housing (PATH)

StalwartBuilt Advantages:

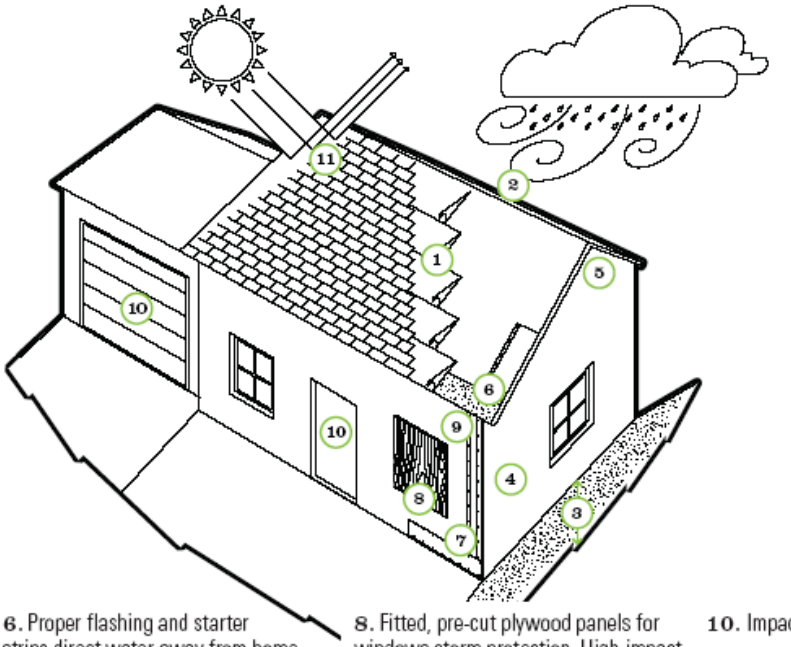
1. Adhesive weatherproof underlayment on roof keeps water out and preserves structural integrity

2. Windload capacity of 150 m.p.h.

3. Raised foundation 6 feet high with retaining walls on three sides to direct water away from house

4. Double-wrapped exteriors with extended drainage plain allows water to drain out of the wall assembly.

5. Closed, unvented attic assembly prevents wind-driven rain from entering through soffit vents



6. Proper flashing and starter strips direct water away from home

7. 500% more fasteners than ordinary homes for structural strength

8. Fitted, pre-cut plywood panels for windows storm protection. High-impact windows available as an upgrade

9. Foundation to roof hurricane strapping to maintain structural integrity

10. Impact resistant doors

11. Light-color roofing to reflect heat

iGreenBuildingFab™

StalwartBuilt HOMES
beyond green

GREEN BUILDING SCIENCE INSTITUTE

StalwartBuilt™ HOMES beyond green™

iGreenBuildingFab™

Launch 2011

Targeted Community Solutions Program

Public-private partnerships for environmental and economic sustainability

Building America U.S. Department of Energy Research Toward Zero Energy Homes Builders Challenge Partner

ENERGY STAR

EPA WaterSense PARTNER

EPA Indoor airPLUS QUALIFIED HOMES

LEED FOR HOMES

ENVIRONMENTS FOR Living® CERTIFIED GREEN

ecomagination FROM GE.COM

GREEN BUILDING SCIENCE INSTITUTE

Targeted Community Solutions

GREEN BUILDING SCIENCE INSTITUTE

THE TEAM

Green Building Science Institute – Targeted Community Solutions Program
Education, Certification, Program Administrator

StalwartBuilt Homes – Stalwart Re-NEW, Stalwart MED

GE - Healthymagination, Ecomagination, City Solutions
(Water, Sewer, Renewable Energy, Electric, Transportation)

Integral Green Building Fabrication
Assembly of High Performance Buildings

Energy Service Company (ESCO)

Department of Energy – Builders Challenge
Zero Energy Homes Program

Environmental Protection Agency
Energy Star, Water Sense, Indoor Air Plus

Florida Solar Energy Center Solar Education,
Project Certification Provider for the USGBC, EPA, DOE

MASCO Industries – Water Sense Certification Provider
Well Home, Environments For Living

CALL TO ACTION

The Green Building Science Institute – Targeted Community Solutions program was created as a solution to address several major issues that cities are facing today. The program is a solution to putting local community workers in a position to service the needs of their own community while gaining new valuable skills that will allow them to compete for better paying jobs related to sustainability.

The program also empowers the targeted city to create solutions for dealing with an aging building stock by utilizing the RENEW portion of the program. Existing buildings can achieve energy reductions from 20% to 70%, and reduce water consumption by at least 40%. New construction buildings can reduce energy consumption by 50% to near zero energy.

By creating a micro assembly plant in targeted locations, new high performance buildings that have superior indoor air quality, reduced utility consumption, and improved lifecycle of sustainability are produced while creating jobs for all in the community who have an association to the real estate transaction.

GREEN BUILDING
SCIENCE INSTITUTE

MISSION

What is the Targeted Community Solutions Program

A workforce development program with a strong emphasis on education and training to address the retrofitting of existing buildings and new construction needs. The program is implemented as a holistic community approach to sustainability, and utility savings for energy, and water.

GBSI and its affiliate partners are in the business of performing Residential & Commercial Development Services that includes:

Planning and Design Services, Construction Management and Administration Services, Construction and Operation Management.

The team also provides Building Certification and Finance placement services on a nationwide basis. The team brings its years of experience, controls, systems, procedures, personnel, and associates to apply the successful completion of community based projects.

Each Plant covers a 200 mile radius for the shipment of Market Rate and Blight Replacement houses. iGreenBuildingFab™

GREEN BUILDING SCIENCE INSTITUTE

SOLUTIONS

BPI CERTIFIED PROFESSIONAL

Summary of Potential Direct Jobs
100 Targeted Cities

Rehab	20,400
Building Science	5,200
Manufacturing/Assembling	6,500
Manufactured Product On-site Assembly	20,400
Total Potential Direct Jobs	**52,500**




GREEN BUILDING
SCIENCE INSTITUTE

Building Solutions

• Residential	• Commercial
• Institutional	• Government
• Civic	• Faith Based Organizations

IGBF - Gulf Coast Assembly Plant

iGreenBuildingFab™

New Construction

Our building solutions program delivers highly energy efficient, healthy, sustainable, storm resistant, long life cycle buildings that are designed to last 100 years.

Housing Solutions

Program funding and management for Blight Replacement, Affordable, Senior, First Responder, Workforce, Special Health needs and Market Rate housing.

Green designated community design services with custom amenities and services to promote the feeling of home and unity. While lowering environmental impacts, utilizing the latest in alternative fuel technologies such as geothermal and solar PV coupled with the high performance housing solution to produce quality carbon credits and maximum CO2 reduction.

GREEN BUILDING
SCIENCE INSTITUTE

Working with the Local Building Community

- Builders attend training and gain certification in systems built construction methods
- Gain continuing education credit
- Advantage of buying at bulk pricing direct from the factory
- Training and support for certified sub-contracted labor
- Community and or project marketing support for chosen mediums of advertising
- Training and marketing support for the realtor(s) working the project
- Builder gains “green designation”

Additional Benefits

Shorter construction cycle
Less call backs
Higher profit margins
Certification and testing to ensure the building is built and functions properly

iGreenBuildingFab™

SOLUTIONS

Assumptions For Manufacturing Job Creation

IGBF Micro Plant Community Facility

- 100 Manufacturing plant direct jobs created
- Plus 160 Onsite Assembly direct jobs created
- Plus 26 Building Science direct jobs created GREEN BUILDING SCIENCE INSTITUTE
- Each Targeted Region is assumed to average 200 Homes per year

GREEN BUILDING
SCIENCE INSTITUTE

SOLUTIONS

The Targeted Community Solutions Program will provide **blight replacement** and **market rate** homes with energy upgrades to accomplish one of four levels of home performance.

Status	Maximum Investment Cost ($)	HERS Rating	Electric Cost per year ($)	Savings ($)
Current	0	100	2350	
Stalwart Level 1	4,000	80	1600	792
Stalwart Level 2	10,000	70	1260	1136
Stalwart Level 3	18,000	55	980	1419
Stalwart Level 4	36,000	25	480	1919

Certifications:

1) Environments for Living
2) Ecomagination
3) Energy Star 2 and after April 2.5
4) Indoor Air Plus (EPA)
5) Water Sense (EPA)
6) Builders Challenge
7) LEED for Homes
8) Near Zero Energy

LEVEL 4

LEVEL 4 expands the BASE program (❶ - ❹) *plus* LEVELS 2 & 3, and adds the following:

■ Solar PV panels or other alternative fuel methods

Brings HERS Score to 30 or below, enables home to cost effectively accept alternative fuel

Allows access to Tax Credits

Allows access to Federal, State, Utility, Foundation Grant Funding where applicable

Estimated energy savings = 77-80%

Estimated water savings = 40% greater

Annual Estimated Savings $ 1919.00

Including:
General Contractor Fee
501(c)(3) Contribution
Testing & Certification
Development Management Fee
Stalwart Science Integration Fee

GREEN BUILDING
SCIENCE INSTITUTE

GREEN BUILDING
SCIENCE INSTITUTE

Sustainability
Guidelines
Checklist

PONTCHARTRAIN PARK
Community Development Corporation

New
&
Rehabilitation
Construction
Standards

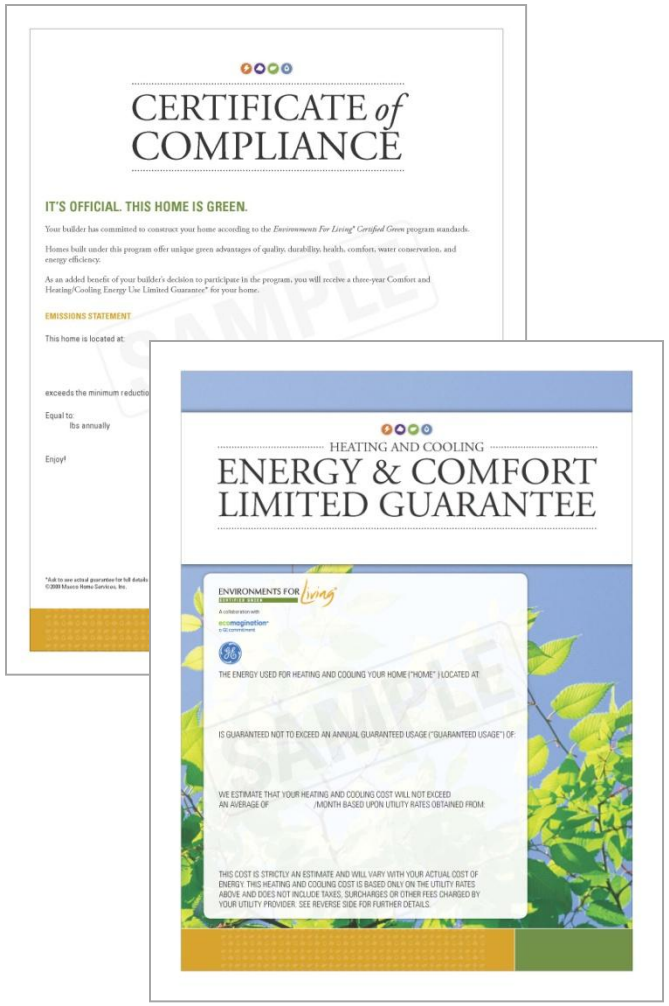
This is a 76 point check list designed to ensure program compliance with all certifications and inspections required to meet the performance standards of StalwartBuilt high performance buildings both residential and commercial.

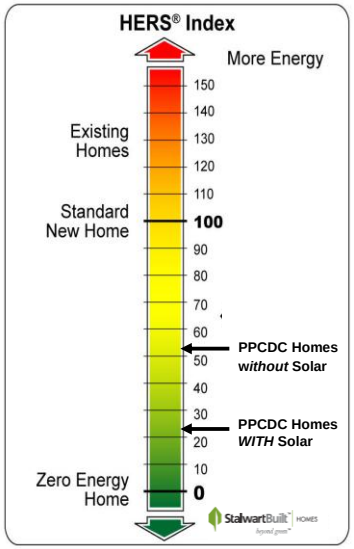
BC = Builder's Challenge ES = Energy Star WS = Watersence IAP = Indoor Air Plus LH = LEED For Homes EFL = Environmental For Living BSG = Building Science Group

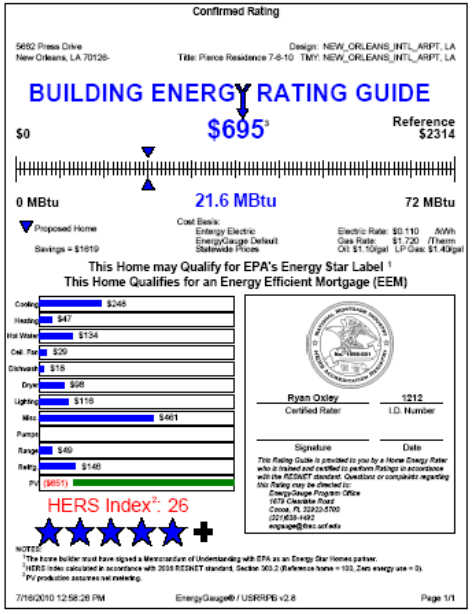
	Check List Requirements	Manufacturer Documentation & Verification Requirement	Third Party Verification Requirement	BC	WS	IAP	LH	ES	EFL	BSG
1	Construction/Design Documentation	✓	✓	✓	N/A	N/A	✓	N/A	N/A	✓
2	Building Envelop Moisture Management	✓	✓	✓	N/A	✓	✓	✓	✓	✓
3	Space Conditioning Design Based on ACCA Manual J,D, and S	✓	✓	✓	N/A	✓	✓	✓	✓	✓
4	All Hot Water Pipe Shall Be Have R-4 Insulation	N/A	✓	N/A	N/A	N/A	✓	N/A	✓	✓
5	Windows Shall Be Qualified Energy Star Southern Climate Zone	✓	✓	✓	N/A	N/A	✓	✓	✓	✓
6	Whole Building Mechanical Ventilation	✓	✓	✓	N/A	✓	✓	N/A	✓	✓
7	There Shall Be Continuous Air Barrier Separating attached garages from living space	✓	✓	✓	N/A	✓	✓	N/A	✓	✓
8	Blower Door Testing Shall be Performed ≤ 0.25 cfm/ft^2 @ 50 pascals	N/A	✓	✓	N/A	N/A	N/A	N/A	✓	✓
	Blower Door Testing shall be performed ≤ .15 ACH	N/A	✓	N/A	N/A	N/A	N/A	N/A	N/A	✓
9	Kitchen Exhaust Fan ≥ 100cfm	✓	✓	✓	N/A	N/A	✓	N/A	✓	✓
10	Bathroom Exhaust Fan ≥ 50cfm (intermittent use) or ≥ 20 cfm (continuous use)	✓	✓	✓	N/A	N/A	✓	N/A	✓	✓
11	Clothes Dryer Vented Directly To Outdoors	✓	✓	✓	N/A	N/A	N/A	N/A	✓	✓
12	All Duct Connections Shall Be Sealed with An Underwriters Laboratories Listed Mastic Product	N/A	✓	✓	N/A	N/A	✓	N/A	✓	✓
13	Total Duct Leakage < 7%	N/A	✓	✓	N/A	N/A	✓	N/A	✓	✓
14	Complete Energy Star Thermal Bypass Inspection	✓	✓	✓	N/A	✓	N/A	✓	✓	✓
15	Use Central Air Handler With a Filter ≥ MERV 10	✓	✓	✓	N/A	✓	✓	N/A	✓	✓
16	Combustion Safety	N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A
17	Central Air Handler Isolated From The Garage by Thermal and Air Barrier	N/A	✓	✓	N/A	✓	✓	✓	✓	✓
18	The Static Water Service Pressure ≤ 60 psi	✓	✓	N/A	✓	N/A	N/A	N/A	N/A	✓
19	All Toilets Shall Be Comply with ≤ 1.1 fgpf	✓	✓	N/A	✓	N/A	✓	N/A	✓	✓
20	Bathroom and Kitchen Sink Faucets Shall Comply with Max Flow Rate Of 1.5 gpm	✓	✓	N/A	✓	N/A	✓	N/A	✓	✓
22	Showerheads Shall Comply with Max Flow Rate Of 1.75 gpm	✓	✓	N/A	✓	N/A	✓	N/A	✓	✓

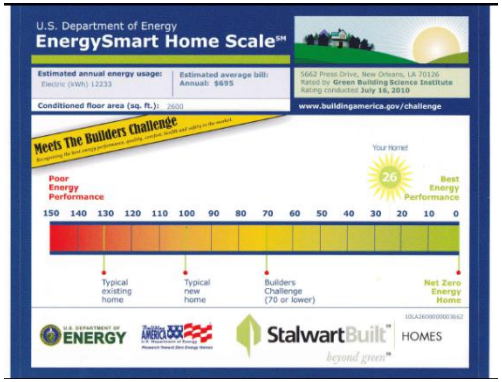
GREEN BUILDING SCIENCE INSTITUTE

SOLUTIONS









Building AMERICA U.S. Department of Energy Research Toward Zero Energy Homes Builders Challenge Partner

ENERGY STAR

EPA WaterSense PARTNER

EPA Indoor airPLUS QUALIFIED HOMES

LEED FOR HOMES

ENVIRONMENTS FOR Living® CERTIFIED GREEN

ecomagination

FROM: GE.COM

GREEN BUILDING
SCIENCE INSTITUTE

SOLUTIONS

Assumptions for Rehab Job Creation
Stalwart-Renew Program

- 51 Jobs Created for every 120 Rehab Projects
- 240 Projects Per City Per Year is Estimated
- 102 Jobs Created Per City Per year
- Plus 26 Supplemental Building Science Jobs Created

GREEN BUILDING
SCIENCE INSTITUTE

Building Solutions

Stalwart Renew Program - Rehab & Retrofit – All Building Types

- Audit
- Solution
- Retrofit
- Commissioning
- Quality Assurance

Workforce development engine implemented as Adult Education through the local community college to provide green jobs training in a variety of fields. Locally qualified, certified companies utilize the trained certified workforce to implement the program solution. Program management provided by GBSI, GREE, FSEC, Masco and GE. Works in unison with the 501(c)(3), Housing Authority, local workforce training programs.

GREEN BUILDING
SCIENCE INSTITUTE

Building Solutions

Rehab & Retrofit – All Building Types

- 30-75% efficiency gain per structure
- 30-50% market penetration
- 5-7 year performance period
- Public-private partnership
- Self-sustaining approach
- Replicable model

Managed by the Nonprofit organization: energy and water efficiency program, implementer for the local community.

- Outreach and marketing on the advantages of efficiency
- Financing source for energy and water related improvements provided by GE – City Solutions, DOE, EPA, SEEA, JCI, Public Institutional Sources and Private Foundations.
- MASCO – Well Home Program is the Quality Assurance provider for property owners and occupants
- Certified Carbon Credits

GREEN BUILDING
SCIENCE INSTITUTE

SOLUTION

The Targeted Community Solutions Program will assess the targeted homes for energy upgrades to accomplish one of four levels of home performance.

Status	Maximum Investment Cost ($)	HERS Rating	Electric Cost per year ($)	Savings ($)
Current	0	150	2350	
Stalwart Level 1	10,000	100	1600	792
Stalwart Level 2	25,000	70	1260	1136
Stalwart Level 3	60,000	55	980	1419
Stalwart Level 4	30,000	25	480	1919

Not to exceed - $10,000

* Model will include Federal, State and local rebates and tax credits

* Includes verification testing to be at or below Code 100 HERS - existing 150 HERS

LEVEL 1

LEVEL 1 is a program that will focus on a 'BASE' upgrade of:

❶ Additional attic insulation & air sealing ❷ Enhanced HVAC system ❸100% CFL Light Bulbs

❹Low flow water fixtures ❺ Performance and certification audits

Bring HERS Score below code rating of 100

Estimated energy savings = 32-35%

Estimated water savings = 40% or greater

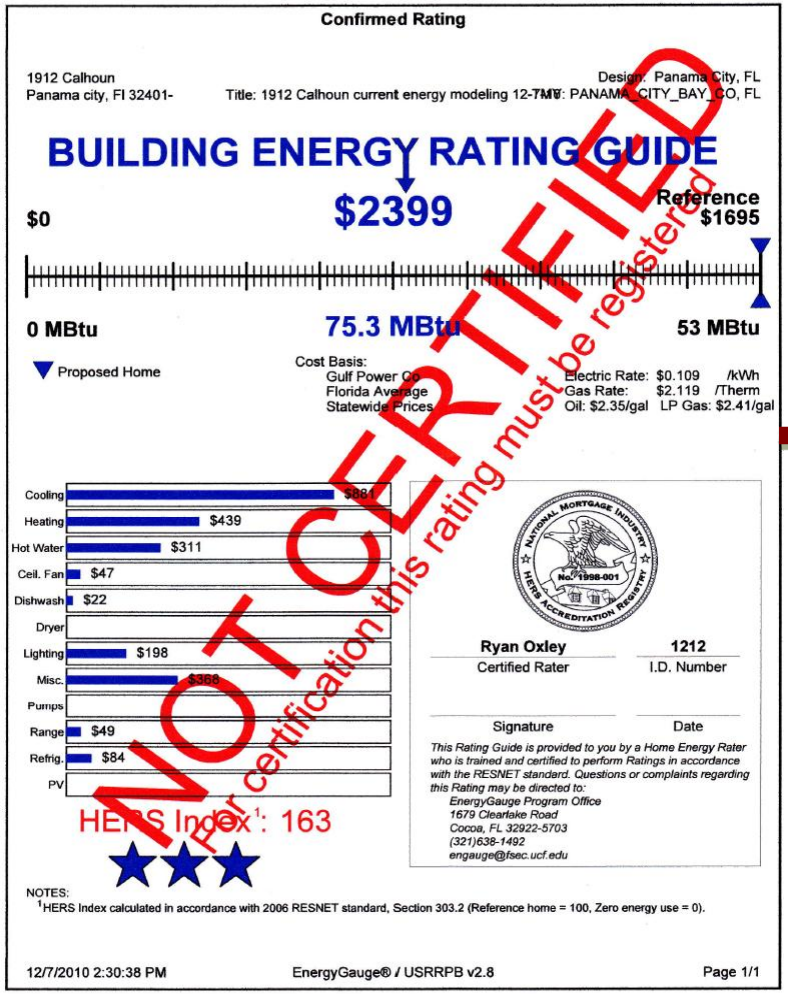
Annual Estimated Energy Savings $ 792.00

Including:
General Contractor Fee
501(c)(3) Contribution
Testing & Certification
Development Management Fee
Stalwart Science Integration Fee

GREEN BUILDING
SCIENCE INSTITUTE

SOLUTION

LEVEL 1



Confirmed Rating

1912 Calhoun
Panama city, Fl 32401-

Title: 1912 Calhoun current energy modeling 12-7-10

Design: Panama City, FL
TMY: PANAMA_CITY_BAY_CO, FL

BUILDING ENERGY RATING GUIDE

$0

$2399

Reference
$1695

0 MBtu

75.3 MBtu

53 MBtu

Proposed Home

Cost Basis:
Gulf Power Co
Florida Average
Statewide Prices

Electric Rate: $0.109 /kWh
Gas Rate: $2.119 /Therm
Oil: $2.35/gal LP Gas: $2.41/gal

Cooling	$894
Heating	$439
Hot Water	$311
Ceil. Fan	$47
Dishwash	$22
Dryer	
Lighting	$198
Misc.	$368
Pumps	
Range	$49
Refrig.	$84
PV	

HERS Index[1]: 163

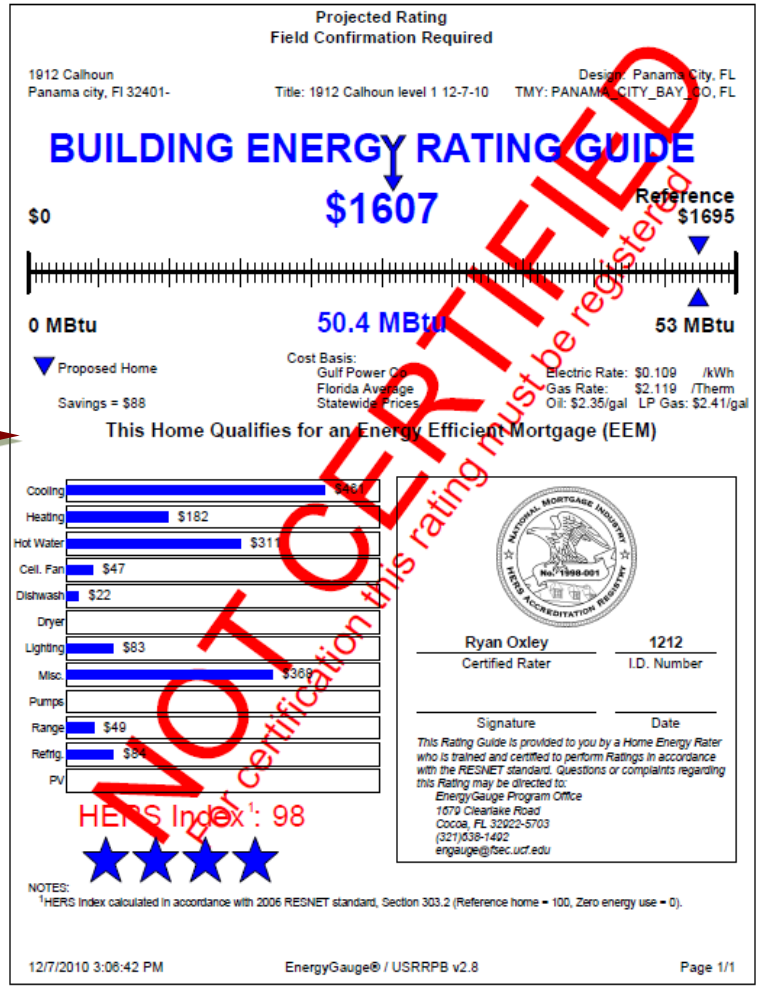
Ryan Oxley — Certified Rater
1212 — I.D. Number
Signature
Date

This Rating Guide is provided to you by a Home Energy Rater who is trained and certified to perform Ratings in accordance with the RESNET standard. Questions or complaints regarding this Rating may be directed to:
EnergyGauge Program Office
1679 Clearlake Road
Cocoa, FL 32922-5703
(321)638-1492
engauge@fsec.ucf.edu

NOTES:
[1]HERS Index calculated in accordance with 2006 RESNET standard, Section 303.2 (Reference home = 100, Zero energy use = 0).

12/7/2010 2:30:38 PM EnergyGauge® / USRRPB v2.8 Page 1/1

NOT CERTIFIED
For certification this rating must be registered



Projected Rating
Field Confirmation Required

1912 Calhoun
Panama city, Fl 32401-

Title: 1912 Calhoun level 1 12-7-10

Design: Panama City, FL
TMY: PANAMA_CITY_BAY_CO, FL

BUILDING ENERGY RATING GUIDE

$0

$1607

Reference
$1695

0 MBtu

50.4 MBtu

53 MBtu

Proposed Home

Savings = $88

Cost Basis:
Gulf Power Co
Florida Average
Statewide Prices

Electric Rate: $0.109 /kWh
Gas Rate: $2.119 /Therm
Oil: $2.35/gal LP Gas: $2.41/gal

This Home Qualifies for an Energy Efficient Mortgage (EEM)

Cooling	$464
Heating	$182
Hot Water	$311
Ceil. Fan	$47
Dishwash	$22
Dryer	
Lighting	$83
Misc.	$368
Pumps	
Range	$49
Refrig.	$84
PV	

HERS Index[1]: 98

Ryan Oxley — Certified Rater
1212 — I.D. Number
Signature
Date

This Rating Guide is provided to you by a Home Energy Rater who is trained and certified to perform Ratings in accordance with the RESNET standard. Questions or complaints regarding this Rating may be directed to:
EnergyGauge Program Office
1679 Clearlake Road
Cocoa, FL 32922-5703
(321)638-1492
engauge@fsec.ucf.edu

NOTES:
[1]HERS Index calculated in accordance with 2006 RESNET standard, Section 303.2 (Reference home = 100, Zero energy use = 0).

12/7/2010 3:06:42 PM EnergyGauge® / USRRPB v2.8 Page 1/1

NOT CERTIFIED
For certification this rating must be registered

GREEN BUILDING SCIENCE INSTITUTE

BUILDING SCIENCE
WELCOME TO THE FUTURE

StalwartBuilt™ HOMES
beyond green™

iGreenBuildingFab

A better system for a Beyond Green home. The building science used in a StalwartBuilt home incorporates high performance green technology within a system-built process. All aspects of the home are designed as an integrated system, with components working together to create a building that maximizes performance within any given climate. The result is a healthier, energy-efficient living environment that not only meets the high “green” standards of national and federal government certification standards, but also includes other high performance attributes that make StalwartBuilt homes…Beyond Green.

STANDARDS & CERTIFICATIONS - STALWARTBUILT HOMES

Building America U.S. Department of Energy Research Toward Zero Energy Homes Builders Challenge Partner

ENERGY STAR

EPA WaterSense PARTNER

EPA Indoor airPLUS QUALIFIED HOMES

LEED FOR HOMES

ENVIRONMENTS FOR Living® CERTIFIED GREEN

ecomagination FROM GE.COM

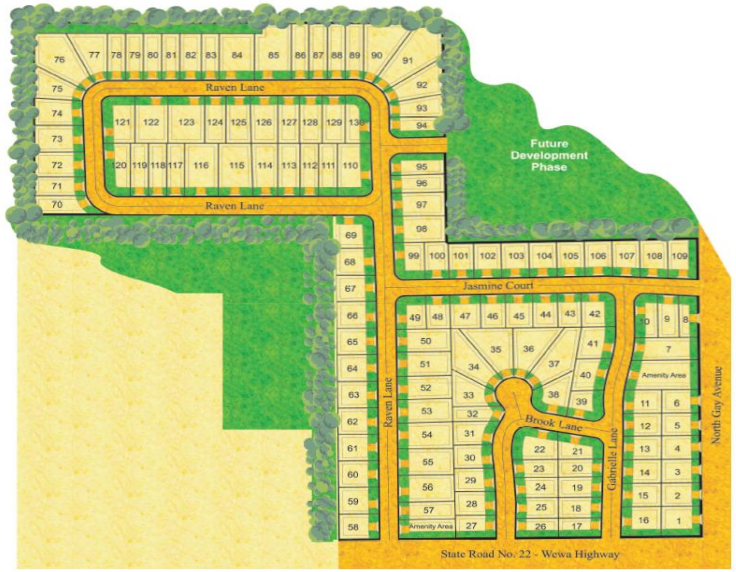
GREEN BUILDING SCIENCE INSTITUTE

Building Solutions

CALLAWAY CORNERS

site plan

StalwartBuilt HOMES beyond green



Location: Callaway, Florida

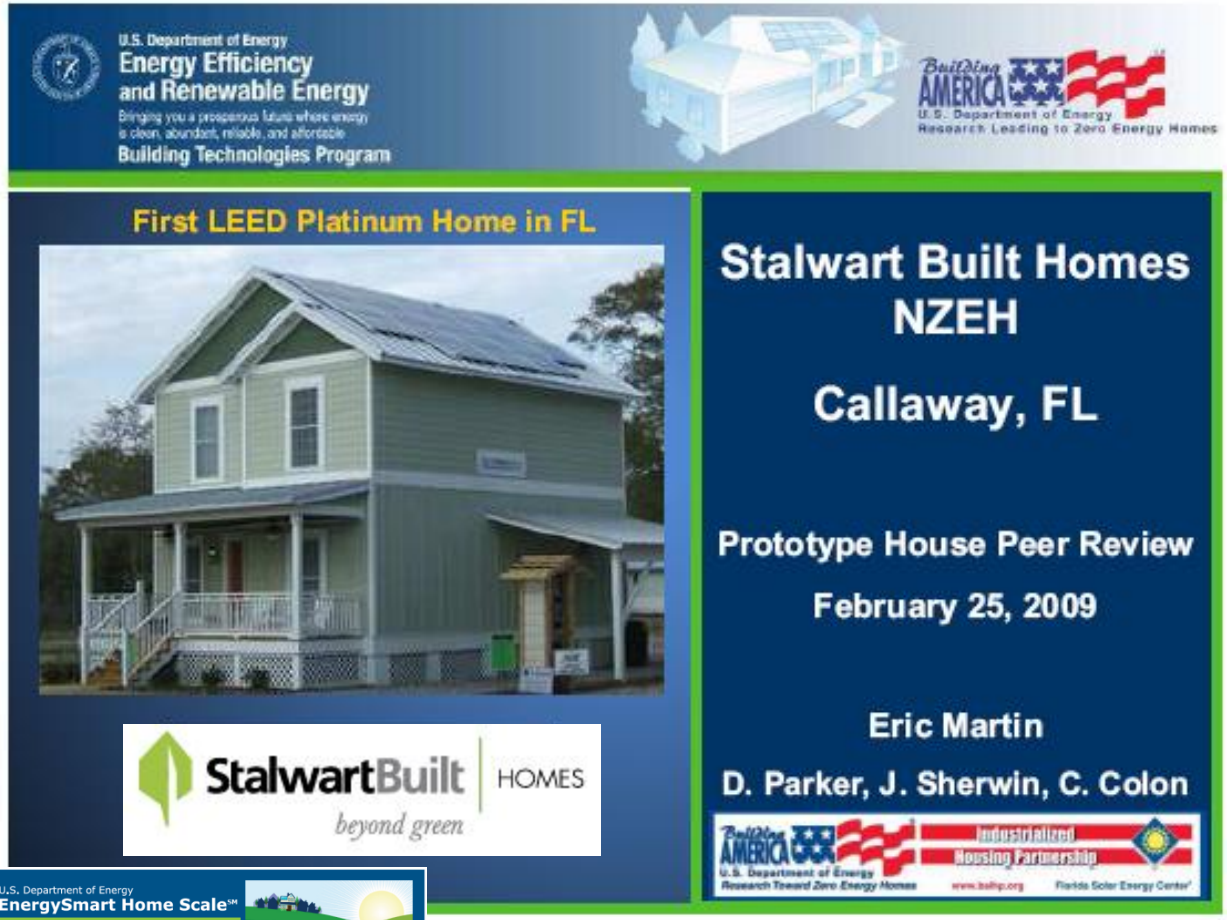
Inner city mobile home park converted to a high performance green single family community.

First LEED Platinum Certified House in the State of Florida.

StalwartBuilt HOMES beyond green

PARTNER

ZERO ENERGY HOME



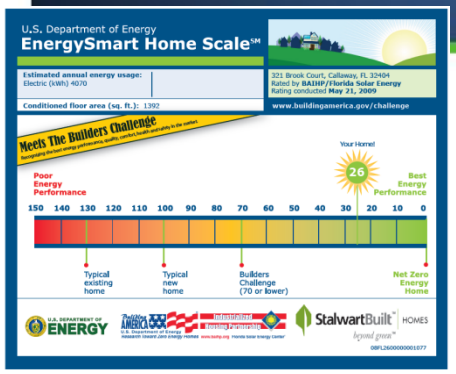
HERS Index = 27

LEED® Facts

Stalwart Built Homes
Panama City, Fl

LEED for Homes Program
Certified on: March 21, 2008

Platinum	86
Locations & Linkages	9
Sustainable Sites	12
Water Efficiency	7
Energy & Atmosphere	34
Materials & Resources	7
Indoor Environmental Quality	10
Innovation & Design	5
Awareness & Education	2



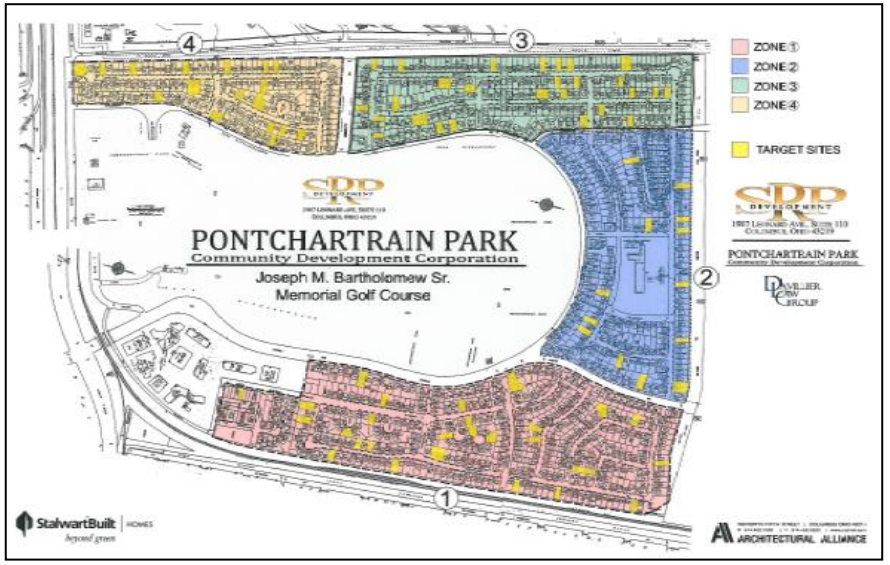
SEE ENCLOSED CASE STUDY

StalwartBuilt HOMES
beyond green

GREEN BUILDING SCIENCE INSTITUTE

Building Solutions

PONTCHARTRAIN PARK
Community Development Corporation



Location: New Orleans, LA

Community destroyed by Hurricane Katrina. Urban redevelopment infill project. Re-built to Stalwart Beyond Green and LEED certification standards.

StalwartBuilt™ HOMES
beyond green™

Building Solutions

Pierce Home Site:
2,600 square feet
conditioned space

Grade elevated 6 ft. to meet FEMA requirements.
Garage: site built

One day set and dry in. Security system activation.

Building Solutions

Building Solutions

Building Solutions

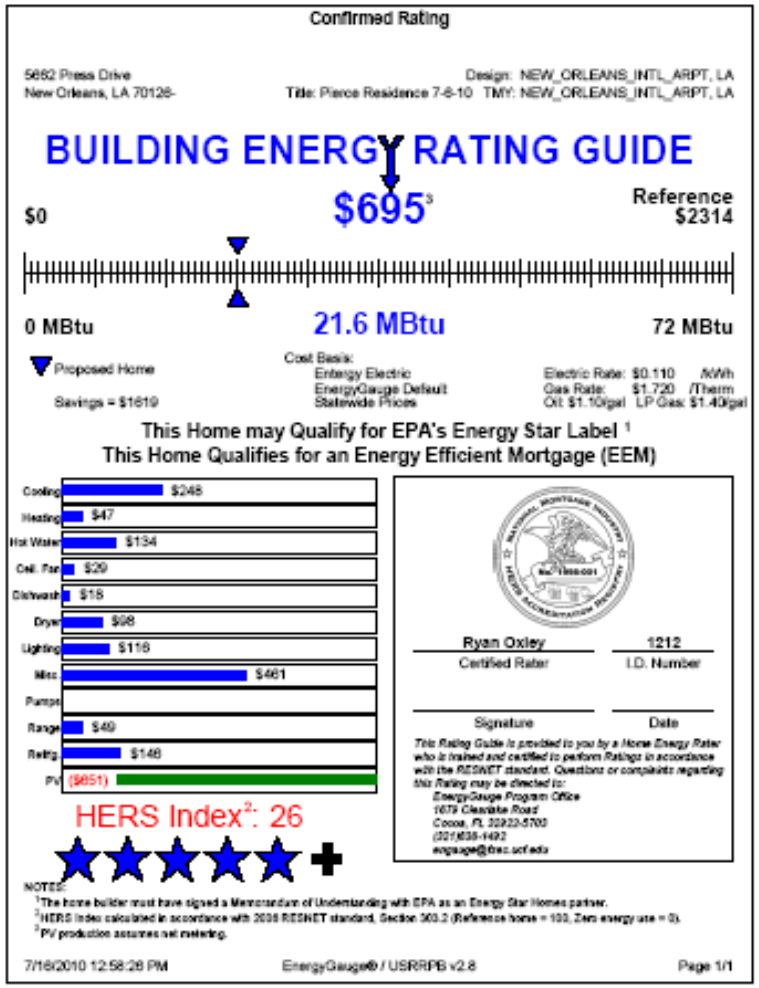
PONTCHARTRAIN PARK
Community Development Corporation

DISCOVERY CENTER

StalwartBuilt™ HOMES
beyond green™

GREEN BUILDING SCIENCE INSTITUTE

Building Solutions


Confirmed Rating

5652 Press Drive
New Orleans, LA 70126-

Design: NEW_ORLEANS_INTL_ARPT, LA
Title: Pierce Residence 7-8-10 TMY: NEW_ORLEANS_INTL_ARPT, LA

BUILDING ENERGY RATING GUIDE

$0 — $695[3] — Reference $2314

0 MBtu — 21.6 MBtu — 72 MBtu

Proposed Home
Savings = $1619

Cost Basis:
Entergy Electric
EnergyGauge Default
Statewide Prices

Electric Rate: $0.110 /kWh
Gas Rate: $1.720 /Therm
Oil: $1.10/gal LP Gas: $1.40/gal

This Home may Qualify for EPA's Energy Star Label [1]
This Home Qualifies for an Energy Efficient Mortgage (EEM)

Cooling $248
Heating $47
Hot Water $134
Cell. Fan $29
Dishwash $18
Dryer $98
Lighting $116
Misc $461
Pumps
Range $49
Refrig $148
PV ($851)

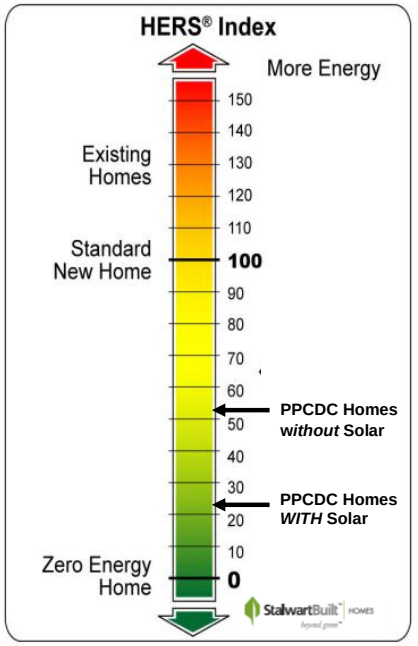
HERS Index[2]: 26

Ryan Oxley — Certified Rater
1212 — I.D. Number
Signature
Date

This Rating Guide is provided to you by a Home Energy Rater who is trained and certified to perform Ratings in accordance with the RESNET standard. Questions or complaints regarding this Rating may be directed to:
EnergyGauge Program Office
1679 Clearlake Road
Cocoa, FL 32922-5703
(321)638-1492
engage@fsec.ucf.edu

NOTES:
[1] The home builder must have signed a Memorandum of Understanding with EPA as an Energy Star Homes partner.
[2] HERS Index calculated in accordance with 2006 RESNET standard, Section 303.2 (Reference home = 100, Zero energy use = 0).
[3] PV production assumes net metering.

7/16/2010 12:58:28 PM — EnergyGauge® / USRRPB v2.8 — Page 1/1



BENEFITS

- Independent third party verification rating by the Green Building Science Institute, Panama City, Fl. Provider compliance approval by the Florida Solar Energy Center, Cocoa Beach, Fl.
- Approved by EPA for Energy Star label
- Qualifies the home for Energy Efficient Mortgage products
- Energy savings count as positive income for the home buyer

Building America U.S. Department of Energy Research Toward Zero Energy Homes Builders Challenge Partner

ENERGY STAR

EPA WaterSense PARTNER

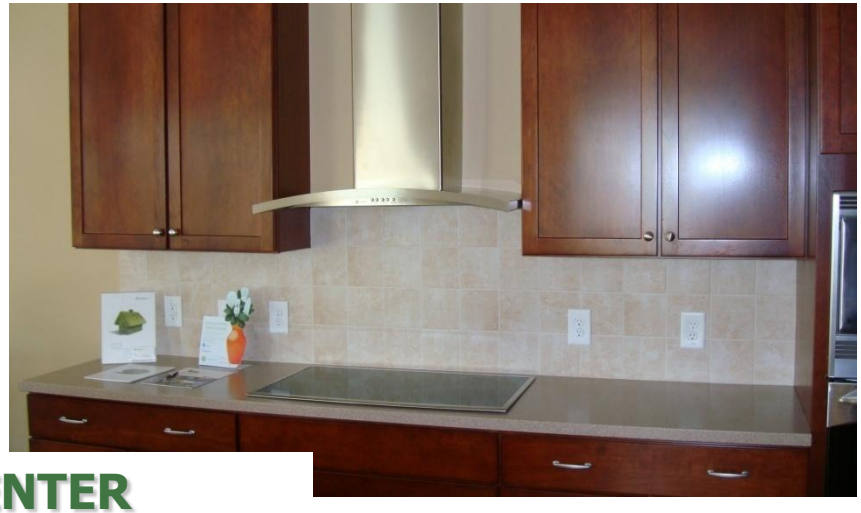
EPA Indoor airPLUS QUALIFIED HOMES

LEED FOR HOMES

ENVIRONMENTS FOR Living® CERTIFIED GREEN

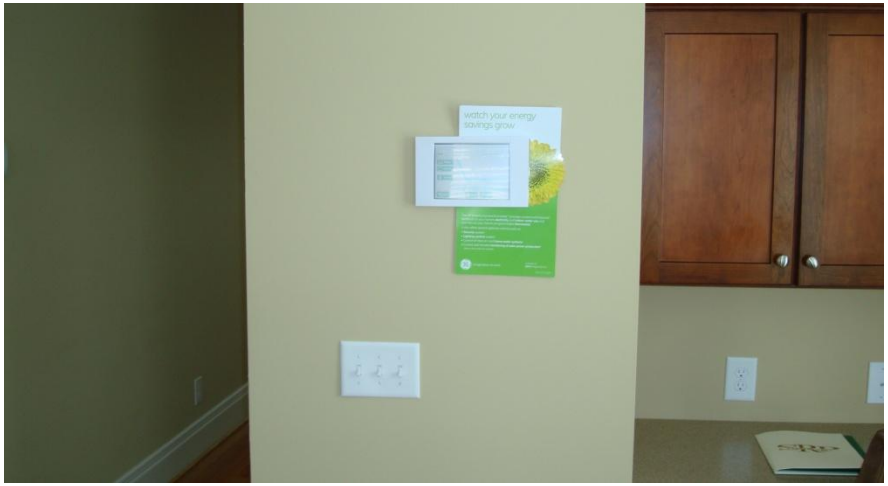
ecomagination FROM GE.COM

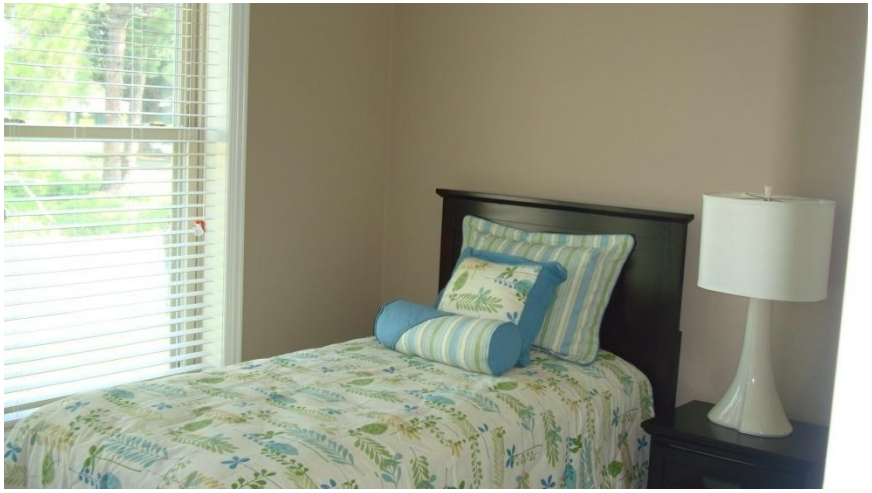
PONTCHARTRAIN PARK
Community Development Corporation



SALES CENTER

StalwartBuilt™ HOMES
beyond green™





StalwartBuilt Homes / GBSI

Proprietary

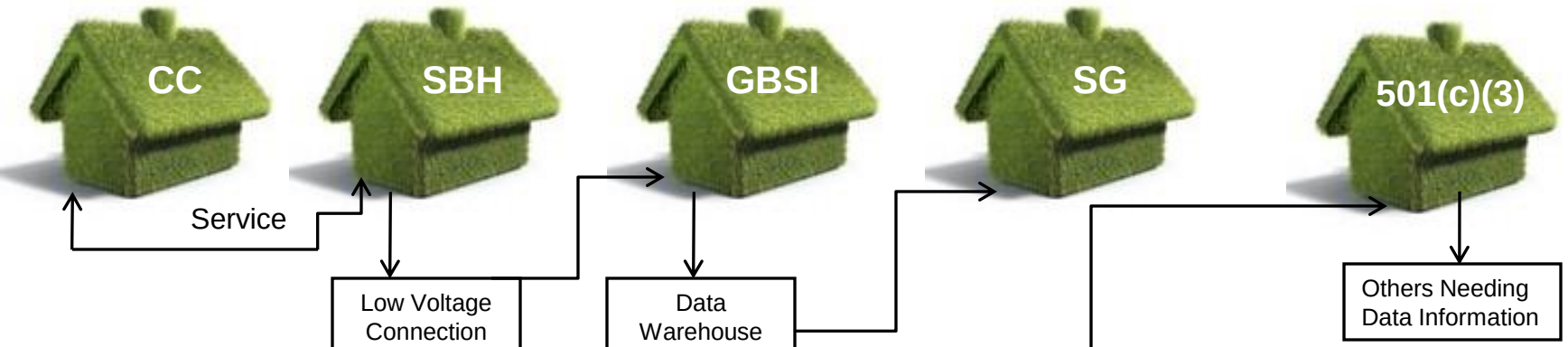
Data Monitoring and Home Automation Solution

DATA SOLUTIONS

GREEN BUILDING SCIENCE INSTITUTE

Targeted Community Solutions Program

Does not require additional capital investment



GBSI
Public Outreach
Education Program

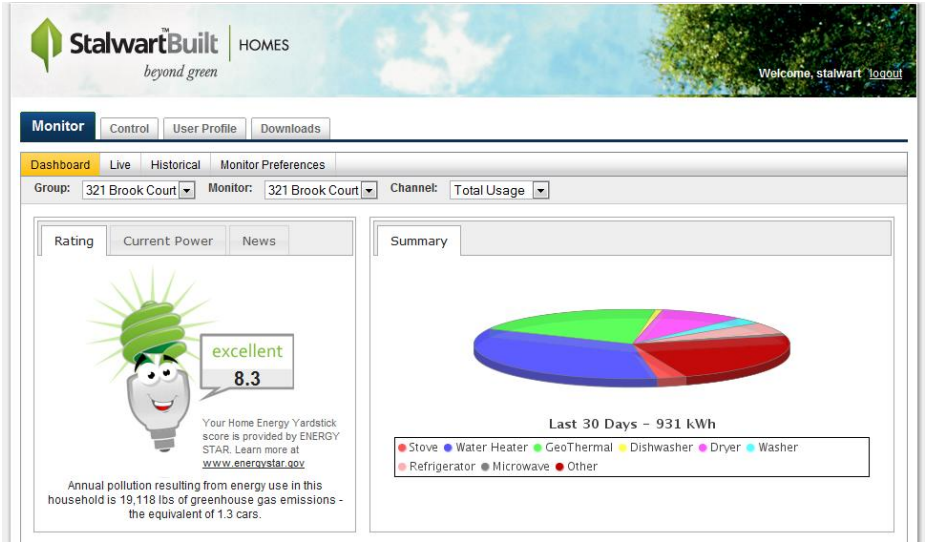
Data Collection

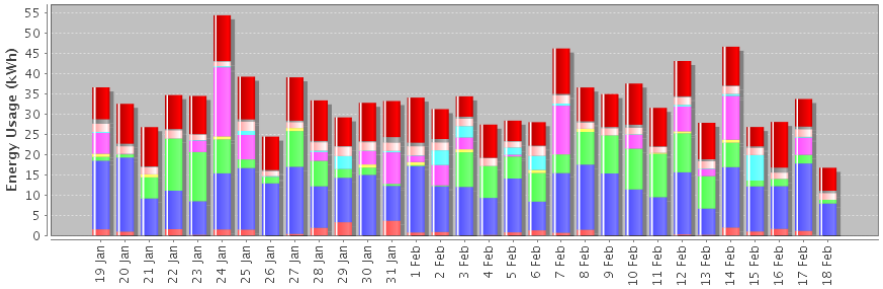
- Energy – Solar PV / Total Usage
- Water – Temp / GPM / Irrigation
- Geothermal – In/Out - HVAC
- Humidity – Outdoor / Indoor
- Universal Design / Medical Monitoring
- Appliance Performance Tracking
- Security – Windows/Doors – Open/Closed
- Lighting Control

Applies to New Construction
&
Rehab Renew Programs

Legend CC=Cable Company ■ SBH=StalwartBuilt Homes ■ GBSI=Green Building Science Institute ■ SG=Smart Grid ■ 501(c)(3) Community

Data Collection





GREEN BUILDING
SCIENCE INSTITUTE

Solution Partners

Team

Building Partnerships

ENVIRONMENTS FOR *Living*®

CERTIFIED GREEN

In Collaboration with ecomagination℠

GREEN HAS GROWN UP. AND IT'S READY FOR BUSINESS.

WellHome Business Model

MHS will make homes operate better and more efficiently by providing whole home performance services

- *Direct marketing*
- *Channel partners*
- *Set in-home appointments*

- *Energy and comfort audit using diagnostic tools such as:*
  - *Blower door*
  - *IR Scanner*
  - *Duct Blaster*
  - *Laptop*

- *In-home selling*
- *Projects will include:*
  - *Air sealing*
  - *Duct sealing*
  - *Insulation*
  - *HVAC upgrades*
  - *Window upgrades*
  - *Renewable energy installations and Others*

- *Project scheduling*
- *Project management*
  - *Sub-contracting*
  - *In house crews*
- *Quality control*

- *Quality assurance*
- *Measure customer satisfaction*
- *Track savings*

WellHome Services

Assess & Recommend

We assess your home, then discuss our recommendations on how to improve your comfort and energy-efficiency.

Install

WellHome or one of our selected service providers performs the improvements you've selected, with a focus on quality, convenience, and service.

Guarantee

Ensure improved home performance with the Whole Home Energy Savings Limited Guarantee.

WellHome Guarantee – Customer for Life

Whole-Home Energy Savings Limited Guarantee

WellHome guarantees that you will save at least _____% off your Historic Energy Use for your home ("Home") located at:

_____

Your Historic Energy Use covers the period _____ ("Historic Period")

_____ _____

WellHome
Improve the weather inside.

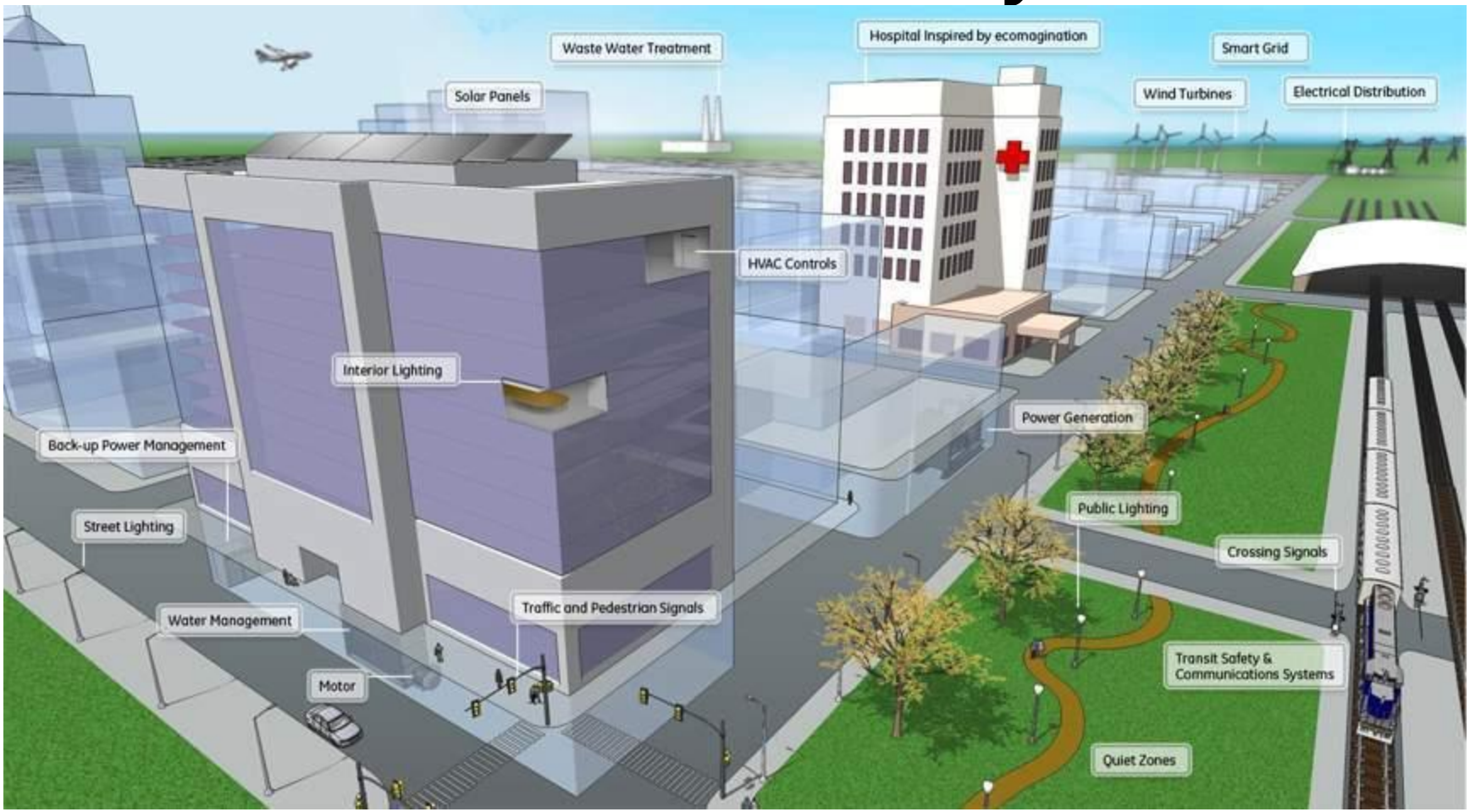
wellinsulated
wellheated
wellcooled
wellperforming

WellHome℠
Improve the weather inside.

GREEN BUILDING SCIENCE INSTITUTE

SOLUTIONS PARTNER

Sustainable community from GE



ecomagination

1. Continue to increase revenues from ecomagination products

2. Double investment in R&D

3. Reduce greenhouse gas emissions and improve energy efficiency of GE

50%
REDUCTION
IN GE'S ENERGY
INTENSITY

4. Reduce water use and improve water reuse

25%
REDUCTION
IN WATER
CONSUMPTION

5. Keep the public informed

INSPIRE
A COMPETITIVE
GREEN ECONOMY

Foley Lighting Audit Review and Next Steps

Expected Outcomes

- Review of lighting audit
- Discussion of next steps
- Framework of phased plan to keep Foley – **The Forward City**

imagination at work

Foley's Building Solutions Case Studies - indoor

Project	Scope	Estimated Operating Impact	Estimated Environmental Impact	Comments One for one replacement	Payback Years
Comm. Dev. 	100 Lighting Fixtures	• $1,368 / yr. savings	• Equals 3 cars or 5 acres of trees	Replaced T12 incandescent with T8Energy Smart	3.1
Fire station 	156 Lighting Fixtures	• $2,687 / yr. savings	• Equals 5 cars or 8 acres of trees	Replaced T12 incandescent with T8Energy Smart	1.7
5 buildings studied 	1,005 Lighting Fixtures	• $8,008 / yr. savings • 32% Energy Reduction	• Deeper dive suggested, based on Foley's metrics	Multiple solutions suggested	2.7

Foley Parking Lot Case Studies - Outdoor

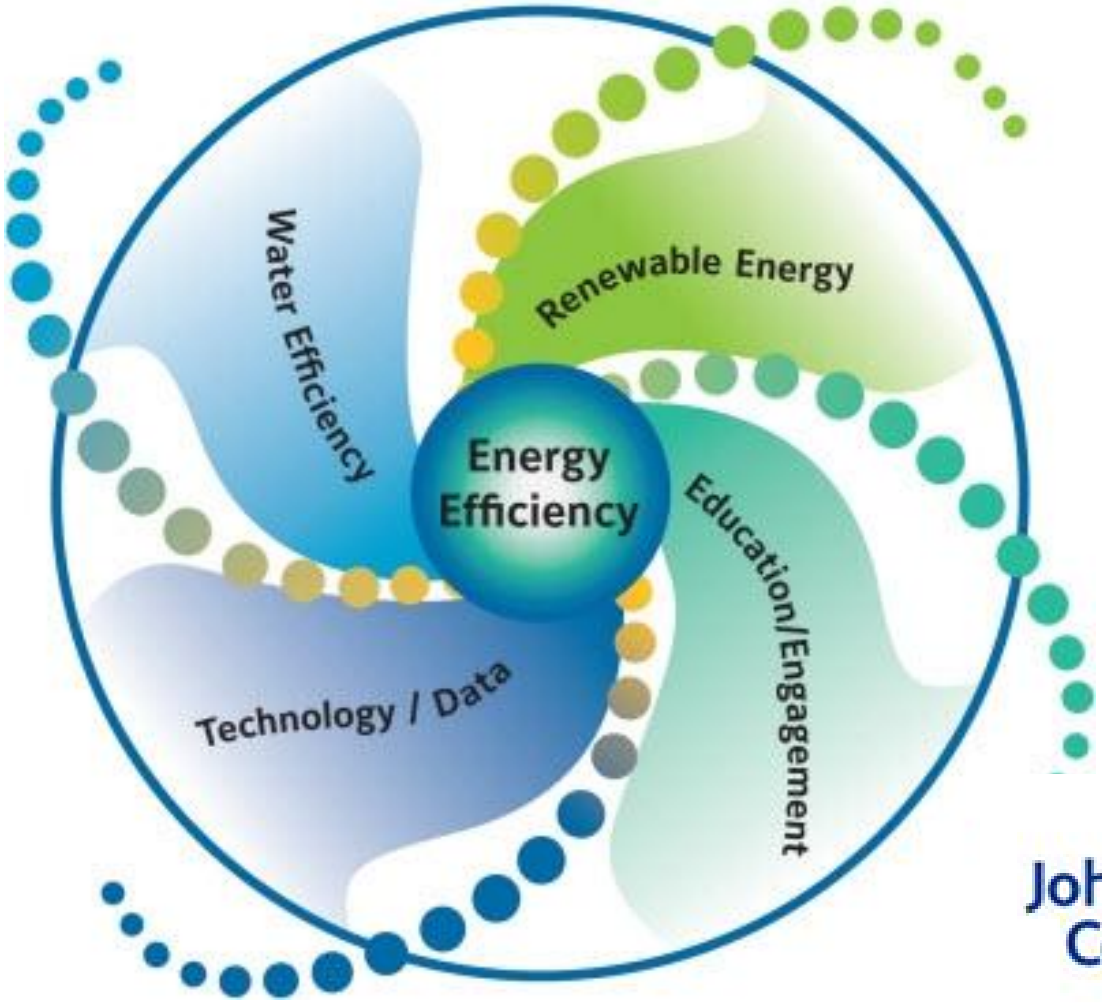
Project	Scope	Estimated Operating Impact	Comments One for one replacement	Payback Years
Justice Dept. 	26 Lighting Fixtures	• $2,500 / yr. savings	Move to LED lighting	8.1
City Hall/Library  	37 Lighting Fixtures	• $3,559 / yr. savings	Move to LED lighting	9.0
2 Lots Studied   	63Lighting Fixtures	• $6,059 / yr. savings • 42% Energy Reduction	Multiple solutions suggested	8.9

GREEN BUILDING SCIENCE INSTITUTE

SOLUTIONS PARTNER

#1 Government need: cut budgets yet develop economy for jobs

#1 Budget item outside of salaries: energy plus always increasing



Johnson Controls

GREEN BUILDING SCIENCE INSTITUTE

SOLUTIONS PARTNER

Smart Meters, Smart Grid, Sustainable City

The real power of the Smart Grid concept for municipal utilities goes far beyond metering technology and better system control. It lies in the communication network that makes the concept possible – while creating opportunities to deliver popular new services, attract businesses, energize economic growth, and engage residents in community improvement with sustainable solutions.

Meet
- City stakeholder leads meeting: fleet, management, procurement with Johnson Controls to determine needs

Survey
- Survey departments for EV truck needs, identify funding & process procurement

Show
- Showcase success, demonstrate savings & integrate with grid

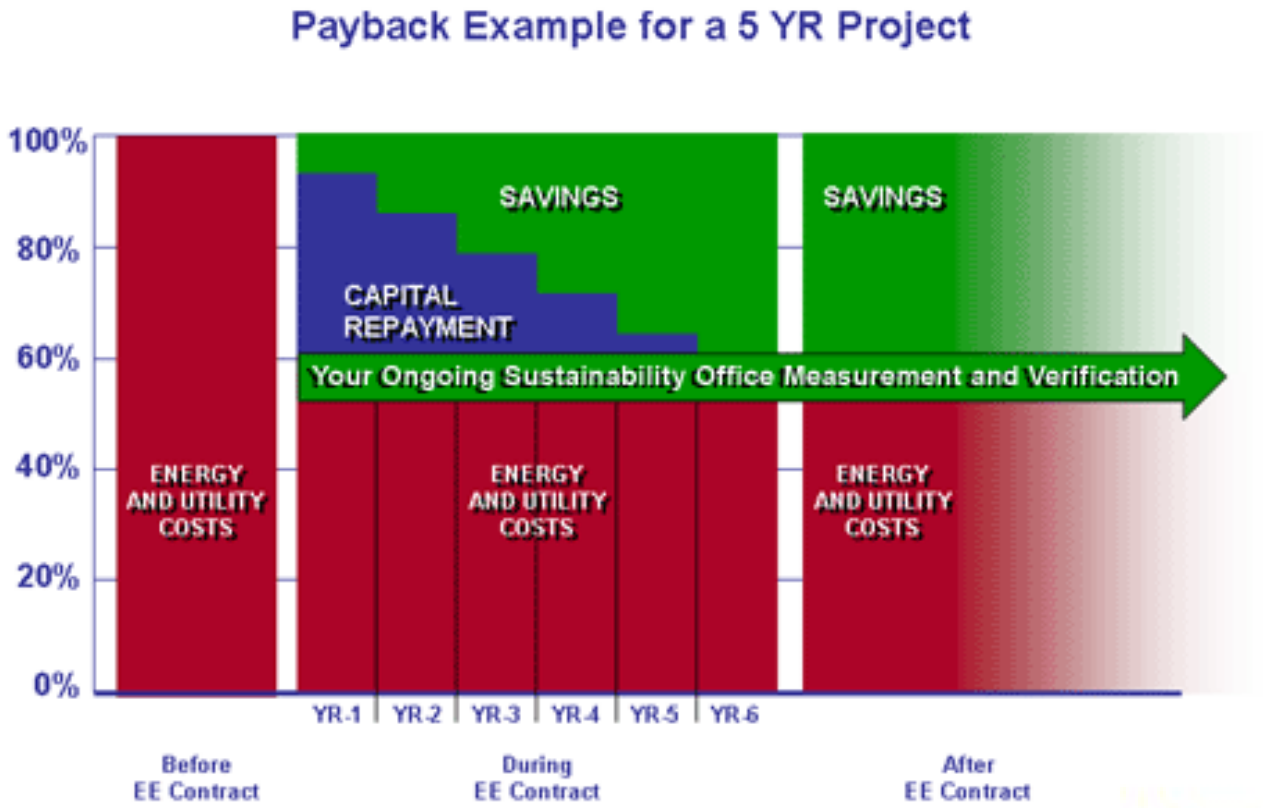
Your ideal next steps

Johnson Controls

GREEN BUILDING SCIENCE INSTITUTE

SOLUTIONS PARTNER

How do you pay for your energy budget cuts, retrofits & upgrades: energy savings



Johnson Controls

GREEN BUILDING
SCIENCE INSTITUTE

Education Solutions

Targeted Community Solutions
Curriculum Offering
Class Room and Online Courses

GREEN BUILDING SCIENCE INSTITUTE
FOLEY CAMPUS

LEGEND

1
IGBF MODEL HOME

2
AUDITORIUM

3
CLASSROOMS

4
RAIN WATER CISTERN

5
PHOTOVOLTAIC PANELS

6
COMMUNITY RECYCLING CENTER

7
COMMUNITY GARDEN

8
NEIGHBORHOOD COMPOST

9
HEAT REFLECTIVE METAL ROOF

10
DEMONSTRATION WIND TURBINE

11
XERISCAPE

GREEN BUILDING
SCIENCE INSTITUTE

EDUCATION PROGRAMS

The Targeted Community Solutions Program education initiative is offered as adult education. We work in partnership with the local college to design flexible schedules and core curriculum for workforce training.

We offer a blended curriculum of On-Line and Classroom courses. The majority of our course offering have CEU credits.

Program content is provided by our team partners. We supply our own certified instructors, additionally we offer “train the trainer” courses for some content.

FSEC

Green Education Online

BPI
CERTIFIED PROFESSIONAL

MASCO

GREEN BUILDING
SCIENCE INSTITUTE

Demonstration House Programming

GBSI proposes a demonstration house located at the Community College that would be used by the College, GBSI and the green building community for education and "Green Events"

- The House would be a "Behind the Walls" that shows the functional systems of a Zero Energy House
- Finishing of the house would be part of the kick-off for education programming
- House would be changed approximately every 2 years to keep pace with building and technology changes

House provided by StalwartBuilt Homes & IGBF

StalwartBuilt™ HOMES
beyond green™

iGreenBuildingFab™

GREEN BUILDING SCIENCE INSTITUTE

Public Outreach and Education

Public Training / Seminars

Local college interns
College projects (like solar decathlon, etc.)
Understanding green (realtors)
Appraising high performance homes
Energy efficient mortgage/underwriting training
Questions to ask your contractor
Sustainable and high performance incentives for homeowners:
- Federal, State & Local Governments
- Utility Companies
- Private / Public Foundations

Efficiency improvements for existing homes (best bang for your buck)
Home energy management (understanding peak utility rates the methods to save water, power, in your daily routine etc.)
New Urbanism
Sins of Green Washing (prioritizing green through third party certification)
Alternative construction methods
Indoor air quality threats, causes, and solutions

Conferences

GBSI works with its national, regional, and local partners to co–sponsor and provide education content in green building and development events through out the Gulf Coast area.

iGreenBuildingFab™ StalwartBuilt™ HOMES beyond green™ GE Johnson Controls MASCO FSEC® Green Real Estate Education

Marketing Program

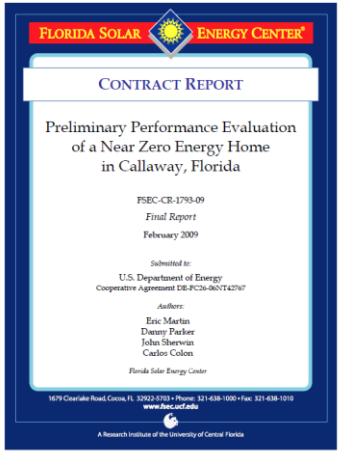
Vendors Partners
&
Community Participation Campaigns

GREEN BUILDING
SCIENCE INSTITUTE

Local & National Community Participation Campaign

Eco- Expo and all educational events will be advertised and marketed through a coordinated community effort.

- White Paper Case Studies by Dept. of Energy
- National & Local Media Programs
- Local cable stations
- Community College
- Chamber of Commerce
- USGBC chapters and local “Green” organizations



STRATEGIC COMMUNICATION PLAN

This planning track will develop a strategic plan to enhance communications and planning with the key community stakeholders during the planning process. This track will focus on communication with key groups connected to the planning process.

Communication Plan Components

- Resources and Expertise
- The Objectives
- The Targeted Audiences
- The Program of Work
- Informing the Community
- The task Timetable for Work
- Methods of Communication
- Evaluation Process Description

Methods of Communication

- Written Information
- Media Relations Announcements
- Marketing and Sales Materials
- Internal & external Comm. Procedures
- Taskforce & team Comm.
- Report Summaries & Procedures
- Surveys or other methods of feedback
- Website(s)
- Periodic Print Publications
- Public Relations Materials
- Legal & Legislative Documents
- Online Communications
- CDC Updates & Newsletters
- Special & Confidential Reports
- Paper or Electronic Signage

GREEN BUILDING
SCIENCE INSTITUTE

Contact:
Jeffrey Allen
Program Administrator
O: 850-392-0292 ext. 6
C: 850-625-3061
jallen@stalwartbuilt.com

Thank You

On behalf of the
Green Building Science Institute
and our strategic alliance partners.