



Charleston SAVES™
Green Committee Meeting
August 10, 2010

ABUNDANT
POWER



Agenda

- What's on your mind?
- Community objectives
- Charleston *SAVES* program
 - Process
 - Vendor Selection and Management
 - Workforce Training
 - Financing Options
 - Marketing Outreach
- What other cities are doing
- How to get involved

Community Objectives

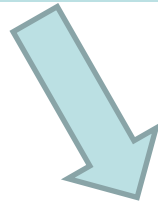
- Reduce carbon emissions
- Address rising energy costs
- Increase job growth

Converging Problems

40% carbon emissions
from building

Rising Energy
Costs

High unemployment,
especially in construction

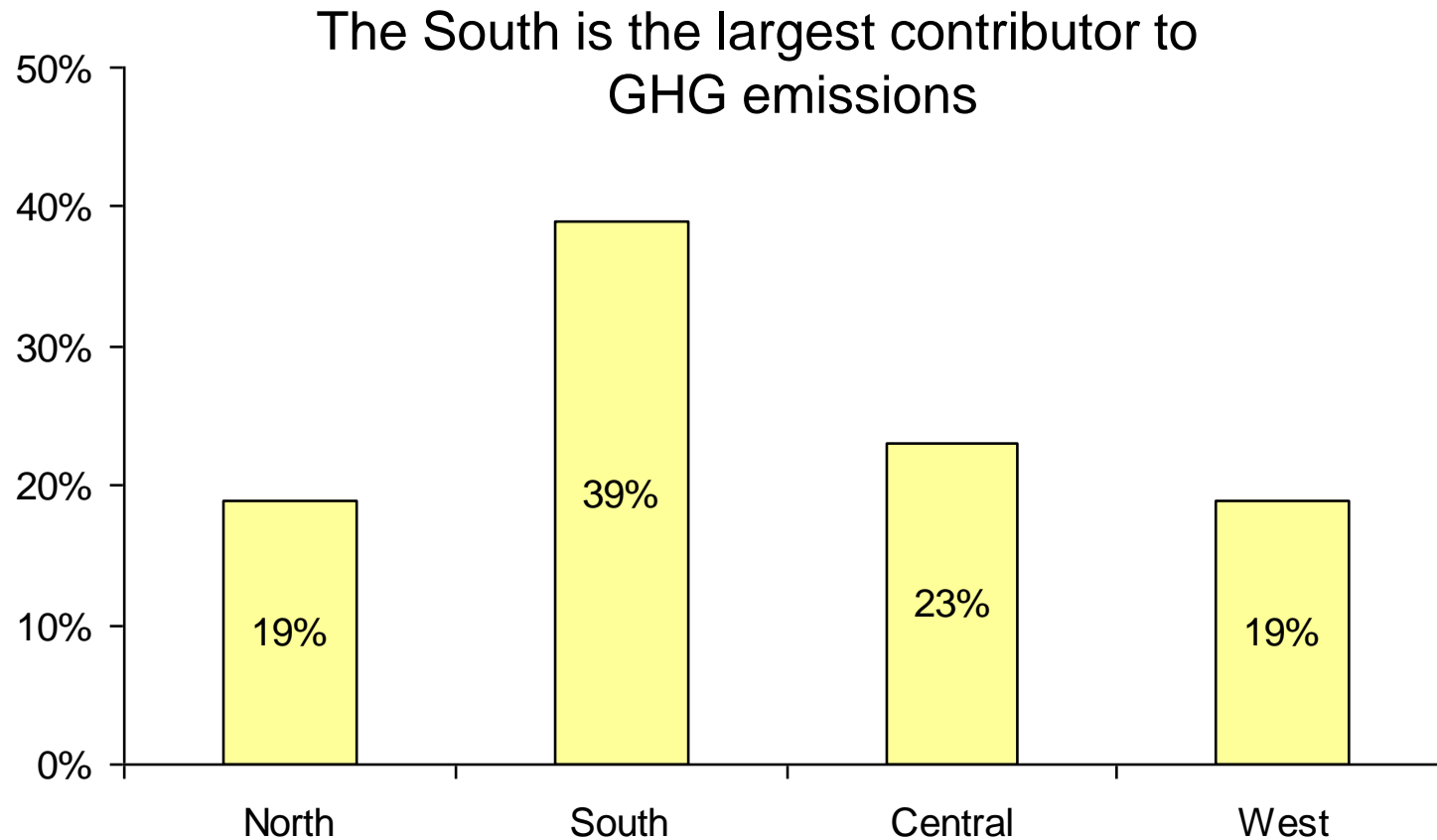


Building retrofit
programs for energy
efficiency

Upfront Costs

Verifiable Savings

Problem #1 – Excessive Waste



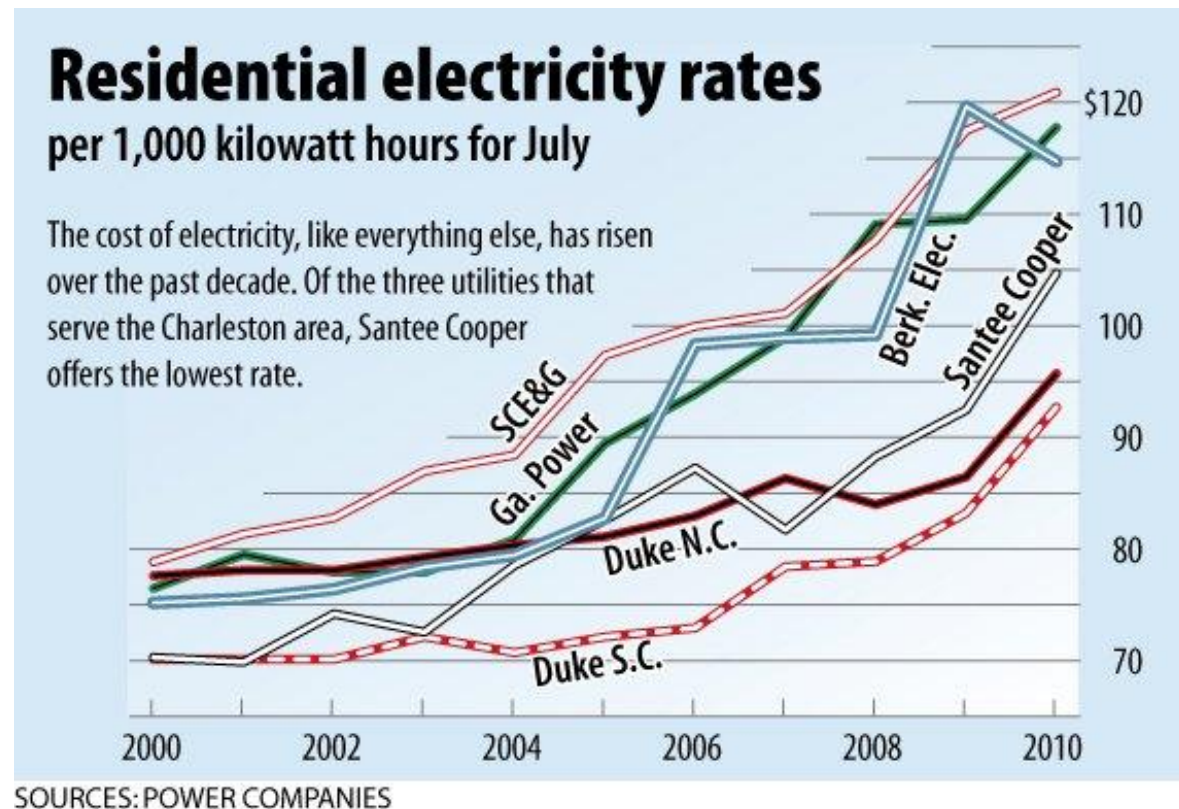
Source: U.S. Department of Energy

Problem #2 – The New Reality

Historically low energy costs have dominated this region...

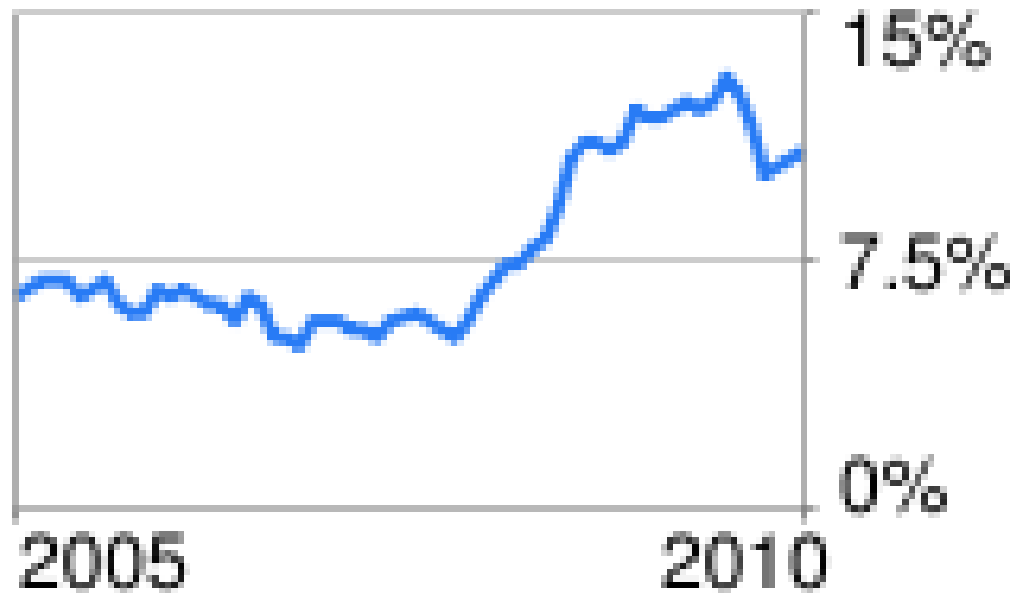
What's Changing?

- *Rate hikes*
- *Volatile coal, gas, and uranium prices.*
- *Environmental externality costs priced into the cost of power.*



Problem #3 – Unemployment

South Carolina unemployment hit hard...



...construction trades hit hardest.

People are required for developing and implementing residential, commercial, and industrial retrofits.

70 cents of every dollar can go towards local labor costs...

Commissioning Agents

Engineers

Energy Auditors

Consultants

Contractors

***Weatherization
Technicians***

Generating Economic Development

**Caulk, Spray Foam, Insulation, Smart Controls, Lighting
Furnaces, Air Conditioners, Water Heaters
Solar Hot Water, Solar Photovoltaic, Small Wind, Biomass**



**Local Retailers, Distributors, Vendors,
Manufacturers and... Local Sales Tax
Revenue**

Community Benefits

Economic Development



Financial Relief

Clean Air



Comfort

40% Energy Usage

Comes from Buildings

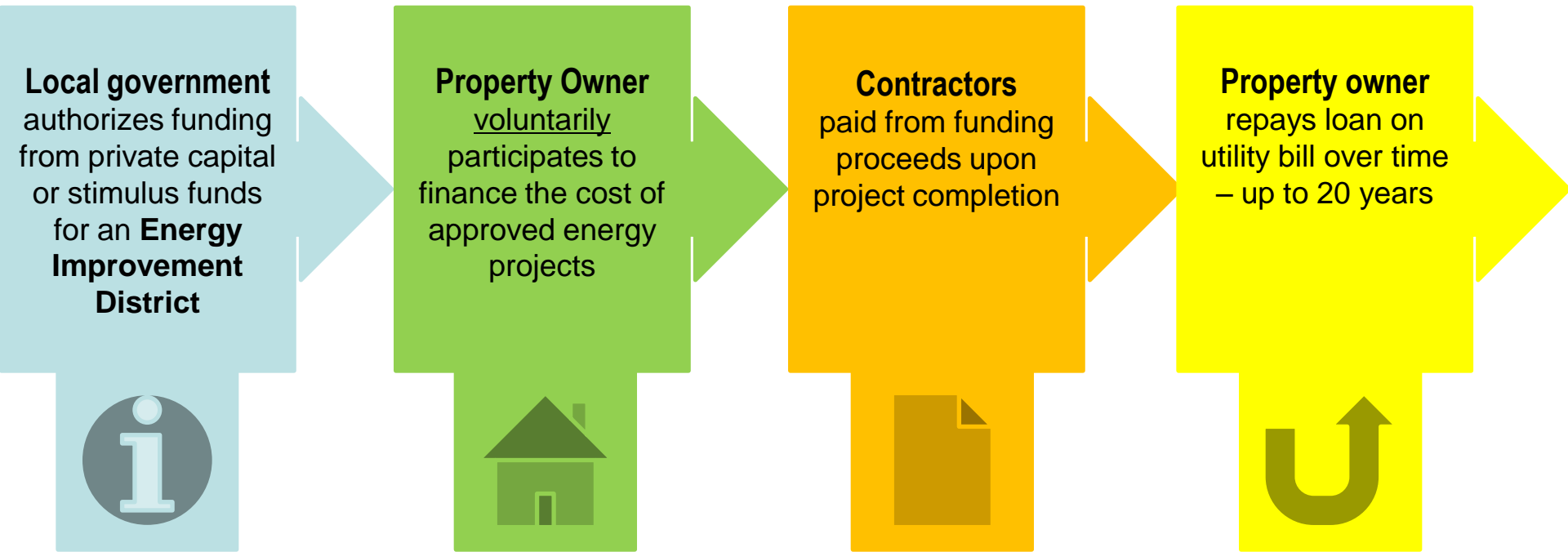


\$120 Billion

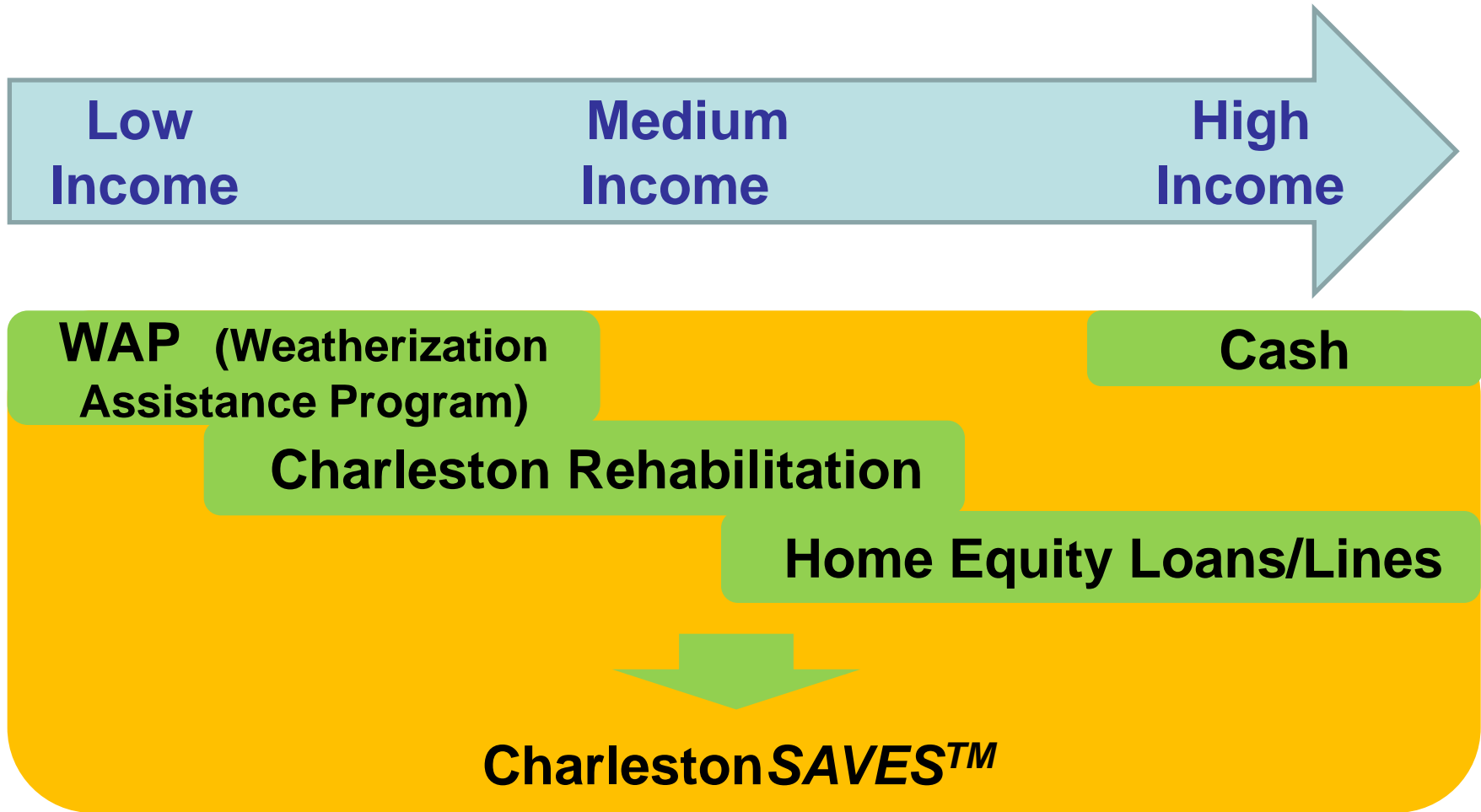
Potential savings from energy efficiency in homes & business
(source: McKinsey)

The Charleston SAVES™ Program

How Energy Efficiency Finance Works

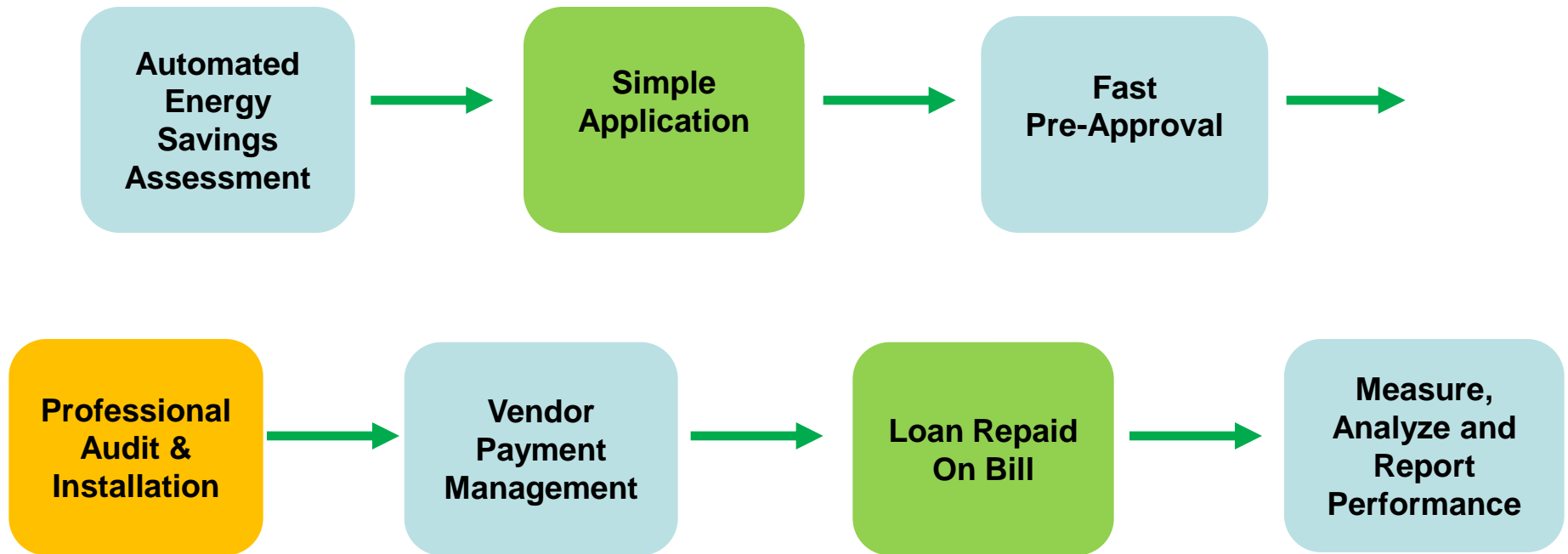


Filling the Gaps



CharlestonSAVES™ – How it Works

SAVES™ – Sustainable and Verifiable Energy Savings



- Abundant Power Solutions
- Property Owner
- Contractor

Pre-Screen for Best Opportunity

Automated Energy Savings Assessment



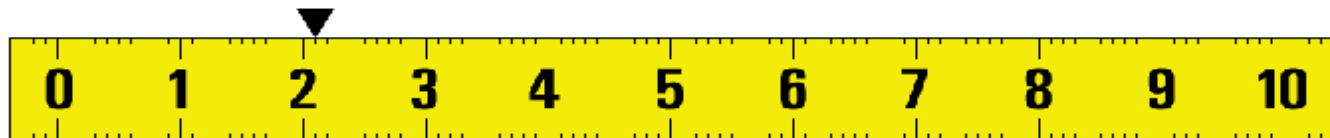
ENERGY STAR Home Energy Yardstick

YOUR SCORE

EPA's Home Energy Yardstick compares a household's energy use to similar homes and gives it a score between 0 and 10 (10 being the most energy efficient).



Yardstick Score: 2.1*



Low Scores =

- *Leaky/Drafty/Humid*
- *Lacks Insulation*
- *Old Equipment*
- *Great Target for SAVES*

High Scores =

- *Best performing homes*
- *Not good targets for financing*

How Does it Work?

For a 1,500 Square Foot home in Charleston, getting from a Yardstick Score of 2 to 8 represents \$1000/year in cost savings

What would it take to get from 2 to 8 on the Energy Yardstick?

At what cost?

On what terms?

- Tier structure
 - Tier One – “reactive”; equipment focused
 - Tier Two – qualified audit (test-in/test-out)
 - Tier Three – audit and energy simulation
- Licensing and Professional Requirements
- Approval process
- Application
- Contractor acknowledgement

**Professional
Audit &
Installation**

- Program Orientation
- Verification
- Documentation
- QA/QC
- Termination/Probation

Quality Assurance

Contractors and auditors will be subject to minimum levels of third party oversight:

**Professional
Audit &
Installation**

- First [xx] projects require on-site 3rd party review
- Random and adverse selection for 3rd party on-site review:
 - [5%] of Tier 1 projects;
 - [10-20%] of Tier 2/3 projects
- Random and adverse selection for paperwork/audit and energy analysis review:
 - [Not applicable] for Tier 1 projects;
 - [30-100%] of Tier 2/3 projects
- Periodic customer surveys and telephone interviews

Workforce Training

- **Program Orientation** - required for all participating contractors/ auditors
 - **Process training** - required docs; guide consumers thru process
 - **Technical training** - basics of building science principles
 - **Financial training** - help consumers determine the most appropriate options to meet their needs.
- Direct responsibility of contractors/auditors to obtain and maintain:
 - Certifications
 - Professional development
 - Continuing education requirements
 - *SAVESTM* will assist in identifying appropriate resources

Historic Properties

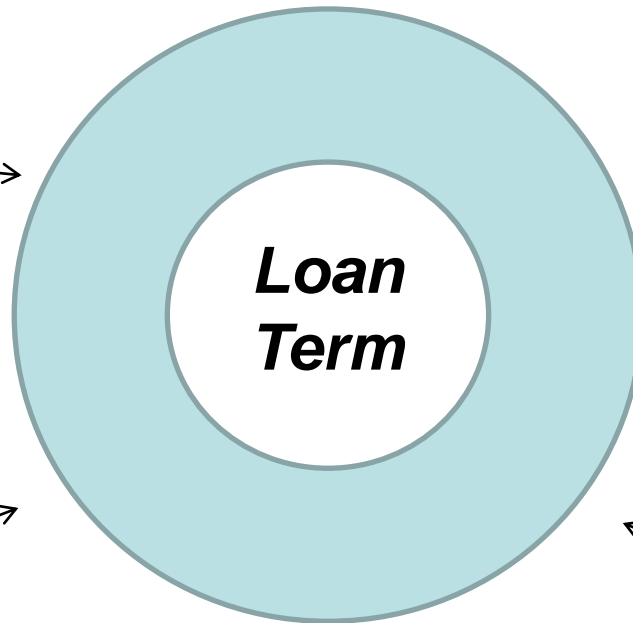
- Charleston Green Committee Historic Structures Task Group
- Non-Invasive Measures can reduce energy costs 30% +
- Historic Charleston Foundation
 - Special training for contractors
 - Materials for property owners
- Sustainability Institute



Financing Structure

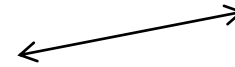
Simple
Application/
Loan Repaid
on Bill

Credit

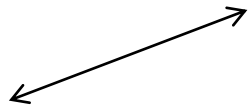


**Loan
Term**

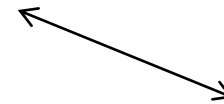
**Billing
Structure**



Tier



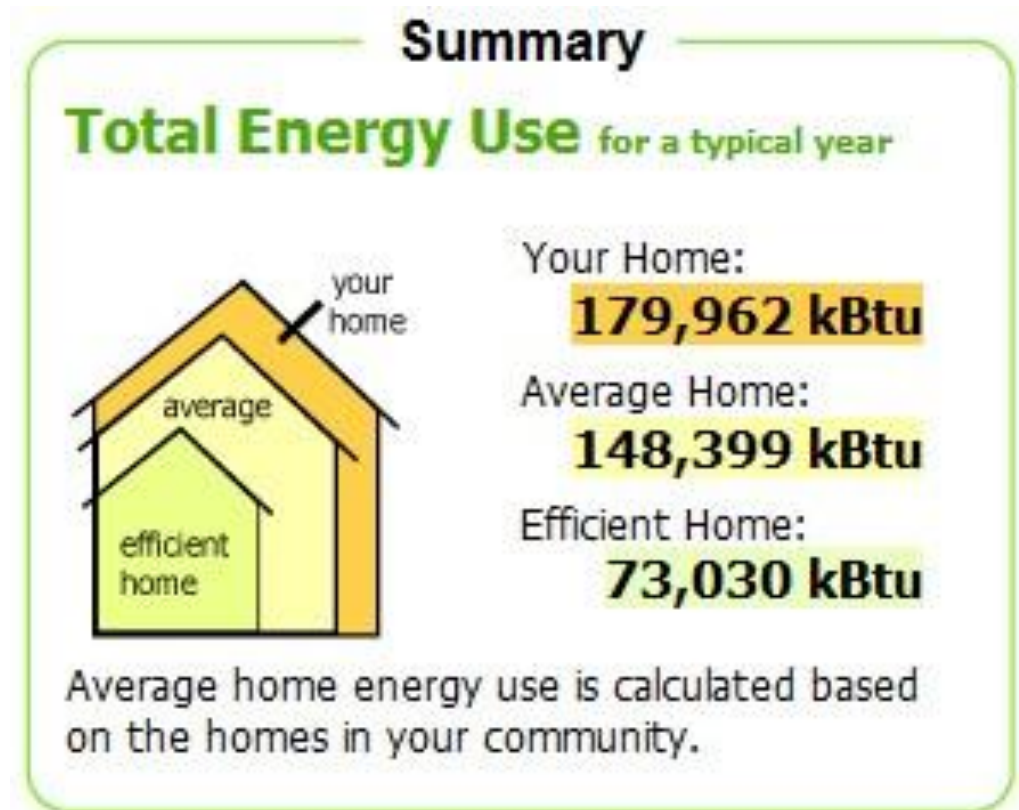
Collateral



Data Driven Results

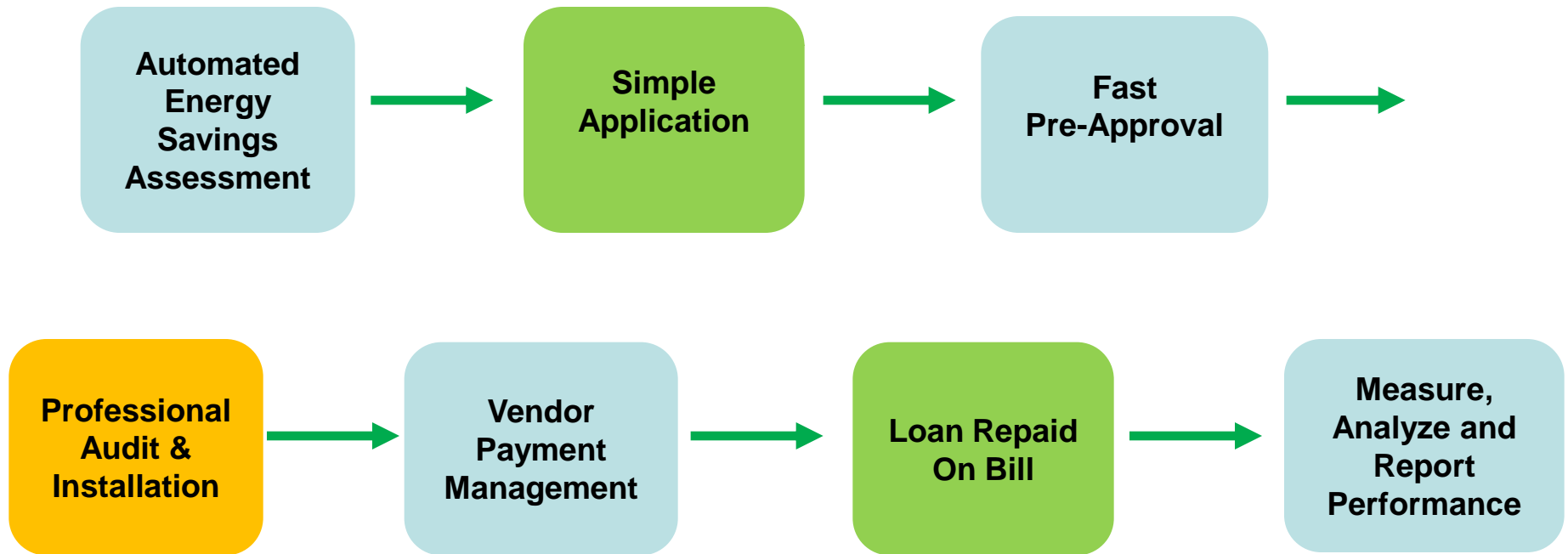
Measure, Analyze and Report Performance

- Metrics ensure accountability
 - Program Level
 - District Level
 - Building Level
 - Contractor Level



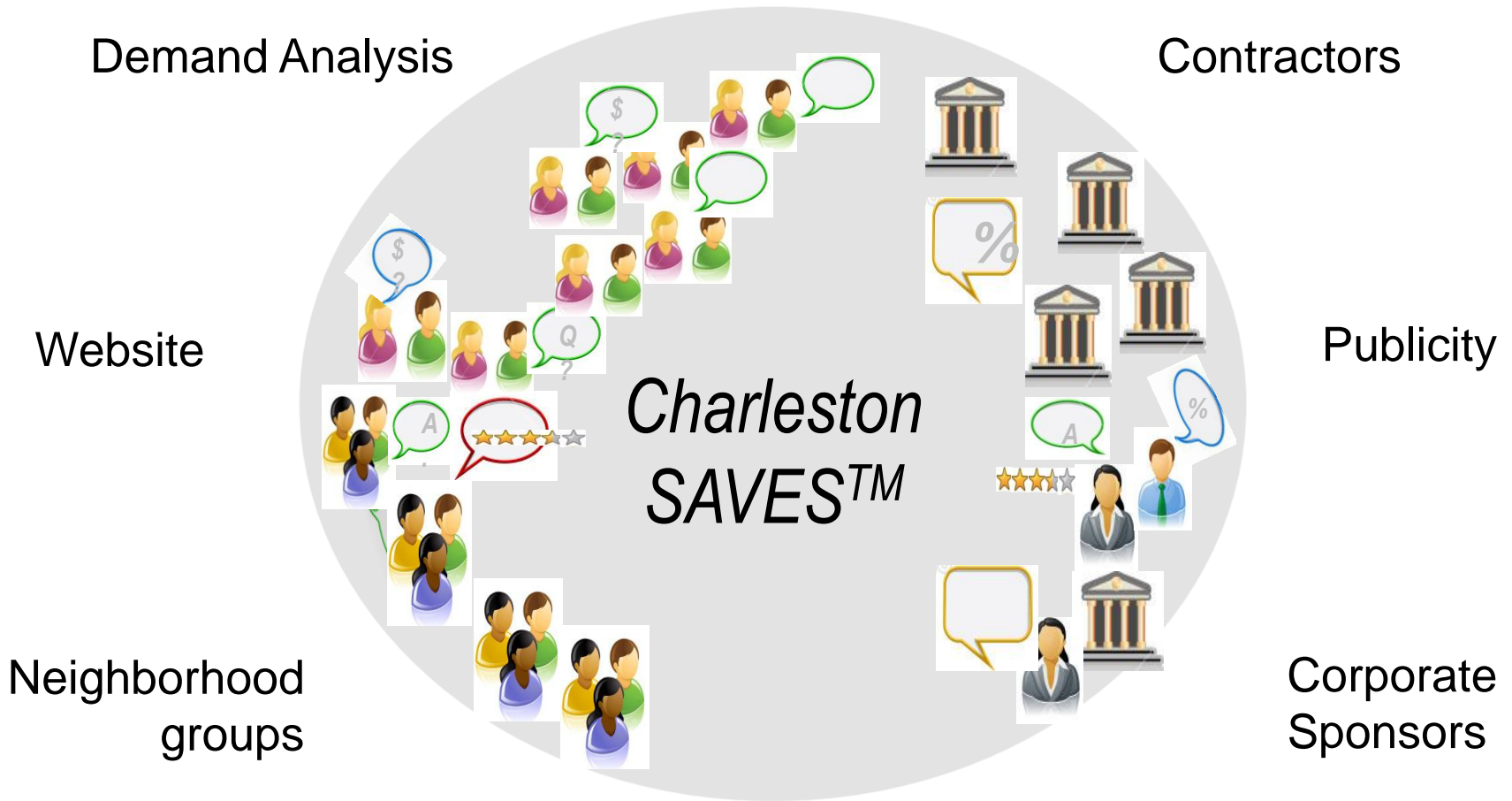
CharlestonSAVES™ – How it Works

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- Property Owner
- Contractor

Marketing Outreach



Local Stakeholders

Local Companies

- The Energy Detective, OneZone Solutions, Home Energy Group, Energy Auditors Inc., Efficient Energy Advisors, EcoBilt Energy Systems, Argand Energy, Johnson Controls, RMF Engineering

Financial Services

- Morgan Keegan

Workforce Development

- Trident Technical College – Energy Efficiency Training Center
- Sustainability Institute
- Private learning providers

Other Groups

- SCE&G/SCANA
- Charleston County Human Services Commission
- Southeast Energy Efficiency Alliance
- Coastal Conservation League
- Historic Charleston Foundation
- State Budget and Control Board, SC Energy Office
- University of South Carolina, Institute for Public Service and Policy Research



Organizational Structure

Abundant Power

- Design Optimization
- Marketing / Education
- Administration
 - Web portal
 - Loan Servicing
 - Ongoing M&V
- Project Financing

Local Partners

- Project Development/Design
- Marketing / PR
- Vendor Management
 - Workforce Training
 - Third Party Oversight
- Billing Conduit (expected)

Partnership Advantages



FINANCING

- Abundant Power facilitates
- Local financial partners
- No impact on City budget



CONTROL

- Compliance with all legal and financial issues
- Measurement & verification ongoing



SERVICE

- Rapid implementation
- Loan servicing
- Underwriting
- Fund management
- Customer care

What Other Cities Are Doing



Approved Contractors
**Click Here for
Sales Tool, Forms,
Supplies & Training**



Find a Contractor

Apply Online



Make Your Payment Online



How to Get Involved

- Promote the program
- Identify (and benchmark) projects
- Sign up and attend orientation (October)
- More to come!

The Opportunity for Charleston

- Green Collar Job Creation – including workforce training
- Economic Development – Business creation and growth
- Bipartisan solution to energy and environmental goals
- Benefit from economies of scale, lowest cost of capital
- Voluntary participation
- Empowers property owners to control energy costs

Charleston – Driving Energy Efficiency and Economic Growth

Abundant Power Solutions

➤ Our Advantages

- ✓ Partner locally with national resources
 - Local office will support Charleston **SAVES**[™] program
- ✓ Low cost, best of class administration
 - Focus on scale, data, integration
 - Manage from loan origination to project completion
 - Integrated loan management and building performance software
- ✓ Sophisticated financial services, structuring, and access
 - National business development and service model
 - Policy leadership
- ✓ Customer Focus
 - Leading edge consumer knowledge
 - Proprietary optimal design
- ✓ Dynamic management team
 - Engineering, legal, financial expertise

Contact Information

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Market Momentum



Current Volume = \$233 MM
Announced Volume > \$3 BB

What Other Cities Are Doing

| KEYSTONE HELP® LOAN PROGRAMS | | |
|---|--|---|
| Unsecured Loan for ENERGY STAR | | \$1,000 to \$15,000 |
| For HEATING, COOLING, WINDOWS, DOORS, INSULATION and other qualifying improvements that are ENERGY STAR qualified or meet program standards. | 6.99% 3,5 or 10 Year Term | - <u>Unsecured</u> , No Lien - \$150,000 Max. Household Income |
| Unsecured Loan for ADVANCED PERFORMANCE | | \$1,000 to \$15,000 |
| For HEATING, COOLING, CLOSED LOOP GEOTHERMAL, INSULATION and other qualifying improvements that exceed ENERGY STAR or meet program ADVANCED PERFORMANCE standards | 5.99% 3,5 or 10 Year Term | - <u>Unsecured</u> , No Lien - \$150,000 Max. Household Income |
| Unsecured Loan for WHOLE HOUSE with Certified Energy Audit | | \$1,000 to \$15,000 |
| For improvements recommended by a Certified Energy Audit. Predicted minimum energy savings of 15% to 25% required, depending on your energy profile. | 4.99% 3,5 or 10 Year Term Plus \$325 Audit Credit | - <u>Unsecured</u> , No Lien - \$150,000 Max. Household Income |
| Secured Loan for WHOLE HOUSE with Certified Energy Audit | | \$5,000 to \$35,000 |
| For improvements recommended by a Certified Energy Audit. Predicted minimum energy savings of 15% to 25% required, depending on home's energy profile. | 3.875% to 6.375% <i>Based on Home's Equity and Loan Term</i> 10,15 or 20 Year Term Plus \$325 Audit Credit | - <u>Up to 120% of Home's Value</u> - 1 st , 2 nd or 3 rd Lien - \$150,000 Max. Household Income |
| ENERGYLOAN® PROGRAMS <i>For Improvements and Borrowers Not Eligible for Keystone HELP</i> | | |
| Secured Loan for OTHER ENERGY IMPROVEMENTS incl. SOLAR <i>No Income Limits</i> | | \$5,000 to \$35,000 |
| For installation of <u>non-qualifying Keystone HELP</u> improvements that are energy efficient, including SUNROOMS (Heated), SOLAR THERMAL, SOLAR PV, CLOSED AND OPEN LOOP GEOTHERMAL | 6.375% to 8.875% <i>Based on Home's Equity and Loan Term</i> 10,15 or 20 Year Term | - <u>Up to 120% of Home's Value</u> - 1 st , 2 nd or 3 rd Lien - <u>No Income Limits</u> |
| Unsecured Loan for OTHER ENERGY IMPROVEMENTS <i>No Income Limits</i> | | \$2,500 to \$20,000 |
| For all makes and models of HEATING, COOLING, WINDOWS, DOORS, INSULATION, SOLAR THERMAL, WATER TREATMENT and other qualifying improvements | 13.99% 3,5 or 10 Year Term | - <u>Unsecured</u> , No Lien - <u>No Income Limits</u> |
| Secured Loan for "R&R" GENERAL HOME IMPROVEMENTS <i>Non Energy Permitted</i> | | \$5,000 to \$35,000 |
| For installation of most types of home improvements (both energy and non-energy related) with a PHFA approved Home Evaluation | 6.375% to 8.875% <i>Based on Home's Equity and Loan Term</i> 10,15 or 20 Year Term | - <u>Up to 120% of Home's Value</u> - 1 st , 2 nd or 3 rd Lien - <u>Max. Income 150% of HUD Area Median Income</u> |