

Energy-saving, innovation, environment-protecting.



**NASEO**

## How to Build Campaigns to Engage Industry Participation in ENERGY STAR – Saint-Gobain Initiatives

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**November 8, 2012**



# Agenda

- **Saint-Gobain - Who we are**
- **Saint-Gobain - ENERGY STAR Challenge for Industry**
- **Saint-Gobain – ENERGY STAR Certified Plants**
- **ENERGY STAR Resources**

# Saint-Gobain – Who we are



- **Worlds largest building materials company, Headquarters in Paris**
- **Global sales 2011 \$58.6 B; 195,000 Employees**
- **North America Headquarters in Valley Forge, PA**
- **North America 2011 : \$7.7 B sales; 19,000 Employees**
- **135 manufacturing plants throughout North America; Four Divisions; 18 business units. Building materials distributor with more than 130 outlets**
  - **Building Materials**
  - **Innovative Materials**
  - **Glass Containers**
  - **Building Materials Distribution**

# Saint-Gobain North America Sites

## Construction Products

- **R&D**  
Blue Bell, PA  
Clearwater, FL  
Jackson, MI
- **CertainTeed Ceilings**  
Ellenton, FL  
L'Anse, MI  
Toronto, ON (Decoustics)  
Plymouth, WI
- **CertainTeed Gypsum**  
Calgary, AB (2)  
Nashville, AR  
Mohave County, AZ  
Delta, BC  
Invermere, BC  
Napa, CA  
Tampa, FL  
Fort Dodge, IA  
Junction City, KS  
Carrollton, KY  
Winnipeg, MB  
Roxboro, NC  
Black Rock, NV  
Blue Diamond, NV  
North Las Vegas, NV  
McAdam, NB  
Mississauga, ON  
Oakville, ON  
Ville Ste. Catherine, QC (2)  
St. George, UT  
Kent, WA  
Seattle, WA  
Moundsville, WV  
Cody, WY
- **CertainTeed Insulation**  
Redcliff, AB  
Chowchilla, CA  
Winter Haven, FL  
Athens, GA  
Kansas City, KS  
Berlin, NJ  
Ottawa, ON  
Sherman, TX
- **CertainTeed Pipe & Foundations**  
Lodi, CA  
McPherson, KS

- **CertainTeed Roofing**  
Glenwood, AR  
Little Rock, AR  
Fremont, CA  
Wilmington, CA  
Peachtree City, GA  
Shreveport, LA  
Norwood, MA  
Shakopee, MN  
Gads Hill, MO  
Oxford, NC  
Avey, OH  
Portland, OR  
Ennis, TX

- **CertainTeed Siding**  
Sodal Circle, GA  
Romeoville, IL  
Terre Haute, IN  
McPherson, KS  
Lake Charles, LA  
Hagerstown, MD  
Jackson, MI  
Buffalo, NY  
Claremont, NC  
Roaring River, NC  
White City, OR

## Innovative Materials

- ▲ **Flat Glass**  
Scottsdale, AZ (2)  
Faribault, MN\*\*  
Columbus, OH  
Fountain Inn, SC\*

- ▲ **R&D**  
Northboro, MA  
Stow, OH

- ▲ **Saint-Gobain Abrasives**  
Hot Springs, AR  
Fullerton, CA  
Carol Stream, IL  
Plainfield, IN  
Worcester, MA (3)  
Reynosa, MX (2)  
Tijuana, MX  
Watervliet, NY  
Plattsville, ON  
Montgomeryville, PA  
Travelers Rest, SC  
Brownsville, TX  
Stephenville, TX

- ▲ **Saint-Gobain Ceramic Materials**  
Huntsville, AL  
Bryant, AR  
Fort Smith, AR  
Little Rock, AR†  
Anaheim, CA  
Louisville, KY  
Northampton, MA  
Worcester, MA (2)  
Milford, NH  
Amherst, NY  
Niagara Falls, NY (2)  
Canton, OH  
Hiram, OH  
Newbury, OH  
Stow, OH  
Niagara Falls, ON  
Latrobe, PA  
Olyphant, PA  
Soddy-Daisy, TN  
Bryan, TX  
Buckhannon, WV

- ▲ **Saint-Gobain Performance Plastics**  
Garden Grove, CA  
San Diego, CA  
Clearwater, FL  
Taunton, MA  
Worcester, MA  
Beaverton, MI  
Merrimack, NH  
Bridgewater, NJ  
Mickleton, NJ  
Wayne, NJ  
Granville, NY  
Hoosick Falls, NY (2)  
Poestenkill, NY  
Akron, OH  
Ravenna, OH  
Bristol, RI  
Puyallup, WA  
Portage, WI

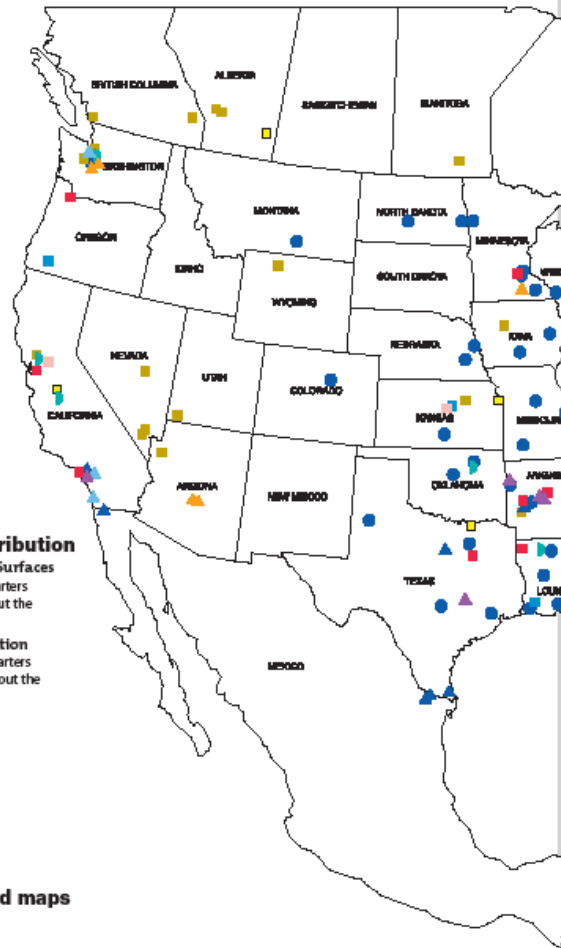
- ▲ **Saint-Gobain ADFORS**  
Russellville, AL  
Albion, NY  
New Philadelphia, OH  
Midland, ON  
North Charleston, SC

## Verallia

- ▶ **GPS America**  
Marion, IN
- ▶ **Verallia North America**  
Fairfield, CA  
Madera, CA  
Dolton, IL  
Lincoln, IL  
Dunkirk, IN  
Muncie, IN  
Ruston, LA  
Milford, MA  
Pevely, MO  
Henderson, NC  
Wilson, NC  
Sapulpa, OK  
Port Allegany, PA  
Seattle, WA  
Burlington, WI

## Building Distribution

- **Meyer Decorative Surfaces**  
Atlanta, GA – Headquarters  
(15 branches throughout the United States)
- **Norandex Distribution**  
Hudson, OH – Headquarters  
(105 branches throughout the United States)



Click [here](#) for location addresses and maps

\*Under Construction  
\*\*Joint Venture

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# ENERGY STAR Challenge for Industry – *reward achievement*

## Why take the challenge?

### Opportunity to Highlight our Success

- Internal Recognition
- External Recognition from a highly valued, credible agency

Opportunity to demonstrate our commitment to energy efficiency and all that it means



# ENERGY STAR® Challenge for Industry Social Circle, GA

Plant Energy Champion **Andy Barnes**

Plant Manager **John Barone**

General Manager **Rick Brinton**

SPG Vinyl Energy Champion **Steve Burghart**

Reduced Energy Intensity by about 23% over the last two years

Two time winner of the  
Saint-Gobain Excellence in  
Energy Efficiency Award



# ENERGY STAR® Challenge for Industry

## Social Circle, GA

- Energy Kaizen (Week long 'focused improvement' event) ~ 15%
  - Programmable Thermostats
- Relighting Projects ~ 8%
  - Motion Sensors
- Compressed Air Audits
  - Project Budgeted for 2013



# ENERGY STAR® Challenge for Industry Fort Smith, AR

**Results: 10.0% Reduction in Energy Per Unit in  
Two years**

Plant Energy Champion Rick Lee  
Manufacturing Director Vince Shores  
NorPro Energy Champion Patrick Sick  
NorPro Energy Sponsor Antonio Vilela

Two time winner of the  
Saint-Gobain Excellence in  
Energy Efficiency Award



Fort Smith Energy Team

# Saint-Gobain NorPro Fort Smith, AR



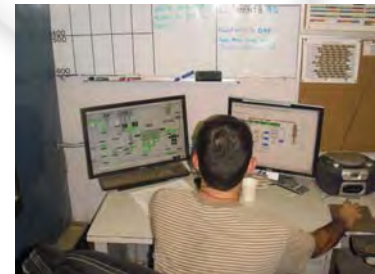
**Reformulated blend that sinters at a lower temperature. ~ 4%**



**Refurbished and tuned gas burners and linkages resulting in tighter combustion efficiency ~ 2%**



**Improved process control resulting in less off-spec materials, higher yield and throughput ~ 4%**



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# 2012 ENERGY STAR Plant Label Recipients

## Milford Plant: (EPI Score = 95%)

ENERGY STAR Event held in October that drew representatives from Federal, State and Local offices



# 2012 ENERGY STAR Plant Label Recipients

## Sapulpa Plant: (EPI Score = 76%)

ENERGY STAR Event held in October with State and Local officials

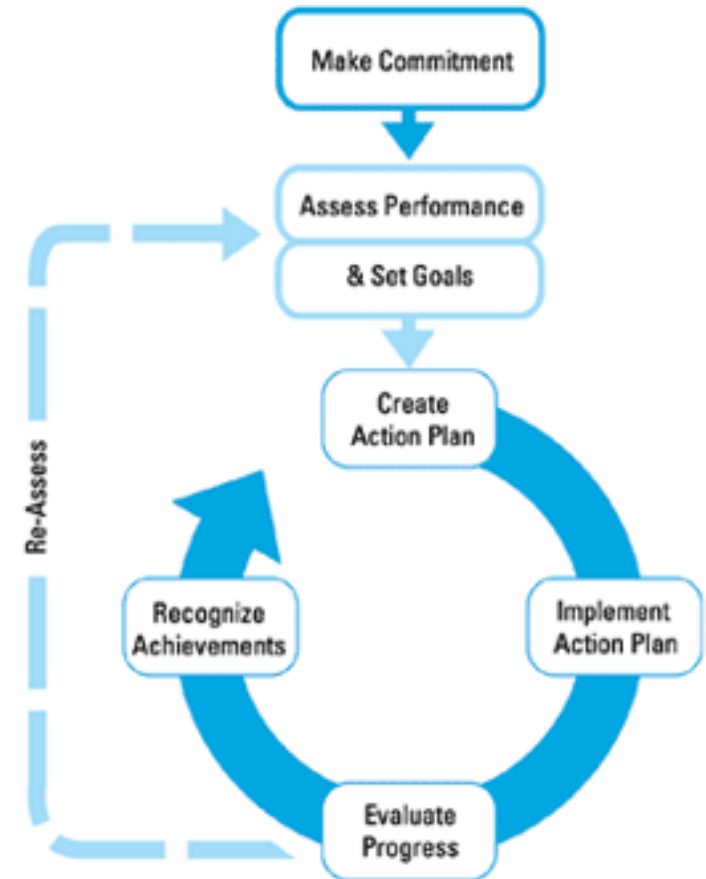


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## ■ Saint-Gobain Participation

- Active participant and supporter of the program
- Proven, effective techniques guided by Industry
- Valuable tools and program resources
- Industry collaboration
- Valuable recognition



# Corporate Assessment Matrix


 <b>ENERGY STAR® Energy Management Assessment Matrix</b>				
	Little or no evidence	Some elements	Fully Implemented	Next Steps
<b>Make Commitment to Continuous Improvement</b>				
Energy Director	<a href="#">No central or organizational resource</a> <a href="#">Decentralized management</a>	<a href="#">Central or organizational resource not empowered</a>	<a href="#">Empowered central or organizational leader with senior management support</a>	
Energy Team	<a href="#">No company energy network</a>	<a href="#">Informal organization</a>	<a href="#">Active cross-functional team guiding energy program</a>	
Energy Policy	<a href="#">No formal policy</a>	<a href="#">Referenced in environmental or other policies</a>	<a href="#">Formal stand-alone EE policy endorsed by senior mgmt.</a>	
<b>Assess Performance and Opportunities</b>				
Gather and Track Data	<a href="#">Little metering/no tracking</a>	<a href="#">Local or partial metering/tracking/reporting</a>	<a href="#">All facilities report for central consolidation/analysis</a>	
Normalize	<a href="#">Not addressed</a>	<a href="#">Some unit measures or weather adjustments</a>	<a href="#">All meaningful adjustments for organizational analysis</a>	
Establish baselines	<a href="#">No baselines</a>	<a href="#">Various facility-established</a>	<a href="#">Standardized organizational base year and metric established</a>	
Benchmark	<a href="#">Not addressed or only same site historical comparisons</a>	<a href="#">Some internal comparisons among company sites</a>	<a href="#">Regular internal &amp; external comparisons &amp; analyses</a>	
Analyze	<a href="#">Not addressed</a>	<a href="#">Some attempt to identify and correct spikes</a>	<a href="#">Profiles identifying trends, peaks, valleys &amp; causes</a>	
Technical assessments and audits	<a href="#">Not conducted</a>	<a href="#">Internal facility reviews</a>	<a href="#">Reviews by multi-functional team of professionals</a>	
<b>Set Performance Goals</b>				
Determine scope	<a href="#">No quantifiable goals</a>	<a href="#">Short term facility goals or nominal corporate goals</a>	<a href="#">Short &amp; long term facility and corporate goals</a>	
Estimate potential for improvement	<a href="#">No process in place</a>	<a href="#">Specific projects based on limited vendor projections</a>	<a href="#">Facility &amp; organization defined based on experience</a>	
Establish goals	<a href="#">Not addressed</a>	<a href="#">Loosely defined or sporadically applied</a>	<a href="#">Specific &amp; quantifiable at various organizational levels</a>	
<b>Create Action Plan</b>				
Define technical steps and targets	<a href="#">Not addressed</a>	<a href="#">Facility-level consideration as opportunities occur</a>	<a href="#">Detailed multi-level targets with timelines to close gaps</a>	
Determine roles and resources	<a href="#">Not addressed or done on ad hoc basis</a>	<a href="#">Informal interested person competes for funding</a>	<a href="#">Internal/external roles defined &amp; funding identified</a>	
<b>Implement Action Plan</b>				
Create a communication plan	<a href="#">Not addressed</a>	<a href="#">Tools targeted for some groups used occasionally</a>	<a href="#">All stakeholders are addressed on regular basis</a>	
Raise awareness	<a href="#">No promotion of energy efficiency</a>	<a href="#">Periodic references to energy initiatives</a>	<a href="#">All levels of organization support energy goals</a>	



# Corporate Assessment Matrix

Build capacity	<a href="#">Indirect training only</a>	<a href="#">Some training for key individuals</a>	<a href="#">Broad training/certification in technology &amp; best practices</a>	
Motivate	<a href="#">No or occasional contact with energy users and staff</a>	<a href="#">Threats for non-performance or periodic reminders</a>	<a href="#">Recognition, financial &amp; performance incentives</a>	
Track and monitor	<a href="#">No system for monitoring progress</a>	<a href="#">Annual reviews by facilities</a>	<a href="#">Regular reviews &amp; updates of centralized system</a>	
<b>Evaluate Progress</b>				
Measure results	<a href="#">No reviews</a>	<a href="#">Historical comparisons</a>	<a href="#">Compare usage &amp; costs vs. goals, plans, competitors</a>	
Review action plan	<a href="#">No reviews</a>	<a href="#">Informal check on progress</a>	<a href="#">Revise plan based on results, feedback &amp; business factors</a>	
<b>Recognize Achievements</b>				
Provide internal recognition	<a href="#">Not addressed</a>	<a href="#">Identify successful projects</a>	<a href="#">Acknowledge contributions of individuals, teams, facilities</a>	
Get external recognition	<a href="#">Not sought</a>	<a href="#">Incidental or vendor acknowledgement</a>	<a href="#">Government/third party highlighting achievements</a>	

# Facility Assessment Matrix

 <b>ENERGY STAR<sup>®</sup> Facility Energy Management Assessment Matrix</b>					
Facility Name:		Assessment Date:			
	Little or no evidence	Some elements/degree	Fully Implemented	Next Steps	
<b>Commit to Continuous Improvement</b>					
Site Energy Leader	<a href="#">None assigned.</a>	<a href="#">Assigned responsibilities but not empowered. 20-50% of time is devoted to energy.</a>	<a href="#">Recognized and empowered leader having site manager and senior energy manager support.</a>		
Site Energy Champion	<a href="#">None identified.</a>	<a href="#">Senior manager implicitly supports the energy program.</a>	<a href="#">Senior manager actively supports the energy program and promotes energy efficiency in all aspects of site operations.</a>		
Site Energy Team	<a href="#">No site energy team.</a>	<a href="#">Informal consultation with secondary activity.</a>	<a href="#">Active cross-functional team guiding site energy program.</a>		
Energy Policy	<a href="#">No energy policy or awareness of organizational policy.</a>	<a href="#">Organizational policy in place. Little awareness by site energy team and limited application of policy.</a>	<a href="#">Organizational policy supported at site level. All employees aware of goals and responsibilities.</a>		
Site Energy Plan	<a href="#">No written plan.</a>	<a href="#">Informal plan not widely known.</a>	<a href="#">Written formal plan endorsed, distributed, and verified.</a>		
Accountability	<a href="#">No energy budgeting and accountability.</a>	<a href="#">Estimates used for allocating energy budgets.</a>	<a href="#">Key users are metered separately. Each entity has total accountability for their energy use.</a>		
Participation Levels	<a href="#">No reporting of energy performance data internally or involvement in external organizations.</a>	<a href="#">Some participation, sharing, mentoring, and professional memberships. Annual reporting of performance.</a>	<a href="#">Participates in energy networks/organizations. Shares best practices/mentors other sites. Reports usage quarterly.</a>		
<b>Assess Performance and Opportunities</b>					
Track & Analyze Data	<a href="#">Limited metering or tracking. No demand analysis or billing evaluation.</a>	<a href="#">Some metering, tracking, analysis and recording. Energy bills verified for accuracy.</a>	<a href="#">Key loads metered, tracked, analyzed, and recorded. Facility peak demand analyzed. Adjusts for real-time demand.</a>		
Documentation	<a href="#">No manuals, plans, designs, drawings, specs, etc. for building and equipment available.</a>	<a href="#">Some documentation and records available. Some review of equipment commissioning specs conducted.</a>	<a href="#">Critical building and equipment documentation available and used for load surveys/recommissioning/efficiency goals.</a>		
Benchmarking	<a href="#">Energy performance of systems and facilities not benchmarked.</a>	<a href="#">Limited comparisons of specific functions, or only same-site historical comparisons.</a>	<a href="#">Key systems/sites benchmarked using comparison tools like Portfolio Manager/Energy Performance Indicators.</a>		
Technical Assessments	<a href="#">No formal or external reviews.</a>	<a href="#">Limited review by vendors, location, or organizational and corporate energy managers.</a>	<a href="#">Extensive regular reviews by multi-functional team of internal and external professionals. Full assessment every 5 years.</a>		
Best Practices	<a href="#">None identified.</a>	<a href="#">Ad hoc or infrequent monitoring of trade journals, internal databases, and other facilities' best practices.</a>	<a href="#">Regular monitoring of trade journals, internal databases, and other facilities. Best practices shared and implemented.</a>		
<b>Set Performance Goals</b>					
Goals/Potential	<a href="#">Energy reduction goals not established.</a>	<a href="#">Loosely defined. Little awareness of energy goals by others outside of site energy team.</a>	<a href="#">Potential defined by experience or assessments. Goals roll up to utility/corporate organization and status posted prominently.</a>		
Career Development	<a href="#">No career development. No opportunities available.</a>	<a href="#">Exposure to other energy programs. Some temporary or project assignments available elsewhere.</a>	<a href="#">Energy professionals have established career paths that are reviewed annually. Opportunities for growth encouraged.</a>		
Energy Team Incentives	<a href="#">No ties between energy efficiency improvement and compensation.</a>	<a href="#">Spot awards or bonuses for employees on a project.</a>	<a href="#">Accountability tied to performance reviews, compensation, and personal and plant bonuses.</a>		

# Facility Assessment Matrix



## ENERGY STAR® Facility Energy Management Assessment Matrix

Facility Name:		Assessment Date:		
	Little or no evidence	Some elements/degree	Fully implemented	Next Steps
<b>Create Action Plan</b>				
Improvement Planning	<a href="#">No upgrade plan.</a>	<a href="#">Upgrades implemented sporadically. Some compliance with organizational goals and standards.</a>	<a href="#">Upgrade plans established; reflect assessments. Full compliance with organizational EE design guidelines and goals.</a>	
Roles and Resources	<a href="#">Not addressed, or addressed on ad hoc basis only.</a>	<a href="#">Informal interested person competes for funding. Little support from organizational program.</a>	<a href="#">Internal/external roles defined and funding identified. Organizational or corporate program support secured.</a>	
Site Planning Integration	<a href="#">Impact on energy from changes not considered.</a>	<a href="#">Decisions impacting energy considered on first-cost basis only.</a>	<a href="#">Projects/contracts include energy analysis. Energy projects evaluated with other investments. Lifecycle costing applied.</a>	
<b>Implement Action Plan</b>				
Communication Plan	<a href="#">Site plan not developed.</a>	<a href="#">Periodic communications for projects. Some reporting of energy use information.</a>	<a href="#">All stakeholders are addressed on regular basis.</a>	
Energy Awareness	<a href="#">None conducted.</a>	<a href="#">Occasional energy efficiency awareness campaigns. Some communication of energy costs.</a>	<a href="#">Planned outreach and communications. Support organizational initiatives. Employees aware of site energy costs.</a>	
Building Staff Capacity	<a href="#">No training offered.</a>	<a href="#">Some vendor training for key individuals and operators.</a>	<a href="#">Broad trainings/education in technology and best practices. Networking opportunities actively pursued.</a>	
Contract Management	<a href="#">Contracts are renewed automatically without review.</a>	<a href="#">Occasional review of supplier contracts.</a>	<a href="#">Energy-efficient procurement policy in place. Vendors for replacements on standby. Regular review of suppliers.</a>	
Incentives and Rebates	<a href="#">Not researched or pursued.</a>	<a href="#">Occasional communication with utility representatives. Limited knowledge of incentive programs.</a>	<a href="#">Researches rebates and incentives offered regionally and nationally. Communicates often with utility representatives.</a>	
<b>Evaluate Progress</b>				
Measuring Results	<a href="#">No reviews.</a>	<a href="#">Historical comparisons. Some reporting of results.</a>	<a href="#">Compare usage &amp; costs vs. goals, plans, other sites. Results reported to site and organizational or corporate management.</a>	
Reviewing Action Plan	<a href="#">No reviews.</a>	<a href="#">Informal check on progress.</a>	<a href="#">Revise plan based on results, feedback and business factors. Best practices shared with other sites / organization or corporate program.</a>	
<b>Recognize Achievements</b>				
Site Recognition	<a href="#">Not addressed.</a>	<a href="#">Occasional recognition of projects and people.</a>	<a href="#">Recognition system in place. Awards for projects pursued by operators.</a>	
Organizational Recognition	<a href="#">Not sought.</a>	<a href="#">Occasionally when prompted by senior management.</a>	<a href="#">Senior management acknowledges site successes.</a>	
External Recognition	<a href="#">Not sought.</a>	<a href="#">Occasional trade magazine and vendor recognition.</a>	<a href="#">Government and third-party recognition highlighting achievements sought. ENERGY STAR label for facility awarded annually.</a>	

# Results

- **Saint-Gobain's 2011 Energy Savings equate to the energy required to produce:**
  - 836 million typical glass containers
  - Shingles for new roofs on over 1.1 million typical houses
  - Insulation for 163,000 typical homes
- **Four year improvement of 11.9% energy-per-unit**

