



Superior Energy Performance Program

Consortium for Energy Efficiency

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Evolution to Superior Energy Performance

1995 to 2005: DOE and partners develop energy system tools, training, qualified specialists

2005 Hurricanes



2006: Desired strategy to hand off to market –
“Institutionalize”

2006: Idea of certifying Energy Management Program with validation of continual improvement performance

Superior Energy Performance Steering Committee

Collaboration of industry, government, and non-profit organizations

- Seek to improve the energy intensity of U.S. manufacturing through a series of initiatives.
- Guide development of the **Superior Energy Performance** program



National Institute of Standards and Technology

Superior Energy Performance Steering Committee

Mission

- Enable U.S. industry to achieve global leadership in energy efficiency and reduction of greenhouse gas (GHG) emissions.
- Increase effectiveness of and participation in existing national and regional industrial energy efficiency programs.
- Identify or create the necessary resources and initiatives to address unmet needs.

Goals

- Assist U.S. industry in pursuing energy efficiency improvements and GHG emissions reductions by leveraging available public and private resources and tools
- Facilitate development and use of standardized methodologies for energy management and assessment of energy systems
- Assist U.S. industry in implementing and achieving national policy goals for energy efficiency
- **Develop and implement a framework for a sustainable Superior Energy Performance program with U.S. manufacturers**

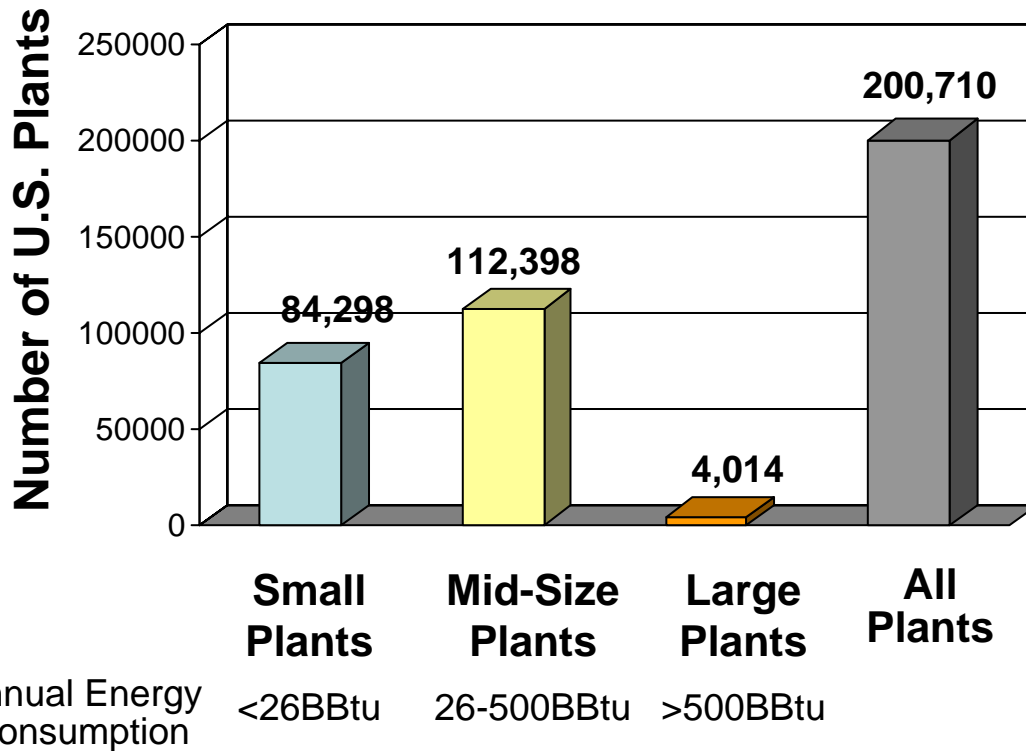
Superior Energy Performance Program Strategy

- Foster an organizational culture of **continuous improvement** in energy efficiency in U.S. manufacturing facilities
- Develop a **transparent** system to validate energy intensity improvements and management practices
- Create a **verified record** of energy source fuel savings and carbon reductions with potential value in national and international markets

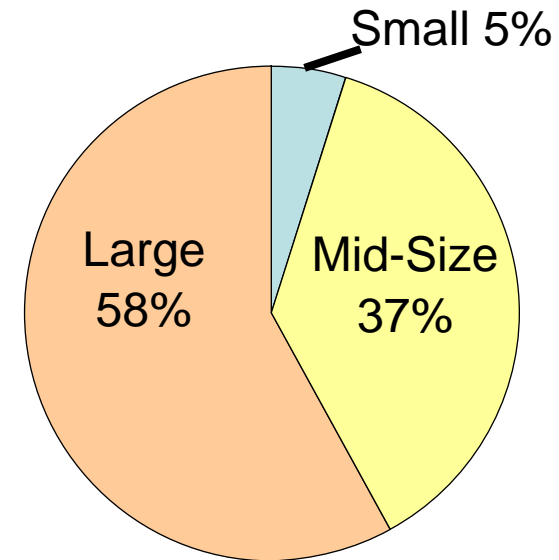


Opportunity Concentrated in Larger Plants

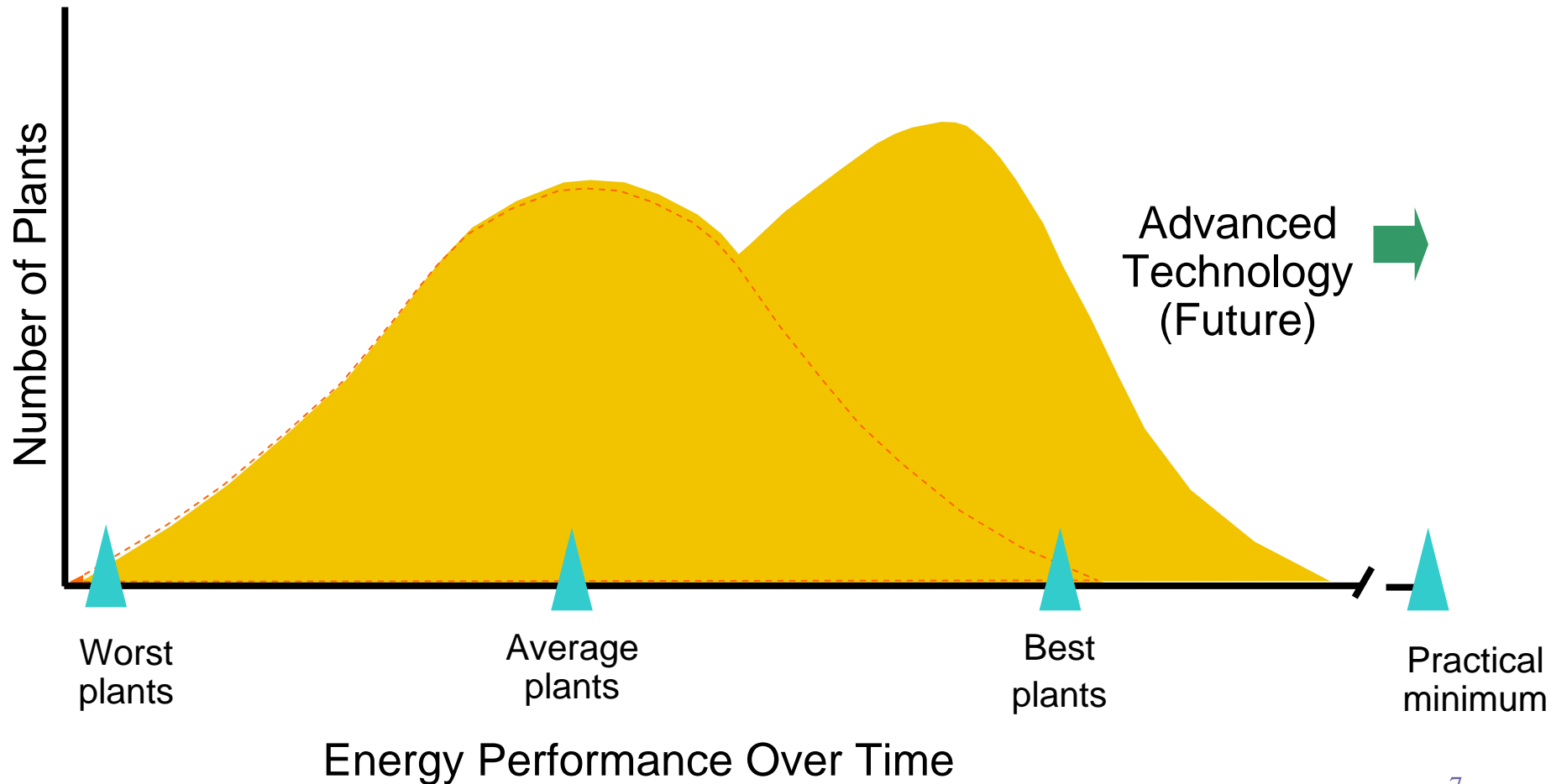
U.S. Manufacturing Plants: By Size



Percent of Total Manufacturing Energy

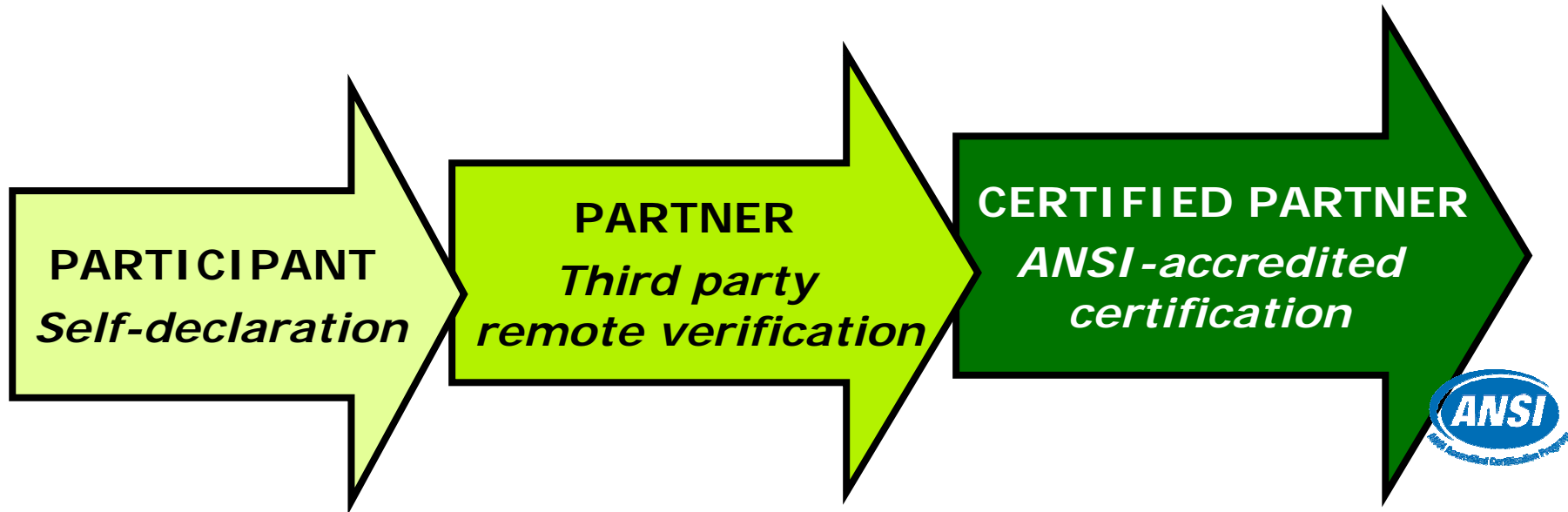


Moving All Manufacturing Plants Toward a Higher Level of Energy Performance



Superior Energy Performance Program Design

- The 3-tiered program accommodates:
 - Maturity of plant's energy management program
 - Level of external validation desired
 - Business climate/cycle



Superior Energy Performance Program Design

PARTICIPANT

- Meet energy management system ISO 50001 and additional SEP requirements*, including: 1) identify key energy uses, 2) prioritize systems for assessment, and 3) systematically identify opportunities
- Set and meet plant targets for energy intensity improvement
- Conducts internal conformance audit

PARTNER

- Meet Participant requirements
- Participates in remote review by Certified SEP program Validator
- Measure and verify energy intensity performance improvement

CERTIFIED PARTNER

- Meet Participant requirements
- Get certified by ANSI-accredited third party with on-site review by Certified SEP program Validator
- Measure and verify energy intensity performance improvement

*For entry period, plants can *commit* to meeting these requirements and targets.

SILVER

GOLD

PLATINUM

Level of achievement based on:

- Validated energy intensity improvements over 3 years
- Implemented Best Energy Management Practices

Department of Energy's Industrial Technologies Program



Energy Efficiency R&D

Develop cross-cutting technologies addressing the top energy savings opportunities across industry



Technology Delivery

Help plants save energy today by assessing opportunities and facilitating adoption of best energy management practices and efficient new technologies



Save
ENERGY
Now

Goal:

Drive a 25% reduction in industrial energy intensity by 2017.

Save Energy Now: A Resource for Success



Superior Energy Performance Program

Participants establish energy management system that complies with ISO 50001 and meet other SEP program requirements

Plant Assistance

- Strengthens corporate support for energy management program
- Plant energy management & system optimization tools
- Training and assessments by Certified Practitioners

Helps individual manufacturing plants improve energy management and intensity performance



Planned Program Infrastructure

Standards & Protocols

Energy Management Standard

System Assessment Standards

Measurement & Verification Protocol

Certifying Organizations for Professionals (TBD)

Energy Management Practitioners

System Assessment Practitioners

Certified SEP Program Validators



Participating SEP program Manufacturing Plants

Texas Pilot Project, 2008-2010

Five plants from diverse sectors selected for SEP pilot (chemicals, electronics, insulation, and food processing).

Goal: Verify the processes, standards, and performance criteria as:

- Practical and achievable
- Beneficial to participating plants
- Effective in identifying plants that meet the proposed SEP program criteria

Who's Involved:

- US DOE ITP, Superior Energy Performance steering committee, Texas Industries of the Future, Georgia Tech, Lawrence Berkeley National Lab, Oak Ridge National Lab

Looking Forward: Key Milestones

- **July 2009:** Begin field testing of measurement and verification methodology in pilot plants
- **Feb. 2010:** Select Certifying Organization(s). Organizations set up processes to certify personnel and plants.
- **June 2010:** Begin training certified practitioners in energy management and system assessments
- **Dec. 2010:** ISO Energy Management Standard published; replaces ANSI energy management standard
- **June 2011:** National launch of Superior Energy Performance program

Opportunities for Partnership with CEE and its members

- DOE/ITP is seeking partnerships with utilities, states, and regional energy efficiency organizations to:
 1. Pilot SEP Program at manufacturing plants
 2. Train and certify Energy Management Practitioners
- Benefits
 - Early access to a well-defined turnkey program
 - Verified energy savings
 - Opportunity to contribute to program design and delivery strategy
 - Compatibility with Public Utility Commission, state, and regional regulatory and programmatic requirements, incentives

Potential Opportunity:

1. Participation in Pilot State Projects

- Build upon ITP state solicitation projects (to be selected), piloting SEP program scheme
- Identify plants to work with leading U.S. energy management and system optimization experts
- Test and refine program “fit” with utility and state incentives, carbon credits, etc.

Selection of state industrial energy efficiency projects to be announced in February 2009

- Check ITP website (news items) for selection of state projects

Potential Opportunity:

2. Certified Energy Management Practitioners

- Sponsor 1 or 2 individuals from state or region to participate in energy management training -- leads to Certification as Energy Management Practitioner
 - Assists manufacturing plants in implementation of ISO 50001 and other SEP requirements
 - Candidates should have either industrial energy management experience, ISO management system experience, or both
 - Only individuals who can work with plants to implement the energy management standard in industrial facilities will be considered
 - Trainees will receive expert-level training and coaching from Georgia Tech (GaTech) on implementing the ISO 50001 energy management standard
 - Trainees will offer hands-on support to plants in their region and be mentored by reps from GaTech

Moving Forward

- CEE Industrial Committee and CEE members express interest in becoming involved in SEP program development:
 - Pilot plant
 - Certified Energy Management Practitioners
- Share results and experiences with CEE membership through CEE Industrial Committee



Thank You!

For More Information

www.superiorenergyperformance.net

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