# DOE BestPractices Program Overview

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# BestPractices Program

## Program Focuses on Delivery of Technology to Industry

### Transferring OIT Products

Information: source books, fact sheets, case studies, newsletters, tip sheets

Software decision tools:PSAT, AirMaster+, Steam Scoping, Process Heating, 3E+, ASD Master, MM+

Technologies emerging from OIT-supported R&D

### Providing OIT Tools/Training

Plant-wide energy assessment

System opportunity assessment tools

Training and workshops

Technology verification

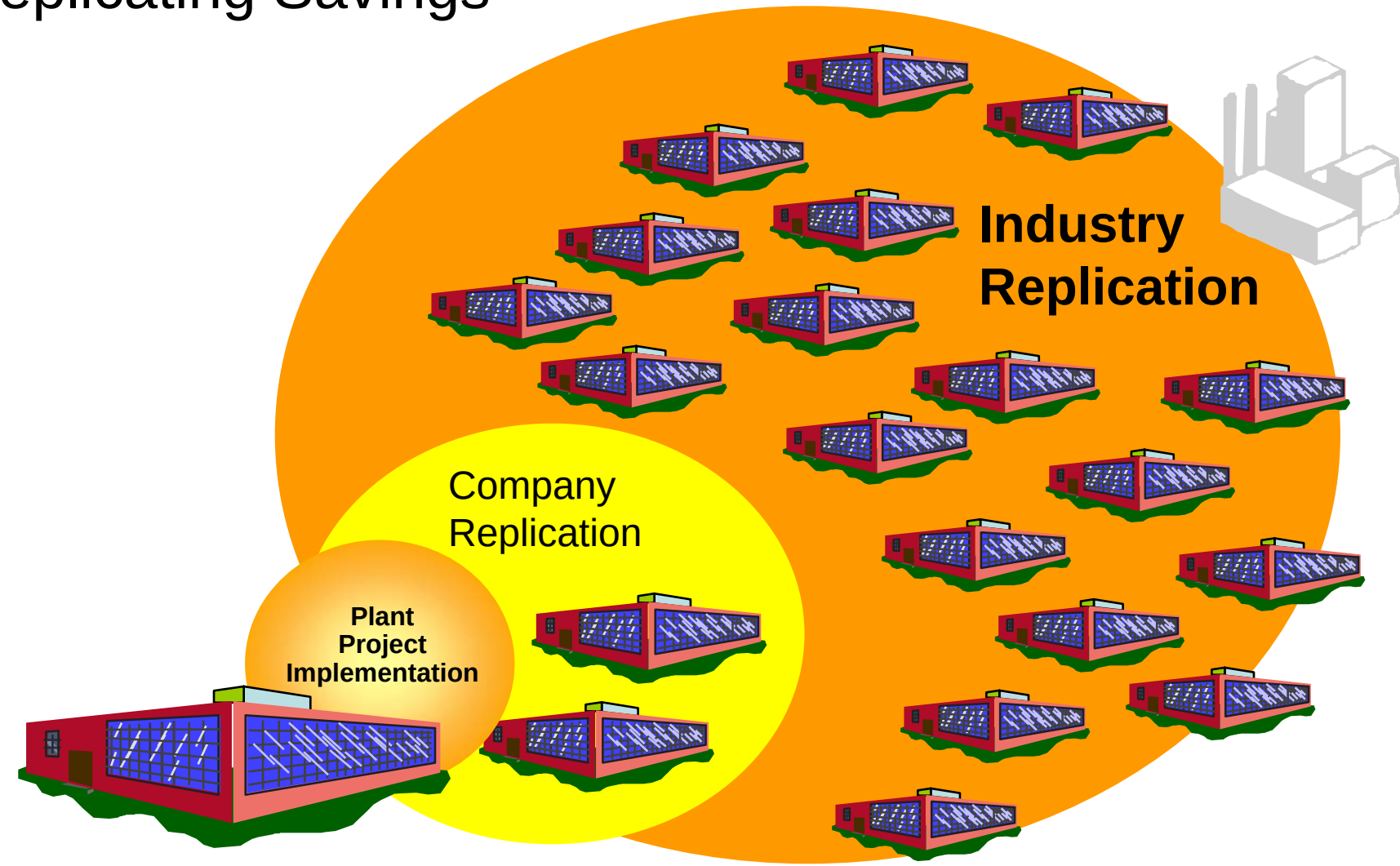
# What is a Plant Wide Assessment (PWA)?

- Applies a systems approach across entire plant operation
- Identifies energy and non-energy applications/opportunities that offer greatest energy benefits (blueprint for savings)
  - New/emerging process technologies
  - Best practices associated with plant support systems
- Provides a roadmap for improving energy efficiency, increasing productivity, and decreasing emissions

# DOE Goals for Plant-wide Assessment

- DOE promotes plant wide assessments to increase U.S. industrial energy efficiency, productivity, global competitiveness, and reduced emissions
- Build portfolio of industry area/assessment technique experience for dissemination
- Jump start industrial efforts
- DOE replication plans developed to promote dissemination within industrial sector and across sectors
- Follow up to determine implementation experience and replication efforts

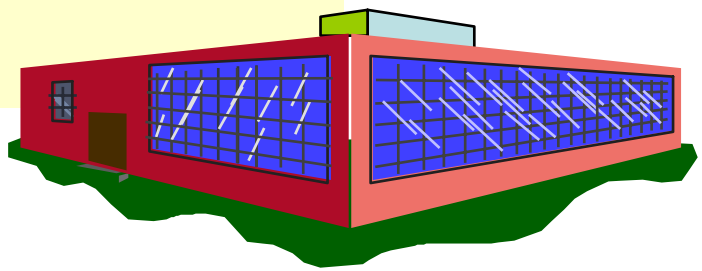
# Replicating Savings



# Partnership with Industry

**Plant-wide assessments for manufacturers are available on a cost-shared basis**

- Up to $100 K in DOE funds competitively awarded to large plants through an open solicitation process
- Also available to Showcase plants
- Assessment team assembled by plant
- Summary case studies published to promote replications of recommended energy efficiency strategy



# Plant-wide Assessments: Examples

**Annual Savings Opportunities Identified**

| | |
|---|---|
| Anchor Glass | $1,638,000. |
| Utica Corporation | $1,880,000. |
| Equilon Enterprises | $52,500,000. |
| Neville Chemical | $75,000. |
| Appleton Paper | $3,459,000. |
| Georgia Pacific - AR | $5,000,000. |
| Alcoa – Bauxite, AR | $1,072,000. |
| Boise Cascade | $707,000. |
| Caraustar | $1,280,000. |
| Akzo Nobel | $1,170,000. |
| MetLab | $518,000. |
| Bayer | $1,478,000. |
| Weyerhaeuser | $3,100,000. |
| Corning | $25,920,000. |
| Rohm & Haas | $1,090,000. |
| 3M | $1,094,000. |
| WR Grace | $840,000. |
| Ford | $3,280,000. |
| Inland | $9,500,000. |
| Alcoa - IN | $1,974,000. |
| AMCAST | $3,600,000. |

# We Advocate a Measured Approach to Energy Efficiency Improvements

**Begin with strategic element**

- Identify high priority targets
- Prioritize opportunities

**Finish with tactical element to capture opportunities**

- Analyze possible solutions
- Implement cost-effective measures

# DOE BestPractices Tools Reflect this Approach

**System Opportunity Assessment Tools for Strategic Element**

- Identification of area presenting greatest opportunity for integrated systems (compressed air or steam)
- Identification of specific systems offering greatest potential for savings in dispersed systems (plant pumping systems or process heating systems)
- Prioritization according to annual dollar savings potential

**Component Level Tools Assist in Tactical**

- Selection of component equipment (e.g. efficient motor)
- Identification of need for component (e.g. ASD)
- Compliment to existing commercial tools

# System Opportunity Tools Assist in Prioritizing Efforts

- Many times energy efficiency efforts bog down because there is too much to analyze
- The system opportunity tools indicate high potential payoff areas where efforts should be concentrated and prioritized according to savings potential
- DOE tools do not define projects to capture the potential benefits – that is a private-sector role
- DOE opportunity assessment tools exist for pump, steam, compressed air, and process heating systems
- Tools for fan systems under development – available in early FY 04

# Component Level Tools Include

- *MotorMaster+* – Motor selection and motor management activities
- *ASD Master* – Determination of applicability of ASD
- *3E+* – Determination of optimal insulation thickness

# Training is Offering at Two Levels

- End User Level
  - Introductory to optimization principles and DOE tools
  - Offered on regional basis
- Specialist Level
  - Become proficient at use of DOE tools

# Regional Training Opportunities

## End User Training

- Pumping System Assessment
- Fundamentals of Compressed Air Systems
- Advanced Management of Compressed Air Systems
- Introduction to AIRMaster+
- Motor Systems Asset Management
- Adjustable Speed Drive Applications
- Steam Systems Improvement
- Optimization of Process Heating Systems

# Regional Training Opportunities

## Specialist Training

- Pump System Assessment Tool (PSAT) *Specialist Training*
- AirMaster+ *Specialist Training*
- Process Heating Assessment Tool (PHAST) *Specialist Training*
- Certified Insulation Energy Appraisers *Training*

# Additional Information

**Additional information on BestPractices activities and detailed Case Studies for each PWA are available on OIT's web site:**

www.oit.doe.gov

www.oit.doe.gov/bestpractices