

Mike Clemmer



Nissan North America

Director,

Smyrna Paint Plant Manufacturing

Sub-Leader,

Energy Team

Welcome

NISSAN



Save Energy Now **LEADER**

Manufacturing

North American Plants



Canton, MS

Altima
Armada
Titan
QX56
Commercial Van



Smyrna, TN

Altima
Maxima
Frontier
Pathfinder
LEAF



Decherd, TN

Engines
Forgings
Castings
Electric Motor

ENERGY STAR® Ratings

2006 2007 2008 2009



Canton, MS

2006 2007 2008 2009



Smyrna, TN

2009



Americas
Headquarters

Franklin, TN

Qualified in top 25% for energy efficiency!

ENERGY MANAGEMENT AWARD



Save Energy Now LEADER

Industrial Technologies Program

Save Energy Now



Industry
LEADERS
are reducing their
energy intensity
by **25%**



Take the Pledge

Taking the pledge will establish your
company as a *Save Energy Now* LEADER.

Lower your energy bills while helping to
meet national energy and climate goals.

Save
ENERGY
Now®



Energy Management Team

Manufacturing

Communications

Engineering

Finance

Maintenance

Legal



Purchasing

Suppliers

Environmental



"The power comes from inside"

Bill Krueger



Nissan North America

Senior Vice President,

Nissan Americas

Leader,

Energy Team

Bill Krueger



Save Energy Now LEADER

Gil Sperling



U.S. Department of Energy

Senior Policy Advisor,
Energy Efficiency and Renewable Energy

Gil Sperling



Pledge Signing Ceremony
Washington, DC
December 4, 2009

Jef Walker



U.S. Department of Energy

Supervisor,
Industrial Technologies Program

Save
ENERGY
Now®



Save Energy Now LEADER Program

Save Energy Now LEADER Industrial Sustainability and Energy Management Showcase

Nissan North America, Smyrna, TN

Jef Walker
Partnership Development & Deployment
Industrial Technologies Program

April 9, 2010



U.S. industry will lead the world in energy efficiency and productivity

35 Years of Working with Industry

Together with our industry partners, we strive to:

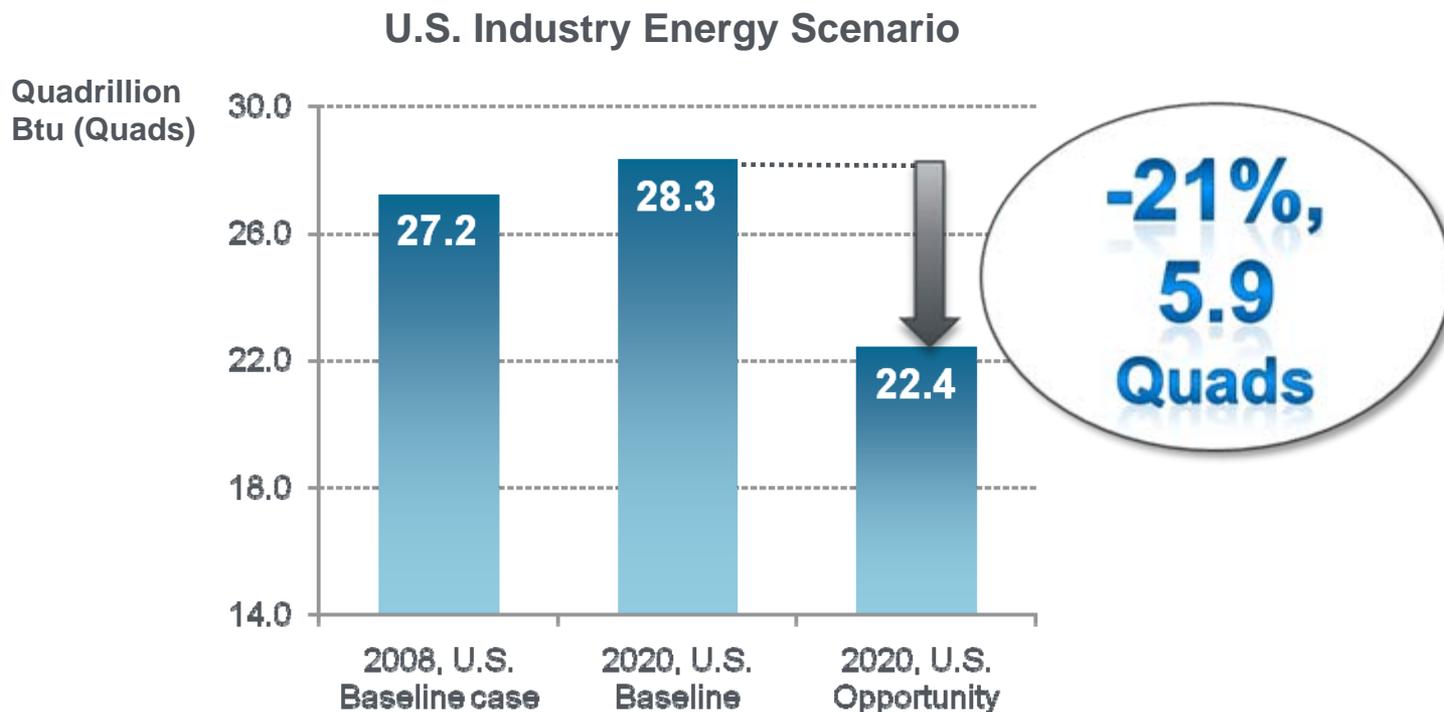
- Accelerate adoption of energy-efficient technologies and practices
- Conduct vigorous research, development, and demonstration of next-generation manufacturing technologies
- Promote a corporate culture of energy efficiency and carbon management



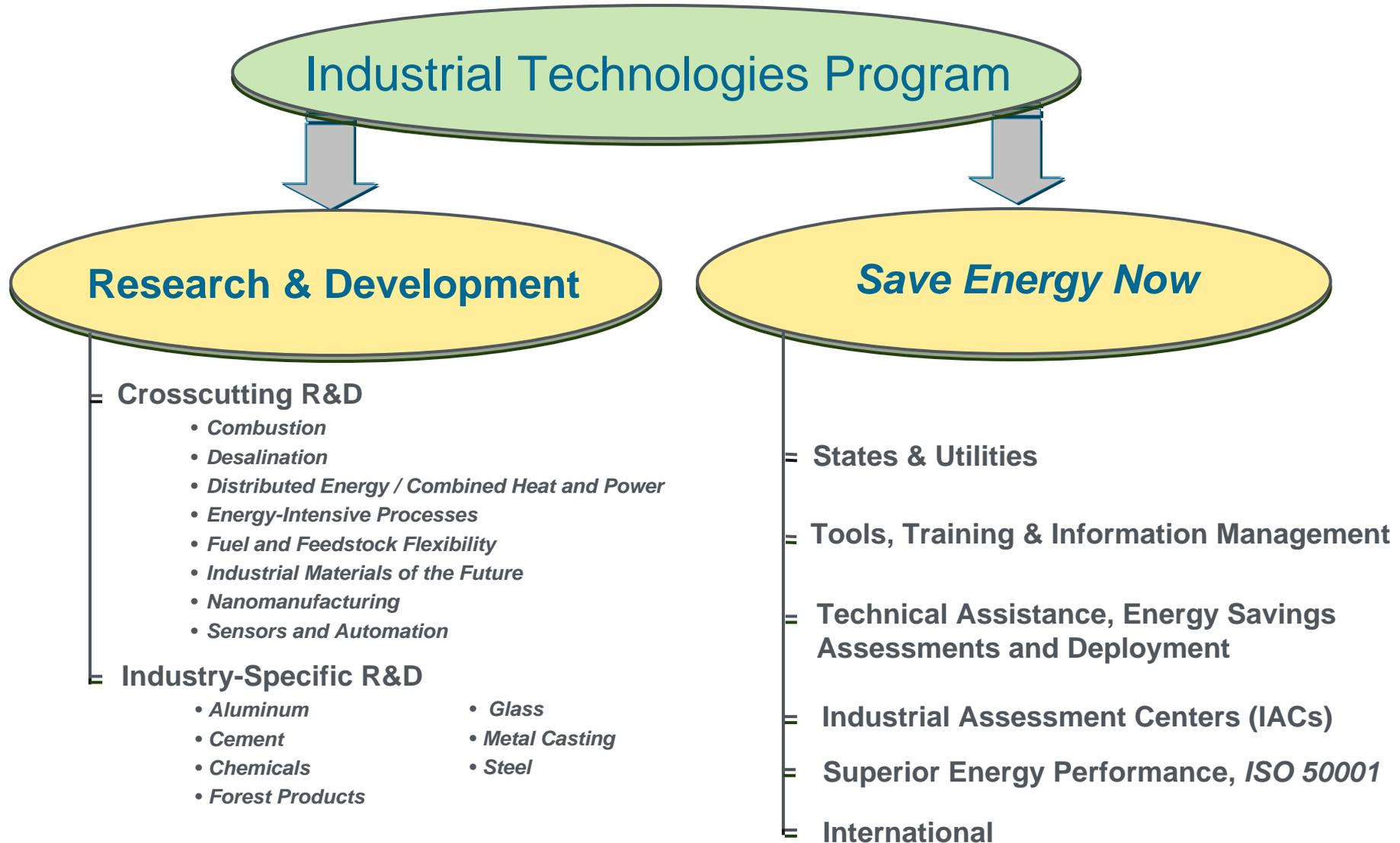


Energy Efficiency: A Big Opportunity

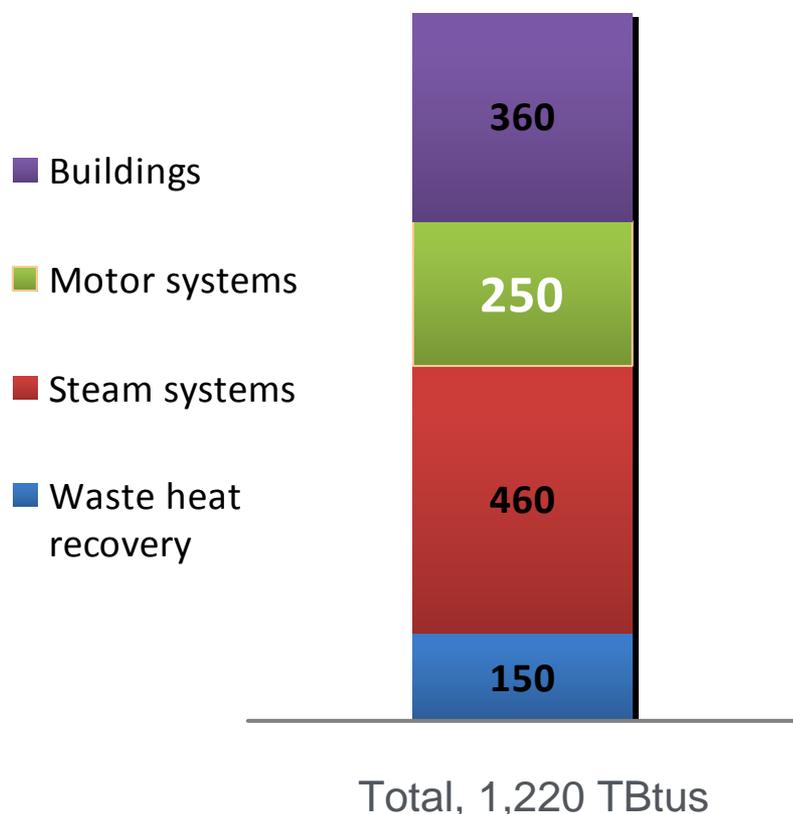
In the U.S. industrial sector alone, energy efficiency measures have the potential to reduce expected U.S. energy demand growth by **more than 20%** by 2020.



Source: McKinsey & Co., *Unlocking Energy Efficiency in the U.S. Economy*, July 2009.



Projected 2020 energy savings opportunity by energy support system type



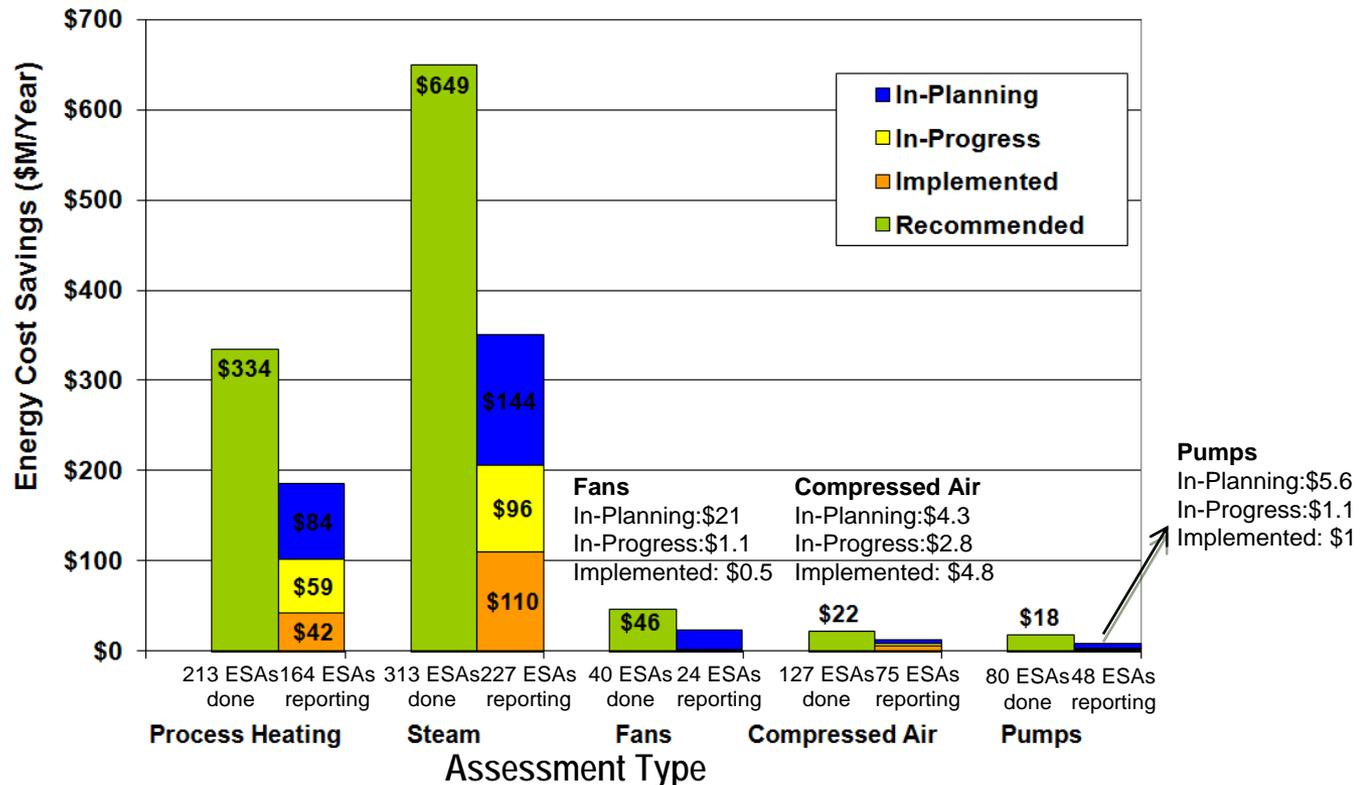
- According to McKinsey and Co., a full 20% of end-use energy efficiency opportunity rests within motor systems alone
 - Two options include improving speed control and maintenance
 - The National Academies of Sciences states better motor systems will help improve production processes, reduce waste, and improve environmental compliance

Source: McKinsey & Co., *Unlocking Energy Efficiency in the U.S. Economy*, July 2009.

Energy Savings Assessment Results (2006-2009)

- Energy Saving Assessments (ESAs) are an in-depth audit of the operation of a key energy/utility system used throughout manufacturing e.g., process heating, steam, fan, compressed air, and pump systems.
- Between 2006-2009, 878 assessments were performed at 729 plants
- Historically, 25% of ESA recommendations were implemented

Energy Cost Savings- Implementation Summary





Despite the significant opportunities, there are numerous barriers to achieving energy efficiency potential gains:

- **Capital/budget constraints**
 - Annual operating budget
 - Initial capital investment
 - Personnel time

- **Lack of awareness of the potential of energy efficiency**
 - No knowledge of assessment process

- **Lack of training or expertise on energy efficiency**

- **Lack of management focus**
 - Shareholders
 - Production



Save Energy Now Strategy

Partner

- **Publicize/Promote *Save Energy Now***
- **Recruit and Recognize LEADER Companies**

Support

- **Deliver Resources to LEADER Companies**
 - Technical assistance, expertise, and resources
- **Provide Self-Directed Assistance Options**
- **Build a Trade Organization, NGO, and Service Provider Support Network**
 - ALLY Organizations

Promote

- **Recognize and Promote Achievements**
 - Media and awards

Transfer

- **Expand the Reach of *Save Energy Now* Beyond DOE**
 - States, utilities, interagency partners
- **Establish and Launch Superior Energy Performance**
 - ANSI/ISO standard and Superior Energy Performance

Teach

- **Increase the Future Workforce through the IAC University-Based Curriculum**

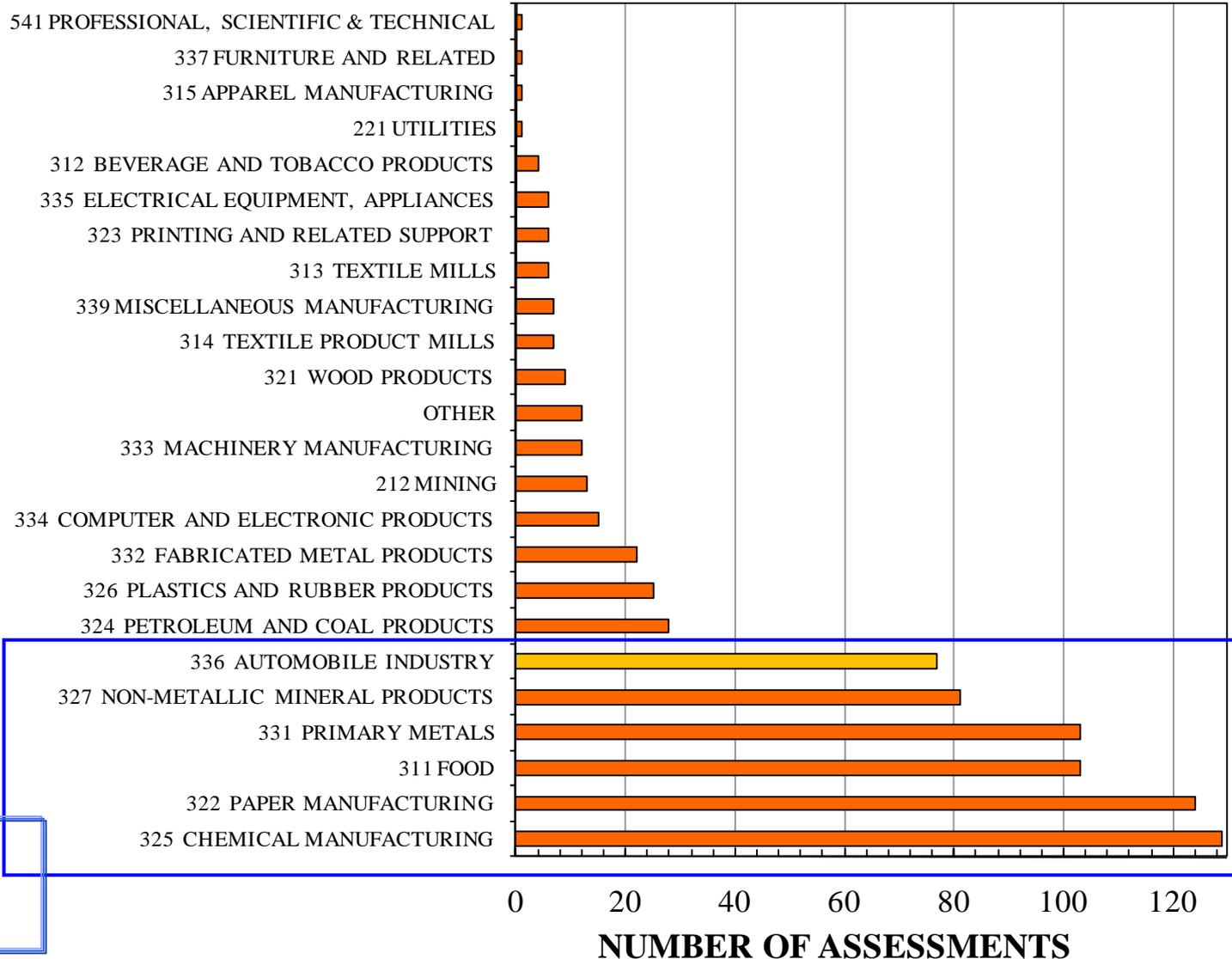


Through *Save Energy Now* partnerships, ITP delivers a robust set of tools and services:



Active Industrial Sectors

INDUSTRY TYPE (NAIC)



**620 Assessments
in 6 Major NAIC
Groups**

Primary Metals

- Number of ESAs = 103
- Average Energy Savings = 420,000 MMBtu/yr (Source)
- % Source Energy Savings = 10%
- Average Energy Cost Savings = \$2.6 million/year

Automobile Industry

- Number of ESAs = 77
- Average Energy Savings = 68,000 MMBtu/yr (Source)
- % Source Energy Savings = 4%
- Average Energy Cost Savings = \$500,000 per year

Chemical Manufacturing

- Number of ESAs = 129
- Average Energy Savings = 290,000 MMBtu/yr (Source)
- % Source Energy Savings = 8.3%
- Average Energy Cost Savings = \$2 million/year

Non-Metallic Mineral Products (Glass)

- Number of ESAs = 81
- Average Energy Savings = 142,000 MMBtu/yr (Source)
- % Source Energy Savings = 7%
- Average Energy Cost Savings = \$800,000 per year

Paper Manufacturing

- Number of ESAs = 124
- Average Energy Savings = 224,000 MMBtu/yr (Source)
- % Source Energy Savings = 5.1%
- Average Energy Cost Savings = \$2.2 million/year

Food Manufacturing

- Number of ESAs = 103
- Average Energy Savings = 56,000 MMBtu/yr (Source)
- % Source Energy Savings = 7%
- Average Energy Cost Savings = \$520,000 per year

* Based on *Save Energy Now* assessments conducted between 2006 to 2009. Numbers are as of January 1, 2010.

Save Energy Now LEADER Companies will:

- Be a Leader to other companies
- Designate an energy manager
- Develop an energy intensity baseline
- Develop an energy management plan

ITP will provide:

- Technical Account Manager
- Energy baseline assistance
- Industry benchmark comparison
- Priority access to plant assessments and emerging, advanced technologies
- Resources and tools for energy analysis and management
- Technical assistance
- Savings measurement and verification

Pledge Form

Save Energy Now LEADER

Voluntary Pledge

Save ENERGY Now LEADER

_____ voluntarily agrees to become a Save Energy Now LEADER.

Company / Plant Name

We pledge to adopt a goal to reduce energy intensity by 25% or more over 10 years.

- Within 12 months, complete the following:
 - Establish an energy use and energy intensity baseline
 - Develop an energy management plan
 - Designate an energy leader or energy manager
- Take steps to reduce energy intensity and the associated carbon emissions
- Report energy intensity, energy use data, and achievements annually to DOE.

Through the Save Energy Now initiative, DOE will provide:

- Tailored technical assistance to assist in developing the energy baseline and energy management plan, plus ongoing access to an energy management expert
- Priority access to energy system assessments on multiple industrial systems
- Waived fees for training workshops on financing options, advanced technology, energy-analysis software, energy management, and other topics
- Easy access to proven, energy-analysis software tools and other technical resources from DOE and partner organizations
- National recognition for pledge participation and achieving reported energy savings
- Additional recognition for validated energy savings.

This pledge is a voluntary agreement. It is strictly for internal management purposes and is not legally enforceable and shall not be construed to create any legal obligation on the part of either party. This agreement can be terminated at any time without prior notification, penalties, or further obligation. DOE agrees to not comment publicly regarding a withdrawal of an agreement. This agreement does not authorize or obligate any party to expend, exchange, or reimburse funds, services or supplies, or transfer or receive anything of value. Companies and plants agree that they will not claim or imply that their participation in the Save Energy Now LEADER pledge program constitutes federal government approval or endorsement of anything other than its commitment to energy efficiency and will not make statements or imply that DOE endorses the purchase or sale of products and services or the organization's views. All agreements herein are subject to, and will be carried out in compliance with, all applicable laws, regulations, and other legal requirements.

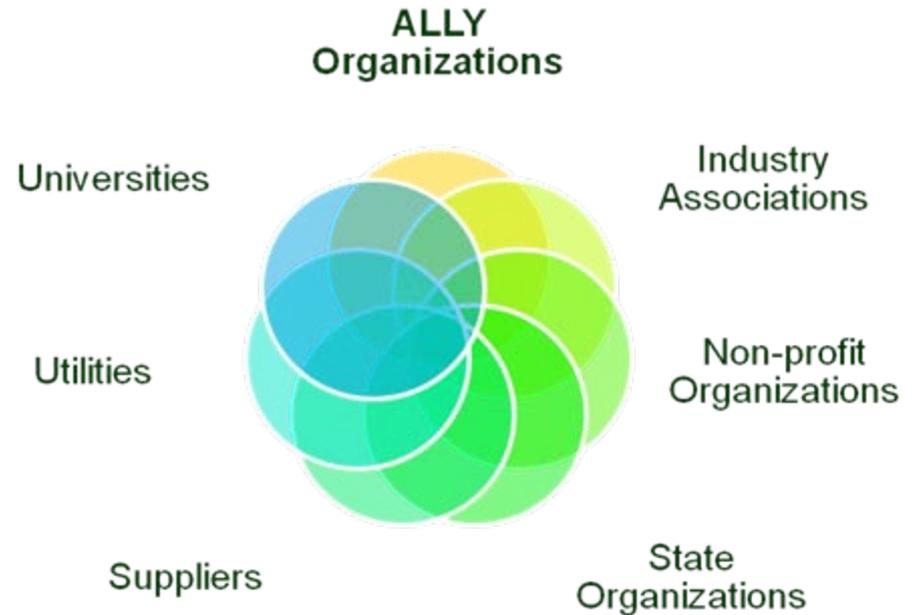
On behalf of _____
the undersigned company representative understands and agrees to the terms of the Save Energy Now LEADER pledge.

Company _____	U.S. Department of Energy _____
Printed Name _____	Printed Name _____
Position _____	Position _____
Date _____	Date _____

U.S. DEPARTMENT OF ENERGY Energy Efficiency & Renewable Energy



- ✓ ALLY Organizations help ITP expand the reach of *Save Energy Now*®
- ✓ Support national efforts to reduce energy intensity
- ✓ ALLY Organizations offer:
 - Resources and technical expertise
 - Enhance energy efficiency communications
 - Added value to your members, customers, or stakeholders
 - Access to credible and trusted end-user relationships



- **Energy Assessments:**

- 3 *Save Energy Now* assessments at Smyrna plant since 2007
- 9 total *Save Energy Now* assessments in NNA's Tennessee and Mississippi plants



- **Energy Efficiency Implementation:**

- Initiated corporate energy management/sustainability plans in 2006
- Primary upgrades/measures (VFDs, lighting, demand management, forecasting tool, recycle air, space temp control, line segregation, real-time usage monitoring/alarms)
- Reduced energy consumption by more than 30%
- Achieved energy cost savings over \$11.0 million per year

- ***Save Energy Now* LEADER:**

- Signed the Pledge in October 2009



- **DOE Loan Guarantee:**

- Awarded \$1.4 billion DOE loan guarantee to retrofit the Smyrna plant and build a lithium-ion battery plant onsite to assemble the Nissan LEAF electric car in January 2010



Save
ENERGY
Now®



Presented to

Nissan North America's
Smyrna, TN Plant

in recognition of
Hosting the *Save Energy Now* LEADER
Industrial Sustainability and Energy Management Showcase
April 9, 2010

NISSAN

Accepted by Nissan North America's Senior Vice President, Bill Krueger

Jef Walker

U.S. Department of Energy
Industrial Technologies Program

Phone: 202-586-5059

Email: Jeffrey.Walker@ee.doe.gov

***Save Energy Now* Web site:**

<http://www1.eere.energy.gov/industry/saveenergynow/>

***Save Energy Now* E-mail:**

SaveEnergyNow@ee.doe.gov

EERE Information Center:

1-877-EERE-INF(1-877-337-3463)

www1.eere.energy.gov/informationcenter/