



# Comprehensive DSM Program: Effectiveness of Capturing Identified Potential Energy Savings

**Brian Albert**

balbert@nexant.com

February 10, 2010

# Overview

- Introduction
- Nonresidential Energy Analysis (NEA) / *EfficiencyPartners*<sup>®</sup> Program Overview
- Program Performance Results
- Program Performance Improvements
- Conclusions and Recommendations

# Introduction

- MidAmerican Energy Company is the largest utility in Iowa
- 722,785 electric customers and more than 702,196 natural gas customers
- 5,361 megawatts of generating capability
- Energy Efficiency savings goal of 1.5% of total sales to end-use customers

# Introduction

- Why offer a comprehensive DSM program?
  - Climate change – carbon reduction – energy conservation
  - Buildings consume 40% of all energy used and 70% of electrical energy use<sup>1</sup>
  - 86% of U.S. Annual Building Construction Expenditures Relate to Building Renovations<sup>1</sup>
  - Commissioned Buildings in the U.S., Performance Deteriorates after 3 years by 30%<sup>1</sup>
  - Building labeling: EPA Energy Star, ASHRAE Building EQ, etc.
  - Establish building performance targets; difficult to establish when you don't even know where your building is today!

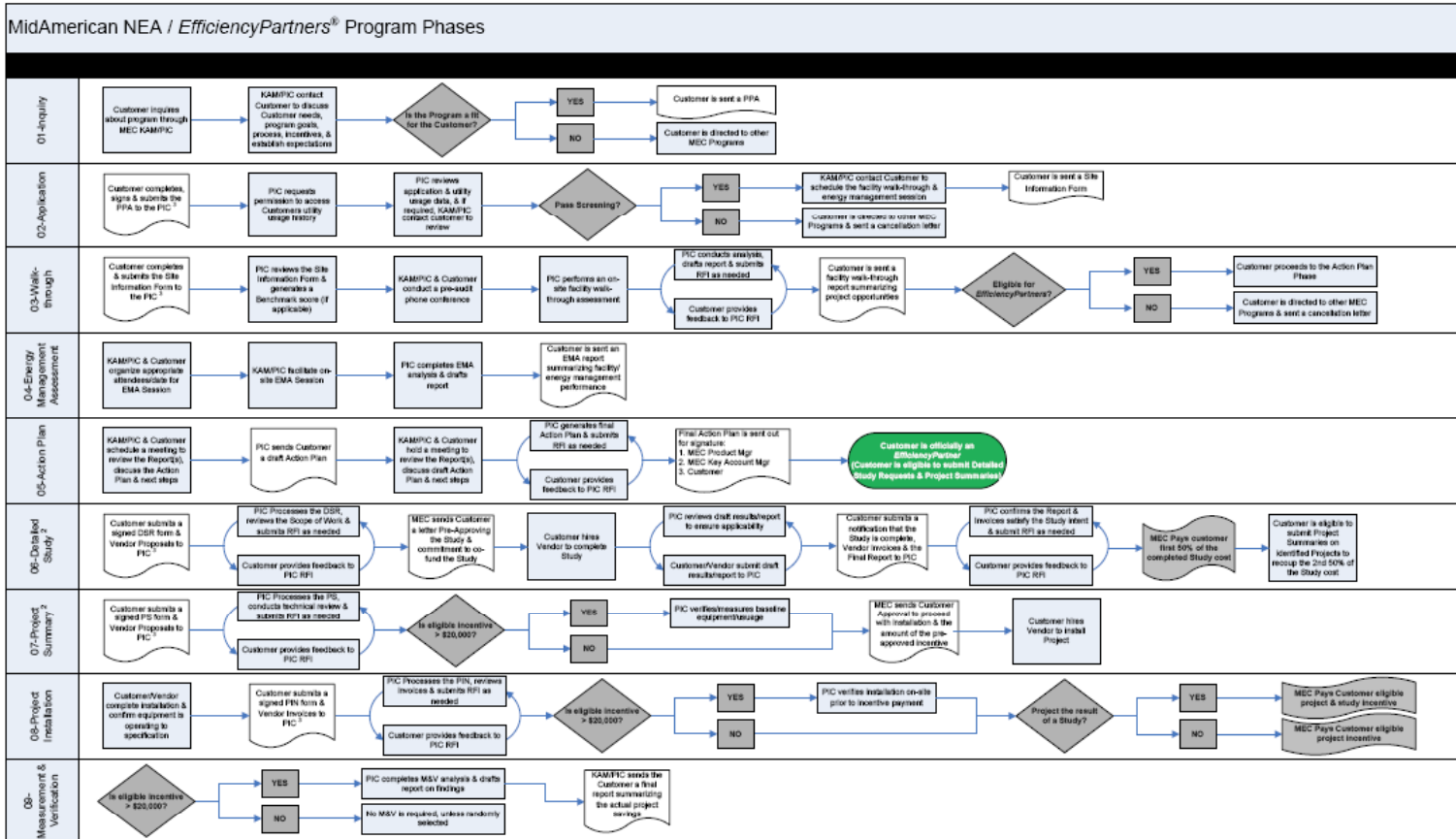
<sup>1</sup> Steps to Advanced Existing Building Energy Performance, Terry Townsend, Sept. 2009

# NEA / *EfficiencyPartners*

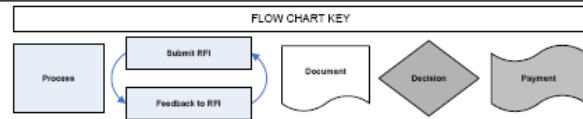
- Electric and natural gas savings program
- Existing non-residential building program
- More than just an incentive program
- Market transformation characteristics
- Organizational and technical assistance

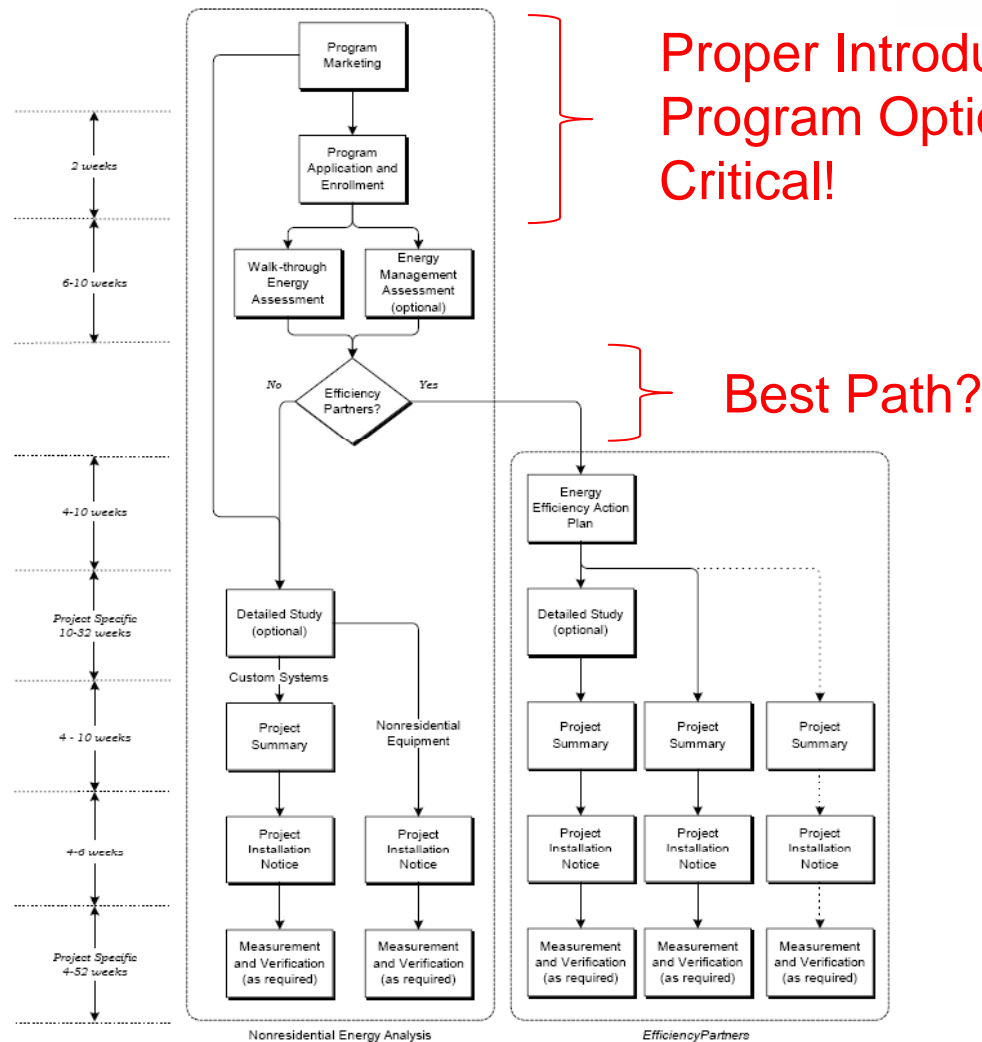
# NEA / *EfficiencyPartners*

- Broad: Large commercial and industrial
- Informative: Facility assessments deliver information to manage energy issues and usage and make informed capital decisions
- Comprehensive: Promotes a holistic approach to achieve high performance facilities
- Partnership: Promotes continuous energy improvement, working at the customers pace



Acronyms
DSR – Detailed Study Request
EMA – Energy Management Assessment
KAM – MidAmerican Key Account Manager
MSV – Measurement & Verification
MEC – MidAmerican Energy Company
PC – Program Implementation Contractor
PPA – Program Participation Application
PS – Project Summary
RFI – Request For Information





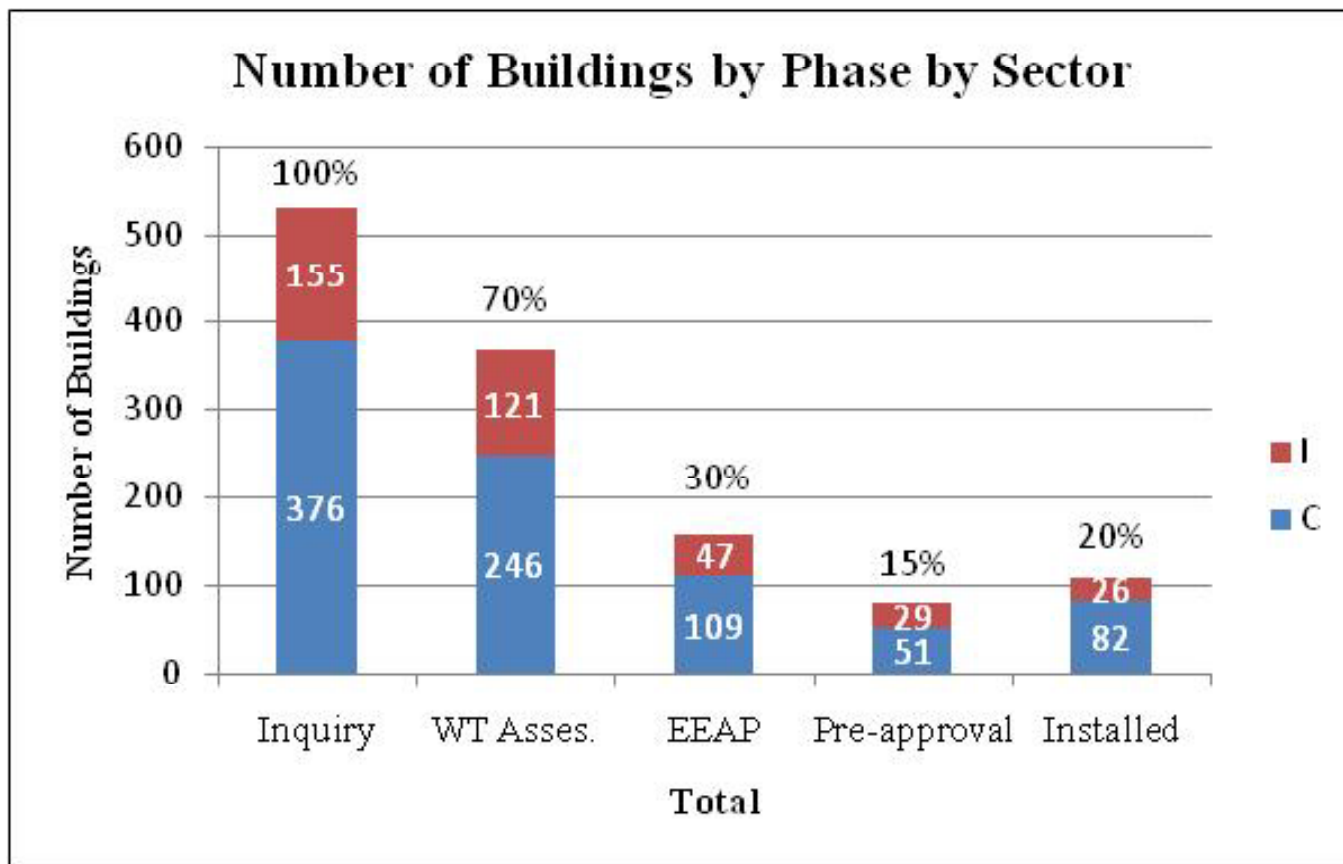


# NEA Filed Goals

- Energy Efficiency Plan 2003 and 2008, filed with the Iowa Utility Board (10 year period)<sup>2</sup>:
  - 310 facility assessments
  - 184,000 MWh saved
  - 33 MW saved
  - 634,000 therms saved
  - 619 peak-day therms saved

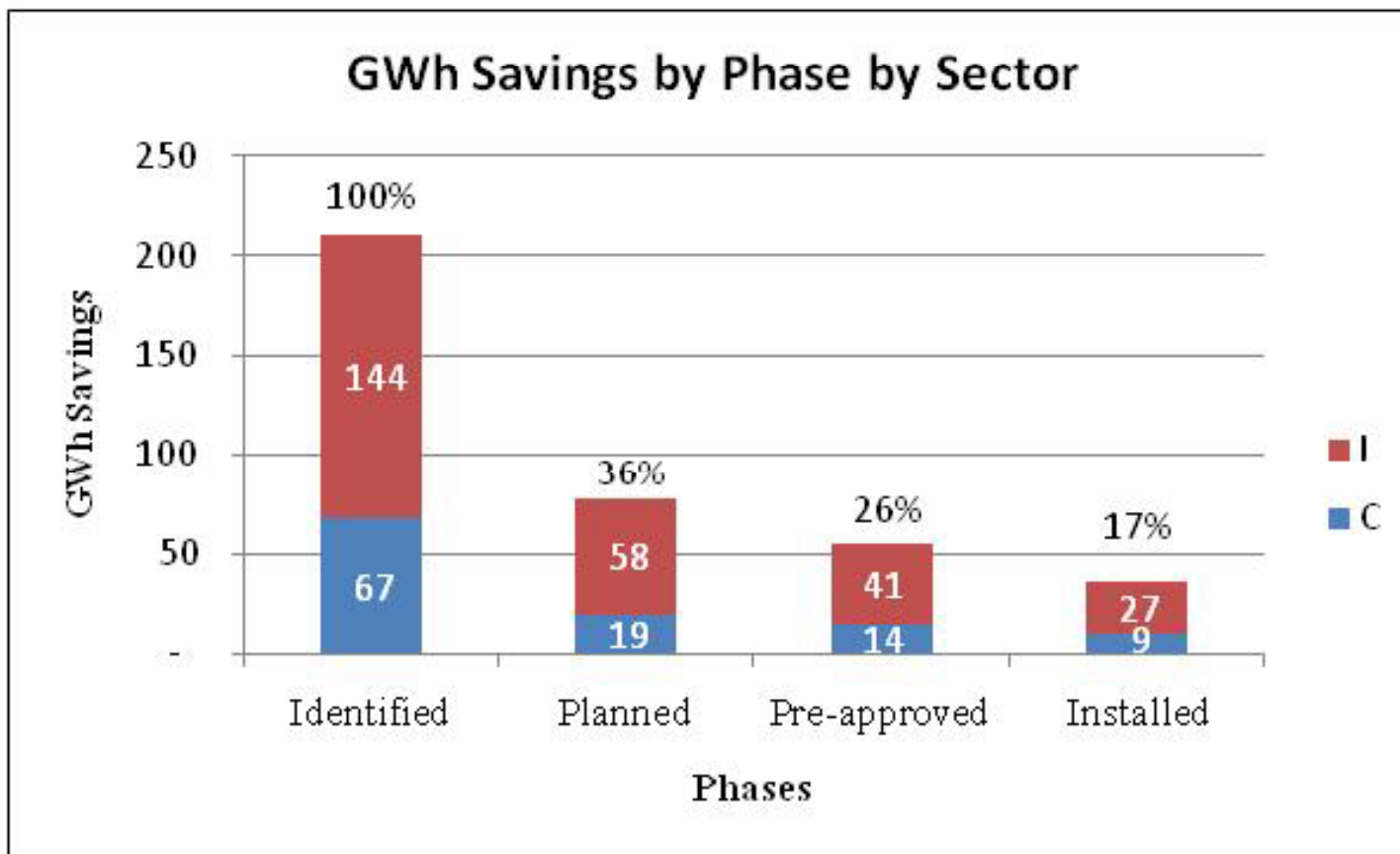
<sup>2</sup> Cumulative participation and installation savings from each 5 year Plan filing

# Participation Results



As of 10/15/2009

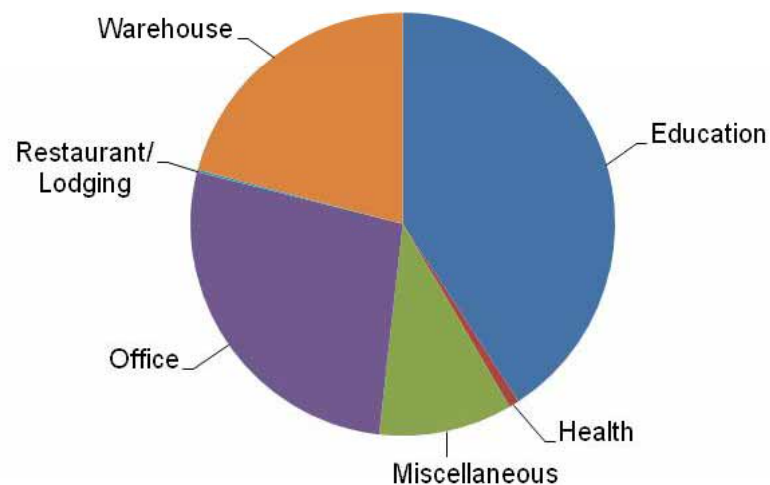
# Savings Results



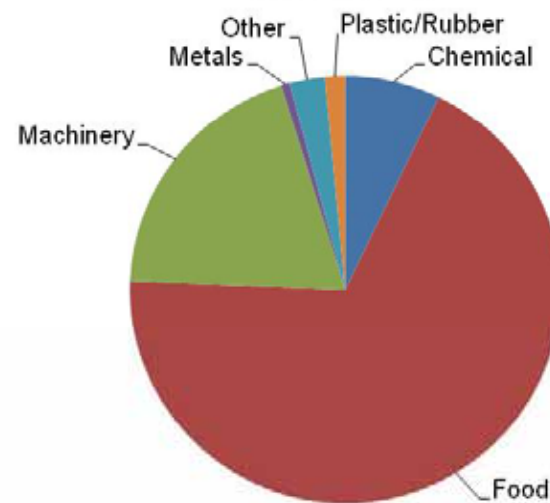
As of 10/15/2009

# Savings by Segment

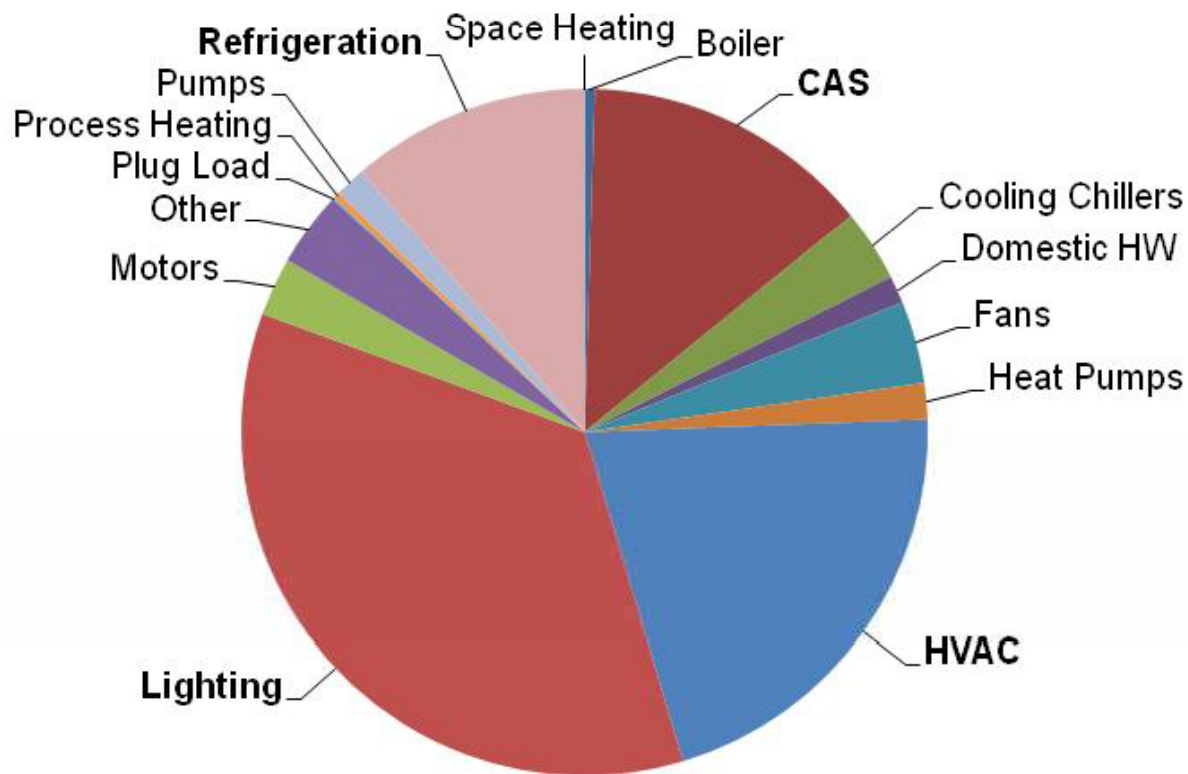
## Commercial



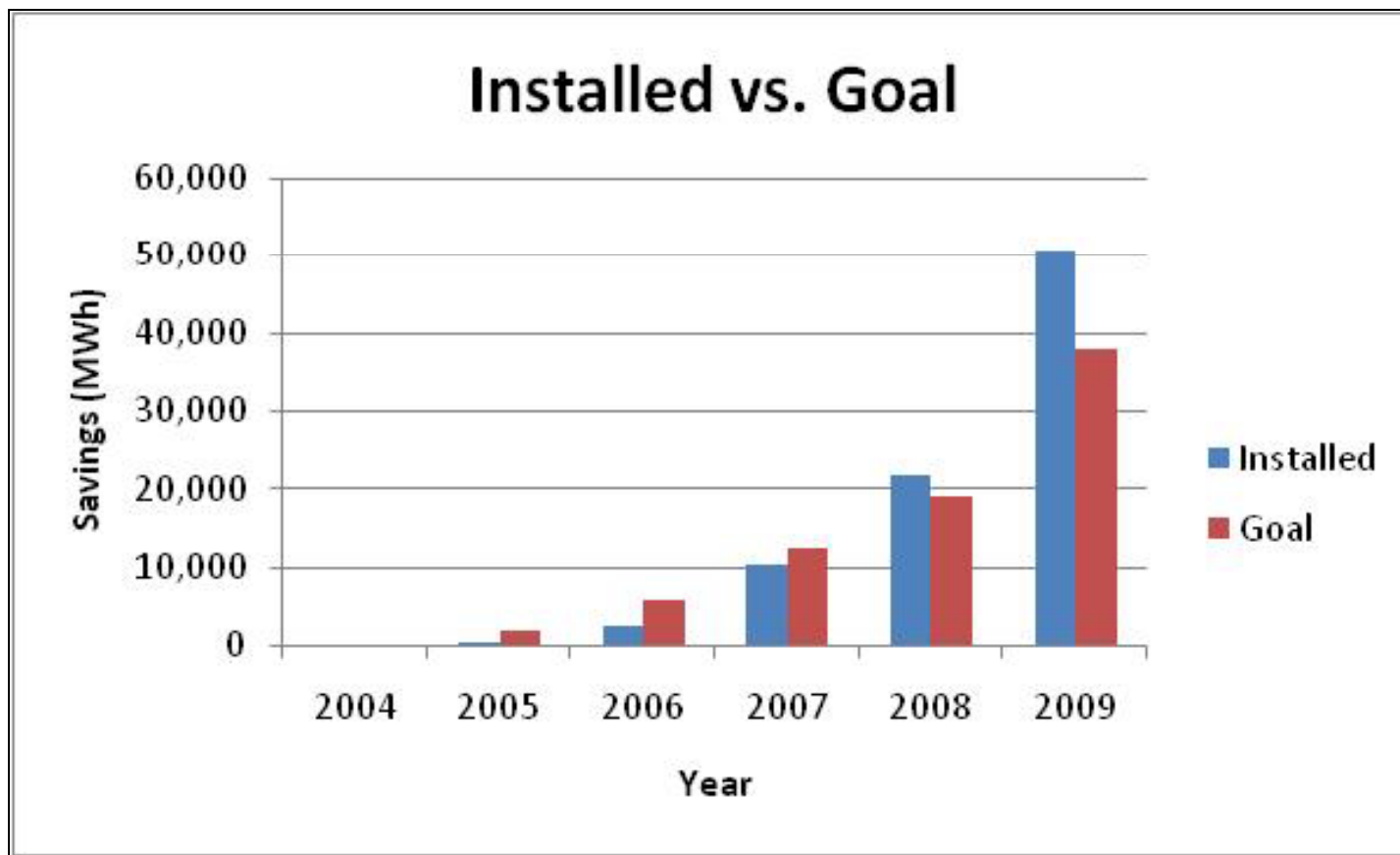
## Industrial



# Savings by End-Use

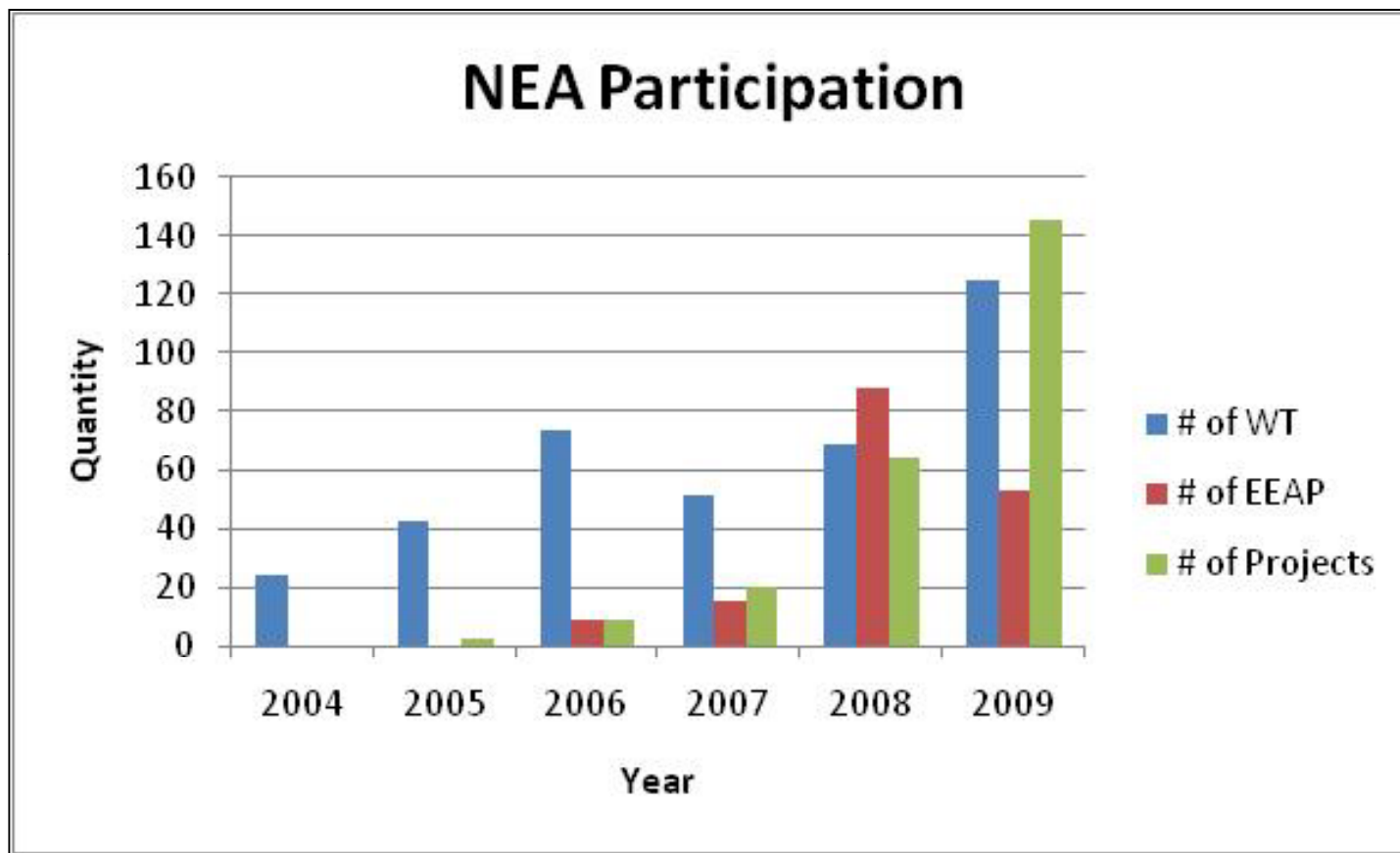


# Implementation Results



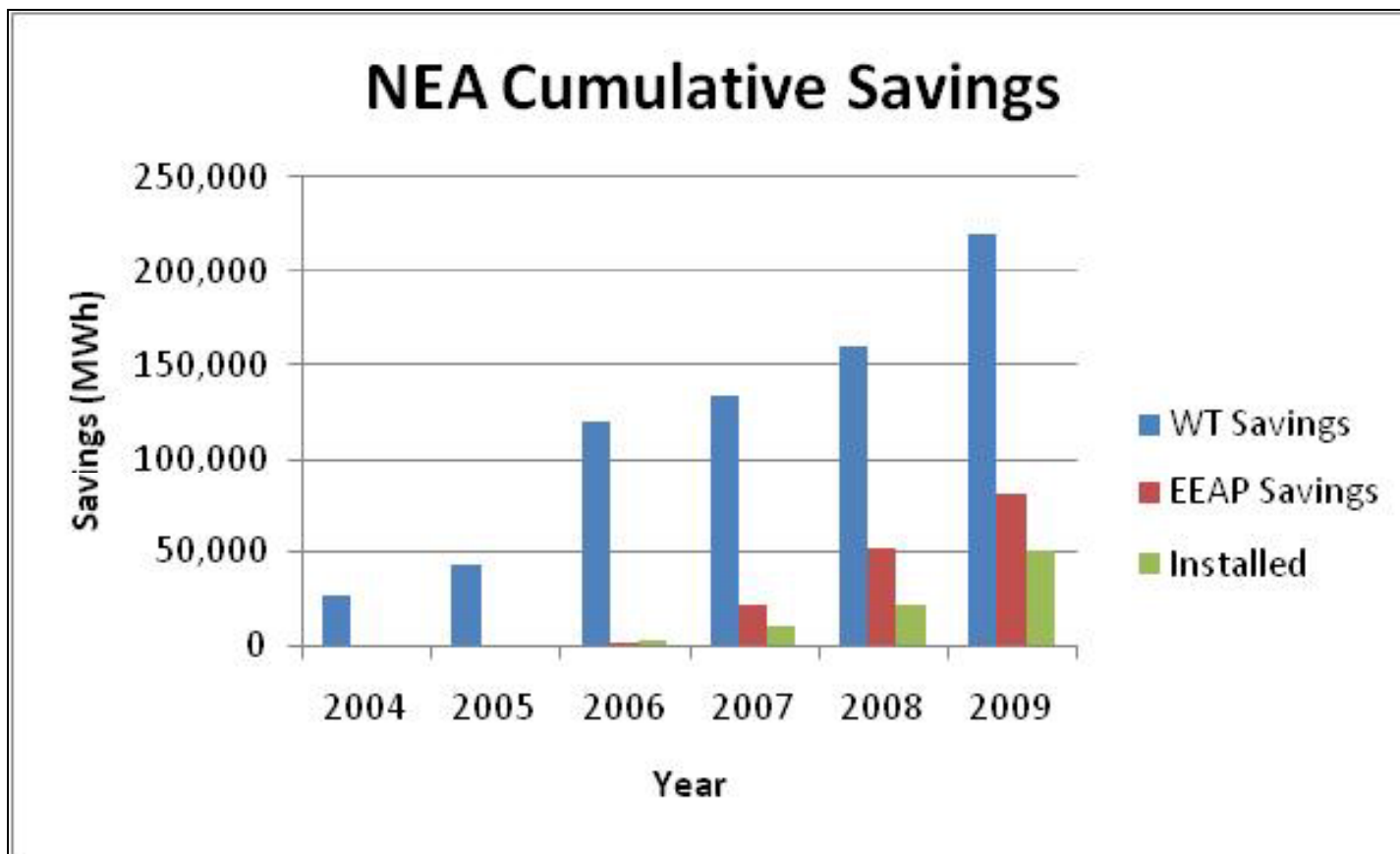
As of 12/31/2009

# Participation Trends



As of 12/31/2009

# Savings Trends



As of 12/31/2009



# Implementation Rate Target

Implementation Rate	WT Assessments per Month
17%	25
25%	15
35%	9
45%	6

Iowa NEA/EfficiencyPartners Program Savings					
Fiscal Year	EEP 008				
	2009	2010	2011	2012	2013
<b>Electric Impacts</b>					
Cumulative Energy Savings Goal (MWh)	37,902	80,458	112,888	146,700	183,968
Cumulative Energy Savings Actual (MWh)	50,881	80,458	112,888	146,700	183,968
Cumulative Energy Savings Identified (MWh)	220,533	321,832	451,552	586,800	735,872
Implementation Rate	23%	25%	25%	25%	25%

## As of 1/1/2010

- ~221,000 MWh Identified
- ~80,000 MWh in Signed EEAP
- ~56,000 MWh Pre-approved
- ~51,000 MWh Installed

# Conclusion & Recommendations

- Energy conservation is relevant today, the NEA Program responds to this need
- NEA helps customers identify and pursue energy management and energy efficiency improvements, i.e. comprehensive
- Matching the right DSM program to the customers EE goals results in success for both the customer and the utility

# Conclusion & Recommendations

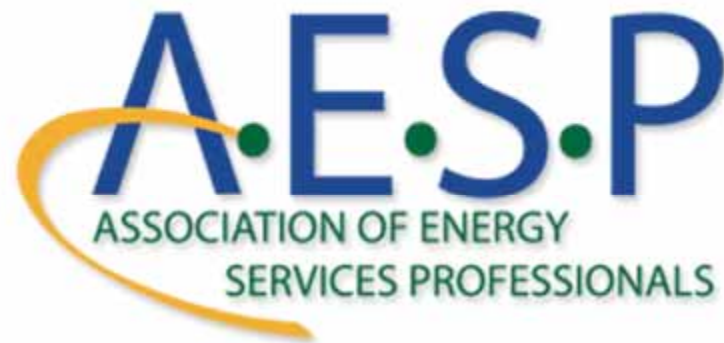
- Savings targets have been met to date; however, target EEAP's and Market Segments will be critical to meet the EEP 008 filing goals
- The implementation rate will require close monitoring by the program
- The NEA Program is finding the right mix of incentive, guidelines and managerial commitment is critical to program success

# Target Segments and Markets

Commercial Segments	Percent of Identified	
	Iowa Economic Potential <sup>3</sup>	NEA WT Assessment
Miscellaneous	22%	4%
Office	20%	26%
Warehouse	14%	7%
Retail	11%	1%
Grocery	10%	2%
Education	9%	46%
Health	8%	9%
Restaurant/Lodging	7%	4%

Industrial Segments	Percent of Identified	
	Iowa Economic Potential <sup>3</sup>	NEA WT Assessment
Metals	30%	5%
Food	26%	29%
Other	20%	7%
Machinery	9%	44%
Chemical	8%	8%
Plastic/Rubber	6%	8%

<sup>3</sup> Assessment of Energy and Capacity Savings Potential in Iowa, February 2008, Prepared for the Iowa Utility Board, Quantec LLC in collaboration with Summit Blue Consulting, Nexant Inc., A-TEC Energy Corporation, and Britt/Makela Group



---

# **21st National Conference & Expo**

**January 17-20, 2011 • Hilton Walt Disney Resort**

