



OMA Energy Committee Agenda
November 3, 2010

- **10:00 AM** - Welcome and Introductions
 - OMA Energy Chair – Brad Belden, Belden Brick
- **10:05 AM** - Guest Presentation - Turning Point Solar Project, Opportunities in the Supply Chain
 - David Wilhelm – Founder and Partner, Adena Ventures
 - Glen Davis – CEO, Agile Energy
- **11:00 AM** - Guest - Improving the Regulatory Environment for CHP and Waste Heat
 - John Cuttica - Director, Energy Resources Center, University of Chicago
 - Dick Munson, Public Affairs, Recycled Energy Development
- **12:00 PM** – Working Lunch - Counsels' Report and PPS Report
 - Tom O'Brien, Bricker & Eckler LLP
 - Lisa McAlister – Bricker & Eckler LLP
 - Kevin Schmidt – OMA Staff
- Natural Gas Report
 - Kurt Waninger, Columbia Gas

Meeting sponsored by:



Table of Contents

Document	Page #s
Calendar of Events	3
Public Policy News	4
Bios	10
Presentations	15
Counselor's Report	36
Public Policy Report	55
Bill Tracker	57
Natural Gas Report	63
DP&L Presentation	73
AEP Presentation	85
FirstEnergy Presentation	102

Calendar of Events

[BWC Safety & Hygiene Training Courses - 10/2010 to 12/2010](#)

[Plante & Moran, PLL - Complimentary Tax Update Seminar - Columbus - 11/03/2010, Cincinnati - 11/11/2010, Cleveland - 11/15/2010](#)

[Taft Stettinius & Hollister LLP Save the Date: Taft's 2010 Government Contracts Seminar - 11/03/2010 & 11/10/2010](#)

[OMA Energy Committee Meeting - 11/03/2010](#)

[Jackson Lewis Employment Law Conference - 11/03/2010](#)

[The Success Group: Impact Ohio 2010 Post Election Conference - Columbus, OH - 11/04/2010](#)

[AEP Ohio Workshop: System Savings Opportunities: The Bigger Picture, Wilmont - 11/08/2010, Lima - 11/09/2010, Columbus - 11/10/2010, Piketon - 11/11/2010, Steubenville - 11/12/2010](#)

[Jones Day Webinars: Beyond Cap and Trade: Climate Change Regulation Under the Clean Air Act Arrives - 11/09/2010 and 11/17/2010](#)

[OMA Tax Committee Meeting - 11/10/2010](#)

[OMA Environmental Committee Meeting - 11/11/2010](#)

[The Northwest Ohio Manufacturing Forum & Expo - Financing & New Business Opportunities - Bowling Green State University - 11/12/2010](#)

[OMA/Jackson Lewis - What Every Employer Should Know About Social Networking in the Workplace - 11/16/2010](#)

[PNC/Smart Business Webinar: Exploring New Territories: Why Diversification is More Important than Ever for US Manufacturers - 11/17/2010](#)

[Six Disciplines - Execution: The Key to Getting Where You Want to Go - 11/17/2010](#)

[OMA Safety & Workers Comp Committee Meeting - 11/18/2010](#)

[GJ&M Seminar: 2010 Year-end tax update - Toledo, OH - 11/18/2010](#)

[Plante & Moran, PLLC Tax Webinar: Tax Planning to Prepare for Today and Tomorrow - 12/02/2010](#)

[OMA Government Affairs Committee Meeting - 12/08/2010](#)

[Safex Training Assessments Workshop: Who has to do what training when? - 12/14/2010](#)

Energy Resources Committee - Public Policy News

OMA and Ohio University Energy & Environment Workshop Materials Now Online

October 29, 2010

The OMA and Ohio University hosted a workshop on energy management and sustainability last week. The workshop was the third in a series aimed at providing manufacturers with the information they need to thrive in the face of rising energy and regulatory costs.

Speakers included subject matter experts, manufacturers sharing case studies, and utilities discussing opportunities with energy efficiency equipment rebate programs.

Here are some of the presentations: **Climate change legislative review; DP&L; AEP-Ohio; FirstEnergy.**

Piketon Uranium Enrichment Plant Moves Forward

October 29, 2010

Governor Strickland **announced** this week that the U.S. Department of Energy (DoE) is moving forward with support for loan guarantees for the USEC Piketon uranium enrichment plant project, which, if approved, is expected to create up to 4,000 jobs in Ohio.

The enrichment facility could provide enough fuel for 20% of the U.S. electricity supply. Already, firms within the nuclear industry, including OMA-member Babcock and Wilcox, have announced that they will invest hundreds of millions of dollars in the facility. The new facility will use the world's most technologically advanced uranium enrichment process and position Ohio as an emerging leader in the nuclear industry.

AEP Seeks to Merge its Ohio Operations

October 22, 2010

AEP filed a [request](#) with the Public Utilities Commission of Ohio (PUCO) this week to allow its two utilities, Columbus Southern Power and Ohio Power, to merge. Under the merger, Ohio Power would be the surviving corporation.

Corporate governance and structure is a matter of shareholder concern. The effect of the governance change on rates and tariffs is a matter of customer concern. The OMA will work closely with AEP and the PUCO to assure that any change benefits not only AEP, but its industrial customers as well.

Contact [Kevin Schmidt](#) at the OMA for get more information and to become engaged on the issue.

OMA Asks for Refund of Columbus Southern Power Excessive Earnings

October 15, 2010

The OMA filed [testimony](#) this week asking the Public Utilities Commission of Ohio to grant customers of AEP's Columbus Southern Power operating company a refund of \$145- to \$156 million dollars. The refund is considered warranted due to a provision in the bipartisan SB 221 legislation, passed in 2008, that requires utilities to have earnings that are not significantly more than similarly situated companies.

The testimony shows that Columbus Southern Power earnings were over 20% while comparable companies' earnings were in the range of 11.5% to 13.5%. It is unclear whether the portion of earnings considered to be excessive would be credited to customers' bills or offset future proposed rate increases.

Expand Your Top Line at the OMA on November 3rd

October 08, 2010

Come to the OMA on November 3rd to hear from [Babcock and Wilcox](#) and Turning Point Solar about their supply chain needs in Ohio. The OMA Energy Committee will be hosting [David Wilhelm](#) and developers of the recently [announced](#) 50MW solar project in southeast Ohio. The solar field is expected to be operational in late 2012. The project managers intend to source as much as possible in Ohio.

The Committee will also hear from [Jeff Crater](#), Vice President, Washington Operations for The Babcock and Wilcox Company, who will discuss his company's supply chain needs. The company and its partners hope to lead a nuclear renaissance with small and modular reactors (SMRs).

Save Money, Learn How on October 20th

October 08, 2010

The OMA, together with Ohio University, is hosting a climate and energy workshop on October 20th. The New Energy Climate Workshop is the third in a series.

Presentations include: case studies in energy efficiency, case studies in sustainability, tips in EPA greenhouse gas reporting, overviews of current federal legislation, and an update on Ohio EPA policy.

An agenda can be found here; registration options [here](#).

PUCO Improves Energy Efficiency Programs

September 17, 2010

This week the PUCO created a program meant to ease the regulatory burden on manufacturers who have adopted energy efficiency measures.

The program creates a template application with set approval timelines for manufacturers to earn rebates based upon energy efficient equipment or processes installed within the past 3 years. Click [here](#) to read a detailed memorandum from OMA energy counsel.

First Energy Customers: Your Energy Efficiency Programs Can Protect Against Utility Charges

September 10, 2010

On August 26, OMA with FirstEnergy and OMA Connections Partner, Patrick Engineering, presented a webinar to help qualified FirstEnergy customers understand how to avoid costs associated with the FirstEnergy Demand Side Management and Electric Efficiency Rider.

Because utilities are required – under Ohio law (Senate Bill 221) - to meet energy efficiency targets, utilities are permitted by the Public Utilities Commission of Ohio to take credit for energy savings on customer-initiated energy efficiency projects. In exchange, the utilities will exempt those companies from paying a billed rider for a period of time determined by the overall MWh savings.

One program is available to FirstEnergy “mercantile” customers (commercial or industrial customers that consume more than 700,000 kWh of electricity a year, or are part of a national account involving multiple facilities in one or more states) with 500,000 kWh or more of identified annual savings on customer-initiated energy efficiency projects (implemented on or after January 1, 2006). [Listen to the recorded webinar.](#)

FirstEnergy Gets OK to Make Electricity from Biomass

August 20, 2010

The PUCO recently approved FirstEnergy's (FE) [application](#) for its Burger Plant to become a renewable energy resource generating facility, clearing the way for it to make electricity by burning wood and other biomass products. FirstEnergy's decision was tied to a consent decree issued by U.S. EPA that required FE to either modify the plant's operation or shut it down. Concerns have been raised about whether switching to biomass is useful or sustainable as it causes utilities to compete with Ohio's paper industry for raw material and it has been claimed that burning biomass results in more emissions than coal. See the [story](#) published by Hannah News Service for more details.

FirstEnergy Rate Filing Promises Potential Benefits

July 30, 2010

The OMA signed onto a rate-making argument advanced by FirstEnergy. The [stipulation](#) filed on July 22 contains items that OMA Energy Counsel believes will be beneficial for FirstEnergy customers. [Click](#) for summary of the filing.

Senator Voinovich Calls for Nuclear Renaissance

July 30, 2010

Late last week, U.S. Senator George V. Voinovich introduced [legislation](#) to spur nuclear energy investment. The bill provides the private sector with financial incentives, trains our talented workforce, and allows nuclear to compete on a level playing field with renewable energy sources. Nuclear power provides 20 percent of our nation's electricity and 70 percent of our emission-free electricity, while wind and solar only currently provide about 3 percent. Members of the OMA Energy Resources Committee will discuss the matter.

"Excessive Earnings" in Electric Utility Rate Cases Delayed

July 16, 2010

July 14 had been the deadline for utilities to file with the Public Utilities Commission of Ohio (PUCO) to prove that rates charged to customers were not resulting in "significantly excessive earnings." The filing was an important step in the rate-making process enshrined in Ohio's electricity restructuring law (S.B. 221) to protect consumers.

But, July 14 came and went without a single filing by a utility on excessive earnings. The reason: The PUCO granted a delay until September 1.

In the Finding and Order issued this [week](#), the PUCO granted the extension sought by Duke Energy. The PUCO also waived the July deadline for AEP and FirstEnergy. Days earlier, the OMA, together with the Ohio Hospital Association, Ohio Energy Group and the Ohio Consumers' Counsel, filed a motion opposing the request for delay. [Read more](#).

Stay tuned and stay engaged with OMA. This process directly impacts your power costs.

Ohio Senators Urging Caution – Sudden Push for Climate Change

July 01, 2010

Both Ohio Senators, Sherrod Brown (D) and George Voinovich (R), were among a handful of senators summoned to a pivotal White House meeting with [President](#) Obama this week. In recent days, with Americans focused on the oil spill in the Gulf, some Senators are working to quickly advance the Kerry Lieberman climate change legislation.

Following the meeting, Senator Brown [characterized](#) that there is recognition that the legislation cannot compromise jobs or economic security. Senator Brown has been a leader on the need to protect manufacturing competitiveness and articulated needed revisions with Kerry-Lieberman in an April [letter](#).

Senator Voinovich, one of a few Republicans included in the meeting, released a [statement](#) saying that "the lack of agreement sent a clear signal to the president, Senator Kerry and Senator Lieberman that the chances of passing their cap and trade legislation are quite slim." The Senator renewed calls to focus on nuclear energy development.

PUCO Punts on “Excessive Earnings” Threshold

June 30, 2010

The Public Utilities Commission of Ohio (PUCO) this week [acted](#) to define certain parameters for determining when an electric utility is making "significantly excessive earnings" on the backs of rate-payers. In such instances, the PUCO can order the utility to refund to customers that portion of the excessive earnings paid by customers over the previous year. This authority was granted to the PUCO under the landmark electric restructuring legislation, Senate Bill 221. The OMA supported this important provision and filed [comments](#) with the PUCO several months ago.

In its Finding and Order, the PUCO rejected a key recommendation of its staff that will be favorable for manufacturers. On the other hand, the Commission sidestepped for the time being the critically important question of how excessive earnings must be before they will be considered "significantly excessive." The PUCO did preserve its ability to order refunds on a case-by-case basis, illustrating the need for manufacturers to regularly intervene on such matters before the PUCO. A [summary](#) of the order was prepared by OMA Counsel Tom O'Brien of Bricker & Eckler, L.L.P.

The order requires each utility file their proposed excessive earnings applications by July 15. The OMA will intervene and monitor these developments at the PUCO on behalf of our members.

PUCO Processing Backlog of Energy Efficiency Cases

June 24, 2010

The PUCO [approved](#) more than 200 applications by mercantile customers this week allowing them to opt-out of paying their utility's energy efficiency rider in exchange for committing their energy efficiency project savings to the utility. This option is commonly called the self-direct" option and can be for new projects or projects as old as three years.

The OMA put in significant work behind the scenes with PUCO staff and the Governor's office to break the log-jam. If you have undertaken a project at your facility that resulted in energy efficiency, contact [Kevin Schmidt](#) at the OMA to find out how you may be able to receive financial benefits from your utility.

OMA Lays Out Energy Policy Gains and Gaps for Lawmakers and Manufacturing Leaders

June 18, 2010

In light of the importance of competitively-priced, abundant energy to Ohio's competitiveness, the OMA's Energy Policy Committee thought it was important to review our state's energy policy. To this end, OMA has just published a new volume of ReTooling Ohio to document Ohio's energy policy gains and gaps from the manufacturers' perspective.

ReTooling [Ohio](#) attempts to address the most critical policy issues, provide relevant context, preserve institutional knowledge and offer thoughtful concepts for change. It always reflects the thinking of subject matter experts and has been developed by the broad-range of manufacturing leaders who serve on the OMA's public policy committees.

Legislature Wraps UP Session, Passes CoGen Fix

June 04, 2010

In a marathon meeting that stretched into the early hours of this morning, the Ohio General Assembly finished its work on a number of pressing pieces of legislation. Notably among those bills for manufacturers is [**SB 232**](#), which grants favorable tax treatment to future advanced and renewable energy facilities.

The OMA worked hard to ensure the bill looked beyond just wind and solar power and included cogeneration facilities. The OMA-supported amendment exempts manufacturers' co-generated power from punitive utility property taxes, regardless of whether the power is used on-site or sold into the grid.

Governor Strickland announces plans for off-shore wind farm in Lake Erie

May 28, 2010

At the American Wind Energy Association's annual trade show in Dallas, Texas, Governor Ted Strickland announced plans for the placement of five wind turbines in Lake Erie by 2012. This experimental project features a unique partnership between the Lake Erie Energy Development Corp. (LEEDCo), a non-profit company in Cleveland, and General Electric, and would result in the first operating off-shore wind farm in the United States.

Read more in this blog [**posting**](#) from OMA counsel Bricker & Eckler.

Learn about the Costs/Opportunities of AEP's Energy Efficiency Programs

May 28, 2010

On May 13th the PUCO approved AEP's energy efficiency and peak demand reduction plan. If you are an AEP customer, you will see a new charge on your bill to pay for this.

To learn what this charge will be and what the programs mean to you, check out OMA Energy Counsel Tom O'Brien's memo in OMA Groups. Tom's memo can be found in the Energy Efficiency Group and details the specific rider charge for the various industrial tariffs and what the opportunities mean to you.

Log into OMA [**Groups**](#) to read Tom's memo and start a conversation.

OMA Energy Committee Learns about Nuclear Supply Chain

April 29, 2010

AREVA, the technology company working with Duke Energy to construct a nuclear plant at the Piketon facility in Southern Ohio, presented to the OMA Energy Committee this week. AREVA discussed the substantial supply chain opportunities available to Ohio manufacturers. AREVA wants a local supply chain for: timely delivery of products for construction, responsiveness to ongoing maintenance issues, and the development of competitive suppliers for its worldwide business. [**Click here**](#) to view the entire presentation.

**Glen Davis**

Co-Founder & Chief Executive Officer

Mr. Davis spent the first 18 years of his energy career with the AES Corporation, helping build it into one of the leading global independent power producers. At AES, he led the development, financing, acquisition, and sale of power generating assets on four continents, worth billions of dollars.

Before co-founding Agile Energy, Mr. Davis served as Executive Vice President and Chief Commercial Officer for Ausra, Inc. from 2007 to 2008. During the period 2004-2006, he provided development and consulting services to the independent power industry at Agile Energy LLC. Agile Energy, Inc. builds off the foundation and track record established by Agile Energy LLC.

Mr. Davis served on the Board of Trustees of the Western Systems Coordinating Council from 1998 through 2002. He holds an MBA from the Massachusetts Institute of Technology and a Sc.B. in Mechanical Engineering from Brown University.

David Wilhelm

Founder and Partner

David Wilhelm is the Founder and President of Woodland Venture Management, a company that raises and invests private equity in parts of the country that are underserved by the nation's financial industry. Woodland has become one of the nation's leading sources of capital in the Midwest and central Appalachia.

In that capacity, Wilhelm founded Adena Ventures, a venture capital fund targeting central Appalachia, which includes the southeastern Ohio area in which he was raised. Wilhelm is a partner and member of the fund's investment committee.

Wilhelm also founded a second fund, Hopewell Ventures, which brings investment dollars to entrepreneurs in the nation's heartland, specifically a seven-state region stretching from Ohio to Nebraska.

Wilhelm is best known for his political work, which has included managing campaigns for President Bill Clinton, Senator Paul Simon, Senator Joe Biden, Governor Rod Blagojevich, and Chicago Mayor Richard Daley. In 1993, he became the youngest ever Chair of the Democratic National Committee.

Wilhelm holds degrees from Harvard's Kennedy School of Government (MPP) and Ohio University (BA), and recently served as Chair of the Ohio University National Alumni Board.

Wilhelm is the proud father of two boys, Luke and Logan. He and his wife, Degee, live in Bexley, Ohio.

John J. Cuttica
Director, Energy Resources Center
University of Illinois at Chicago

Mr. Cuttica has over twenty-five years of experience in the energy field. As a former Vice President and General Manager at the Gas Research Institute for 18 years, he directed advanced technology programs that resulted in over 40 new products reaching commercial reality. These technologies and products are presently being utilized in such market sectors as Commercial Heating & Cooling, Alternative Fueled Vehicles, Distributed Power Generation, and various Industrial Processes. Prior to his work at the Gas Research Institute, Mr. Cuttica was responsible for the Consumers Product R&D Program at the US Department of Energy. He was responsible for the original Appliance Efficiency Labeling Program, and the early R&D work in energy efficient lighting, day lighting, appliances, and thermally activated heat pumps.

In June of 2000, Mr. Cuttica joined the University of Illinois at Chicago Energy Resources Center as the Coordinator of Energy and Environmental Programs. During his employment at the Center, Mr. Cuttica has been responsible for expanding the Center's strategic direction to include Distributed Generation. As part of this initiative, the University was designated (in March 2001) by DOE, as the first Regional CHP Application Center, set up to provide technical assistance and education in the area of Combined Heat and Power (CHP) to targeted audiences in the twelve state Midwest region. That regional activity has now grown to include not only CHP, but District Energy and Waste Heat Recovery Systems.

Mr. Cuttica has recently been named the Director of the Energy Resources Center. His new responsibilities include the development and implementation of the Center's programs in energy and environmental sustainability, distributed generation, bio-energy, and alternative energy sources.

Dick Munson, Public Affairs Recycled Energy Development

For the past several decades, Dick Munson has been a key advocate for clean energy and industrial energy efficiency. Before joining Recycled Energy Development to lead its public affairs efforts, Dick directed the Northeast-Midwest Institute and coordinated with the Northeast-Midwest House and Senate Coalitions, which are bipartisan caucuses that conduct policy research and draft legislation on issues pertaining to agriculture, economic development, energy, the environment, and manufacturing.

Dick has also served as secretary of the U.S. Clean Heat and Power Association, director of the Solar Lobby, director of the Center for Renewable Resources, co-coordinator of Sun Day, coordinator of the Environmental Action Foundation, and lecturer in history at the University of Michigan. He now sits on the boards of directors for the U.S. Clean Heat and Power Association, Institute for Health Policy Solutions, and Business Council for Sustainable Energy. He has received outstanding service awards from the Great Lakes Commission, U.S. Clean Heat and Power Association, and American Small Manufacturers Coalition.

Dick is the author of several books. His most recent is *From Edison to Enron*, which recounts the history of electricity and proposes an innovation-based vision for the power industry. His *Cardinals of Capitol Hill* traces the machinations of congressional appropriators who control government spending, and *Cousteau: The Captain and His World* is a biography of the famed ocean explorer and filmmaker. Dick's articles on energy and environmental policy have appeared in numerous newspapers and journals, including *Electricity Journal*, *Issues in Science and Technology*, and the *Baltimore Sun*, among others.

He is a graduate of the University of California, Santa Barbara, and the University of Michigan.

Nolan Moser, J.D.

Staff Attorney, Director of Energy & Clean Air Programs, Ohio Environmental Council

Nolan provides management and strategic leadership of all Energy and Clean Air Program work, funding, resource allocation and planning. Nolan also directs the OEC's energy-related litigation efforts at the Public Utilities Commission and beyond; coordinating the activities of the OEC staff attorneys and outside counsel focused on energy.

Nolan acts as the OEC's representative on a variety of boards and appointed positions, and is responsible for the development of OEC policies and positions on energy and climate change.

Nolan began his tenure with the OEC as a legal intern during law school and is a licensed attorney in both Ohio and Michigan. He has authored several published articles on environmental litigation and regulation, energy law, and international law. Nolan received a J.D. degree from Case Western Reserve University in 2006 and B.A. degrees in political science and history from Austin College in 2003.

Presentations

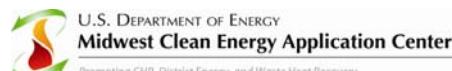
Combined Heat and Power (CHP) Waste Heat Recovery (WHR) Building a Coalition

The Ohio Manufacturers' Association

November 9, 2010

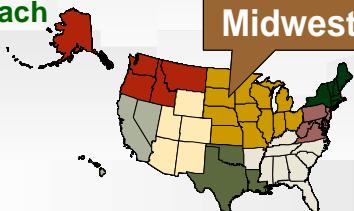
John Cuttica

U.S. DOE Midwest Clean Energy Application Center



Who are we?

- **U.S. DOE Midwest Clean Energy Application Center**
- Originally established in 2001 by US DOE to support DOE CHP Challenge
- Today the center promotes the use of CHP, District Energy, and Waste Heat Recovery Technologies
- Strategy: Provide a technology outreach program to end users, policy, utility, and industry stakeholders focused on:
 - Targeted education and outreach
 - Policy education
 - Project support
- www.midwestcleanenergy.org

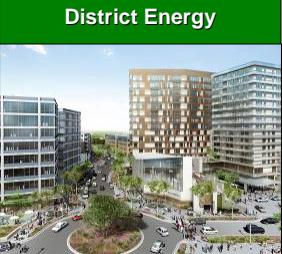


2

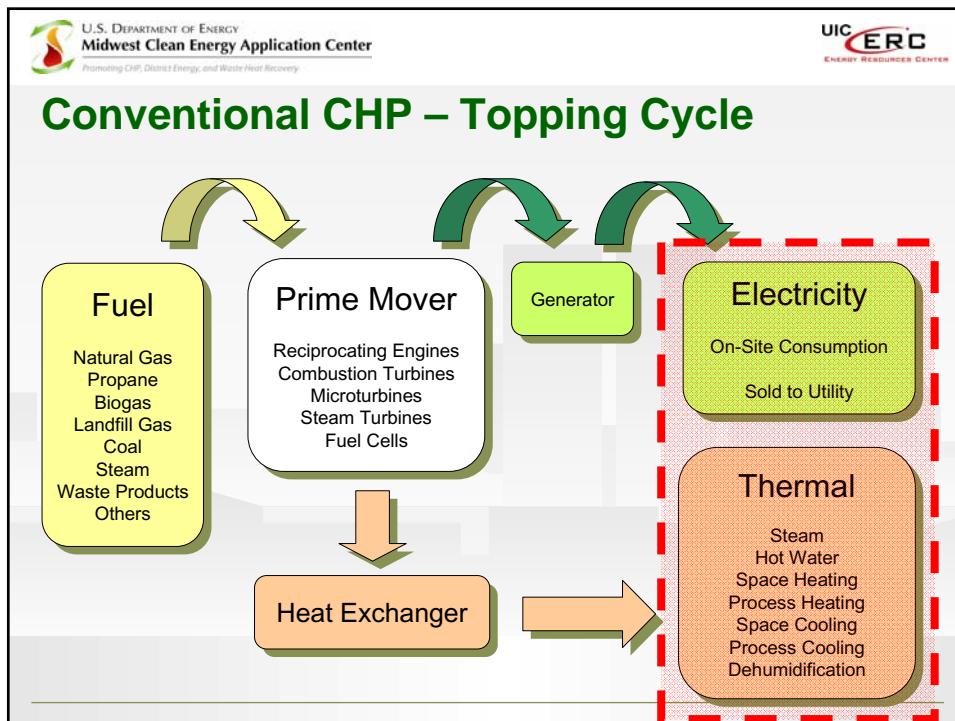
**U.S. DEPARTMENT OF ENERGY
Midwest Clean Energy Application Center**
Promoting CHP, District Energy, and Waste Heat Recovery

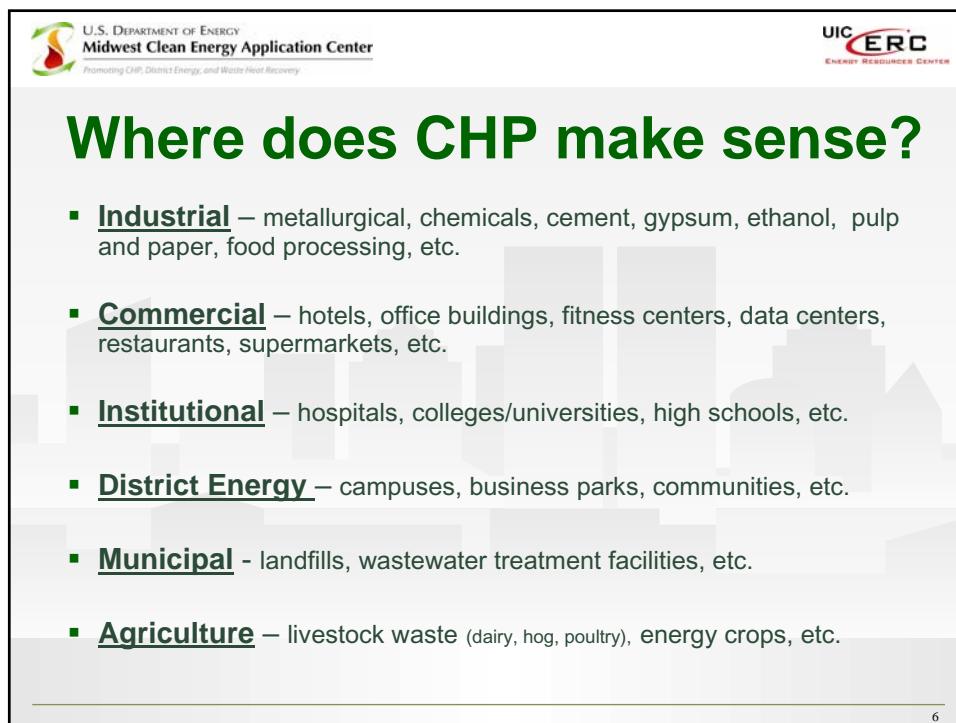
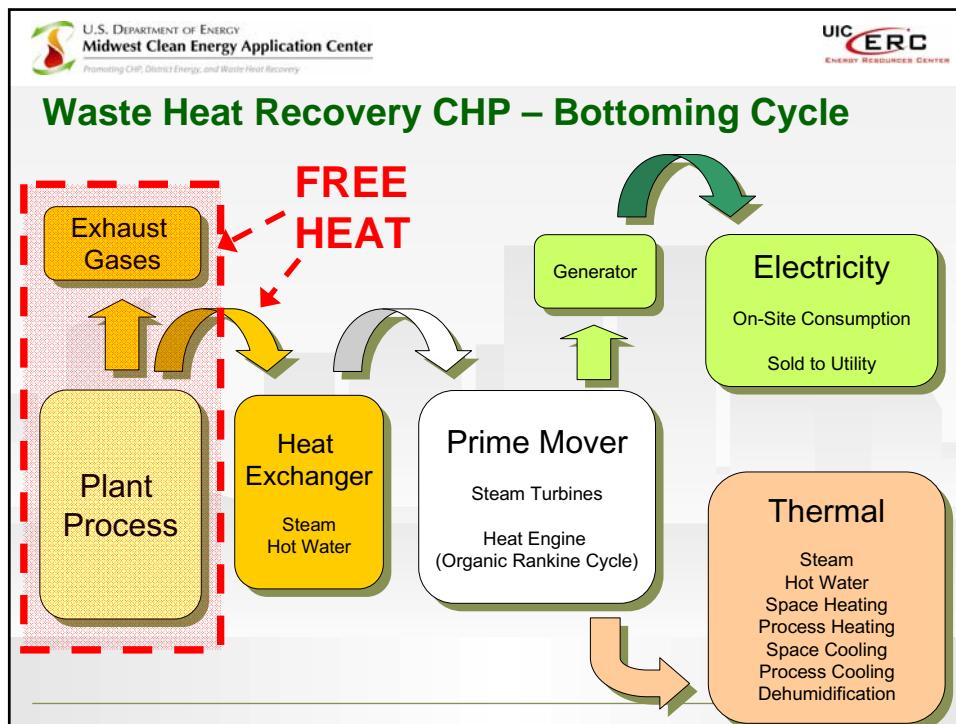
UIC ERC
ENERGY RESOURCES CENTER

“Clean Energy” Technologies

CHP	Waste Heat Recovery	District Energy
		
The sequential production of electric and thermal power from a single dedicated fuel source	Captures heat otherwise wasted in an industrial process and utilizes it to produce electric power. These systems may or may not produce additional thermal energy	Central heating & cooling plants that incorporate electricity generation along with thermal distribution piping networks for multiple buildings (campus / downtown area)

3





**U.S. DEPARTMENT OF ENERGY
Midwest Clean Energy Application Center**
Promoting CHP, District Energy, and Waste Heat Recovery

UIC ERC
ENERGY RESOURCES CENTER

Where is CHP utilized today?

- 84,570 MW installed at 3,500 sites (nationally)
 - Average capacity is 24.2 MW
 - Median capacity is 1.2 MW
- Represents almost 8% of total U.S. generating capacity
- **Saves over 3 quads of fuel** each year!
- **Eliminates over 400 million tons of CO₂ emissions** each year!

7

**U.S. DEPARTMENT OF ENERGY
Midwest Clean Energy Application Center**
Promoting CHP, District Energy, and Waste Heat Recovery

UIC ERC
ENERGY RESOURCES CENTER

Existing CHP Installations in Ohio

Application Class	Sites	Capacity (MW)
Industrial	26	601.8
Commercial/Institutional	20	103.3
Other	2	1.4
Total	48	706.5

←

Technical Potential in Ohio – With Export

Technical Potential	Capacity at Existing Sites (MW)
Industrial	6,672
Commercial/Institutional	3,082
Total	9,755

←

8

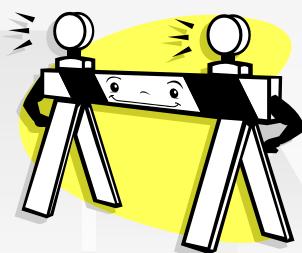
How does Ohio rank amongst other states?

Installed CHP Generating Capacity				Number of CHP Installations			
State	Megawatts (MW)	National Rank	Midwest Rank	State	# of CHP Sites	National Rank	Midwest Rank
MI	3,100.9	9	1	IL	137	5	1
IN	2,303.2	11	2	MI	87	10	2
WI	1,521.4	14	3	WI	73	11	3
IL	1,287.6	17	4	OH	48	17	4
MN	807.3	24	5	MN	43	18	5
OH	706.0	25	6	IN	34	21	6
IA	578.4	27	7	IA	30	26	7
MO	212.2	37	8	MO	20	34	8
KS	130.5	42	9	KS	16	41	9
ND	62.0	47	10	NE	14	43	10
NE	31.6	49	11	ND	10	47	11
SD	19.2	50	12	SD	4	50	12

9

What Are The Barriers

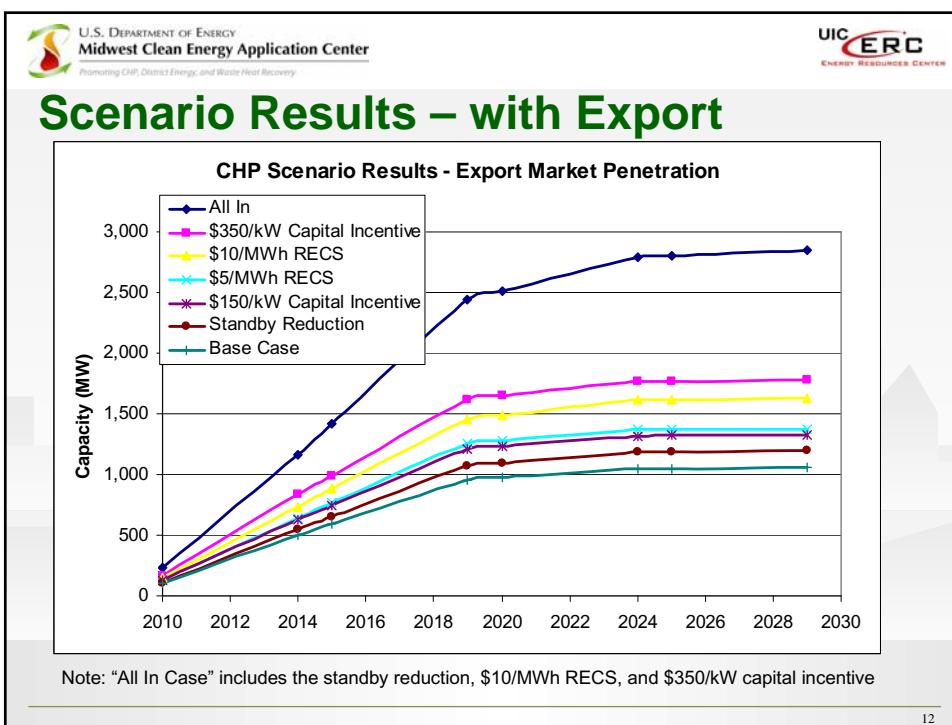
- **Technology is not the issue**
- **Financing and Policy are the issues**
 - Electric Utility Resistance
 - Unfavorable / Confusing Utility Rate Structures
 - Unstable Energy Prices
 - Energy Policies that do not adequately recognize CHP / waste heat recovery
 - Lack of adequate end user demand (education and frustration)



10

Target Policy Scenarios

Policy		Description	Modeling Metric
A	Rate Reform (including standby, tariffs, riders, etc.)	The Ohio PUC would rule that rate structures have to be designed in a way that makes them less prohibitive to CHP.	In Ohio base case customers will avoid 80% of their electric bill due to standby charges. Policy change moves this to 90%.
B	Feed in Tariff (export power applied to all cases)	Utilities would be required to buy excess electricity from CHP sites <= 50 MW.	Cents/kWh for excess generation based on the cost of new combined cycle generation.
C1	CHP and WHR in AERS	Have CHP / WHR qualify to produce RECs for the state AERS.	\$5 / MWH
C2			\$10 / MWH
E1	Integration of CHP / WHR into utility plans	Require utilities to evaluate CHP / WHR in their resource plans	\$150 / kW
E2			\$350 / kW




Learn More – Coalition Building Event

Ohio Manufacturing Competitiveness

“The Role of CHP and Waste Heat to Energy”

Sponsors:



 **Energy Efficiency & Renewable Energy**

December 14th, 2010
Ohio State University (Blackwell Conference Center)

A dialogue on policy solutions to increase the use of CHP and waste heat to energy in Ohio – increasing competitiveness, jobs, and energy efficiency

13


Ongoing Coalition Activities in Ohio

“Supporting Entities”

- Industrial Energy Consumers of America
- Ohio Chemistry Technology Council
- Ohio Industrial Energy Users
- Dec 14th Coalition Event
- Ohio Energy Office
- ELPC
- Ohio Envir. Council
- Recycled Energy Development (RED)
- Ohio Policy Matters

Short Term Goal

Introduce Policy Reform in Spring 2011

14

Thank You

Contact Information

John Cuttica
312/996-4382
cuttica@uic.edu

www.midwestcleanenergy.org

 U.S. DEPARTMENT OF ENERGY
Midwest Clean Energy Application Center
Promoting CHP, District Energy, and Waste Heat Recovery

 UIC
ERC
ENERGY RESOURCES CENTER

15



Improving Industrial Productivity

Dick Munson

Senior Vice President, Recycled Energy Development, LLC

November 9, 2010

1

RED | the new green

www.recycled-energy.com



Industrial Productivity:

- Increases U.S. manufacturing competitiveness;
- Retains and creates jobs;
- Cuts operating costs;
- Reduces pollution costs.

- Cuts waste.

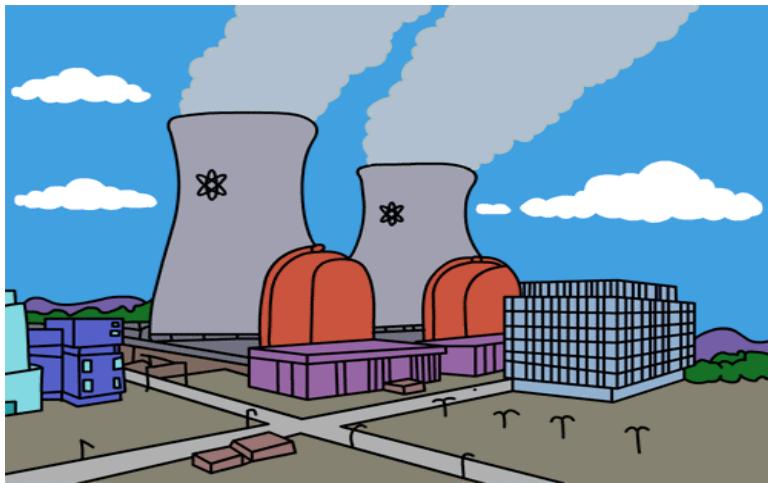
2

RED | the new green

www.recycled-energy.com



Homer Simpson's Power Plant (Springfield)



3

RED | the new green

www.recycled-energy.com



Real Electric Generation Plant (Craig, CO)



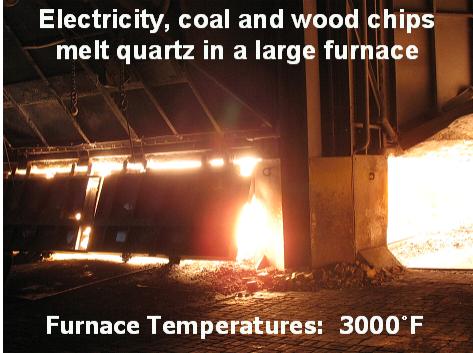
4

RED | the new green

www.recycled-energy.com

65 MW from Silicon Production (Alloy, WV)

Electricity, coal and wood chips melt quartz in a large furnace



Furnace Temperatures: 3000°F

- Recycles exhaust into 65 megawatts of clean power
- More efficient plant will expand production and jobs by 20%
- We are taking silicon manufacturing back from China!

5

RED | the new green www.recycled-energy.com

220 MW from Steel Smelter's Waste Energy



- Smelter saves \$100 million annually.
- Cuts CO₂ emissions by 916,000 metric tons/year

Courtesy Primary Energy

6

RED | the new green www.recycled-energy.com



Policy Options

- **Financing.** Tax credits. Loan guarantees.
- **Market for Power.** Clean Energy Standard Offer Program (CESOP), portfolio standards, feed-in tariffs.
- **Efficiency as Pollution Prevention.** Reform New Source Review. Focus on outputs.
- **Value for Provided Benefits.** Distributed generation can increase reliability, reduce line losses and curtail the need for new lines.

7



Alliance for Industrial Productivity

- Corporations – Arcelor Mittal, Caterpillar, Dow Chemical, GE Energy, Libbey Glass, United Technologies
- Ohio Firms: GEM Inc., Rudolph Libbe, BHP Energy
- Associations: American Chemistry Council, American Forest & Paper Assn, Electricity Consumers Resource Council, Glass Manufacturing Industry Council, Sheet Metal Contractors, Electrical Contractors
- Labor: United Steelworkers, Boilermakers, Sheet Metal Workers, Pharmaceutical Labor-Management Assn.
- Environmental – Environmental Defense, Environment America, Sierra Club, Alliance to Save Energy

8



Thank You

Dick Munson

dmunson@recycled-energy.com

www.recycled-energy.com

9

Clean Energy Standard Offer Program

A Better Way to Procure Electricity and Attract Optimal Generation

Thomas R. Castenⁱ

Americans want low-cost, reliable, and clean electricity. This note explains why typical utility procurement practices fail to achieve that goal. We will show that current procurement processes have a built-in bias towards large, central, electricity-only generation, which largely excludes the lower-cost, lower-carbon options that are smaller, decentralized, and combine heat and power generation. This exclusion hurts all consumers and the environment. Finally, we offer a solution – a **Clean Energy Standard Offer Program** – that that will, by its terms, lower the cost and the associated environmental impact of new power generation.

Problems with Typical Generation Procurement

The typical generation procurement has become a periodic request for proposal (RFP), with utilities seeking bids to obtain some stated amount of new generation, usually in very large blocks. This approach has partially opened the market, but has two major shortcomings:

1. The bids with the lowest cost per generated megawatt-hour may not result in the lowest cost delivered power, after factoring in line losses and the need for new transmission, backup generation, and spinning reserves.
2. Many lower-cost low-carbon options are not even bid by the typical RFP approach.

Utilities assume an RFP process identifies the lowest-cost option. That's true if a utility were purchasing a standardized product, such as nails or concrete, but electricity generation includes multiple attributes and alternatives.

Current RFPs typically offer relatively short windows, say three to six months maximum. This approach assumes power entrepreneurs can quickly tie down sufficient certainty to bid within the time window. Yet many clean-generation projects require long-term partnerships that take months, if not years, to develop. Many of these projects are not simplistic black boxes that can be plopped onto vacant land. A combined heat and power (CHP) project, for instance, requires that equipment be shoe horned into a cluttered industrial site, as well as agreements to make process changes that enable the use of low-grade heat or extract useful energy from some manufacturing process. It is simply impossible to develop relationships with hosts, design, negotiate, and cost out these changes in the time a typical RFP is open. As a result, firms that develop CHP and recycled-energy projects do not even try to respond to utility RFPs.

Typical RFPs also are geared to identify large blocks of central generation, thereby ignoring opportunities associated with distributed generation that is built close to consumers in order to reduce line losses and the need for new long-distance transmission wires. Distributed generators also reduce

the need for system backup or spare capacity, and they can provide valuable active power factor correction and voltage support. The capital costs per megawatt of capacity for distributed generation may be higher than for a new gas turbine central plant, but when the above advantages are properly accounted, the total capital cost to deliver a new megawatt is lower than any central plant option. The typical RFP process does not reflect these value differences.

Utility managers have deep experience with a system of a few large central generation plants feeding users in a radial branching T&D system, but few have begun to think through all of the implications of moving to a system of many small distributed generation resources near electricity consumers. As a result, the RFP solicitations inadvertently stack the deck against such options.

Clean Energy Standard Offer Program Logic

A Clean Energy Standard Offer Program, or *CESOP*, addresses the above flaws of typical RFP solicitations and will induce development of the lowest-cost low-carbon options. In fact, CESOP can be designed to induce lowest cost generation of any option, and offers low-carbon as a bonus. In simplest terms, CESOP would have the utility provide a standard offer contract to purchase qualified clean energy, up to some specified total capacity, and guarantee to keep the offer open for several years, or until the offer has been filled with signed contracts for new clean generation.

Pricing CESOP power is the key to inducing low-cost low-carbon plant development. A ‘Goldilocks’ approach is critical – power prices that are not too high and not too low, but just right. Too high is any price that exceeds the delivered cost of the next best new generation option. Too low is any price that fails to induce development of most of clean-energy opportunities. A CESOP offer of 25% to 50% below the delivered cost of the next best option has great savings on paper, but may well fail to induce a single megawatt of new generation. We think a discount of 10% to 15% versus the delivered price of the best new central generation option is ‘just right.’ With that pricing, developers and entrepreneurs can see sufficient potential to justify gearing up and spending the 12 to 18 months required to complete needed partnerships to capture waste heat and provide clean power. That pricing discount will provide societal savings on each megawatt-hour (MWh) as well as induce substantial new clean generation.

To assure that the procured power is clean, CESOP would require that new generation achieves an annual net fossil efficiency of at least 60%, after credit for displacing boiler fuel that provides thermal energy or heat. This level is nearly double the 33% delivered efficiency from the grid. All renewable energy and all generation that recycles industrial waste heat will qualify, since none of them burn any incremental fossil fuel. Good CHP will qualify, providing the plant is sized to the host’s thermal load.

Contract terms can differ for CHP and recycled energy. The former must purchase fuel at market prices, whether biomass or fossil fueled, and requires a portion of the purchase price to track fossil fuel prices. The cost of producing power at central generation plants that burn fossil fuel also will vary with fuel price changes, so effective contracts can make sure the CESOP power plant has sufficient revenue to pay for fuel but that the delivered power is always less expensive than less efficient central power. By contrast, recycled energy relies on a waste-energy stream and can either price the energy relative to

some index of fossil fuel prices, or can enter a long-term contract with only enough escalation to cover the inflation of operating and maintenance costs.

Learn by Doing

The current power procurement systems have been developed over a century and were based on facts, concerns, and assumptions that differ substantially from today's facts, concerns, and assumptions. Unfortunately, we've become quite adept at sourcing optimal solutions for yesterday's conditions.

Today's realities require new methods of procuring power. Low carbon is a growing concern. Transmission and distribution systems need to do much more, but it is not smart to plan a "Smart Grid" that ignores the value of widely dispersed local generation. Coal, long believed to be the lowest cost generation option, is now one of the most expensive options, even before adding the costs of carbon taxes or allowance purchases. Big combined-cycle natural gas plants are relatively cheap to build and achieve up to 50% annual delivered efficiencies, but must purchase high-cost fuel that exhibits great price volatility. With an annual load factor of 24% in 2008, the delivered cost per megawatt-hour from natural gas plants is one of the highest of any option.

Changing the procurement system to CESOP will come in stages, as utilities, regulators, developers, and policymakers learn by doing. It simply will take time and experience to learn how to optimally procure power from distributed and energy-recycling plants. As just one example, CHP systems could be designed to operate at 60% to 80% load during normal hours, generating just enough power to create sufficient byproduct heat to meet the host's thermal needs. But utilities may want to pay the plant to have extra capacity that could be quickly ramped up when other system generation drops or fails. Such a hybrid CESOP plant could normally run at 60% to 90% fossil efficiency but also serve as spinning reserves for system stability or add incremental generation at 35% efficiency. This approach looks favorable compared with the current practice of running very inefficient gas turbines at low loads in order to handle quick load swings. Many other subtle changes could occur to CESOP over time as we learn by doing.

Thus, it makes sense to start CESOP pilot programs. One approach is to find a single CESOP developer and contract for a limited amount of new clean generation – say 50 to 100 megawatts spread over several plants. Use this experience to fine tune the standard contract and offer a larger generation pool – say 500 to 1,000 megawatts – to all comers. Studies indicate a U.S. potential for more than 200,000 megawatts of CHP and recycled energy, and these numbers probably extrapolate to other clean-energy systems. Inducing this low-cost low-carbon power would create a great many advantages to society. But every journey starts with a step.

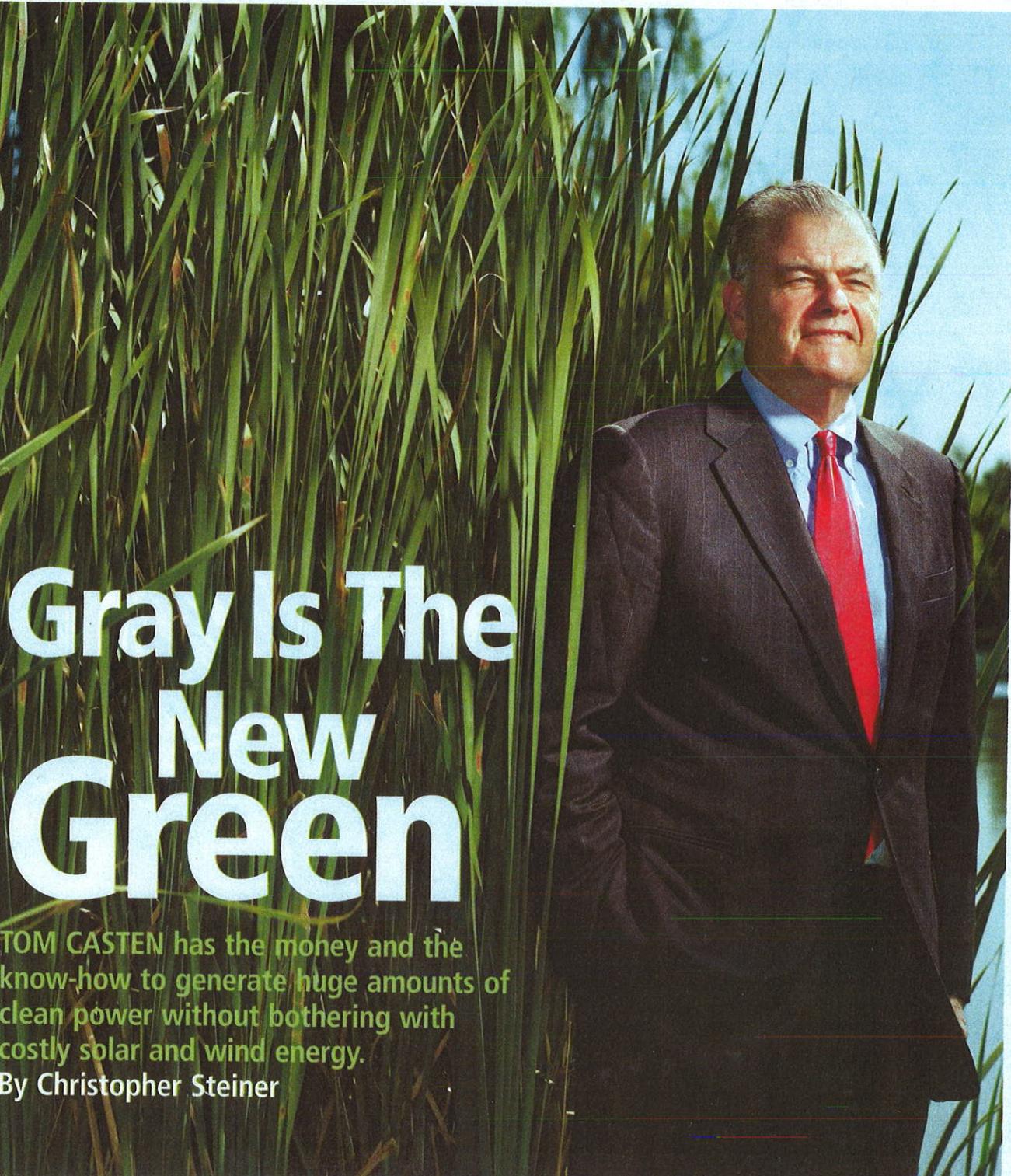
CESOP is the next step in the journey to low-cost, clean energy.

ⁱ Chairman of Recycled Energy Development LLC, Westmont, IL, tcasten@recycled-energy.com

Revolutionaries

RECYCLED ENERGY

32 of 110



Gray Is The New Green

TOM CASTEN has the money and the know-how to generate huge amounts of clean power without bothering with costly solar and wind energy.

By Christopher Steiner

WEST VIRGINIA'S KANAWHA RIVER Valley is a gritty collection of slag piles, coal mounds and sooty mine shafts. It is also a showcase for clean energy. In the unincorporated town of Alloy, a 72-year-old silicon smelter

owned by West Virginia Alloys is getting a \$75 million heat recycling system. If it delivers what it promises, it will produce as much electricity as \$300 million worth of giant windmills or \$2.8 billion in solar panels—exclusive of energy credits.

Is it possible that in their hunt for low-carbon energy, environmentalists are barking up the wrong trees? Sun and wind power are indeed clean but expensive, in part because the sun doesn't always shine and the wind doesn't always

Revolutionaries



"We will move the world to local generation or suffer the

blow. For its modest capital outlay the Alloy project is supposed to produce 357 million kilowatt-hours of juice per year. Solar cells (at least if installed in West Virginia) would pay a much lower dividend per dollar invested.

The Alloy project is the brainchild of Thomas and Sean Casten, the father and son duo who run Recycled Energy Development in Westmont, Ill. In early 2010 RED hopes to fire up a turbine that will capture the 1,500-Fahrenheit-degree heat coming off the silicon plant's five arc furnaces and feed that electricity in a

roundabout way back into the factory. West Virginia Alloys makes more silicon, 72,000 tons annually, than any other single site in the world, selling the glinty metal to manufacturers of everything from cosmetics to computer chips. This plant is already the lowest-cost producer of silicon in the world and, with the Castens' technology, will save an additional 37% on its energy bills, which account for one-third of its operating costs.

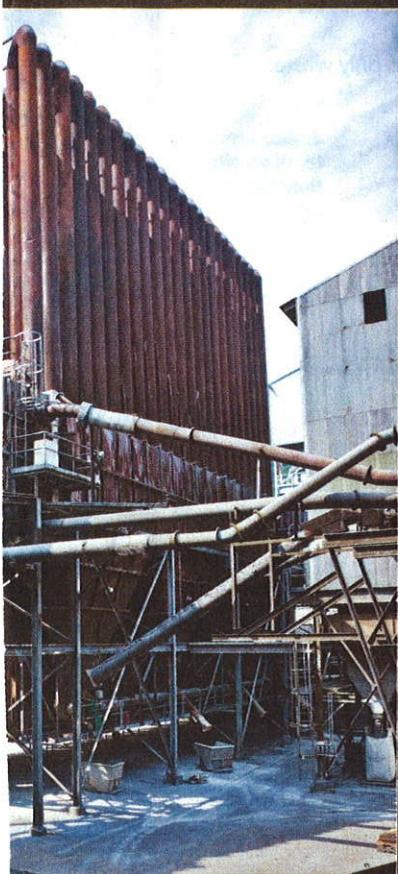
The idea that you can wring value out of waste heat has a long history. Thomas Edison sold heat from the exhaust of the

world's first power plant on Pearl Street in Manhattan, using it to warm nearby buildings. You do the same sort of thing when you turn on a car heater. Space heating is the easy application for industrial waste heat. But with some engineering finesse the discarded Btu can also be used to turn turbines that produce high-quality electric energy.

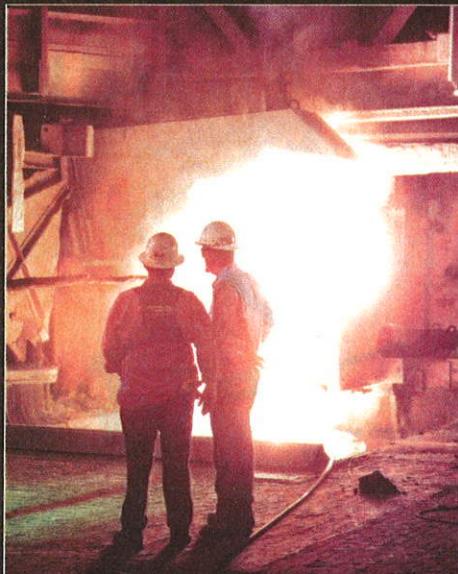
Why isn't more of this country's industrial waste heat put to use? The space heating application is geographically limited; customers have to be within several miles of the heat source. As for dynamos running on

PHOTO: FORBES (5)

Ambition, meet



(Left) At West Virginia Alloys, pure silicon pours forth from a fiery mix of coal, quartz and hardwood that reaches 6,000 degrees, belching heat in every direction; (center) RED will capture that heat, making steam in a building housing turbines so old that some bear the marks of Hitler's Germany; (right) the valuable heat currently is expelled in a giant outdoor radiator.



consequences of global warming.”

scrap heat: Cheap energy and grid regulations have discouraged such projects. But now the “gray power” concept is back on the table. “We’re at the start of something that should have been done long ago,” says Tom Casten, 65, RED’s chairman. Sean, 37, is chief executive.

The Castens are armed with Department of Energy studies that suggest the U.S. could reduce its CO₂ emissions by 20%, the equivalent of taking all the cars and light trucks off the road, by recycling industrial waste heat and building smaller fossil-fuel “cogeneration” plants sized to

provide enough by-product heat for each factory or office park. Tom Casten goes even further, envisioning small power plants spread out across America for homes and businesses. By capturing waste heat, these power plants would operate at above 90% efficiency, Casten says, compared with the current U.S. power grid that operates at 33%, the same as it did 50 years ago.

Doubters exist on the pragmatics of cogeneration of heat and electricity for the general population. “That’s a little bit of a fairy tale, but it does hold a grain of truth,” says

John Parsons, executive director for MIT’s Center for Energy & Environmental Policy Research. Parsons says cogeneration could work for high-density apartment blocks but isn’t reasonable for single-family homes.

Working against electricity production from waste heat is the fact that most states still have utility-friendly laws that prohibit nonutilities from selling power directly to others without going through the grid. Bilateral agreements to buy and sell power can be done across the grid, but producers such as RED must surrender roughly a third of the selling price to a utility for transmission fees, even if it’s just across the street. New legislation that democratizes the world of power supply is bubbling up, however. Two years ago New Jersey began, on a limited basis, allowing commercial neighbors to sell power to one another outside of the grid. “We will either move the world to local generation or we will suffer the consequences of global warming,” says Tom Casten.

The Castens founded RED in 2006 after seeing two similar, and lucrative, companies the elder Casten helped develop, Trigen Energy and Primary Energy, bought out from under him. He took Trigen public in 1994 on the New York Stock Exchange, where it traded until France’s Suez launched a hostile takeover bid in 1999 that secured the 47% of Trigen it didn’t already own for \$138 million. Trigen operated small turbine power plants that supplied power and waste heat to customers for winter warmth and hot water. Casten’s time at Primary Energy, which pursued the same business as RED, ended when the company’s equity backers sold the company to Canada’s Epcor in 2006 for \$330 million. Casten did well on those deals but felt he never got to see either to the heights he’d envisioned. He wants to take RED public one day, while still maintaining control.

execution.TM

BMO  Capital Markets™

Revolutionaries

To that end, he's lured Boston's Denham Capital as a partner to fund his projects without sacrificing any equity in RED. Denham, which manages \$4.3 billion from investors including Bill Gates and Harvard University, will share dividends in the projects with RED and expects a return in the 15%-to-20% range, according to Riaz Siddiqi, a Denham managing partner. "It's been fascinating, over the years, to watch Tom be so faithful to his beliefs on efficiency and how he makes money on that," Siddiqi says. Sean Casten brings his own experience as a trained molecular engineer and clean-energy consultant with Arthur D. Little. "I was into cellulosic ethanol before it was cool," says Sean.

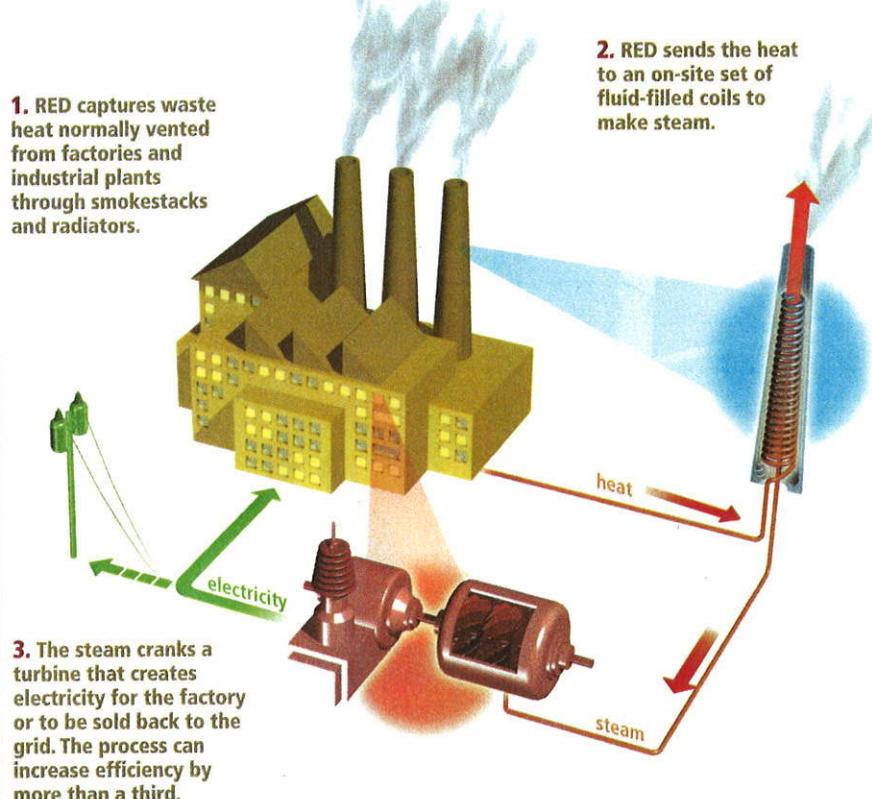
Denham has staked RED with \$500 million (and the company is hoping to borrow another \$1.5 billion) to finance ventures like the one at West Virginia Alloys. At Alloy RED will sell the power to the public grid at 6 cents per kilowatt-hour and share the revenue with Denham Capital and West Virginia Alloys. The silicon maker will continue buying most of its 135 megawatts of power drawn from a hydroelectric plant eleven miles upriver at the unbeatable price of 3 cents per kilowatt-hour. The extra revenue from RED will cut its electricity budget by 37%.

It's foolish not to tap the plant's furnaces, which belch heat as promiscuously as a raging bonfire. The company warns visitors not to wear polyester, because it could easily melt during a walking tour. The furnaces are vented when needed and are water-cooled by 2-foot-wide radiator pipes that dump their heat outside in three rows of 23 loops, each 100 feet high. RED will use this heat to run steam turbines. One of those turbines, once powered by coal, is now sitting unused at the site. It is so old that some of its imported pipes carry the swastika of Hitler's Germany.

West Virginia Alloys executive Arden Sims is champing to seize on these cost savings and has plans to open a shuttered plant in economically ravaged Niagara, N.Y. Despite higher labor costs, he'll still produce silicon cheaper than in Asia because of less expensive energy. "We've known for years we've been blowing energy out the door," Sims says.

Waste Not

RED's process makes energy where before there was only waste.



The Castens deployed similar strategies at the labyrinthine Arcelor Mittal Steel plant in East Chicago, Ind., one the largest mills in North America. Casten captured the 2000-degree Fahrenheit exhaust coming from the mill's coke ovens, turning that into 1 million pounds of steam an hour and 95 megawatts of juice, starting in 1998. Together with three other projects at the mill, Arcelor Mittal saves \$100 million a year in electricity costs.

RED's next big customer is gypsum giant USG, which operates 17 energy-hungry U.S. plants that produce 8 billion square feet of wallboard a year. USG currently burns natural gas to heat its football-field-length ovens to 700 degrees to dry out giant slabs of gypsum and paper. RED is negotiating to work on two USG plants, one in the Imperial Valley of Southern California and one in Cloquet, Minn.

RED will spend \$80 million on each of these plants to equip them with gas-burning turbines sized exactly for the factories' loads. The turbines will displace purchased electricity while their 900-degree exhaust

will get piped straight to the ovens. The exit gas from the ovens, which is 300 degrees and saturated with water vapor from the gypsum, will be used to boil propane to turn a turbine to produce another 12 to 15 megawatts. Each project will save the grid 30 megawatts. The water vapor at the California project, where water is scarce, will be captured for reuse. The combined system will run at 96% efficiency. "I could see us doing the whole line for USG," Tom Casten says, although that would likely exhaust RED's \$1.5 billion capital pile.

Gray power may even improve the economics of the beleaguered ethanol business. A gallon of corn ethanol contains 76,000 Btu of chemical energy. Normally, it takes 60,000 Btu of fossil fuel to produce the crop and distill a single gallon. Installing Casten's cogeneration process at an ethanol refinery cuts that to 25,000 Btu. "The story with ethanol that nobody is talking about is what happens when you do the energy all at the plant rather than pulling from the grid," Casten says.

Counsel's Report



COLUMBUS | CLEVELAND
CINCINNATI-DAYTON

BRICKER & ECKLER LLP
100 South Third Street
Columbus, Ohio 43215-4291
MAIN: 614.227.2300
FAX: 614.227.2390

www.bricker.com
info@bricker.com

Thomas J. O'Brien
614.227.2335
tobrien@bricker.com

OMA ENERGY COMMITTEE COUNSEL'S REPORT

Thomas J. O'Brien, Bricker & Eckler LLP, Counsel to the OMA
November 3, 2010

ADMINISTRATIVE ACTIONS: Current Electric Proceedings

1. FirstEnergy Electric Security Plan (“ESP”) Application, 10-388-EL-SSO / Market Rate Offer Plan Filing, and Market Rate Offer Plan (“MRO”), Case No 09-906-EL-SSO

On August 25, 2010, the Public Utilities Commission of Ohio (PUCO) approved, with minor modifications, the stipulated, three-year electric security plan (ESP) for FirstEnergy's electric distribution utilities in Ohio. The PUCO's 47-page Opinion & Order is the culmination of a heavily-litigated market rate offer proceeding, more than six (6) months of negotiations between dozens of stakeholders, and the filing of three separate stipulations. The Ohio Coalition of Environmental Advocates (OCEA), which is led by the OCC, filed an application for rehearing of the PUCO's August 25, 2010 approval of FirstEnergy's ESP. Despite strong opposition from FirstEnergy and Industrial Energy Users-Ohio, the PUCO granted OCEA's application for rehearing on October 22, 2010 to allow the PUCO additional time to review the issues.

The three ESP Stipulations filed in Case No. 10-388-EL-SSO (the “ESP Case”) can be traced back to FirstEnergy's application for approval of a Market Rate Offer filed on October 20, 2009 in Case No. 09-906-EL-SSO (the “MRO Case”). In November 2009, the Commission issued an Entry directing its Staff to file comments regarding FirstEnergy's MRO application. The resulting Staff comments recommended that the parties pursue an ESP as an alternative to the proposed MRO. Although preliminary ESP discussions began in early December, they were interrupted while the parties litigated the MRO Case for nearly two weeks. The record in the MRO Case was completed on January 19, 2010 upon the filing of reply briefs – and served as the “baseline” for re-opened ESP discussions in the early months of 2010.

The product of the lengthy ESP discussions was the first stipulation filed on March 23, 2010 and signed by FirstEnergy, the PUCO Staff, and 16 other signatory parties, including the Ohio Manufacturers' Association, Ohio Hospital Association, and Ohio Schools Council. Although this initial stipulation established the framework for the PUCO's August 25 Opinion & Order, it lacked the support of residential customers (e.g. OCC), the OCEA coalition, and the governmental aggregation community (e.g. NOPEC and NOAC). To remedy this problem, two supplemental stipulations were filed

Page 2 of 9

on May 13, 2010 and July 19, 2010. The first supplemental stipulation made minor substantive changes and added the City of Akron and the Council of Smaller Enterprises (COSE) as signatory parties. The second supplemental stipulation added a significant number of new provisions to the original ESP settlement as well as four new parties: NOPEC and NOAC, both filing in support; and a low income group from Cleveland and the Environmental Law and Policy Center, both filing as non-opposing parties.

A brief summary of the significant provisions in the combined stipulations follows:

A. The Competitive Bid Process

The ESP Stipulation adopts a descending-clock, slice-of-system competitive bidding process for procuring FirstEnergy's standard service offer ("SSO") electric generation supply from June 1, 2011 through May 31, 2013. This is very similar to the approach used in FirstEnergy's May 13, 2009 auction conducted under the previous ESP stipulation adopted in Case No. 08-935-EL-SSO. Unlike the products offered in FirstEnergy's previous auction, the new products will be 12-month, 24-month and 36-month tranche offerings. Based on the filing dates of the stipulations and the delay in the PUCO's approval of the combined stipulation, the auction schedule had to revised. As a result, the first and second auctions were re-scheduled for October 2010 (from July 2010) and January 2011 (from October 2010). And, rather than holding the third and fourth auctions in July 2011 and July 2012, the PUCO divided these auctions into four separate ones to be held in October 2011, January 2012, October 2012, and January 2013. The first auction was held on October 20, 2011. See the summary below for a discussion of the results.

In addition, the PUCO noted that it reserved the power to carve out tranches for customers on dynamic and time-differentiated rates in future auctions.

B. Rate Design

With only minor exceptions, all generation rates under this ESP will be bypassable for the entire 36 month duration of the ESP. There also will be no minimum stay period or standby charges for residential and small commercial customers not participating in a governmental aggregation.

The rate design currently in effect will largely remain in place, except for the following:

- The average total rate increase for the 12 month period ending in May 2012 for Private Outdoor Lighting, Traffic & Street Lighting and Rate GT customers shall not exceed one and one-half (1 ½) times the system average percentage increase by the relevant FirstEnergy operating company.
- Any revenue shortfall resulting from the application of either the \$1.95 per kW/month interruptible credit in Rider OLR, or the \$5.00 per kW/month interruptible credit in

Page 3 of 9

Rider ELR, will be recovered from all non-interruptible customers through the non-bypassable charge in Rider DSE-1. This spreads the costs over a much wider customer base.

- Residential rates will have a flat rate structure.
- The initial allocation of revenue responsibility for Rates GS and GP will be implemented to produce an approximately even percentage rate increase (or decrease) for the two rate schedules. This modification will serve to moderate any rate increases on Rate GP, while causing only a slight cost shift to Rate GS.

C. Regional Transmission Organization (“RTO”) Realignment Costs

Several weeks prior to the filing of its MRO Application, FirstEnergy’s transmission affiliate (ATSI) requested permission from the Federal Energy Regulatory Commission (“FERC”) to withdraw from its current regional transmission organization (MISO) to become a member of PJM. The move from MISO to PJM carried a potential liability of at least \$585 million for FirstEnergy (and its customers).

As part of its request to the FERC, ATSI sought a waiver of PJM’s annual allocation of RTEP costs because such costs were planned and approved prior to ATSI’s integration into PJM. In conjunction with ATSI’s waiver request, FirstEnergy Services Company filed a complaint against PJM requesting that the FERC, in the alternative to ATSI’s waiver request, find that PJM’s RTEP allocation methodology was unjust, unreasonable and unduly discriminatory when applied to ATSI’s integration into PJM. FERC denied both the complaint and waiver request, noting:

Transmission owners that seek to change RTOs should be prepared to assume the costs attributable to their decisions. ATSI is permitted to balance the benefits it associates with its decision to join PJM under its existing tariff against the costs it anticipates it will incur in exiting the Midwest ISO and joining PJM to determine whether such a move is cost-justified.

(*FirstEnergy Service Company v. PJM Interconnection, L.L.C.* (Dec. 17, 2009 Order), 129 FERC ¶61,249 at ¶113).

During the ESP negotiations, this issue proved to be the most divisive and centered on the proper amount that FirstEnergy’s retail customers in Ohio should be responsible for paying. In the end, the parties agreed that FirstEnergy will not collect: 1) MISO exit fees; 2) PJM integration costs; and 3) RTEP costs charged to First Energy for transmission projects approved by PJM prior to ATSI’s integration into PJM for the longer of the five (5) year period from June 1, 2011 through May 31, 2016 or when a total of \$360 million of RTEP costs are paid by

Page 4 of 9

FirstEnergy's Ohio operating companies. This provides a specific monetary benefit to Ohio customers – an amount well in excess of \$360 million.

While the precise amount of RTEP costs is currently unknown, the prospect of the potential upward liability, along with the inherent risk of a fight about the prudence of these costs before the FERC, makes this portion of the Stipulation very attractive for Ohio consumers. On the other hand, FirstEnergy (and its customers) are still responsible for: 1) MTEP costs charged to FirstEnergy's Ohio operating companies for transmission projects approved by MISO prior to June 1, 2011; and 2) RTEP costs for transmission projects approved by PJM prior to June 1, 2011 and to be collected starting on June 1, 2016.

D. Distribution Base Rate Freeze and Rider DCR

The combined stipulation implements a distribution base rate freeze through June 1, 2014. In exchange for this distribution rate freeze, FirstEnergy is permitted to implement a delivery capital recovery rider ("Rider DCR"). This new Rider DCR will allow FirstEnergy to recover a return on capital distribution system investments, as well as certain tax liabilities, incurred since the date certain in FirstEnergy's most recent distribution rate case (07-551-EL-AIR). For the 29 months that this rider will be in effect, FirstEnergy's total collections for all three operating companies is capped at \$390 million (such cap amount applying proportionally to each FirstEnergy operating company). The only limitation under Rider DCR is that recovery is contingent on there being no net job losses resulting from involuntary attrition as a result of the merger between FirstEnergy and Allegheny Energy, Inc. The attrition calculation includes employees of FirstEnergy Service Company who provide distribution-related services in Ohio.

The amounts recoverable through Rider DCR will be adjusted quarterly and supported by a filing with the Commission detailing the derivation of the adjustments. Annual audits of the charges sought to be recovered under Rider DCR will be conducted by an independent auditor. The first audit will be completed in January 2012. The second supplemental stipulation also makes clear that FirstEnergy will have the ultimate burden of proof concerning the reasonableness of the distribution investments collected through the rider. While this language still requires FirstEnergy to make an initial showing of accuracy, it clarifies that if a party challenges the reasonableness of the expenditures (presumably, as a result of the independent auditor's findings), then FirstEnergy will still bear the ultimate burden of proof against such a challenge.

E. Economic Development Provisions

The ESP Stipulation included a number of new economic development provisions. For example, the Cleveland Clinic is proposing a \$1.4 billion expansion to its main campus that requires significant electric infrastructure improvements. Instead of seeking a special arrangement under Ohio Revised Code Section 4905.31, the stipulation provides the Cleveland Clinic with up to \$70 million in electric infrastructure that would otherwise require a contribution in aid of construction. This amount will be recovered from FirstEnergy customers

Page 5 of 9

through a non-bypassable rider. In addition, the stipulation contains a rate discount applicable to “domestic” automobile manufacturing facilities if such facilities expand their electricity consumption beyond 2009 levels.

F. Energy Efficiency

To help augment the cost of providing energy efficiency services, FirstEnergy agreed to provide the OMA, OHA, Council of Smaller Enterprises, Association of Independent Colleges and Universities of Ohio, City of Cleveland, City of Akron, and Lucas County with annual compensation ranging from \$25,000 to \$100,000. These amounts will be recovered through Rider DSE-2.

G. Long Term Contracts for RECs

A major benefit for the renewable energy industry will be the implementation of an RFP process for long term (10-year) REC contracts. FirstEnergy will release an RFP in each of the next four years. The first RFP will be for the time period June 1, 2011 through December 31, 2020 (10 years) and involve 5,000 in-state solar RECs and 20,000 in-state non-solar RECs. Subsequent RFPs will take place in 2012 (for the 10-year period from 2012-2021); 2013 (for the 10-year period from 2013-2022); and 2014 (for the 10-year period from 2014-2023). The number of solar RECs could increase by as much as 3,000 RECs depending on the size of FirstEnergy's customer load (in kWh) in the subsequent years. There is no indication that the number of non-solar RECs will increase in subsequent years.

Rider AER will allow FirstEnergy to recover the costs of the RFPs as well as the cost of the RECs in the year in which they are delivered.

H. Other Provisions

As part of the MRO proceeding from which the ESP evolved, FirstEnergy proposed a non-bypassable Rider GCR to recover costs associated solely with its SSO service. In particular, Rider GCR ensures that the Companies remain revenue neutral in the procurement of SSO generation supply. After a number of parties argued that Rider GCR should be entirely bypassable for shopping customers, the second supplemental stipulation accommodated this request. Now, Rider GCR remains bypassable for shopping customers until the balance of Rider GCR reaches 5% of the FirstEnergy's generation expense for two consecutive quarters. This significantly reduces the odds of Rider GCR becoming non-bypassable.

Certain enhancements to the Master SSO Supply Agreement will be made, including: an update to account for Duke Energy Ohio's pending move from MISO to PJM and potential effects on Cinergy Hub pricing; additional supplier security options; and a clarification that the Mark-to-Market Exposure Amount will be limited to a rolling 24 month period starting on the Effective Date of the Agreement.

Page 6 of 9

2. FirstEnergy Auction Results Under New ESP, Case No. 10-1284-EL-UNC

On October 22, 2010, the Public Utilities Commission of Ohio (PUCO) approved the results of the first of six wholesale generation auctions that will determine FirstEnergy's retail generation rates for the time period from June 1, 2011 through May 31, 2014. Conducted on October 20, 2010, the auction involved 10 participating bidders. As the PUCO's Order explained, "4 bidders submitted winning bids during the CBP auction for a clearing price of \$54.55 per MWh for the June 1, 2011 to May 31, 2012, delivery period, \$54.10 per MWh for the June 1, 2011 to May 31, 2013, delivery period, and \$56.58 per MWh for the June 1, 2011 to May 31, 2014, delivery period." More specific information regarding the auction (e.g. the names of winning bidders and the number of tranches won by each bidder) will be available in about three weeks on the PUCO docketing division's website in Case No. 10-1284-EL-UNC.

3. FirstEnergy Application for Approval of its Energy Efficiency and Peak Demand Reduction Program Portfolio Plans for 2010 Through 2012 and Associated Cost Recovery Mechanisms, Case No. 09-1947-EL-POR, et al.

On December 15, 2009, FirstEnergy filed their plans for compliance with SB 221's energy efficiency and peak demand reduction benchmarks [Ohio Revised Code Section ("R.C.") Section 4928.66], as required by the PUCO's rules.

As it impacts mercantile customers (customers with consumption greater than 700,000 kWh per year or a customer that is part of a national account), FirstEnergy's proposed program calls for a continuation of prescriptive lighting rebate programs, prescriptive motor upgrade programs, audit and technical assistance programs, new construction assistance programs (process efficiency upgrades), plus a continuation of the existing mercantile "self-direct" programs, available through the assistance of administrators, such as the OMA.

FirstEnergy's application was litigated on the first of March with briefing concluding by mid April. This matter still awaits a Commission decision, despite the fact that the 2010 reporting year will soon come to a close.

4. Energy Efficiency Pilot Program, Case No. 10-834-EL-EEC

On September 15, 2010, the PUCO issued an Entry establishing an 18-month pilot program for applications filed by mercantile customers seeking to commit their energy efficiency and peak demand measures to the EDU's programs. Designed to simplify the application process, the Commission committed to: 1) develop a "standard application template for use by mercantile customers; 2) expedite the approval process through the implementation of an automatic approval process; and 3) simplifying the incentives available to mercantile customers.

A. The Standard Application Template

The Commission's Entry committed to posting a standardized template and corresponding filing instructions on its website. The standardized application form will be used for all EDUs and all EDU service territories. In addition, the Commission emphasized that all mercantile customer applications filed before September 15, 2010 should be refiled **if** the applicant wants to be considered for the automatic approval process. Mercantile customers that do not withdraw their pending application and refile will remain in the queue, but there was no guarantee of expedited approval.

B. The Automatic Approval Process

The automatic approval process only applies to a mercantile customer who agrees to take a cash incentive rather than an exemption from the applicable EDU's energy efficiency rider. From a procedural standpoint, the automatic approval process commences once a mercantile customer application is filed. Unless the automatic approval process is suspended or the application denied, approval will automatically be approved on the 61st day after filing.

C. Simplified Incentives

In order to simplify the incentive programs available to mercantile customers, the Commission established the following guidelines:

- Cash incentives are only available for projects involving a monetary investment, not projects resulting solely from behavioral changes (presumably, monetary investments causing behavior changes would count).
- Cash incentives will only be available upon the mercantile customer's demonstration that "it has installed more efficient equipment than was otherwise available." As a result, the replacement of failed equipment will not be available for an incentive.
- Reversing course, the Commission agreed that cash incentives would be allowed for projects having a payback of less than one year. The sole caveat is that the incentive be less than 50 percent of the total project cost.

The guidance provided by the Commission's Entry is a major step forward from the uncertainty caused by Commission's prior pronouncements on energy efficiency projects for mercantile customers. While certain unanswered questions about the level of benefits and the speed of the process remain, this Entry shows that the Commission is willing to make the effort to address the problems voiced by manufacturers.

Page 8 of 9

5. AEP 2009 Significantly Excessive Earnings Test (SEET) Filing Review, Case No. 10-1261-EL-UNC

As required by SB 221 and at the direction of the Commission, on September 1, 2010, each of Ohio's investor-owned electric distribution utilities¹ operating under an electric security plan (ESP) filed their annual reports demonstrating whether or not any rate adjustments authorized by the commission as part of the ESP resulted in significantly excessive earnings during the review period. Of the seven EDUs subject to the filing requirement, only Columbus Southern Power Company's filing triggered a formal review by the Commission. The OMA, along with the Ohio Hospital Association, the Ohio Energy Group, the Office of the Ohio Consumers' Counsel, and the Appalachian Peace and Justice Network, intervened in this proceeding. This group of intervenors agreed to act collectively as the "Customer Parties."

On Tuesday, October 12, 2010, the Customer Parties submitted the testimony of two witnesses demonstrating that consumers of the Columbus Southern Power Company are entitled to a refund of between \$145 Million and \$156 Million under the SEET. The testimony of Lane Kollen shows that Columbus Southern Power was the most profitable electric utility in the country in 2009 after the Public Utilities Commission of Ohio granted it a significant 3 year stepped increase in electric rates. SB 221 directs the Commission to conduct a review of the impact on earning of such increases and directs the Commission to refund any amounts that contribute to earnings significantly in excess of comparable companies. The testimony of Dr. J. Randall Woolridge established a baseline for a reasonable level of earning for CSP, against which the SEET should be applied. Copies of the testimony filed by this consumer group can be found at <http://dis.puc.state.oh.us/CaseRecord.aspx?CaseNo=10-1261&x=12&y=5>. Hearings were held in this case beginning on October 25, 2010, and concluding on November 1, 2010. Briefing will be completed by November 30, 2010.

6. AEP Proposes Merger of Ohio Power and Columbus Southern Power, Case No. 10-2376-EL-UNC

On October 18, 2010, AEP filed an application with the Public Utilities Commission of Ohio seeking approval of a merger between its Ohio Power and Columbus Southern Power subsidiaries. AEP's application states that the merger is necessary to "efficiently prepare, file, and process" a standard service offer (SSO) application (which is expected to be filed soon) as well as a general distribution rate (which AEP proposes to file within the next few months). Manufacturers will have a significant interest in the upcoming AEP SSO filing, which Ohio law requires to be filed no later than the end of March 2011. However, the filing is expected before the end of the 2010.

¹ Excluding DP&L, which is exempted until the conclusion of its current ESP.?

Page 9 of 9

7. Duke Energy Ohio Long-Term Forecast Report, Case No. 10-503-EL-FOR

SB 221, and particularly electric security plan (“ESP”) provision found at Ohio Rev. Code Section 4928.143, reinvigorated the importance of the Commission’s electric resource planning requirements, which had been relegated to a transmission resource planning function in the aftermath of Ohio’s first experiment with deregulation in SB 3. Electric utilities that expect a major change to its generation resource mix to serve its load over a ten year planning horizon must report this fact in annual resource planning filings.

On June 25, 2010, Duke Energy Ohio submitted its regular plan update that contained a major anticipated a major change to its generation resource mix. Duke’s revised plan calls for the addition of a nuclear generating facility to its resource mix, starting about 2024. While 2024 is beyond the ten-year planning horizon required by the rule, the lead-time and financial burdens posed by a major nuclear facility require the inclusion in the long-term planning process sooner than other, more conventional forms of base load generation (if such resources in fact exist). Duke’s filing indicates that it may seek recovery of the costs necessary for the start of an Ohio-based nuclear program as early as its 2012-2014 ESP case filing. This ESP filing is expected as soon as mid-November 2010, but no later than March 31, 2011.

The Commission set a hearing schedule for Duke’s resource plan case, with hearing to commence on February 8, 2011. This date was extended from the original hearing date of September 13, 2010. The reason for the extension was the close interrelationship between the discovery questions put forth by the intervenors in the resource planning case, and Duke’s responses, many of which will be revealed in its ESP filing. This turn of events is a clear indication that Duke’s ESP filing will require the full attention of manufacturers operating within its service territory.

ADMINISTRATIVE ACTIONS: Current Natural Gas Proceedings

For your information, the PUCO Staff and three of the four Ohio investor-owned natural gas local distribution companies (LDCs) determined the SSO auction schedule for 2011. Vectren Energy Delivery of Ohio will hold its natural gas SSO auction on January 18, 2011; Columbia Gas of Ohio will hold its natural gas SSO auction on February 8, 2011; and East Ohio Gas Company d/b/a Dominion East Ohio will hold its natural gas SSO auction on March 1, 2011.

BEFORE
THE PUBLIC UTILITIES COMMISSION OF OHIO

In the Matter of a Mercantile Application Pilot Program Regarding Special Arrangements with Electric Utilities and Exemptions from Energy Efficiency and Peak Demand Reduction Riders.) Case No. 10-834-EL-EEC

ENTRY

The Commission finds:

- (1) Pursuant to Section 4928.66, Revised Code, mercantile customers may commit their peak demand reduction, demand response, and energy efficiency projects for integration with an electric utility's programs. Rule 4901:1-39-05(G), Ohio Administrative Code (O.A.C.), permits a mercantile customer to file, either individually or jointly with an electric utility, an application to commit the customer's demand reduction, demand response, and energy efficiency projects for integration with the electric utility's programs.
- (2) The Commission notes that mercantile customer participation through utility and mercantile customer-sited programs is essential to long-term reductions in energy usage and peak demand. We further recognize that the prompt review of applications to commit mercantile customer programs for integration with electric utility programs is essential in order for electric utilities to meet their peak demand reduction and energy efficiency benchmarks set forth in Section 4928.66, Revised Code, and we continue to seek ways to streamline the options available to mercantile customers and facilitate the prompt approval of applications filed by mercantile customers for integration of mercantile customer-sited programs with electric utility programs. For example, on June 23, 2010, the Commission conditionally approved 241 applications that had been filed by mercantile customers. Further, we anticipate that, with the implementation of utility portfolio plans, mercantile consumers will increasingly be able to take advantage of

utility-administered programs, reducing the number of individual mercantile customer-sited projects requiring Commission review and approval.

- (3) In order to further expedite the review and approval process, the Commission has developed a pilot program for applications filed by mercantile customers under Rule 4901:1-39-05(G), O.A.C. The Commission finds that the pilot program should be implemented to: simplify the Energy Efficiency Credits (EEC) application process through the development of a standard application template for use by mercantile customers; expedite the approval of certain applications through the creation of an automatic approval process; and simplify various incentive programs for mercantile customers who commit their programs for integration with an electric utility. This should also prompt the development of energy efficiency programs at mercantile customer facilities and stimulate customer adoption of energy efficiency projects.
- (4) This pilot program shall be in place for 18 months, and the Commission will initiate a review of the results of the pilot program after 12 months. During this review, the Commission will determine whether the pilot program was successful in expediting the approval process for mercantile customer applications, motivating mercantile customers to undertake additional energy efficiency projects, and minimizing the overall cost of compliance for all customers. The overall goal is to promote the continuous development of energy efficiency programs in this state.
- (5) In order to simplify the EEC application process, the Commission directed Staff to develop a standard application template. This standard application template will be used for all applications irrespective of which electric utility service territory the mercantile customer's facilities are located. The standard application template should make it easier for mercantile customers with facilities in different electric utility service territories to complete the EEC application. The application template and filing instructions will be posted on the Commission's website. During the pilot program, applicants are instructed to use the template and filing instructions when submitting such applications.

Moreover, an automatic approval process should expedite the process for review and approval of certain applications for incentives. The automatic approval process is available for any mercantile customer who agrees to a cash rebate reasonable arrangement (Option 1), rather than an exemption from the electric utility's energy efficiency rider (Option 2). Under the automatic approval process, applications that are complete and filed using the automatic approval template will be approved on the sixty-first calendar day after filing, unless the Commission, or an attorney examiner, suspends or denies that automatic approval of the application. The Commission expects each electric utility that does not offer a cash rebate to review whether a cash rebate option would assist the electric utility in meeting its statutory benchmarks and minimize the costs of compliance with the benchmarks.

- (6) Further, the pilot program will include provisions to simplify the incentive programs for a cash rebate reasonable arrangement or the determination of the appropriate length of the exemption from the energy efficiency rider.
- (7) As a preliminary matter, the Commission clarifies that Section 4928.66, Revised Code, requires the electric utilities to implement energy efficiency programs that achieve energy savings and peak demand reduction programs and includes specific annual benchmarks to satisfy those requirements. Section 4928.66(A)(2)(c), Revised Code, explains how compliance with those benchmarks shall be measured, including *counting* toward the utility's compliance obligation "the effects of all demand-response programs for mercantile customers of the subject electric distribution utility and all such mercantile customer-sited energy efficiency and peak demand reduction programs, adjusted upward by the appropriate loss factors."

Notwithstanding the statutory provisions regarding what the electric utilities are permitted to *count*, Section 4928.66(A)(2)(c), Revised Code, also provides the Commission with the discretion to exempt mercantile customers from paying any costs associated with the electric utilities' compliance with the energy efficiency and peak demand benchmarks as an *incentive* for the mercantile customers to commit their capabilities to the

electric utilities' programs. A clear distinction exists between what may be counted versus what the Commission has discretion to incentivize. For example, we find that no *incentive* should be paid for behavioral changes by a customer that did not include a monetary investment by the customer; however, the electric utility is permitted to *count* any measureable and verifiable energy savings that result from such behavioral changes towards its statutory benchmarks. Likewise, unless the mercantile customer can demonstrate that it has installed more efficient equipment than was otherwise available, no incentive should be paid for replacement of failed equipment, but, for purposes of the pilot program, the electric utility is permitted to count any measurable and verifiable savings that result from such equipment replacement.

To more clearly articulate this distinction for purposes of the pilot program and based upon our experience in reviewing the applications which have been approved to this point, the Commission believes that it is necessary to make certain clarifications to simplify the available incentive programs.

The Commission previously ruled that the benchmark comparison methodology should not be used for applications filed after December 9, 2009. For purposes of the pilot program, the Commission will authorize the use of the benchmark comparison methodology or an electric utility-proposed methodology that simplifies the calculation of the incentive payment. The Commission would, as part of that methodology, authorize the payment of a standard incentive in the form of a fee per kWh of net savings or per kW of peak demand reduction.

Further, for purposes of counting savings toward utility compliance and providing available incentives under the pilot program, all equipment replacements will be considered using the "as found" method of establishing the baseline for all energy efficiency calculations. Under the "as found" method, the baseline for energy savings is the efficiency rating of the existing equipment at the time of replacement. This will allow the Commission to review the impact of considering equipment on an "as found" basis upon the ability of the electric utilities to

meet their benchmarks and upon the costs of compliance with the benchmarks.

In addition, the Commission previously determined that projects with a payback to the mercantile customer of less than one year would not be eligible for a cash rebate or exemption from the energy efficiency rider. While we continue to believe that payback periods are an appropriate factor to consider when determining how to set incentives in electric utility administered programs, based upon our review of the EEC applications submitted to date, the Commission is concerned that in a standardized approach for mercantile customers this limitation requires further refinement in order to ensure that mercantile customer projects are carried out at the least cost. Therefore, for purposes of the pilot program, the Commission will not preclude cash rebates or exemptions from the energy efficiency riders for projects with a payback of less than one year. However, in no way should the calculated rebate incentive be greater than 50 percent of the total project costs.

In summary, for purposes of the pilot program, the Commission adopts the following conceptual framework:

Incentivizing vs. Counting

<u>Issue</u>	<u>Rebate Incentive</u>	<u>Count</u>
Equipment Replacement		
Early Retirement	Yes (as found)	Yes (as found)
Equipment Failure	No	Yes (as found)
Equipment Subject to State or Federal Standards		
Early Retirement	Yes (as found)	Yes (as found)
Equipment Failure	No	Yes (as found)
Behavioral Modifications		
Measurable/Verifiable	No for \$0 investment; Yes for > \$0 investment	Yes Yes
Not Measurable/Verifiable	No	No

- (8) With this framework, the Commission believes that it is necessary and appropriate to waive the provisions of Rule 4901:1-39-05(H), O.A.C., for purposes of the pilot program. The Commission considers this pilot program to be consistent with our other rules governing efficiency and peak demand reduction programs. However, to avoid any uncertainty with respect to implementation of the pilot, to the extent any rule might be considered to be inconsistent with the framework utilized in this pilot program, such rule is hereby waived for purposes of the pilot program. Additionally, to the extent that previous Commission orders have provided guidance that might be considered to be inconsistent with the framework outlined above, we will stay those orders for purposes of instituting this simplified approach to the pilot program.
- (9) Additionally, as indicated in the framework set forth above, the electric utility may count certain mercantile programs even though the mercantile programs are not eligible for a cash rebate or other incentive (i.e., exemption from the rider). To this end, the Commission realizes that commitment payment programs may be necessary in order to encourage mercantile customers to commit those capabilities for integration into the electric utility's programs in the absence of a cash rebate or other incentive. The Commission believes that a commitment payment program could include third party administrator-type programs, which are already receiving compensation for finding mercantile customer-sited projects, or a flat commitment payment to offset the costs associated with filing an application by a mercantile customer. The Commission expects all electric utilities to review potential commitment payment programs and file an application based upon its review within 60 days after the issuance of this Entry.
- (10) The Commission further notes that, with respect to cases filed prior to the implementation of the pilot program, applicants must withdraw their pending application and refile the application, using the standard application template, if they wish to be considered under the automatic approval process. Nonetheless, all pending cases that are not withdrawn and refiled will be considered under the provisions of the pilot program to simplify the calculation of either the cash rebate or

the length of the exemption from the energy efficiency rider without further action by the applicant.

- (11) Accordingly, the Commission finds that the pilot project, discussed above, should be adopted. The Commission intends for this pilot project to reduce obstacles to compliance with the statutory energy efficiency benchmarks, simplify the existing application process, and minimize the overall cost of compliance to all ratepayers.
- (12) Although the Commission has determined that the pilot project should be adopted, the Commission believes that greater efforts by the electric utilities are necessary in order to educate mercantile customers about energy efficiency generally, available electric utility portfolio programs, as well as the specific provisions of the pilot project. We encourage each electric utility, in consultation with interested stakeholders, to implement a customer education initiative to make mercantile customers aware of the specific provisions of the pilot program and to provide further information regarding the role energy efficiency must play in reducing the State's energy needs.
- (13) Finally, on June 17, 2010, the Ohio Environmental Council (OEC) filed a motion to intervene and memorandum in support, alleging that the failure of any mercantile project to produce the energy efficiency savings stated in its application could result in the failure of the electric utility to comply with statutory energy efficiency benchmarks. We find that OEC has set forth sufficient grounds for intervention; thus, its motion should be granted.

It is, therefore,

ORDERED, That the 18-month pilot program enumerated in this Entry be adopted.
It is, further,

ORDERED, That the provisions of Rule 4901:1-39-05(H), O.A.C., be waived for the purposes of the pilot program. It is, further,

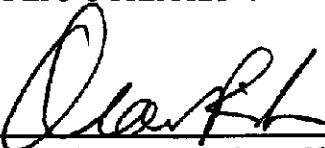
ORDERED, That OEC's motion to intervene be granted. It is, further,

10-834-EL-EEC

-9-

ORDERED, That a copy of this Entry be served upon all parties of record.

THE PUBLIC UTILITIES COMMISSION OF OHIO



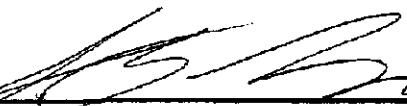
Alan R. Schriber, Chairman



Paul A. Centolella



Valerie A. Lemmie

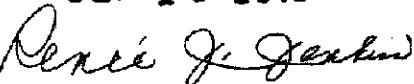


Steven D. Lesser

Cheryl L. Roberto

GAP/sc

Entered in the Journal

SEP 15 2010


Reneé J. Jenkins
Secretary

Public Policy Report

To: OMA Energy Committee
From: Kevin Schmidt, OMA Staff
Re: OMA Energy Committee PPS Report
Date: November 3, 2010

Elections held yesterday could have significant effects on the state's energy policies moving forward. At the time of this writing the results are unknown. Below, please find a summary of key policy issues being discussed in and around the Statehouse.

Ohio's Renewable Energy Mandates

Rumors have been swirling around the statehouse that utilities are uneasy about meeting the renewable energy mandates in the near future. While AEP and other utilities have met their benchmarks for the next couple of years, it seems like meeting future requirements could prove costly. Already it is being reported that utility scale solar projects, with all government incentives factored in, are costing upwards of \$.30 a kWh. As renewable energy grows as a share of Ohio's IOU's overall portfolio, these costs will be more difficult to mask in rates.

Any proposal on how to solve this cost problem has not been forthcoming. Nor has any argument on why the 3% cost-cap language included in SB 221 will be insufficient.

The OMA remains vigilant on the development of this new industry and the interplay between new jobs in Ohio and costs on Ohio's existing manufacturing base.

Energy Efficiency – Industrial Process Improvements

Except for FirstEnergy, all Ohio IOU's have active, relatively robust, energy efficiency programs available for their industrial customers. The OMA is partnering with each utility to in an effort to promote robust participation.

It is clear that the prescriptive rebates for lighting, motors, and other systems have been useful. However, it is also clear that in the next couple of years the IOU's will need to begin partnering more closely with their industrial customers to identify process savings that are customized to individual customers.

Please contact me at 614-629-6816 if you would like to discuss how your facility might be included in the development of these programs.

Energy Legislation
Prepared by: The Ohio Manufacturers' Association
Report created on November 1, 2010

- HB87** **OHIO ENERGY RESOURCE CENTER** (PHILLIPS, D) To create the Ohio Energy Resource Center at Ohio University's Voinovich School and to make an appropriation.
- Current Status:** 3/16/2010 - Senate Energy and Public Utilities, (Second Hearing)
All Bill Status: 3/10/2010 - Senate Energy and Public Utilities, (First Hearing)
12/2/2009 - Referred to Committee Senate Energy and Public Utilities
11/18/2009 - **PASSED BY HOUSE**, Vote 68-30
11/18/2009 - Bills for Third Consideration
10/28/2009 - **REPORTED OUT AS AMENDED**, House Finance and Appropriations, (Third Hearing)
10/20/2009 - House Finance and Appropriations, (Second Hearing)
10/15/2009 - House Finance and Appropriations, (Second Hearing)
10/7/2009 - House Finance and Appropriations, (Second Hearing)
5/27/2009 - House Finance and Appropriations, (First Hearing)
3/24/2009 - Referred to Committee House Finance and Appropriations
3/18/2009 - Introduced
- Comments:** None
- HB110** **NATURAL GAS & OIL PERMITS** (ADAMS, J) To authorize the Director of Natural Resources to issue permits and make leases to take and remove natural gas and oil from under the bed of Lake Erie.
- Current Status:** 5/13/2009 - House Agriculture and Natural Resources, (First Hearing)
All Bill Status: 4/1/2009 - Referred to Committee House Agriculture and Development Subcommittee
3/30/2009 - Introduced
- Comments:** None
- HB113** **SCHOOL ENERGY MEASURES** (FOLEY, M) To authorize school boards, for on-site renewable energy generation measures and in the same manner as for energy conservation measures, to enter into installment contracts subject to specified terms of payment, to provide that energy conservation installment contracts are subject to those same terms, and to require that at least twenty-five per cent of the schools in the state's school districts have a long term supply of solar-sourced electricity.
- Current Status:** 2/2/2010 - Senate Energy and Public Utilities, (First Hearing)
All Bill Status: 1/12/2010 - Referred to Committee Senate Energy and Public Utilities
12/17/2009 - **PASSED BY HOUSE**, Passed, as amended 91-5
6/16/2009 - **REPORTED OUT AS AMENDED**, House Alternative Energy, (Fifth Hearing)
6/9/2009 - House Alternative Energy, (Fourth Hearing)
5/26/2009 - House Alternative Energy, (Third Hearing)
5/12/2009 - House Alternative Energy, (Second Hearing)
4/28/2009 - House Alternative Energy, (First Hearing)
4/1/2009 - Referred to Committee House Alternative Energy
3/31/2009 - Introduced
- Comments:** None
- HB218** **PUBLIC UTILITY TANGIBLE TAX VALUATION** (WINBURN, R) To modify the tax valuation of public utility tangible personal property used to generate electricity from renewable resources.

	<p>Current Status: 6/24/2009 - BILL AMENDED, House Ways and Means, (Second Hearing)</p> <p>All Bill Status: 6/17/2009 - Referred to Committee House Public Utilities 6/17/2009 - House Ways and Means, (First Hearing) 6/10/2009 - Introduced</p> <p>Comments: None</p>
HB230	<p>COMMON SENSE REGULATION ACT (MORAN, M) To enact the Common Sense Regulation Act to improve state agency regulatory processes, especially as they relate to small businesses, to require state departments to develop customer service training programs, and to require the director of environmental protection to provide environmental regulatory compliance assistance to small businesses.</p> <p>Current Status: 3/2/2010 - Senate State and Local Government and Veterans Affairs, (First Hearing)</p> <p>All Bill Status: 11/17/2009 - Referred to Committee Senate State and Local Government and Veterans Affairs 10/28/2009 - PASSED BY HOUSE, Vote 94-0 10/28/2009 - Bills for Third Consideration 10/14/2009 - REPORTED OUT AS AMENDED, House State Government, (Fourth Hearing) 10/7/2009 - House State Government, (Third Hearing) 9/30/2009 - House State Government, (Second Hearing) 9/23/2009 - House State Government, (First Hearing) 6/23/2009 - Referred to Committee House State Government 6/17/2009 - Introduced</p> <p>Comments: None</p>
HB301	<p>ADVANCED ENERGY FUND (FOLEY, M) To replace the current Advanced Energy Fund revenue rider on retail electric distribution service rates with a new rider that will terminate on January 1, 2025 and permit aerospace institutes to receive Advanced Energy Fund money for advanced energy projects and economic development.</p> <p>Current Status: 1/19/2010 - House Alternative Energy, (Fourth Hearing)</p> <p>All Bill Status: 12/15/2009 - House Alternative Energy, (Third Hearing) 12/8/2009 - House Alternative Energy, (Second Hearing) 11/17/2009 - House Alternative Energy, (First Hearing) 10/14/2009 - Referred to Committee House Alternative Energy 10/6/2009 - Introduced</p> <p>Comments: None</p>
HB426	<p>OIL AND GAS LAW (SKINDELL, M) To revise the Oil and Gas Law.</p> <p>Current Status: 2/2/2010 - Referred to Committee House Agriculture and Natural Resources</p> <p>All Bill Status: 1/27/2010 - Introduced</p> <p>Comments: None</p>
HB437	<p>TAX CREDIT FOR BUSINESS-INCREASED PAYROLL (BAKER, N) To authorize a nonrefundable tax credit for a business that increases payroll and expands into a vacant facility.</p> <p>Current Status: 3/3/2010 - House Ways and Means, (First Hearing)</p> <p>All Bill Status: 2/8/2010 - Referred to Committee House Ways and Means 2/3/2010 - Introduced</p> <p>Comments: None</p>
HB439	<p>TAX EXEMPTION-RENEWABLE ENERGY (PHILLIPS, D) To exempt from property taxation the cost of energy-conservation or renewable energy improvements to business property and</p>

to authorize an additional income tax deduction for the costs of such improvements if the property is sold for a gain.

Current Status: 5/11/2010 - House Alternative Energy, (First Hearing)

All Bill Status: 4/20/2010 - House Alternative Energy, (First Hearing)

2/17/2010 - Referred to Committee House Alternative Energy

2/8/2010 - Introduced

Comments: None

HB443 ENERGY EFFICIENCY (GERBERRY, R) To create the Energy Efficiency Stakeholder Advisory Group to review energy efficiency and peak demand reduction programs and related matters and to require the group to make a recommendation regarding its continuation to the General Assembly by December 31, 2024.

Current Status: 2/17/2010 - Referred to Committee House Public Utilities

All Bill Status: 2/8/2010 - Introduced

Comments: None

HB464 WIND/SOLAR ENERGY FACILITIES (WINBURN, R) To exempt qualifying wind and solar energy facilities from property taxation for up to 20 years and to require payments in lieu of taxes on the basis of each megawatt of production capacity of such facilities.

Current Status: 6/3/2010 - House Ways and Means, (Eighth Hearing)

All Bill Status: 6/2/2010 - House Ways and Means, (Seventh Hearing)

5/26/2010 - House Ways and Means, (Sixth Hearing)

5/12/2010 - House Ways and Means, (Fifth Hearing)

4/21/2010 - House Ways and Means, (Fourth Hearing)

4/14/2010 - House Ways and Means, (Third Hearing)

3/24/2010 - House Ways and Means, (Second Hearing)

3/16/2010 - House Ways and Means, (First Hearing)

3/15/2010 - Referred to Committee House Ways and Means

3/15/2010 - Introduced

Comments: None

HB469 HOME ENERGY TAX CREDIT (PHILLIPS, D) To allow a nonrefundable tax credit against the personal income tax for home energy audits.

Current Status: 5/11/2010 - House Alternative Energy, (First Hearing)

All Bill Status: 4/20/2010 - House Alternative Energy, (First Hearing)

3/23/2010 - Referred to Committee House Alternative Energy

3/18/2010 - Introduced

Comments: None

HB474 RENEWABLE ENERGY FACILITIES (HITE, C) To exempt from property taxation renewable energy facilities that are not financed through the Ohio Air Quality Development Authority and to require a payment in lieu of taxes on the basis of each megawatt of production capacity of such facilities.

Current Status: 4/13/2010 - Referred to Committee House Alternative Energy

All Bill Status: 3/30/2010 - Introduced

Comments: None

HB551 SURPLUS ELECTRICITY (SNITCHLER, T) To require a municipal utility supplying surplus electricity to nonresidents to provide written notice of termination one year before terminating the service.

Current Status: 6/15/2010 - Introduced

All Bill Status:

Comments: None

HCR28 URANIUM ENRICHMENT (DANIELS, D) To urge the President of the United States to direct

the United States Department of Energy to ensure the continuation of the uranium enrichment work being developed by the USEC, Inc., at its Piketon, Ohio plant by granting USEC's application for a federal loan guarantee.

Current Status: 11/17/2009 - House Alternative Energy, (First Hearing)

All Bill Status: 9/15/2009 - Referred to Committee House Alternative Energy
9/15/2009 - Introduced

Comments: None

HCR36 **GREENHOUSE GAS REGULATIONS** (MARTIN, J) To urge the Congress of the United States to pass Senate Joint Resolution 26, which proposes to invalidate regulations of the United States Environmental Protection Agency related to greenhouse gases.

Current Status: 5/11/2010 - Referred to Committee House Environment and Brownfield Development

All Bill Status: 5/11/2010 - Introduced
Comments: None

HJR1 **COMPENSATION FOR VETERANS** (PRYOR, R) To provide compensation to veterans of the Persian Gulf, Afghanistan, and Iraq conflicts.

Current Status: 2/19/2009 - House Veterans Affairs, (First Hearing)

All Bill Status: 2/17/2009 - Referred to Committee House Veterans Affairs
2/17/2009 - Introduced

Comments: None

SB232 **RENEWABLE ENERGY FACILITIES** (WIDENER, C) To exempt from taxation renewable energy facilities that are not financed through the Ohio Air Quality Development Authority and require a payment in lieu of taxes on the basis of each megawatt of production capacity in such facilities.

Current Status: 6/17/2010 - **SIGNED BY GOVERNOR**, eff. immediately

All Bill Status: 6/9/2010 - Sent to Governor for Signature
6/3/2010 - Consideration of House Amendments, The Senate concurred with the House Amendments; Vote 27-5. Emergency Clause; Vote 26-6
6/3/2010 - Bills for Third Consideration, Passed as Amended; Vote 91-7. Emergency Clause; Vote 91-7
6/3/2010 - Bills for Third Consideration
6/3/2010 - **REPORTED OUT AS AMENDED**, House Ways and Means, (Fourth Hearing)
6/2/2010 - House Ways and Means, (Third Hearing)
5/26/2010 - House Ways and Means, (First Hearing)
5/25/2010 - Referred to Committee House Ways and Means
5/18/2010 - **PASSED BY SENATE**, Passed as amended; Vote 28-4
5/18/2010 - Bills for Third Consideration
5/12/2010 - **REPORTED OUT AS AMENDED**, Senate Energy and Public Utilities, (Ninth Hearing)
5/11/2010 - **BILL AMENDED**, Senate Energy and Public Utilities, (Eighth Hearing)
3/24/2010 - Senate Energy and Public Utilities, (Seventh Hearing)
3/23/2010 - **SUBSTITUTE BILL ACCEPTED & AMENDED**, Senate Energy and Public Utilities, (Sixth Hearing)
3/17/2010 - Senate Energy and Public Utilities, (Fifth Hearing)
3/16/2010 - Senate Energy and Public Utilities, (Fourth Hearing)
3/10/2010 - Senate Energy and Public Utilities, (Third Hearing)
3/9/2010 - Senate Energy and Public Utilities, (First Hearing)
3/3/2010 - Referred to Committee Senate Energy and Public Utilities
3/3/2010 - Senate Energy and Public Utilities, (First Hearing)

2/24/2010 - Introduced

Comments: None

SB236 ALL-ELECTRIC HOME DISCOUNTS (GRENDELL, T) To restore discounts for customers with all-electric homes, to restore electric, load-management programs, and to declare an emergency.

Current Status: 5/18/2010 - Senate Energy and Public Utilities, (Second Hearing)

All Bill Status: 3/24/2010 - Senate Energy and Public Utilities, (First Hearing)

3/9/2010 - Referred to Committee Senate Energy and Public Utilities

3/3/2010 - Introduced

Comments: None

SB241 OIL AND GAS DEVELOPMENT (FABER, K) To grant the Department of Natural Resources exclusive authority to enter into leases for oil and gas development on state land.

Current Status: 5/19/2010 - Senate Environment and Natural Resources, (Second Hearing)

All Bill Status: 5/12/2010 - Senate Environment and Natural Resources, (First Hearing)

3/24/2010 - Referred to Committee Senate Environment and Natural Resources

3/17/2010 - Introduced

Comments: None

SCR27 GREENHOUSE GASES (GIBBS, B) To urge the Congress of the United States to adopt legislation invalidating regulations of the United States Environmental Protection Agency related to greenhouse gases.

Current Status: 6/3/2010 - **ADOPTED BY SENATE**, Vote 21-11

All Bill Status: 6/3/2010 - Bills for Third Consideration

6/1/2010 - **REPORTED OUT**, Senate Environment and Natural Resources, (Third Hearing)

5/26/2010 - Senate Environment and Natural Resources, (Second Hearing)

5/19/2010 - Senate Environment and Natural Resources, (First Hearing)

5/11/2010 - Referred to Committee Senate Environment and Natural Resources

3/25/2010 - Introduced

Comments: None

Additional Materials

Natural Gas/Energy Update

OMA Energy Committee

Kurt Waninger
NiSource
November 3, 2010

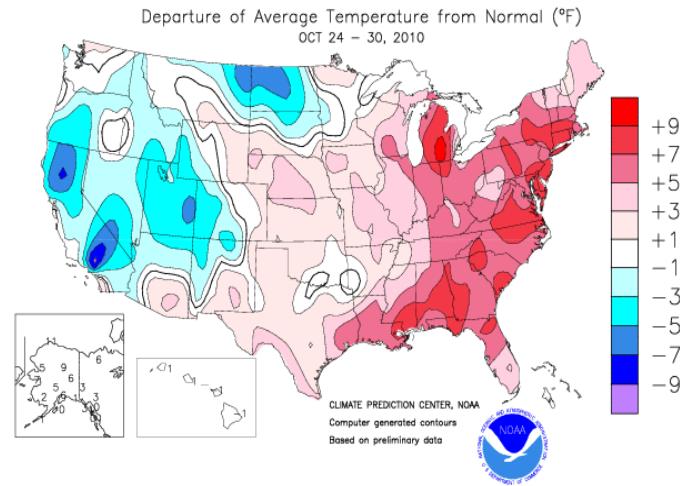
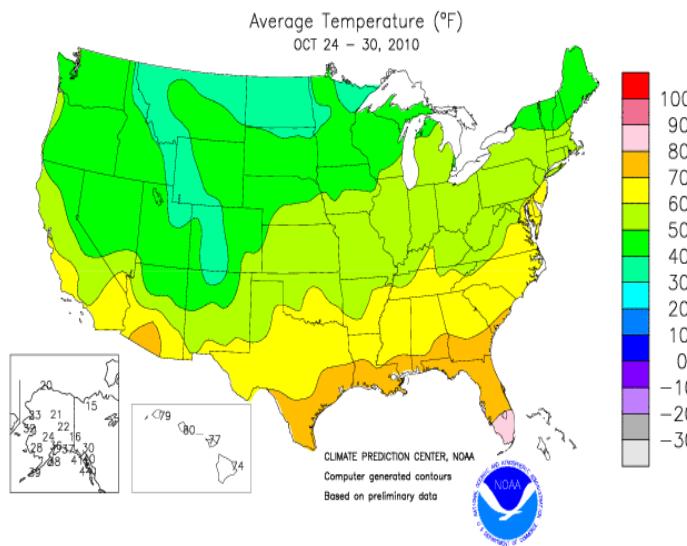
Agenda

64 of 110

- Weather
 - National
 - NiSource
 - Columbia Gas of Ohio Degree Days
- National Storage
- Gas Prices
 - NYMEX Prompt Month History
 - NYMEX Gas Futures
- Drilling Rig Count

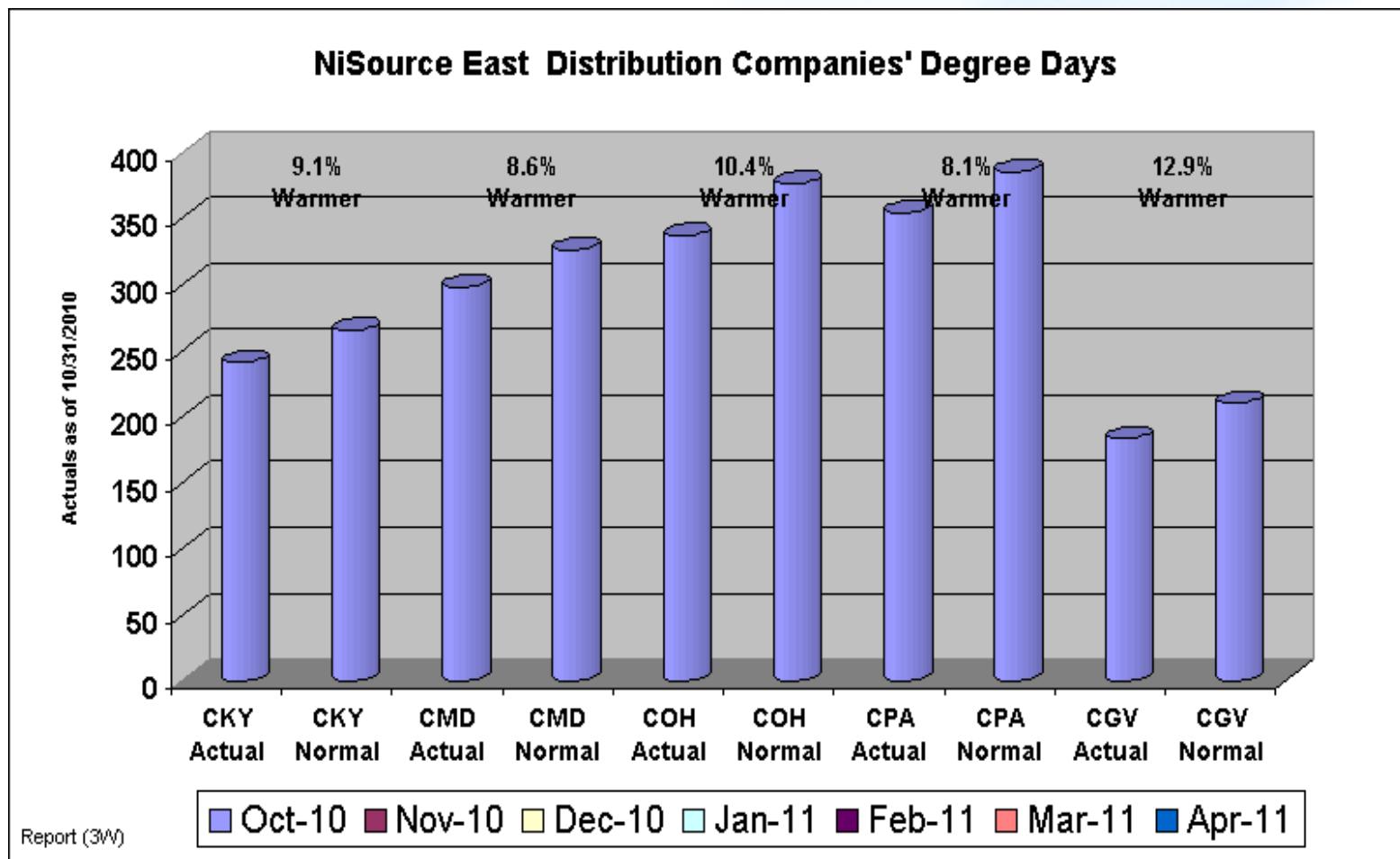
National Weather Review

65 of 110



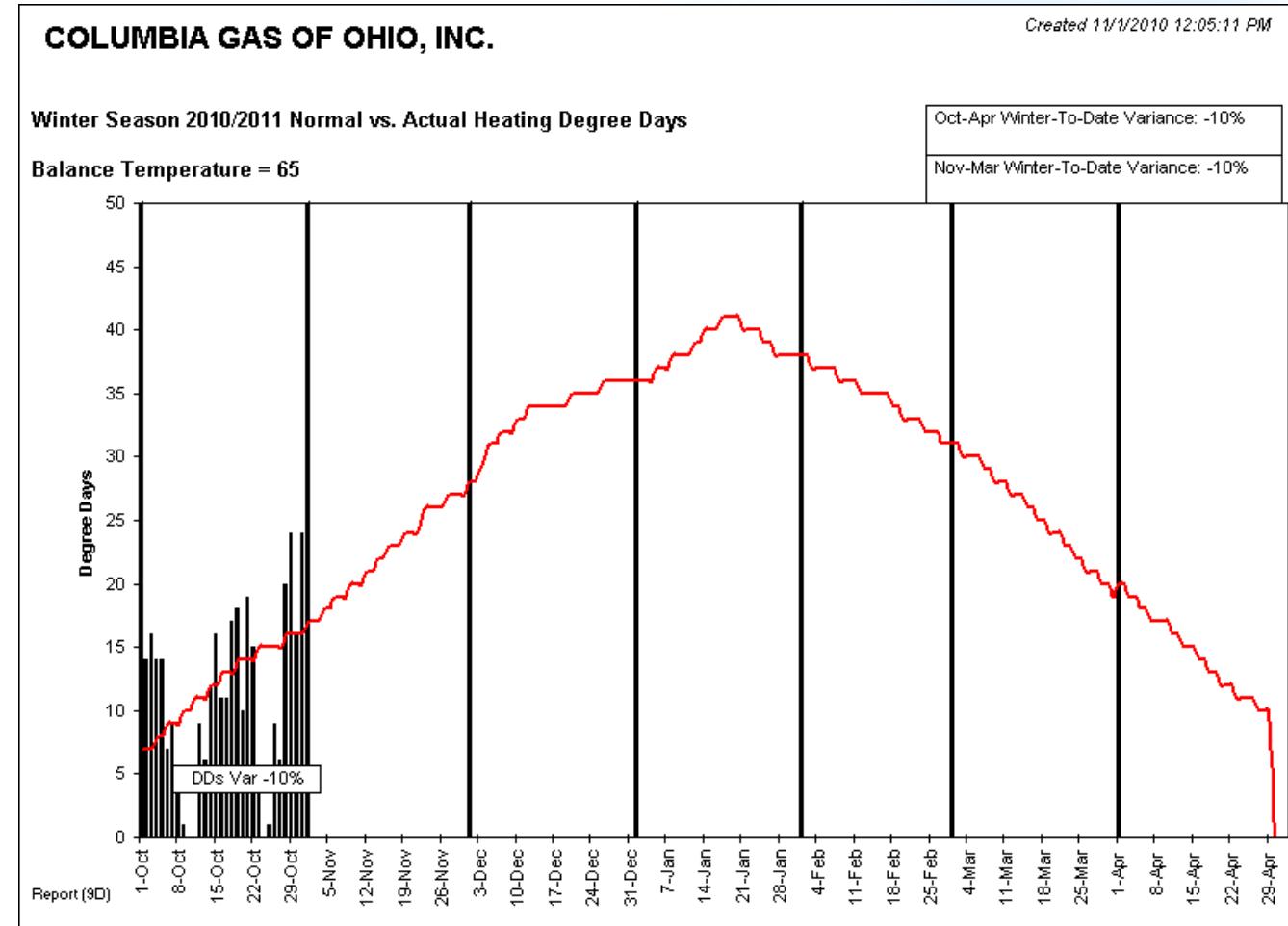
NiSource LDC Degree Days

66 of 110



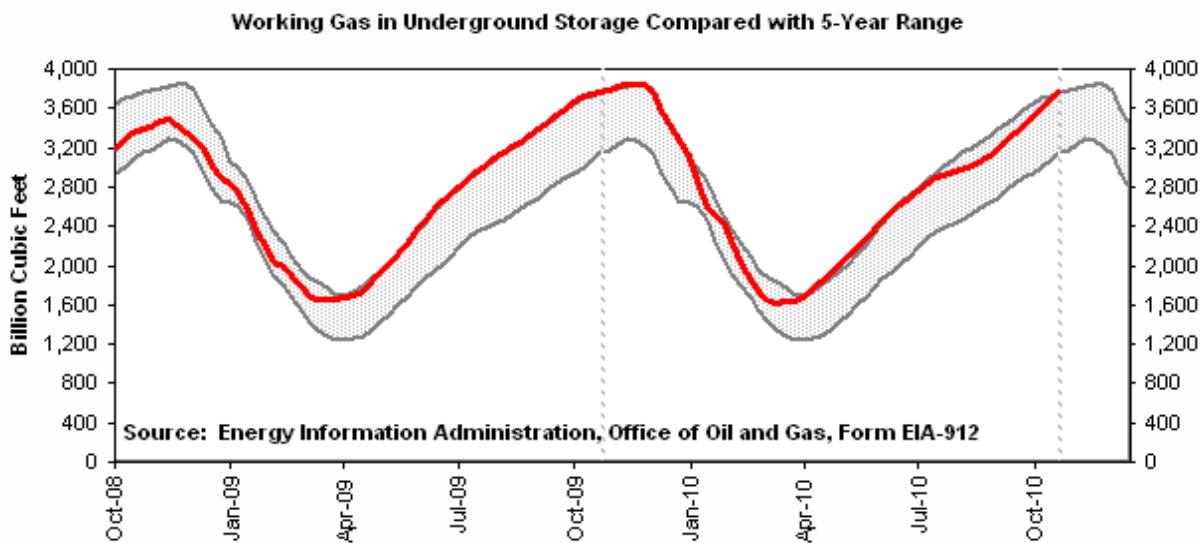
Degree Day Comparison

67 of 110



Summary

Working gas in storage was 3,754 Bcf as of Friday, October 22, 2010, according to EIA estimates. This represents a net increase of 71 Bcf from the previous week. Stocks were 1 Bcf less than last year at this time and 312 Bcf above the 5-year average of 3,442 Bcf. In the East Region, stocks were 69 Bcf above the 5-year average following net injections of 34 Bcf. Stocks in the Producing Region were 193 Bcf above the 5-year average of 999 Bcf after a net injection of 31 Bcf. Stocks in the West Region were 51 Bcf above the 5-year average after a net addition of 6 Bcf. At 3,754 Bcf, total working gas is within the 5-year historical range.

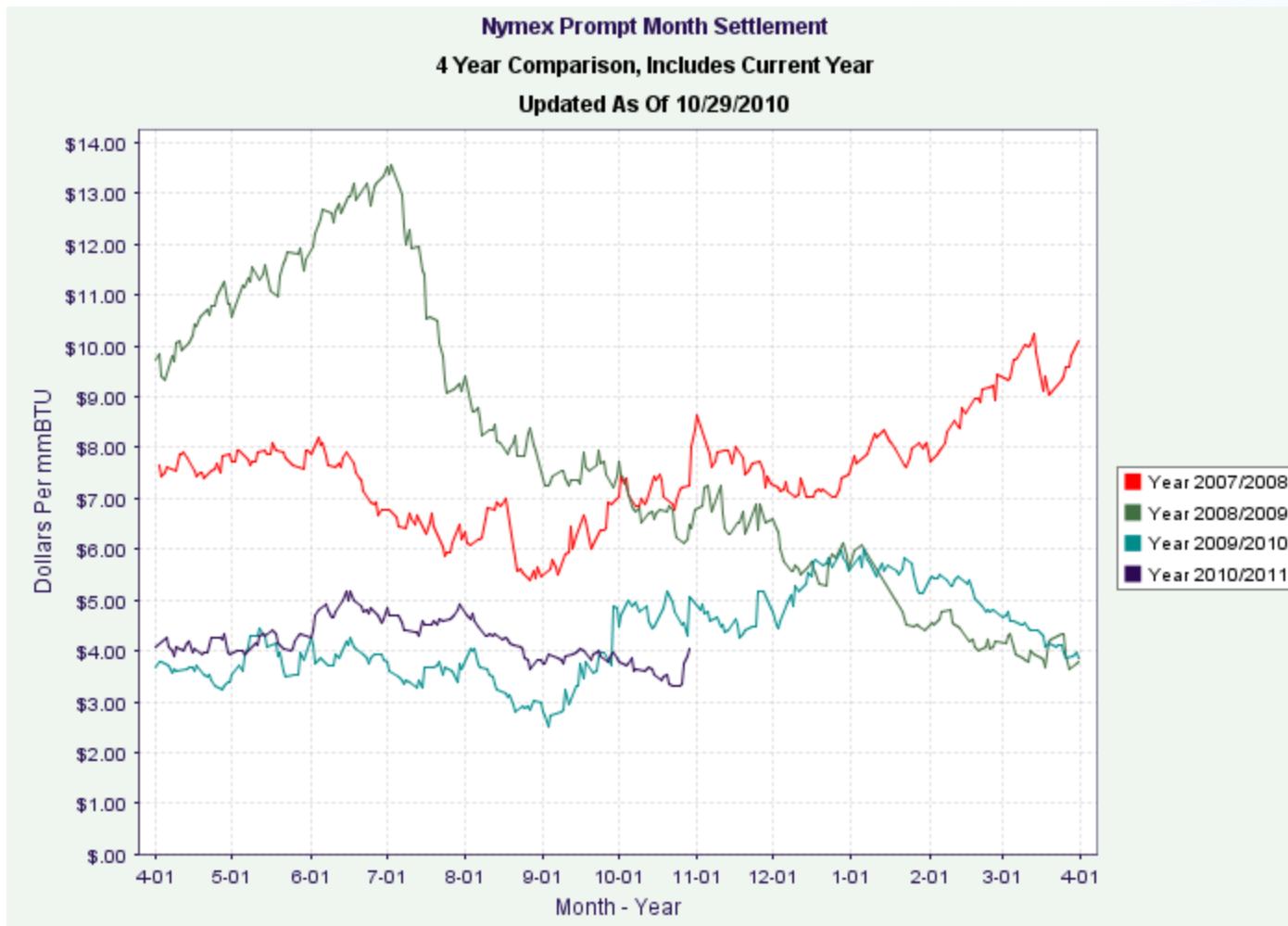


Note: The shaded area indicates the range between the historical minimum and maximum values for the weekly series from 2005 through 2009.

Source: Form EIA-912, "Weekly Underground Natural Gas Storage Report." The dashed vertical lines indicate current and year-ago weekly periods.

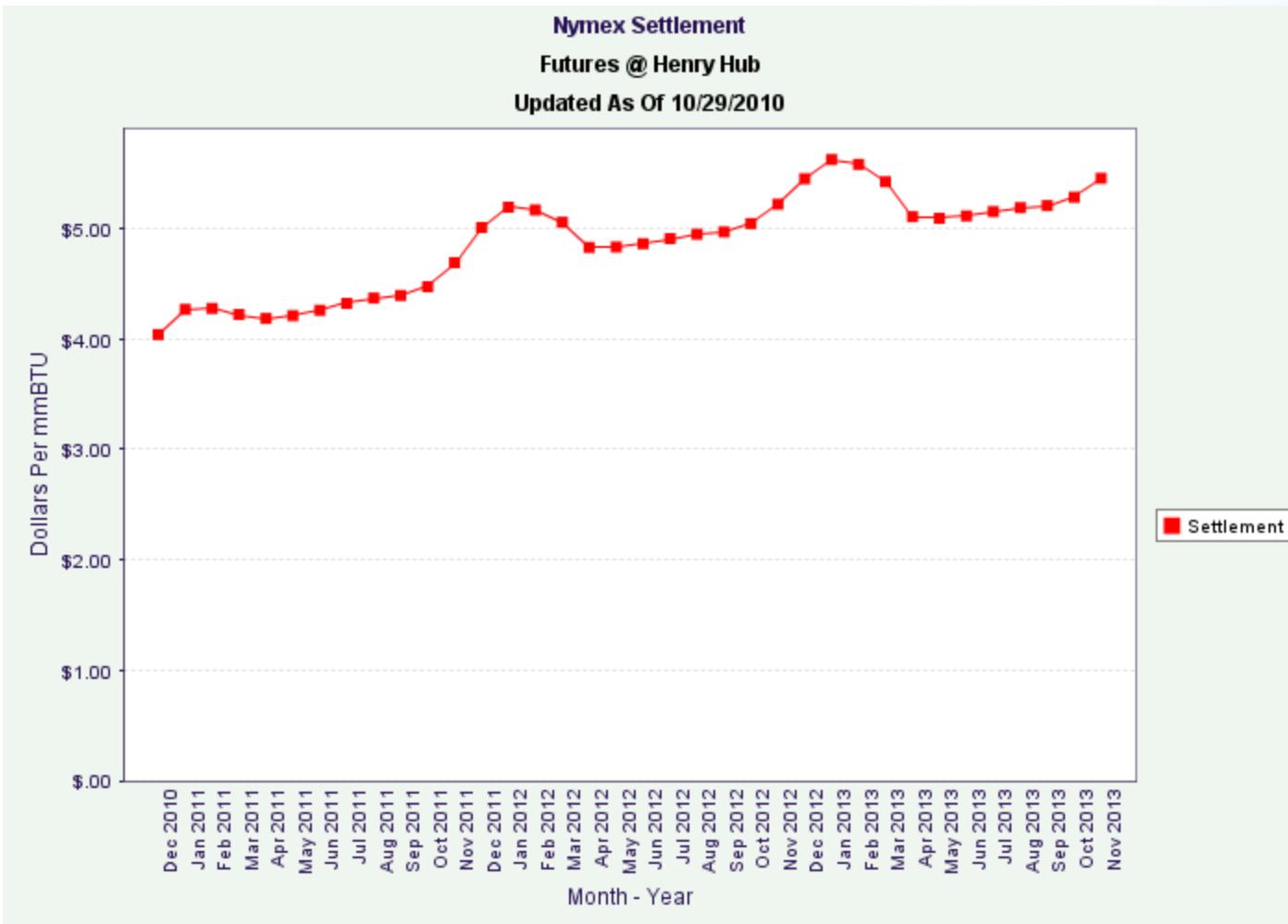
NYMEX Settlement Futures

69 of 110



Henry Hub Futures

70 of 110



2010 Worldwide Rig Count

BAKER HUGHES INCORPORATED

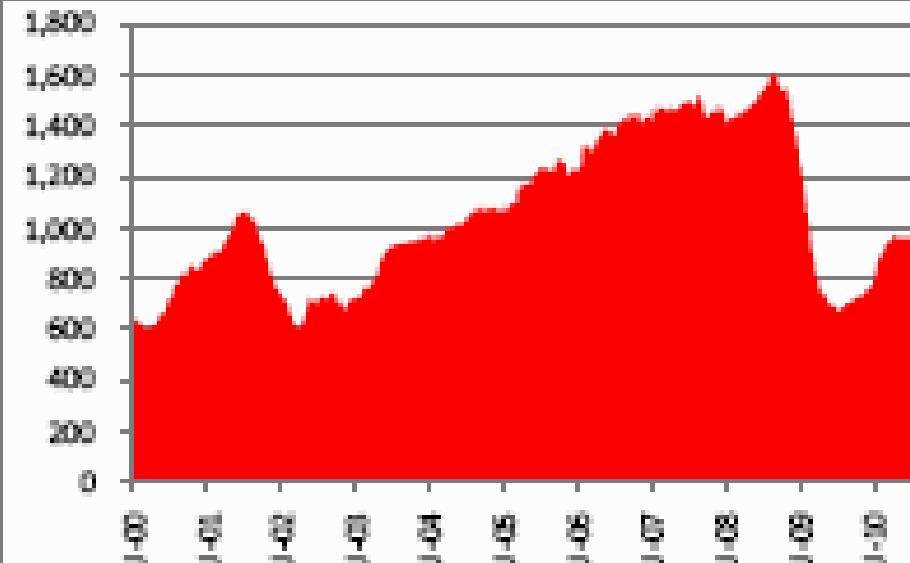
WORLDWIDE RIG COUNT

US Gas

US Gas rigs for 8/21/2010 were 967

Up 2 compared to 10/22/2010

Up 239 compared to 8/18/2010



Energy Efficiency Programs and Customer Case Study



The New Energy Climate for Ohio Manufacturers
October 20, 2010

DP&L

Why Energy Efficiency Programs?

May 2008 – Ohio Senate Bill 221

DP&L S.B. 221 Targets			
	2009	2010	2011
% of Energy Delivered	0.3%	0.8%	1.5%
DP&L MWh Goal	43,919	118,606	222,386
DP&L MW Goal	30	56	80

Energy targets are cumulative and reach 22% by 2025

DP&L Energy Efficiency Programs

Business & Gov't

- Rapid Rebates
 - Lighting Upgrades
 - HVAC
 - Motors, Drives, Air Compressors
- Custom Rebates
- New Construction
- Government Audit

Residential

- CFL Lighting Discounts
- HVAC Rebates & Tune-Ups
 - Central Air Conditioning, Heat Pumps
- Appliance Recycling
 - Refrigerators & Freezers
- School Education
- Income Eligible Weatherization

www.dpndl.com



Rapid Rebates

- Cash back on energy efficiency products and upgrades.
- Pre-determined rebate amounts per product based on projected energy savings.
- Relatively simple and streamlined process.
- Up-to-date rebate amounts listed in the business program section of our website.



\$2.68 Million in Incentives Available in 2010

www.dpndl.com



100+ Measures Eligible for Rebates

Lighting

- Fluorescent Lighting Retrofits
- Sensors & Controls
- LED Traffic Signals & Exit Signs

HVAC

- Efficient Air Conditioning
- Water Cooled Chillers
- Heat Pump Water Heaters
- Geothermal
- Thermal Storage 

Motors, Drives & Air Compressors

- NEMA Premium Efficiency Motors
- Variable Frequency Drives
- Variable Speed Air Compressors
- Efficient Pumps

Other

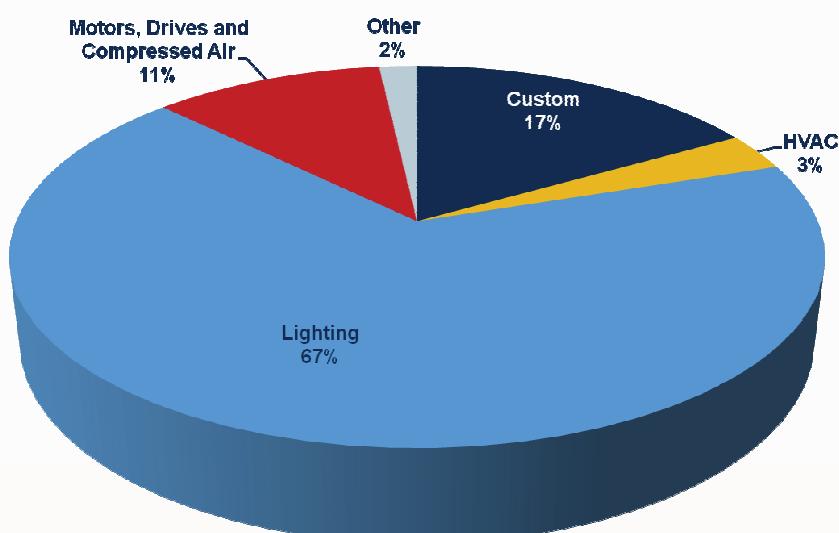
- Window Film
- Vending Equipment Controllers
- Commercial Clothes Washers, Dryers
- Barrel Wraps for Injection Molding Equipment

Pre-approval not required for most measures.
Projects started after 1/1/10 are eligible.

www.dpndl.com



2010 YTD kWh Savings by Rebate Category



www.dpndl.com



Custom Rebates

- Customized rebates for products and process changes not covered by Rapid Rebates.
- Base case electric usage compared to post-investment usage.

Lighting: \$0.05 per kWh saved + \$50 per KW saved.

HVAC: \$0.10 per kWh saved + \$100 per KW saved.

Other: \$0.08 per kWh saved + \$100 per KW saved.

Pre-approval is required.

www.dpndl.com



2010 New Construction Program

Types of Incentives:

- Lighting Power Density (LPD) Reduction
- Whole Building Energy Performance Baseline Improvements



www.dpndl.com



Custom Rebate Case Study

Introductions



AIR HANDLING EQUIPMENT INC.

www.dpandl.com

DP&L

COMPRESSED AIR PROFILE NEATON AUTO PRODUCTS

Putting compressed air best
practices to work.

The Scenario

- Large Automotive manufacturing facility
- Operates (5) 200 HP rotary screw oil flooded air compressors
- The facility operates 24 hours per day 7 days per week
- Multiple compressor rooms as the result of growth

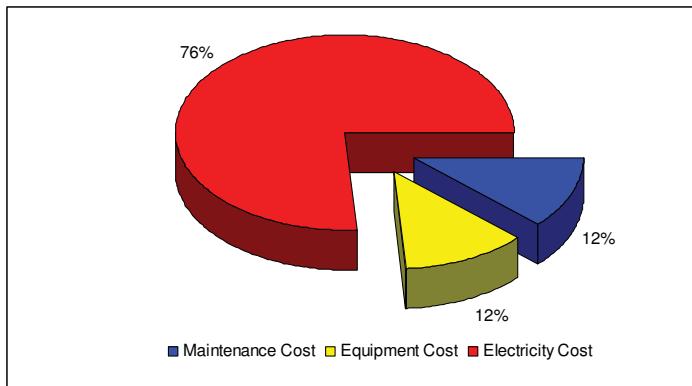
937-492-5331 kurt@ahequip.net
www.ahequip.net

The Question

- Chris approached Air Handling regarding his compressed air system, and if there was a way to improve his operating efficiencies.

937-492-5331 kurt@ahequip.net
www.ahequip.net

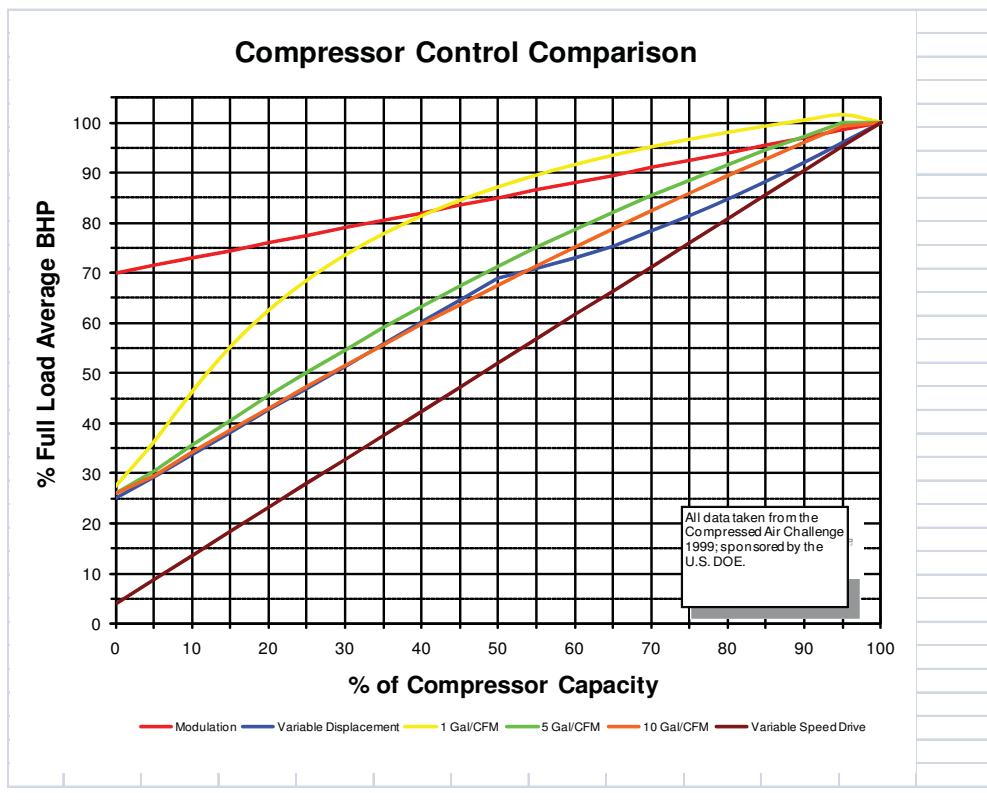
Cost of Compressed Air



- 100 HP Compressor (\$24,000 initial expense)
- 6-Day per Week Operation / 2 Shifts per Day / 4800 hours
- Electric Costs of \$0.065 / kW Hour (\$27,237 annually)

The Findings

- We conducted a walk through evaluation of the facility.
- We found that the location operated (2-3) 200 HP compressors in a part loaded condition at all times.



937-492-5331 kurt@ahequip.net
www.ahequip.net

The Preliminary Figures

- We found that the three units were running at 50% capacity or approximately 1350 CFM delivered to the plant to sustain operations.
- This equates to the equivalent of (1) 300 HP compressor in performance

Current Cost to Operate

- Using the performance chart we just reviewed we estimated his cost to operate to be around \$108,383 for (2) 200 HP load/unload machines and (1) 200 HP variable displacement at \$49,415.00 for a total Cost of \$157,798.00

937-492-5331 kurt@ahequip.net
www.ahequip.net

Savings

- If he installed (1) 300 HP compressor his cost to operate would be \$107,424 or a potential one year savings of \$50,374.00 (105KW)
- Figures assumed 8000 operating hours and a \$.06 per KW hour fee.

937-492-5331 kurt@ahequip.net
www.ahequip.net

DP&L Audit

- DP&L had their independent auditors install KW recording meters
- They determined that Neaton Auto had the opportunity to save 109 kW and 955,641 kWh.
- Their post evaluation confirmed these findings and allowed DP&L to present them with a \$44,400 rebate check!

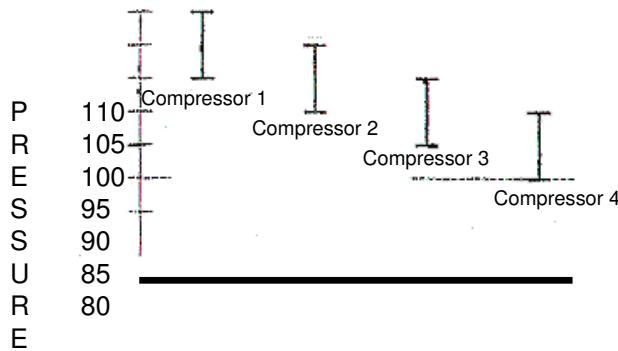
937-492-5331 kurt@ahequip.net
www.ahequip.net

Things to Consider

- Supply Side Considerations:
 - How do your compressors operate?
 - Load/unload, modulation, VSD, etc...
 - Do you have adequate storage?
 - Do you have multiple part loaded compressors?

937-492-5331 kurt@ahequip.net
www.ahequip.net

Pressure Cascade



937-492-5331 kurt@ahequip.net
www.ahequip.net

Things to Consider Con't

- Demand Side Considerations
 - Inappropriate uses
 - Vacuum generation, low pressure blow offs, etc...
 - High Volume Intermittent Demands
 - i.e. baghouse/dust collectors, presses, etc...
 - Leaks – $\frac{1}{4}$ " at 100 PSIG wastes 80 CFM or 20-25 HP of air at a cost of over \$8,000 per year.

937-492-5331 kurt@ahequip.net
www.ahequip.net

Questions?

937-492-5331 kurt@ahequip.net
www.ahequip.net

Contact Information



1389 Riverside Dr.
Sidney, OH 45365
937-492-5331
www.ahequip.net

Kurt Barhorst
Vice President



Neaton Auto Products Manufacturing Inc.

975 S. Franklin St
Eaton, OH 45320
937-456-7103
www.neaton.com
Chris Roach
Maintenance Manager

Dayton Power & Light Business Rebate Programs

Stefanie Campbell, PE CEM
Business Program Manager
937-331-4770
Stefanie.campbell@dplinc.com

www.dpndl.com

DP&L



Energy Efficiency Case Studies

Ohio Manufacturers' Association

October 20, 2010

Sherry Hubbard, Education & Training Coordinator
Energy Efficiency/Demand Response



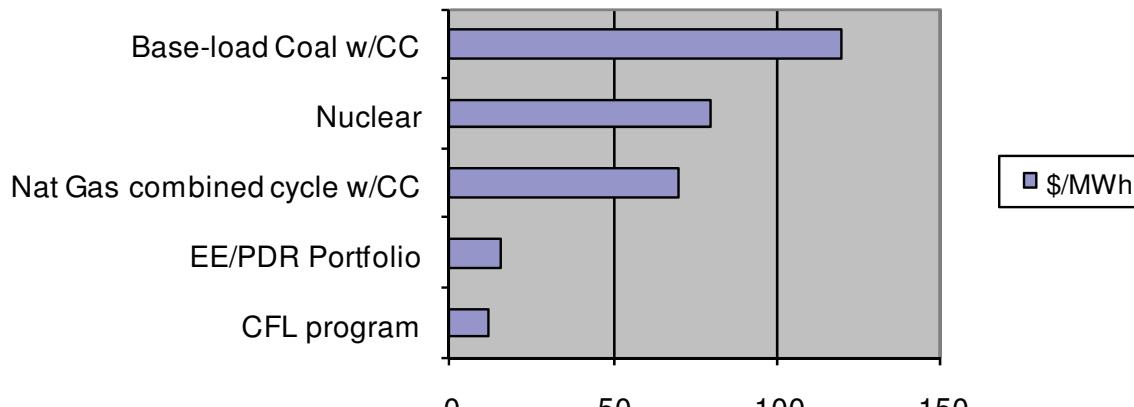
gridSMARTohio.com

Agenda

- **Background**
- **Two Case Studies**
- **Overview of Incentive Programs**
- **Q&A**

Efficiency is Lower Cost Alternative to New Supply

Investments: EE/PDR vs Supply Side



gridSMART™
From AEP OHIO™

gridSMARTohio.com

SB 221: Aligning Energy Efficiency Targets

AEP Ohio Benchmark Targets	Energy Savings incremental GWh/%	Demand Savings cumulative MW/%
2009	137 / .30%	86 / 1.00%
2010	228 / .5%	151 / 1.75%
2011	320 / .7%	215 / 2.50%

SB221	energy savings		SB221	demand savings	
year	incremental	cumulative	year	incremental	cumulative
2009	0.3%	0.3%	2009	1.00%	1.00%
2010	0.5%	0.8%	2010	0.75%	1.75%
2011	0.7%	1.5%	2011	0.75%	2.50%
2012	0.8%	2.3%	2012	0.75%	3.25%
2013	0.9%	3.2%	2013	0.75%	4.00%
2014	1.0%	4.2%	2014	0.75%	4.75%
2015	1.0%	5.2%	2015	0.75%	5.50%
2016	1.0%	6.2%	2016	0.75%	6.25%
2017	1.0%	7.2%	2017	0.75%	7.00%
2018	1.0%	8.2%	2018	0.75%	7.75%
2019	2.0%	10.2%	cumulative total		7.75%
2020	2.0%	12.2%			
2021	2.0%	14.2%			
2022	2.0%	16.2%			
2023	2.0%	18.2%			
2024	2.0%	20.2%			
2025	2.0%	22.2%	cumulative total		22.2%

gridSMART™
From gridSMARTOHIO™
From AEP OHIO™

gridSMARTohio.com

Working to Reach Targets Through Cost Effective Efficiency Programs

- Programs launched for all customer classes
- Process
 - Collaborative
 - Market potential study
 - Design approval by PUCO
 - Implementation of three-year portfolio plan (2009-2011)
 - Third-party evaluation
- Rate recovery approved through EE/PDR rider
- Shareholder penalties if not meet targets



gridSMARTohio.com

Refrigerator & Freezer Recycling for Residential Customers

1-877-545-4112 to schedule pickup



\$ 50!



gridSMARTohio.com

Smart Lighting for Residential Customers

Look for this label
at participating
retailers.



gridSMARTohio.com

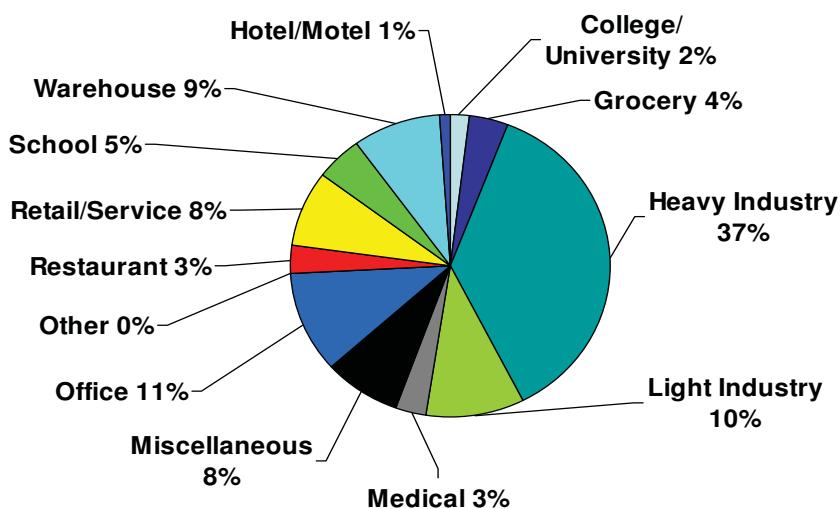
Programs for Business Customers

- **Incentives for Future Energy Efficiency Measures-for any Non-Residential Customer**
 - Prescriptive: Pays defined amount per specific measure
 - – Custom: Pays per annual kWh savings and/or per kW peak demand reduction for a variety of efficiency measures
- **Energy Efficiency Credits for Past Efficiency Measures for Very Large Non-Residential Customers**
 - Credit is 75% of Prescriptive or Custom incentive
 - Two options:
 - • Payment or
 - Exemption from EE/PDR Rider for calculated period of time



gridSMARTohio.com

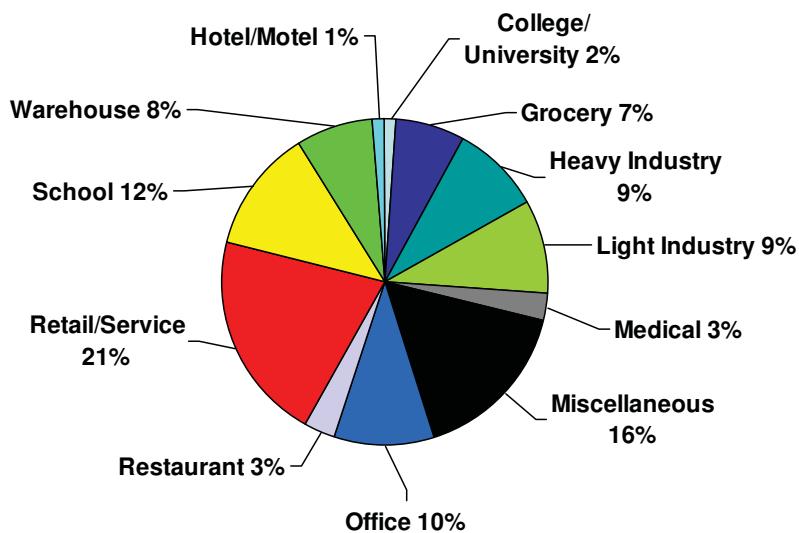
2009 Incentives Paid



gridSMART™
From AEP OHIO™

gridSMARTohio.com

2010 Incentives Paid

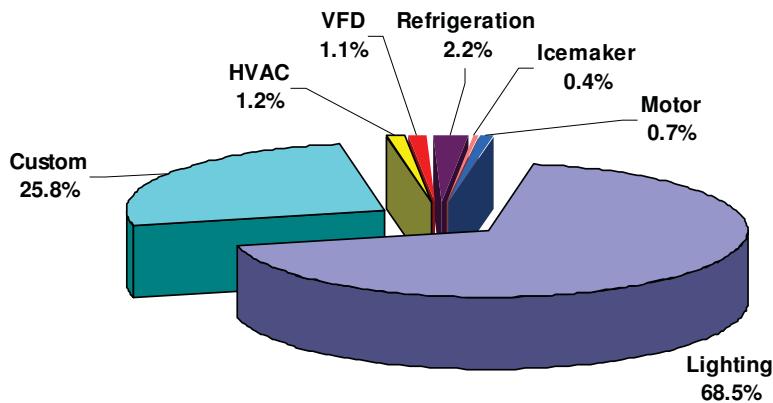


gridSMART™
From AEP OHIO™

gridSMARTohio.com

2010 Applications by Technology

90 of 110



gridSMARTohio.com

Case Study: 1 Customer

Ball Packaging, Findlay, Ohio

- Aluminum beverage cans and ends
- Steel food cans
- Expanded in 1980 to add production capacity and warehouse
- Expansions and conversions in 1982, 1987 and 1996



gridSMARTohio.com

Case Study: 1 Technology

Lighting Retrofit – Installed as of July 1, 2009

**Replaced 1277 Metal Halide HIDs
with 1058 T8s**

Savings = 2,800,000 kWh



(HID fixtures out - T8 fixtures in) x 8760 operating hours



gridSMARTohio.com

Case Study: 1 Project Without Self Direct EE Credit

Material Costs = \$186,151

Labor = \$ 73,300

Total Costs = \$259,451

Energy Savings \$156,494

SIMPLE PAYBACK $249,451 / 156494 = 1.7 \text{ YRS}$



gridSMARTohio.com

Case Study: 1

Project With Self Direct EE Credit

Total Costs	\$259,451
Incentive	<u>-\$108,919</u>
Reduced Costs	\$140,532
Energy Savings	\$156,494

SIMPLE PAYBACK $140,532/156494 = 9 \text{ Mos}$



gridSMARTohio.com

Case Study: 1

Lessons Learned

- **Placement of fixtures**
- **Got into program early when approval process still being developed – “slow”**
- **Supports ongoing efficiency improvements; initiated from corporate sustainability group**



gridSMARTohio.com

Case Study: 2 Customer

Wood Processing Firm



gridSMARTohio.com

Case Study: 2 Technology

Process Improvement:

Replaced existing saw with a new rip saw with capability of cutting multiple strips simultaneously. New saw has 34 12" x 48 teeth, carbide tip saw blades.

Benefits

- Saved energy (and reduced peak demand)
- Improved process flow
- Increased production capacity
- Reduced labor



gridSMARTohio.com

Case Study: 2

Project without Custom Incentive

Total Costs = \$ 55,423

Energy Savings = \$ 15,733 per year

SIMPLE PAYBACK $55423/15733 = 3.5 \text{ YEARS}$



gridSMARTohio.com

Case Study: 2

Calculating Custom Incentive

Estimating Incentive:

Saves 157325 kWh annually

$$157325 \times \$0.08 = \$12,586$$

Peak demand reduction is 25.5 kW

$$25.5 \times \$100 = \$ 2,550$$

TOTAL ESTIMATED \$15,136

Project cost limitation = 50%

$$.5 \times \$55,423 = \$27,712$$

\$ 15,136 < \$27,712

So Incentive = \$ 15,136



gridSMARTohio.com

Case Study: 2

Project with Custom Incentive

Total Project Costs = \$55,423
 Incentive = - \$15,136

Reduced Project Cost = \$40,287

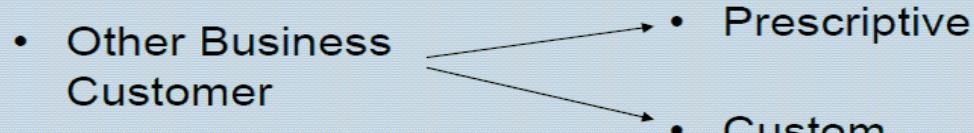
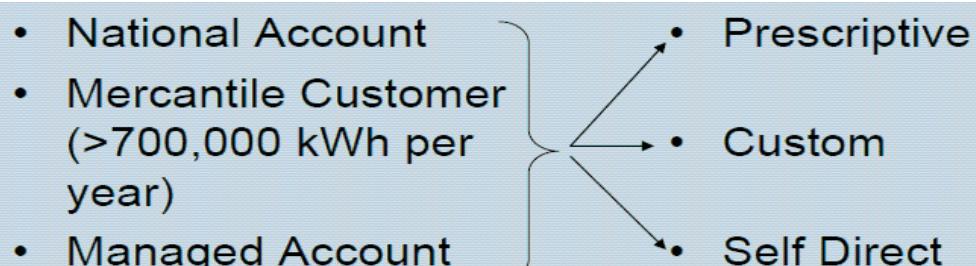
Energy Savings = \$ 15,733 per year

SIMPLE PAYBACK $40287/15733 = 2.5 \text{ YEARS}$



gridSMARTohio.com

Matching Customers with Programs



gridSMARTohio.com

Eligible Lighting Measures – First Year and Continuing

- Compact Fluorescents and LEDs
- Standard Linear Fluorescent Retrofit (T12 to T8 or T5)
- High Output Linear Fluorescents (T12 to T8 or T5)
- High Performance and Low Wattage 4-foot Linear Fluorescents
- Interior High-Intensity Discharge to Fluorescent Fixtures
- Exterior and Garage High-Intensity Discharge Conversion
- Exit Signs Retrofit
- LED Traffic Signals
- Occupancy Controls
- Daylighting and Controls



gridSMARTohio.com

Added Prescriptive Lighting Measures in 2010

- LED open sign/ channel sign
- LED lamp
- LED or induction replacing exterior fixtures
- Timeclocks
- Photocells
- Daylighting
- Bi-Level fixtures with integrated sensor
- T12 to T5 is \$7.00 per lamp
- Pulse start or ceramic MH replacing probe start
- Large exterior CFL's > 31 watts



gridSMARTohio.com

Added Prescriptive Measures in 2010

- Anti-Sweat Door Heater Control
- EC Motor for Walk-in and Reach-in Refrigerator Cases
- Evaporator Fan Controls
- Strip Curtains / Door Gaskets / Night Covers
- Automatic Door Closers for Walk-in Coolers and Freezers
- LED Refrigeration Case Lighting
- Energy Star Solid and Glass Door Freezers
- High Efficiency Ice Makers
- Steam Cookers / Combination Ovens / Hot Holding Cabinet



gridSMARTohio.com

Last of the Added Prescriptive Measures

- Unitary and Split AC Systems
- Air- and Ground-Source Heat Pumps
- Air- and Water-Cooled Chillers
- Room AC
- Package Terminal AC and Heat Pumps
- Guestroom Occupancy Sensor
- Variable Speed Drive on HVAC motors
- NEMA Premium-Efficiency Motors
- Variable Frequency Drives



gridSMARTohio.com

Custom – Examples of Technologies

- Improved Process Efficiency
- Exhaust Heat Recovery Units
- Cooling Towers
- Building Automation System (BAS)
- CO₂ Sensors with Fresh Air Ventilation Control



gridSMART™
From AEP OHIO™



gridSMARTohio.com

Prescriptive and Custom Programs

- Pre-approval application is required to reserve funding.
- Measures must include a capital investment.
- Measures must be installed for 5 years.
- Separate applications are required for each metered account.
- Projects must meet program requirements and specifications.
- Custom: Projects must meet payback requirements > 1 year; < 7 years.

gridSMART™
From AEP OHIO™

gridSMARTohio.com

Prescriptive and Custom Programs

- Customers, contractors, or third parties can receive payment with customer approval.
- Program implementers will inspect many of the projects.
- Incentive payments are capped at 50% of the total project cost.
- Funds are limited; incentives are reserved based on availability.



gridSMARTohio.com

Self Direct Program – Retroactive Energy Efficiency Credits

- Available to largest energy users
 - 700,000 kWh or more annually
 - Part of National Account or with multiple locations
- For installations completed after 1/1/07
- Requires both AEP Ohio and PUCO approval – every application is a filing with PUCO
- Participants encouraged to use credits for further efficiency improvements
- One application required after project completed
- Incentives at 75% (compared to programs for future EEMs)



gridSMARTohio.com

Third Party Evaluation All Programs

- Selected Navigant Consulting through RFP
- Measure and verify energy savings
- Evaluate
 - Impacts
 - Process
- Field inspections, telephone surveys, interviews, data analysis, engineering reviews
- PUCO also has evaluation firm



gridSMARTohio.com

Program Details and Applications

www.gridSMARTohio.com



gridSMARTohio.com

Thank You

QUESTIONS



gridSMART™
From AEP OHIO™

gridSMARTohio.com

Ohio Energy Efficiency Opportunities

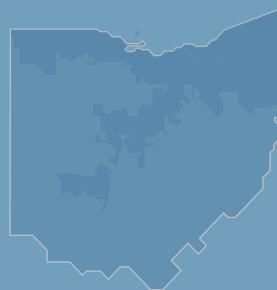
Kurt Turosky

Manager, Energy Efficiency Compliance and Performance



The New Energy Climate for Ohio Manufacturers Series –
Workshop 3

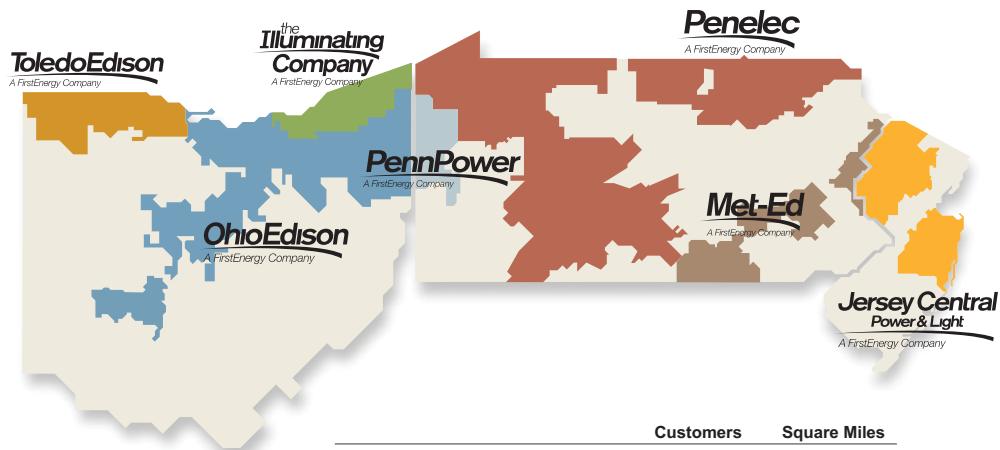
October 20, 2010



Disclaimer

The information contained in this presentation material is intended to provide generally descriptive and summary information. Any conflict between the information contained in this material, or conveyed orally during the presentation, and the information provided in any of the Companies' public filings, as part of Public Utilities Commission of Ohio Entries or Orders, or the Companies' tariffs is unintentional and the docketed material controls. The information contained herein is subject to change during the regulatory process.

FirstEnergy Utility Profile



	Customers	Square Miles
Toledo Edison	312,000	2,300
Ohio Edison	1,040,000	7,000
The Illuminating Company	755,000	1,600
Penelec	590,000	17,600
Penn Power	160,000	1,100
Met-Ed	549,000	3,300
Jersey Central Power & Light	1,093,000	3,200
Total	4,499,000	36,100



FirstEnergy Ohio Energy Efficiency Programs

- **In Response to Ohio Senate Bill 221**
 - Utilities mandated to achieve annual energy reductions growing to over 22% by 2025
- **Incentives for Installing Energy Conservation Measures**
 - Program is funded through ratepayer surcharges
- **C/I Program Opportunities**
 - Mercantile Self-Directed
 - Rebates for Energy Efficiency Projects
- **Programs are subject to approval by the Public Utilities Commission of Ohio (PUCO)**



Mercantile Self-Directed Program

Benchmark Approach

- A mercantile customer is a commercial or industrial customer:
 - Consuming more than 700,000 kWh per year, or
 - Is part of a national account involving multiple facilities
- Minimum Energy Efficiency saving requirements
 - Energy savings from customer's self-directed projects equal to or greater than the statutory benchmarks
- Customer commits either existing or new energy savings to the Utility's compliance requirements through PUCO filing



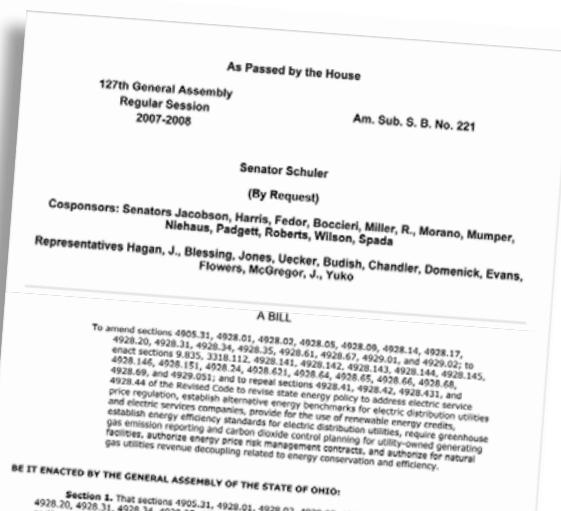
The New Energy Climate for Ohio Manufacturers Series – Workshop 3

October 20, 2010

5

What's In It For the Customer?

- Potential to avoid DSE2 rider surcharges
- Those charges may start out low and increase over time, proportional to compliance requirements for Energy Efficiency



The New Energy Climate for Ohio Manufacturers Series – Workshop 3 October 20, 2010

6

Examples of DSE2 Rider Impact:

¢/KWH	GS	GP	GSU	GT
OE	.1252	.0465	.0461	.0460
CEI	.1392	.0677	.0675	.0671
TE	.0776	.0352	.0351	.0350

Typical CEI Customer Example:

10,000,000 kWh per year GS customer = \$ 13,920 per year

50,000,000 kWh per year GS customer = \$ 69,600 per year

* Ohio EE/PDR Plan still pending approval, thus rates are subject to change



The New Energy Climate for Ohio Manufacturers Series – Workshop 3

October 20, 2010

7

Mercantile Self-Directed Program Pilot Program (PUCO Order 9/15/10)

- Goal is to streamline approval process
- Pilot program to last 18 months, with PUCO review at 12 months
- Standard application template and filing instructions to be used for all new applications
- Auto-approval process available to customers taking cash rebates (Option 1), but not those seeking benchmark rider exemption (Option 2)
- Benchmark rider exemption (Option 2) initially limited to 24 months, unless part of ongoing efficiency program
- Auto approval occurs on day 61 unless suspended or denied



The New Energy Climate for Ohio Manufacturers Series – Workshop 3

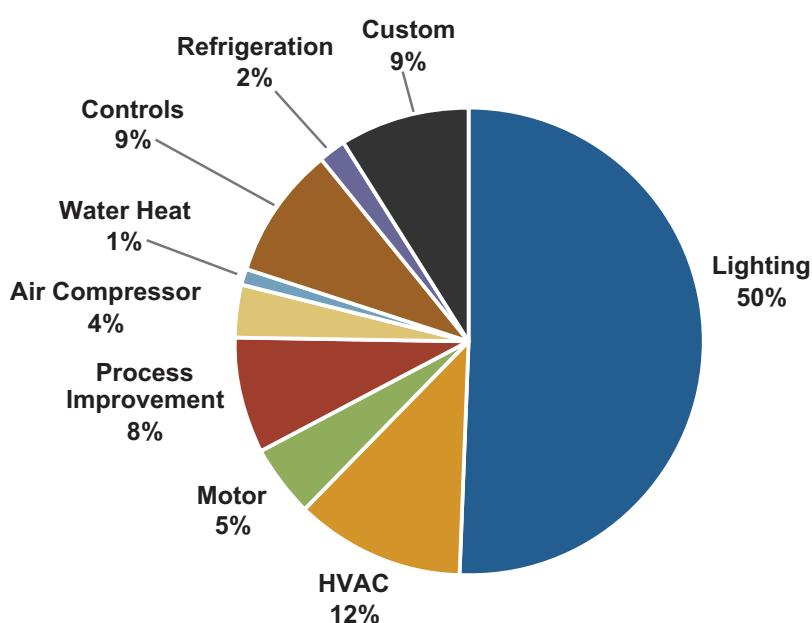
October 20, 2010

8

What is Required to Participate in Process?

- **Submit project application detailing information**
 - Must provide signed affidavit attesting to project details
 - Must provide basis for calculations of kWh savings claimed
 - Must allow access for inspection by PUCO and/or the company
- **Agreement between customers and the company**
 - Customer commits EE savings for utility compliance use
- **Joint application between utility and customer to PUCO**
- **PUCO has final approval authority**
- **Details of this program have been changing and are subject to future changes**

Mercantile Self-Direct Project Breakdown



Typical Project

T-12 to T-8 Fluorescent Lighting Retrofit

	T-12	T-8
Number of Units	1263	964
Wattage	36 W	24 W
Hours per year	3120	3120
kWh per Year	141,860	72,184

Total KWH Savings (141,860 – 72,184) = 68,640 kWh/year

Baseline Customer's Usage = 4,000,000 KWH/year

% Savings = 68,640/4,000,000 = 1.7%



The New Energy Climate for Ohio Manufacturers Series – Workshop 3

October 20, 2010

11

Contact Information

■ Administrators

- COSE
- Industrial Energy Users – Ohio
- Ohio Manufacturer's Association (OMA)
- Ohio Hospitals Association (OHA)
- Ohio Schools Council
- E- Group
- Roth Bros.
- County Commissioners' Association of Ohio
- Association of Independent Colleges and Universities

Or, you may contact your utility directly

■ CEI Customers

- James Frank
Senior Account Manager – Customer Support Services
The Illuminating Company
External: 440-717-6853

■ Ohio Edison Customers

- Mike Orban
Customer Service Specialist
Ohio Edison Company
External: 330-436-4062

■ Toledo Edison Customers

- Greg Flaczynski
Customer Service Specialist
Toledo Edison Company
External: 419-249-4157



The New Energy Climate for Ohio Manufacturers Series – Workshop 3

October 20, 2010

12



Commercial and Industrial Energy Efficiency Programs



The New Energy Climate for Ohio Manufacturers Series – Workshop 3

October 20, 2010

13

New C/I Programs (Rebates and Incentives)

- **Small Enterprise Audits and Equipment Program – R. W. Beck**
 - Subsidized audits identifying efficiency opportunities
- **C/I Equipment Program (Lighting) – R. W. Beck**
 - Rebates for high-efficiency commercial lighting
- **C/I Equipment (Industrial Motors) – R. W. Beck**
 - Incentives for upgrading to NEMA Premium® motors
- **C/I New Construction Program – R. W. Beck**
 - Incentives up to \$15,000 for efficient building shells and equipment
- **C/I Technical Assessment Umbrella Program – R. W. Beck**
 - Assists customers with complex opportunities, custom measures and multi-year projects. Incentives are on a case by case basis.
- **Government Lighting Program – R. W. Beck**
 - Rebates for replacing traffic signals and pedestrian light signals with high-efficiency LED equipment



New C/I Programs Pending PUCO Approval



The New Energy Climate for Ohio Manufacturers Series – Workshop 3

October 20, 2010

14

Typical EE Opportunities for C/I Customers

- **High-bay metal halide replacement with high-intensity fluorescent fixtures (non-standard lighting)**
- **Occupancy sensor lighting controls (standard lighting)**
- **Compressed air system upgrades (custom)**
- **VFDs for pumping, HVAC, and process applications (motors/drives)**
- **Process improvements (custom)**



Program Delivery Partners

- **R.W. Beck (an SAIC Company)**
 - Selected as FirstEnergy Implementation Partner
 - Strong track record of successful program delivery
- **Program Allies**
 - Program administrators, vendors, consultants, contractors providing products and services
 - Leverage existing relationships
 - Trained to provide incentive application processing support
- **FirstEnergy Account Managers**
 - Assigned to large customers and national accounts
 - Trained to provide program awareness information and to leverage program resources



Thank You

Questions & Answers



The New Energy Climate for Ohio Manufacturers Series – Workshop 3

October 20, 2010

17