

# DUQUESNE LIGHT

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## Act 129 Collaborative Exchange Meeting Industrial Subgroup

# **DUQUESNE LIGHT**

## **Act 129 Collaborative Exchange Meeting**

**April 22, 2009**

### **Agenda**

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- I. Welcome/Introductions
- II. General Session
- III. Breakout Sessions
- IV. Subsequent Subgroup Meetings

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# General Session

# General Session

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- Review:
  - Requirements of Act 129
  - Forecast Results
- Sector and Sub-sector Statistics

## What are the goals?

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- The Act requires the achievement of 1.0% and 3.0% reductions in consumption in our service territory by May 31, 2011 and May 31, 2013 respectively, as measured against the June 2009 – May 2010 kWh sales forecast.
  - 140,885,117 kWh by 2011
  - 422,565,351 kWh by 2013
- The Act requires the achievement of a 4.5% reduction by May 31, 2013 in peak demand in our service territory as measured against the 2007 June – September average of the 100 hours of peak demand.
  - 113 MW in the summer of 2012
- Of these targets, 10% of the reductions must come from government, municipal, educational and non-profit accounts.

## Where does the funding for the programs come from?

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- Act 129 sets annual spending on the programs at 2% of the EDC's 2006 total retail revenue. For Duquesne that equates to a little under \$20 million per program year.
- Law provides for current recovery of these dollars from customers classes relative to the dollars expended on the programs for each class.
- Duquesne is also studying the stimulus package for opportunities to take advantage of funding for energy efficiency that would allow for a broader implementation of our programs and greater reductions in energy use and demand.

## Which programs will qualify for inclusion in Duquesne's plan?

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- Measures that will get PUC approval **MUST** be cost effective as measured by a Total Resource Cost Test, the particulars of which are being developed by the PUC.
- This test includes **ALL** expenditures on a program measure, both what the customer contributes and what Duquesne Light would contribute.
- The ultimate plan to be approved should represent an array of programs that optimize the available funding to achieve the greatest energy and peak demand savings.

# Forecast Annualized Energy Efficiency Potential and Program Budgets

## DLCo Forecast Annualized Energy Efficiency Potential and Program Budgets

	(2011) Sector Use kWh	Technical Potential kWh	Economic Potential kWh	Achievable Program Potential kWh	Achievable Life-Cycle Potential kWh	Achievable Program Potential kW	Program Costs	NPV Avoided Cost of Supply	TRC
<b>Residential</b>	4,276,840,291	464,548,955	263,784,114	57,019,772	916,942,563	27,927	\$5,072,989	\$55,777,299	4.2
<b>Commercial</b>	6,852,783,429	313,000,430	207,886,260	67,973,214	811,446,874	15,950	\$9,515,151	\$54,345,940	2.2
<b>Industrial</b>	2,914,124,575	853,866,072	703,725,145	32,056,756	320,625,105	4,951	\$3,984,097	\$20,728,167	3.6
<b>Composite</b>	14,043,748,296	1,631,415,457	1,175,395,519	157,049,742	2,049,014,542	48,828	\$18,572,237	\$130,851,406	3.0
				<i>% Annual Consumption</i>	1.1%				

		Annual kWh Use	Achievable kWh	Impact %	Program Funding	% Costs
<b>Residential</b>	30%	4,276,840,291	57,019,772	1.3%	\$5,072,989	27.3%
<b>Commercial</b>	49%	6,852,783,429	67,973,214	1.0%	\$9,515,151	51.2%
<b>Industrial</b>	21%	2,914,124,575	32,056,756	1.1%	\$3,984,097	21.5%
		14,043,748,296	157,049,742		\$18,572,237	

# Customer Sector Information - Industrial

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## Industrial Market Segments

	<b>2011</b>		<b>Sub-Program Focus</b>	
	<b><u>Energy (kWh)</u></b>			
Food Processing	83,021,048	2.8%	Umbrella Program	8.0%
Textiles / Apparel	886,599	0.0%	Primary Metals	54.5%
Lumber / Furniture	4,686,239	0.2%	Chemicals	19.5%
Paper	462,822	0.0%	Mixed Segments	18.0%
Printing	38,469,324	1.3%		
Chemicals	577,320,680	19.8%		
Petroleum / Coal	4,790,976	0.2%		
Rubber / Plastics	46,538,528	1.6%		
Stone / Clay / Glass	214,176,577	7.3%		
Primary Metals	1,588,592,204	54.5%		
Fabricated Metals	112,223,274	3.9%		
Industrial Machinery	77,479,766	2.7%		
Electronics	113,514,590	3.9%		
Transportation Equipment	24,618,855	0.8%		
Instruments	5,350,047	0.2%		
Miscellaneous Mfg	21,993,046	0.8%		
<b>Total Industrial</b>	<b>2,914,124,575</b>	<b>100.0%</b>		

# Industrial Sector Programs

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## Industrial Umbrella Program

- Provides a level of service available to *all* customer sectors
- Puts in-place standard terms, conditions, operating processes and incentive levels (prescriptive and custom)

## Sub-Programs (specialized programs focused on overcoming participation barriers of the major market segments)

- Primary Metals
- Chemical Manufacturing
- Mixed Segments

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# Breakout Sessions

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- Introduction (Customers and Service Providers)
- Review Section/Sub-sector Statistics
  - Energy Consumption
  - Program Descriptions
  - Implementation Approach
    - Delivery process
    - Measures
  - Estimated Funding Goals & Budgets (incentives/administration)
- Receive and Record Comments

# Customer Sector Information - Industrial

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# High-Level Description of Sub-Programs

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- Program Services
  - No cost energy audits
  - Retrofit recommendations and assistance with program applications
  - Incentives

## Prescriptive Incentives

Lighting	32.6%
HVAC	45.8%
Refrigeration	60.9%
Office Equip	50.0%

## Preliminary Custom Incentives

Lighting	\$0.11
HVAC	\$0.28
Refrigeration	\$0.21
Office Equipment	\$0.12
Industrial Process	\$0.06

- Market segment specific measure focus
- Project oversight, technical assistance and operations training
- Sub-Program Implementation
  - Door to door outreach by implementers with market segment expertise
  - Development and dissemination of specific marketing materials (direct mail, email and internet).
  - Implementer networking with trade associations, chambers of commerce, etc

# Implementation Approach

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EE Sector	Program	Implementation
Residential	Residential Rebate Program Low-Income Weatherization	Core Team (or Contractor) Sub-program Contractor
Commercial	Commercial Rebates (umbrella) Office Buildings Healthcare Retail Stores & Restaurants Education Public Agency Program (10%)	Core Team (or Contractor) Sub-program Contractor Sub-program Contractor Sub-program Contractor Sub-program Contractor Core Team (or Contractor)
Industrial	Industrial Rebates (umbrella) Primary Metals Chemicals Industrial Rebates (Mixed)	Core Team (or Contractor) Sub-program Contractor Sub-program Contractor Sub-program Contractor
Demand Response Programs	Utility Interface Residential DR Small/Mid Commercial DR Large C/I Curtailable Load	Core Team (or Contractor) Sub-program Contractor Sub-program Contractor Sub-program Contractor

# Industrial Sector Measures

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All Commercial Measures  
Compressed Air Systems  
  Operations and Maintenance  
  Controls  
  System Optimization  
  Sizing  
  Motors, motor practices and variable speed drive  
Fan Systems  
  Operations and Maintenance  
  Controls  
  System Optimization  
  Sizing  
  Motors, motor practices and variable speed drive  
Pump Systems  
  Operations and Maintenance  
  Controls  
  System Optimization  
  Sizing  
  Motors, motor practices and variable speed drive  
Power Recovery  
Refinery Controls  
Energy Star Transformers  
Optimize Drying Process  
Bakery - Process (Mixing) - O&M  
O&M - Drives Spinning Machines  
Air Conveying Systems  
Replace V-Belts  
Gap Forming Paper Machine  
High Consistency Forming  
Optimization Control PM  
Efficient Practices Printing Press  
Efficient Printing Press (fewer cylinders)  
Light Cylinders  
Clean Room - Design and Control  
Process Controls (batch + site)  
Process Optimization  
O&M - Extruders/Injection Moulding  
Extruders/Injection Moulding-Multipump  
Direct Drive Extruders  
Injection Moulding - Impulse Cooling / Direct Drive  
Efficient Grinding  
Efficient Drives - Rolling  
Drives - Scheduling  
Base Heating  
Bakery - Process  
Drying (UV/IR)  
Heat Pumps - Drying  
Top-Heating (glass)  
Efficient Electric Melting  
Intelligent Extruder (DOE)  
Near Net Shape Casting  
Heating - Process Control  
Efficient Curing Oven  
Heating - Optimization Process (M&T)  
Heating - Scheduling  
Efficient Desalter  
New Transformer - Welding  
Efficient Processes (welding, etc.)  
Process Control  
Power Recovery  
Refinery Controls  
Membranes for Wastewater

# Estimated Goals & Budgets

Industrial	Program Budgets				Program Impacts Energy (kWh)			
	2009	2010	2011	2012	2009	2010	2011	2012
Industrial Rebates (umbrella)	\$316,083	\$318,728	\$321,373	\$324,041	641,135	2,564,540	2,585,826	2,607,289
Primary Metals	\$2,153,845	\$2,171,872	\$2,189,898	\$2,208,075	4,368,818	17,475,270	17,620,315	17,776,564
Chemicals	\$782,743	\$789,294	\$795,845	\$802,451	1,587,700	6,350,801	6,403,513	6,456,662
Industrial Rebates (Mixed)	\$698,358	\$704,203	\$710,048	\$715,941	1,416,536	5,666,144	5,713,173	5,760,592
	\$3,951,029	\$3,984,097	\$4,017,164	\$4,050,508	8,014,189	32,056,755	32,322,827	32,601,107

Industrial	2010		
	Administration	Incentives	Total
Industrial Rebates (umbrella)	\$168,926	\$149,802	\$318,728
Primary Metals	\$1,151,092	\$1,020,780	\$2,171,872
Chemicals	\$418,326	\$370,968	\$789,294
Industrial Rebates (Mixed)	\$373,228	\$330,975	\$704,203
	\$2,111,572	\$1,872,525	\$3,984,097

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## Discussion, Comments & Recommendations

# Contact Information

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