Exelon 2020: A Low Carbon Roadmap for Business Management

Pew Center on Global Climate Change Energy Efficiency Conference
April 7, 2010

Val Jensen
ComEd

Exelon (NYSE: EXC)

- ✓ **One of the nation's largest integrated electric utilities**
  - **2009 Total Assets: $49.2 billion**
  - **2009 Revenues: $17.3 billion**
  - **Employees: 19,329**
  - **Customers: 5.4 million electric, 485,000 gas**
  - **Generating Assets: 31,303 MW, including owned generation and long-term contracts**

Exelon Generation

Capacity (MW)	
Owned:	24,850
Contracted:	6,153
Total	31,003

Generating Plants
Nuclear
Hydro
Coal/Oil/Gas Base-load
Intermediate
Peaker

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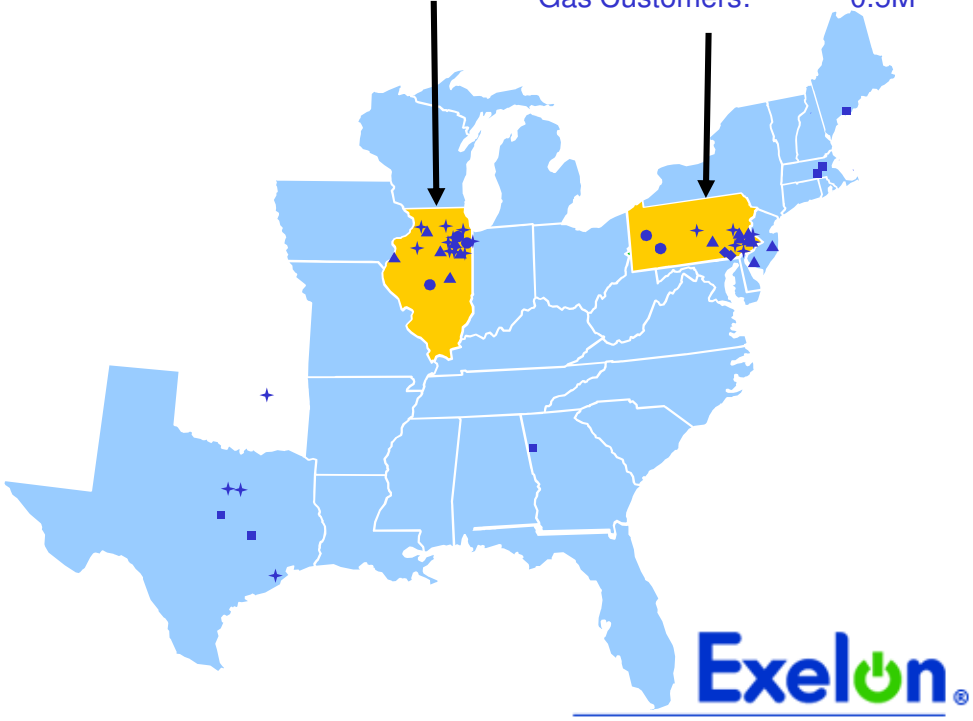
Electricity Customers: 3.8M

PECO
Electricity Customers: 1.6M
Gas Customers: 0.5M

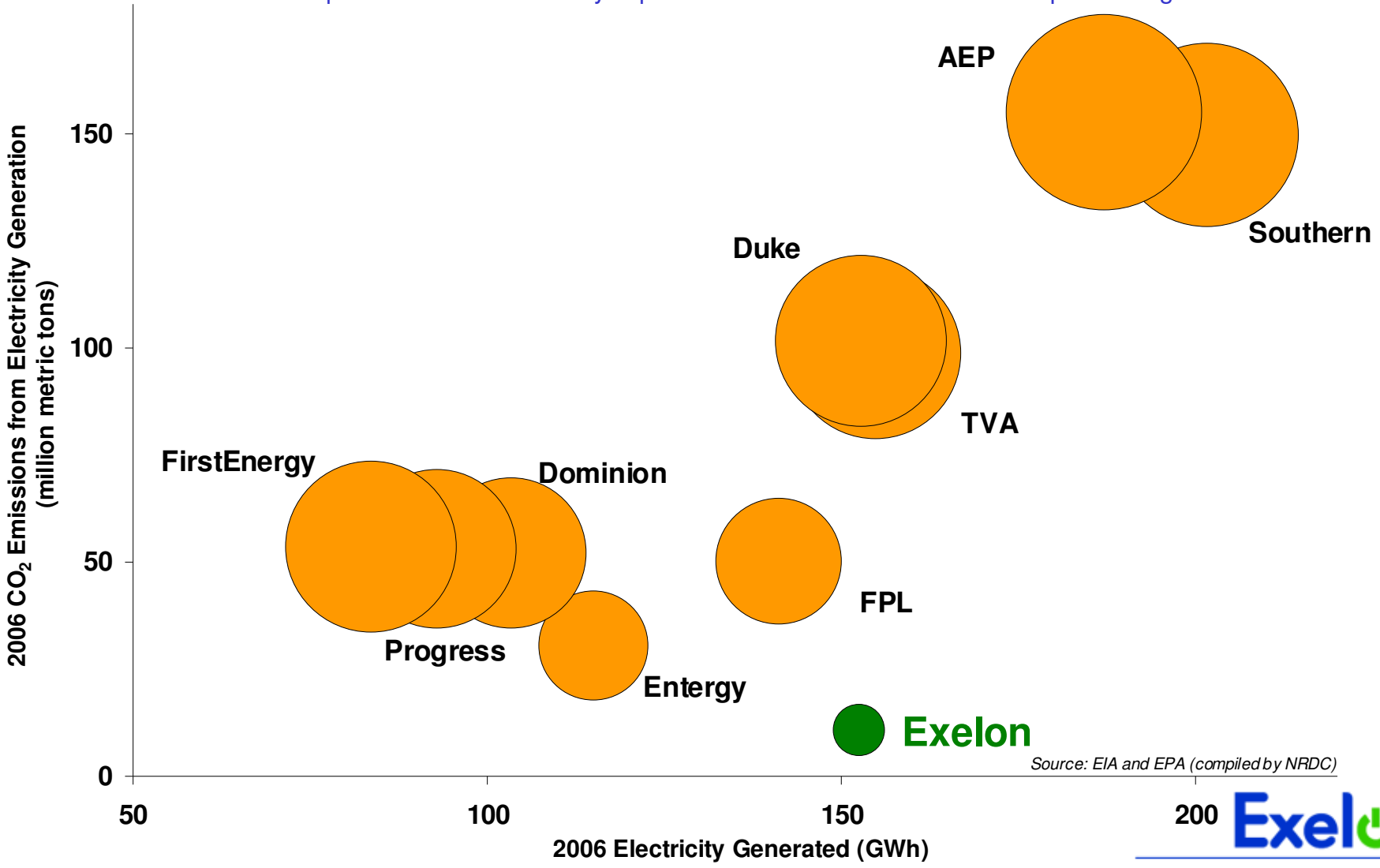


2009 Exelon Generation - Ownership Equity		
	Output Measured in MWh	**Capacity Measured in Megawatts**
Nuclear	92%	68%
Coal	5%	6%
Oil	<1%	8%
Gas	<1%	11%
Renewables	2%	7%

Exelon CO_2 Emissions Versus Industry

CO2 Emissions of 10 Largest U.S. Electricity Generators in 2006

Bubble size represents carbon intensity expressed in terms of metric tons CO2 per MWh generated



Source: EIA and EPA (compiled by NRDC)

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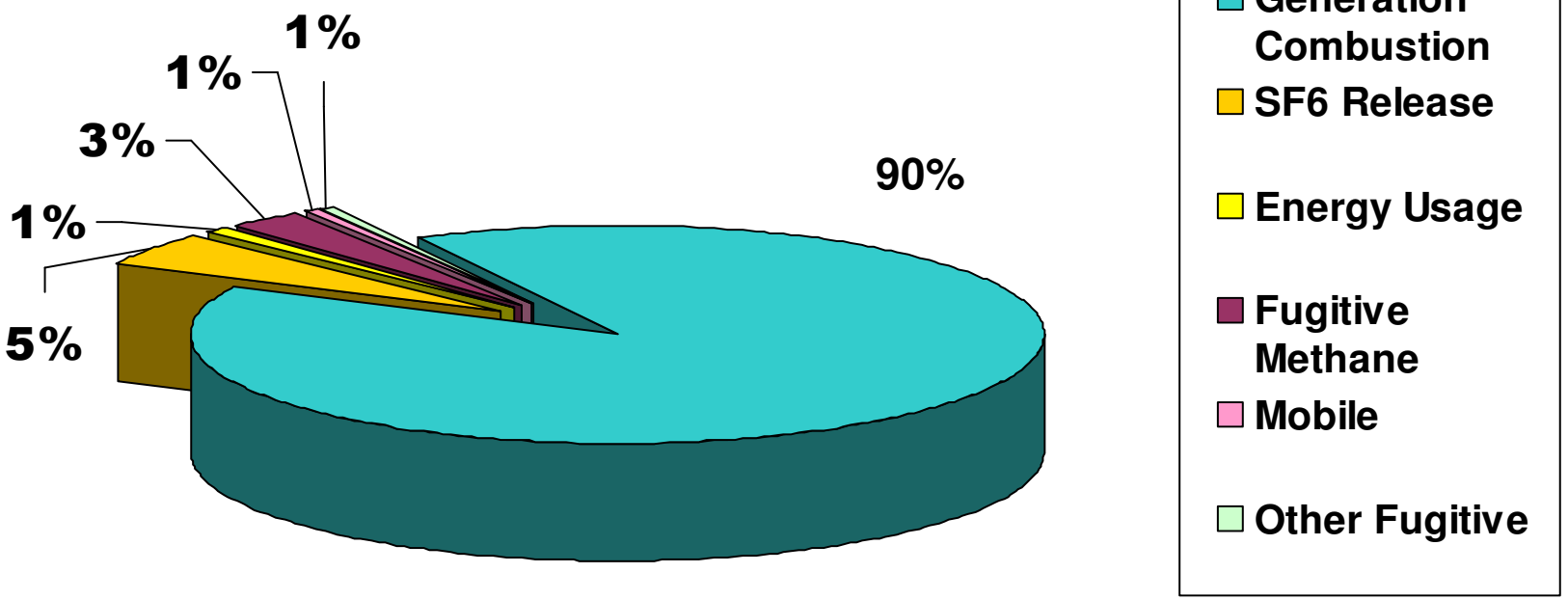
Exelon GHG Emissions – 2001 Baseline

Emissions by Type



Emissions by Business Unit

93% Power
2% Nuclear
5% Delivery
<1% Services

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Voluntary Commitment to Reduce CO_2e Emissions

CLIMATE LEADERS
U.S. Environmental Protection Agency

- ✓ **Goal**: Exelon will achieve a reduction of 8% below its 2001 level of greenhouse gas (GHG) emissions by 2008
  - 2001 GHG emissions approximately 15.8M metric tons
  - 8% reduction equates to a 1.3M metric ton reduction
- ✓ **Results**: Exelon's 2008 GHG emissions were almost six million metric tons, or more than 35%, below 2001 levels
  - 5.2 million metric tons of reductions from reduced fossil generation
    - Less fossil generation due to market conditions
    - Retirement of inefficient units
    - Energy efficiency
  - 0.8 million metric tons of reductions from other sources
    - Sulfur Hexafluoride (SF6) emission reductions in electrical equipment
    - Energy efficiency and reduced electricity consumption in operations
    - Gas distribution system fugitive emission reductions

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Exelon 2020 Goal and Plan Announced July 2008

Reduce, offset or displace more than 15 million metric tons of GHG emissions per year by 2020

Reduce or offset our footprint by greening our operations

- ✓ Reduce Exelon's energy consumption by 25%
- ✓ Improve the efficiency of the generation and delivery system for electricity and natural gas
- ✓ Continuously reduce GHG emissions from our vehicle fleet
- ✓ Build an industry-leading green supply chain
- ✓ Help employees adopt green practices in the workplace and at home
- ✓ Offset a portion of emissions

Help our customers and the communities we serve reduce their GHG emissions

- ✓ Implement industry-leading energy efficiency and demand response programs
- ✓ Convey price signals to help customers use energy more efficiently
- ✓ Enhance wholesale and retail markets for green products and services
- ✓ Increase customer awareness of approaches to reduce GHG emissions

Offer more low carbon electricity in the marketplace

- ✓ Reduce fossil generation emissions and expand low-carbon fossil generation capacity
- ✓ Increase investment in renewable power
- ✓ Expand nuclear generation

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How Exelon Is Managing its 2020 Goal

- ✓ Exelon 2020 program initiated and championed by CEO
- ✓ Governance and Oversight by Executive Integration Steering Team
- ✓ Each operating company has established annual goals and commitments. Integrated into quarterly operational and financial reviews.
  - Direct GHG emission "not to exceed" targets based on reductions from Exelon's 2001 baseline (All operating companies)
  - Customer megawatt hour load reduction targets (ComEd and PECO)
  - Nuclear generation efficiency projects (uprates, generator rewinds, turbine upgrades, high efficiency transformer upgrades)
- ✓ Supply curves of GHG abatement options are updated several times per year and reviewed by senior management
- ✓ Exelon Corporate Strategy & Exelon 2020 group provides internal coordination and leadership
- ✓ Communicate progress and results to stakeholders via reports, web and presentations

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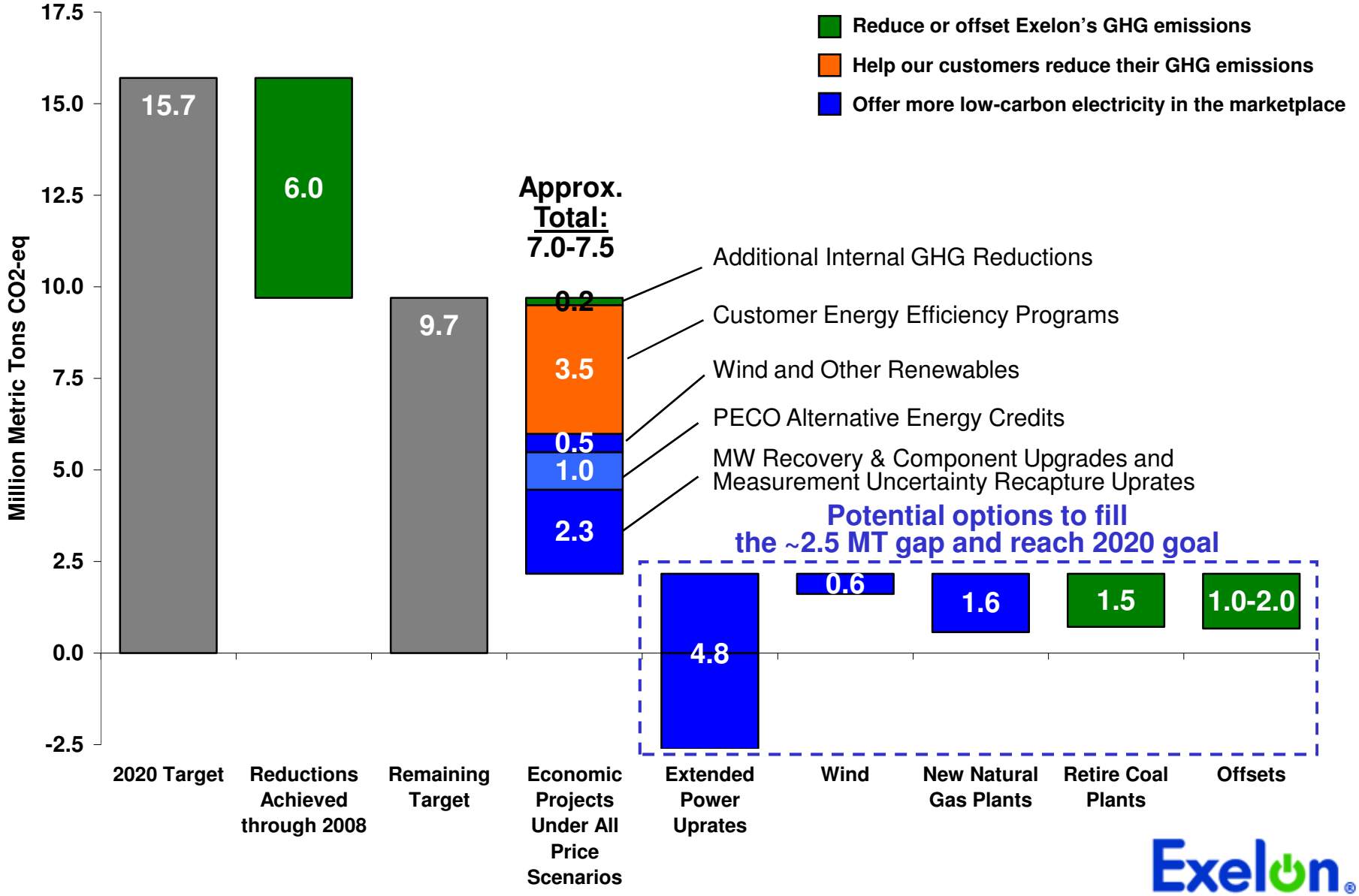
Exelon Remains on Track to Meet its Remaining Goal



Note: Emissions abatement estimates for new generation capacity represents emissions reduced in the market as a result of the project less emissions introduced due to the project (if any).

ComEd's Program Summary for Exelon 2020

- ✓ Invest and implement the twenty-one broad ranging initiatives which includes:
  - Smart Ideas – Largest contributor for ComEd
  - Internal building energy efficiency
  - Pricing signal programs
  - Prairie grass offsets
  - Industrial and office recycling

- ✓ Lead the advancement of technology

  Examples:
  - SF6 Alternatives
  - Plug-in Hybrids
  - Smart Grid

- ✓ Engage the workforce for continuous improvement

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ComEd Program Example: Reduce Building Energy Use

✓ Overview – Energy Reduction Challenge

- Reduce energy consumption in buildings by 25% in 2012 (goal)
- Conduct energy audits and implement economically viable opportunities
- Work with key managers to influence employee behavior with a vision to increase energy efficiency

✓ Goals

- 3% per year improvement through 2012

✓ Progress – Total energy

- 2008 (actual) – 29.7%
- 2009* (actual) – 29.5%
- 2010 (forecast) – 27.7%
- 2011 (forecast) – 30.1%
- 2012 (forecast) – 32.1%

* Reallocation of building usage between business units

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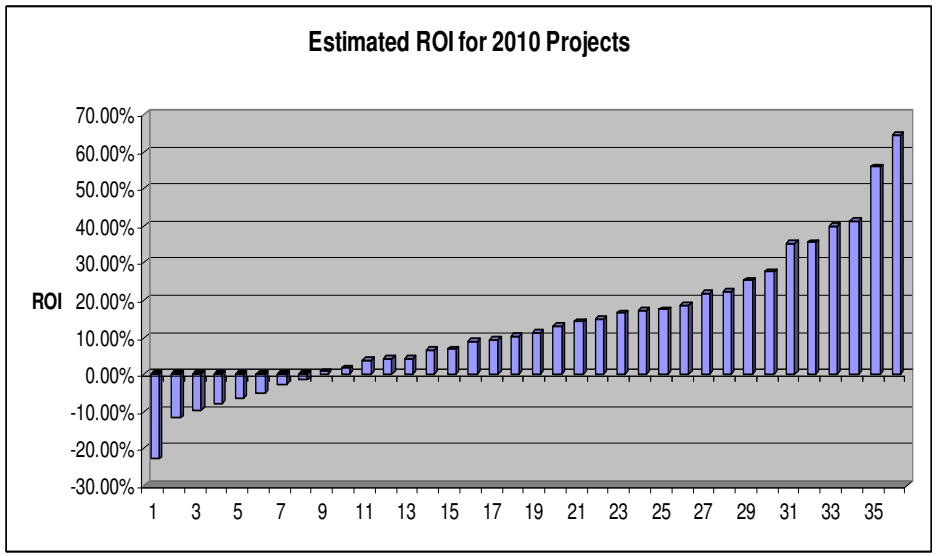
Summary of Key Building Projects

- ✓ Lighting
  - High efficiency lighting technology
  - Occupancy controls
- ✓ HVAC
  - Variable speed drives
  - Premium efficiency motors
  - Controls
  - Repairs
  - Equipment operations scheduling
- ✓ Space utilization
  - Space consolidation
  - Decommissioning
- ✓ Projects for 2010
  - 10 Facilities
  - 43 projects
  - 2.6 million kWh reduction – estimated (roughly 5 year payback)



Primarily lighting

High ROI projects largely operational

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Warehouse Lighting Retrofit

Estimated Energy Savings: 67%,

Demand Reduction: 21 kW

Old Lighting System:

(108) Metal Halide fixtures, 290 W/ea.

Foot Candle: 7-21 fc at floor level

New Lighting System:

(72) T8 fixtures, 4 – 4' lamps, 144 W/ea.

Foot Candle: 29-54 fc at floor level

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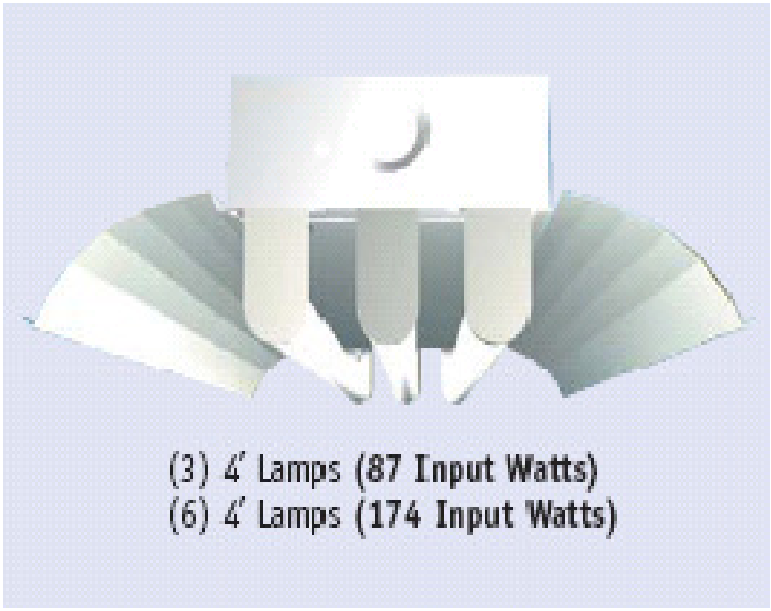
Garage Lighting Retrofit

Estimated Energy Savings: 42%,

Demand Reduction: 5.67 kW

Existing Lighting System:

(45) HPS fixtures, 300 W/ea.



Proposed Lighting System:

(45) T8 fixtures, 6 - 4' lamps, 174 W/ea.

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Customer Energy Efficiency Programs

Annual Goals	2008	2009	2010	Total
Budget ($ Millions)	$ 39.4	$ 81.6	$ 126.7	$ 247.7
ComEd Energy Efficiency Savings (MWh)	148,842	312,339	458,919	920,100
DCEO Energy Efficiency Savings (MWh)	39,887	81,352	125,158	246,397
ComEd Demand Response Goal (MW)	11.7	11.1	10.0	32.8

Projected Second Plan Goals: Annual Goals	2011	2012	2013	Total
Budget ($ Millions)	$ 170.0	$ 210.0	$ 295.0	$ 675.0
Energy Efficiency Savings (MWh)	780,000	970,000	1,360,000	3,110,000
Demand Response Goal (MW)	10.0	10.0	10.0	30.0

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Customer Energy Efficiency Programs

Commercial and Industrial Programs

- ***Prescriptive Incentives:*** offer pre-set incentives for high efficiency equipment *(e.g., lighting, HVAC, refrigeration)*
- ***Custom Incentives:*** offer customized incentives for more complex energy efficiency projects *(e.g., unique upgrades to building operating systems, industrial processes)*
- ***Retro-commissioning:*** enhancing existing building operating systems
- ***New Construction:*** Design and financial assistance for major rehab and new construction that exceeds standard practice for energy efficiency

Program Year 2 Highlights

2,055 projects

282 lifetime gigawatt-hours

51 MW

$17M in projected incentives

First-year average cost of 6.4 cents/kWh

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For More Information: www.exeloncorp.com

- 2020 Low Carbon Roadmap

Part of Exelon 2020 exeloncorp.com a low-carbon roadmap℠

- 2020 Low Carbon Roadmap 2009 Update

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