



An Exelon Company

RCx Insights and Best Practices from Utilities

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Learning Objectives

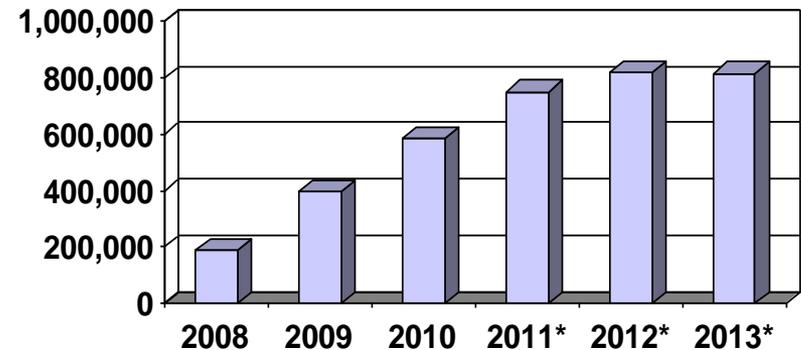
1. **ComEd's RCx Program and all its flavors**
2. **Case studies for Museum, Hospital, and Office**
3. **Program design changes and lessons learned**
4. **Anticipated future direction of the program**

Smart Ideas Background

✓ What is the Smart Ideas Program?

- Provides incentives for energy efficient upgrades and incentives
- Part of Illinois energy legislation passed in 2007
- Program implemented by ComEd, Ameren Illinois, and the Illinois Department of Commerce and Economic Opportunity
- ComEd goal: Reduce energy consumption by 1.2 million MWh over the first 3 years

Smart Ideas for Your Business
Energy Efficiency Goal (MWh)



* Estimated based on planning projections

Retro-Commissioning

Two Types: Commercial Building and Compressed Air

Building Retro-Commissioning

- Incentive is the cost of engineering study and M&V
 - Study performed by ComEd-approved service provider
 - Electric-only
 - 500 kW and larger
 - 150,000 sq ft and larger
 - Measure implementation deadline
 - Customer implementation requirement of \$10,000 or \$20,000



Retro-Commissioning

Two Types: Commercial Building and Compressed Air

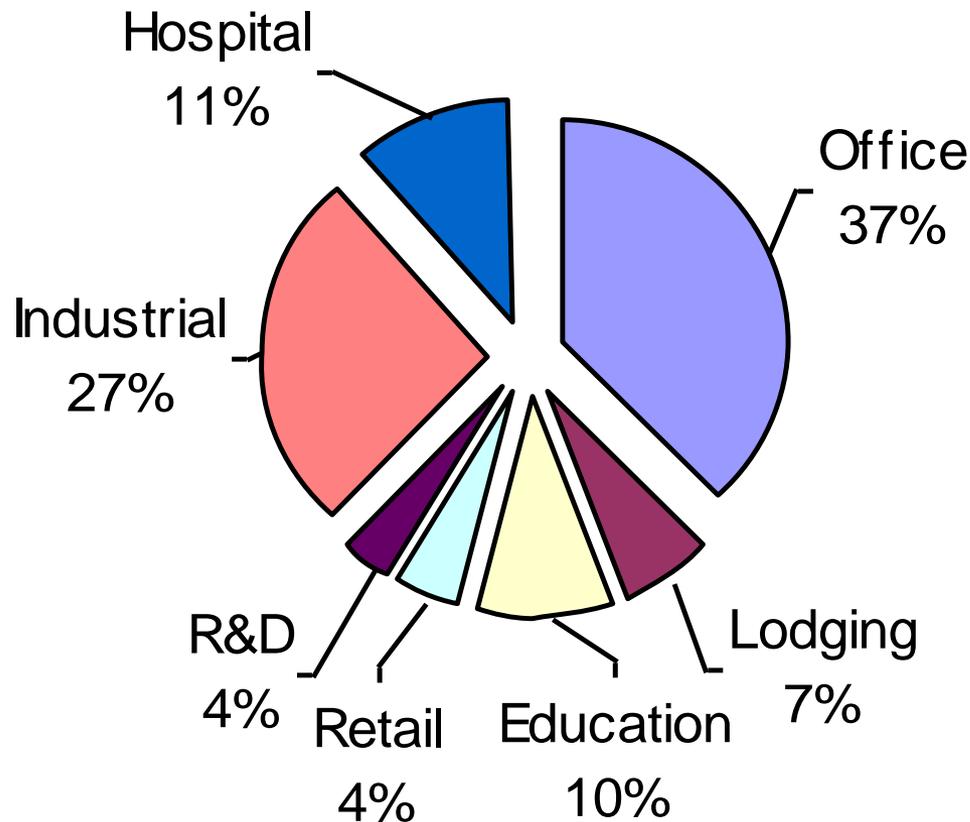
Compressed Air Retro-Commissioning

- Two tracks
 - 100 – 499 HP
 - Incentive pays for portion of study
 - Customer leak-fix requirement (50% by volume)
 - 500 HP and larger
 - Same incentive structure as commercial bldg
- Customer is paid \$0.01/ M&V kWh



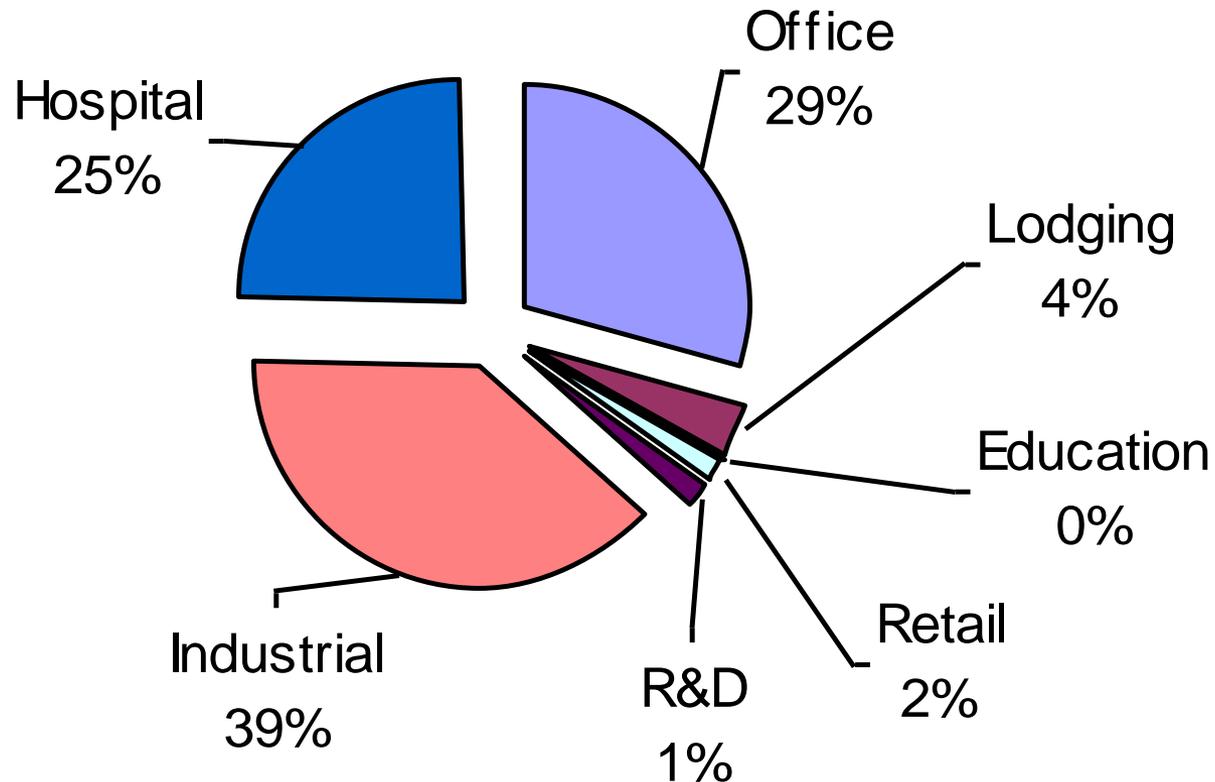
Retro-Commissioning – Program Year 2

MWh Savings by Building Type



Retro-Commissioning – Program Year 3

MWh Savings by Building Type



Case Study – Chicago History Museum

- Pilot project – 2008
- 235,000 sq ft
- Value of incentive: \$43,296
- Annual energy savings: 491,754 kWh
- Annual cost savings: \$40,000
- Total implementation cost: \$11,400
- Payback period: < 4 months



Case Study – Chicago History Museum

✓ Measures Implemented

- Control OA volume based on CO2 levels
- Economizer operation
- Fan scheduling
- Hot water temperature reset
- Chiller optimization

Case Study – Advocate Good Samaritan Hospital

- PY2 project
- 966,172 sq ft
- Value of incentive: \$50,400
- Annual energy savings: 666,768 kWh
- Annual cost savings: \$59,462
- Total implementation cost: \$82,999
- Payback period: < 17 months



Case Study – Advocate Good Samaritan Hospital

- ✓ Measures Implemented
 - Optimize central plant CHW system
 - Repair economizer dampers
 - Repair faulty humidity sensors
 - Revise economizer mode setpoint

Case Study – 55 West Monroe

- PY2 project
- 803,000 sq. ft.
- Value of incentive:
\$74,713
- Annual energy savings:
755,400 kWh
- Annual cost savings:
\$64,000
- Total implementation
cost: \$28,300
- Payback period: < 5
months



Case Study – 55 West Monroe

- ✓ Measures Implemented
 - Fan optimization
 - Electric heat schedule setback
 - Supply air temperature optimization
 - Chilled water temperature reset
- ✓ Whole-building energy consumption down 14%
- ✓ AHU energy consumption down 31%

Program Lessons Learned

- Incentives need to be profitable for RSPs
- Customers need accurate baselines
 - Energy usage
 - Equipment condition
- Repeat business and referrals are critical
- Can lead horses to water, but can't make them drink

Anticipated Future Direction

- Monitoring-Based Commissioning
- Niche program elements and system types
- Different incentive systems for RSPs?
- Implementation incentive for customer?
- Collaboration with gas utilities
- Studying viability of smaller buildings
- Cost-effectiveness
- Next 3 years:
 - Goals of ~136 GWh
 - Budget of ~\$24MM

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Thank you!

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