

Remote Building Analysis

- ✓ Energy consumption in commercial buildings is dependent on many different factors:
 - Age and condition of building structure
 - Types, age/condition, and operating schedules of building systems such as HVAC and lighting
 - Occupancy levels
 - Weather
 - Needs of business being conducted by tenants

- ✓ The RBA approach identifies operational improvements and retrofit opportunities within a building through statistical analysis:
 - 12+ months of hourly energy usage data for the building
 - 12+ months of hourly weather data
 - Characteristics of similar buildings from large databases of building stock in same geographic area

- ✓ As no onsite visits or direct measurements of equipment performance are needed, RBA can generate recommendations for energy efficiency improvements at very low cost compared to traditional RCx evaluation methods.

Common Retro-Commissioning Measures

- ✓ By the end of PY5, the ComEd-led RCx program will have completed approximately 150 retro-commissioning projects
- ✓ Among those projects, the three measure categories responsible for the most kWh savings are:
 - Equipment Scheduling (22.0 GWh)
 - Fan Optimization / Air Distribution (19.5 GWh)
 - Economizer and Outdoor Air Control (9.1 GWh)
- ✓ The three most commonly identified individual measures are:
 - Scheduling Air Handling Units for Space (111 occurrences)
 - Economizer and Outdoor Air Control (61)
 - Supply Air Temperature Reset (48)
- ✓ The three measures responsible for the most total savings are:
 - Scheduling Air Handling Units for Space (15.6 GWh)
 - Duct Static Pressure Reduce/Reset (8.6 GWh)
 - Economizer and Outdoor Air Control (5.3 GWh)

Customer Engagement

- ✓ In order to generate kWh savings, energy efficiency measures identified by an RBA must be implemented
- ✓ Direct customer involvement is needed:
 - Approval of projects by decision-makers
 - Access to facilities
 - Contribution of funding / personnel resources
- ✓ Potential strategies for customer engagement include:
 - Direct customer contact by utility or program implementer staff via direct mail, e-mail, phone call, etc.
 - Provide leads to third parties for followup:
 - Existing trade ally network
 - RCx service provider network
 - Mechanical/electrical contractors already working in the building
- ✓ Effectiveness of making initial contact with customer before vs. after performing the RBA will be evaluated (On Demand vs. Unsolicited)