

# New York Mercantile Exchange



## Retro-commissioning

A systematic process for improving an existing building's performance by identifying and implementing relatively low-cost operational and maintenance improvements.

## Retro-commissioning Assistance

NYSERDA's *Guideline to the Commissioning Process for Existing Buildings* provides basic information on applying the RCx process. It covers industry terminology, phases of RCx, team member responsibilities, and costs and benefits of typical operation and maintenance improvements.

## NYSERDA Resources for RCx

Those interested in RCx have access to a variety of valuable resources, technical assistance, and financial incentives. NYSERDA's website contains case studies, an RCx Guide, templates for developing scopes of work, and sample RCx plans and reports. Owners may select from NYSERDA's list of *Participating RCx Service Providers* and can also receive incentives through NYSERDA's Technical Assistance and FlexTech programs which cost share up to \$50,000 for RCx investigation studies.

## Retro-commissioning Training at the New York Mercantile Exchange Building

### New York City

#### Background

In June 2005, the New York Mercantile Exchange (NYMEX) hosted an innovative training session at its New York City facility, sponsored by the New York State Energy Research and Development Authority (NYSERDA) and its State Technologies Advancement Collaborative (STAC) partners. The retro-commissioning (RCx) training consisted of four days of lecture and field work focused on the technical aspects of the RCx process. The hands-on portions of the training utilized the mechanical systems of the NYMEX building and allowed the students to correlate theory with application in a working building. As a result, newly-trained participants assisted in identifying measures in the facility that represented opportunities to improve building performance and save up to \$190,000 in annual energy costs.

Advanced training material covered the RCx process as well as technical methods for identifying opportunities. It included reviewing historical operating information; examining drawings and specifications; looking at visible indicators; collecting utility consumption records; using data logging; trending and system flow diagrams; and performing targeted testing. The training focused on ways the Functional Test Guide and the Commissioning Test Protocol Library can be utilized to streamline testing during RCx. The class used data loggers to gather trending data to identify several additional savings opportunities that could optimize the air handling system controls.

#### Findings and Results

As a result of the facility walk-through and in-building testing, eleven RCx findings were identified relating to improved equipment performance, improved indoor air quality, and energy savings. The measures included pump savings, providing removable insulation covers for steam valves, and optimizing the building's economizers. Most of the savings would be obtained without major capital expenditures through modification and adjustment of existing machinery, operating strategies, and control programming. Implementing these measures would save \$148,000 – \$190,500 (up to 950,000 kWh & 2,200 M-lb of steam) annually.

A full RCx investigation will leverage in-house mechanical staff expertise along with support from an experienced commissioning provider, and will use existing service contracts to implement recommended measures.

Results in the NYMEX facility will demonstrate the potential for improved equipment performance and significant energy savings, while spreading RCx knowledge to other facilities in the area through future training sessions. The NYMEX facilities department is involved in on-going training for local building engineers and seeks to expand this involvement to include in-building training sessions utilizing building equipment and systems. NYMEX, as witnessed by its RCx initiatives and its support of the NYSERDA sponsored training, has a long term commitment to RCx as an energy conservation strategy. This strategy provides a unique opportunity for the facility to accumulate the knowledge gained from its RCx experience and formulate materials for a training program and curriculum.

*"This training gave me invaluable hands-on experience to use what I was learning in the classroom – now I won't forget it!"*

*– NYMEX building staff*



For more information about trainings and other commercial energy efficiency services, contact NYSERDA at:  
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toll free 1-866-NYSERDA, locally (518) 862-1090,  
e-mail: [info@nyserdera.org](mailto:info@nyserdera.org), or visit [www.nyserdera.org](http://www.nyserdera.org)

