Program Overview

EIP

Retrocommissioning (RCx)

Definition:

RCx is a systematic process for identifying and implementing **low-cost operational and maintenance improvements in existing buildings**. By evaluating and optimizing building systems and associated controls, RCx improves functionality, increases occupant comfort, and saves energy.

Intent:

The RCx program provides no-cost investigation and verification support to help facilities uncover and implement quick-win energy efficiency projects.



Program Sponsor

NYSEG · RG&E
Part of the Avangrid family

Program Implementer

Energy Infrastructure Partners

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Website:
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RCx Program

Identifying & Realizing Savings Through RCx



LOW/NO COST ENERGY EFFICIENCY MEASURES



CONTROLS ADJUSTMENTS AND SETPOINT CHANGES



OPERATIONAL AND MAINTENANCE REPAIRS THAT SAVE ENERGY

Customer Benefits of RCx



Cost Savings



Reduced Environmental Impact



Regulatory Compliance



Stewardship and Recognition



Enhanced Operational Efficiency



Reduced Maintenance



Improved Resilience

Program Design & Incentives

Investigation Phase

- Report format, list of RCx measures & energy/payback benefits
- Completed by Technical Service Provider (TSP)
- No cost to customer, *100% Utility-funded*

Implementation Phase

- Customer decides which measures to implement
- Customer can implement either in-house or via their preferred contractor
- EIP provides high-level, product-agnostic energy engineering guidance

Measurement & Verification Phase

- Final realized savings & project closeout
- Completed by TSP
- No cost to customer, *100% Utility-funded*

Deliverables and Timeline

Scoping & Kickoff

2-4 weeks

Participation Agreement signed, TSP scope of work and fees finalized, and project kickoff held

Investigation Phase

2–4 months

Site visit, baseline development, RCx opportunity identification, report generation & delivery

Implementation Phase

2–6 months

Installation, configuration, functional testing of approved measures

Implementation spend tracking

M&V Phase

1-2 months

Verification of savings, documentation, and reporting

Persistence & Closeout

2-4 weeks

Persistence meeting:

What changes were made and why they matter

How to maintain performance over time

Customer Commitment

Participants commit to invest a minimum of $5,000 into implementing quick-win energy-saving measures within 6 months of RCx study delivery

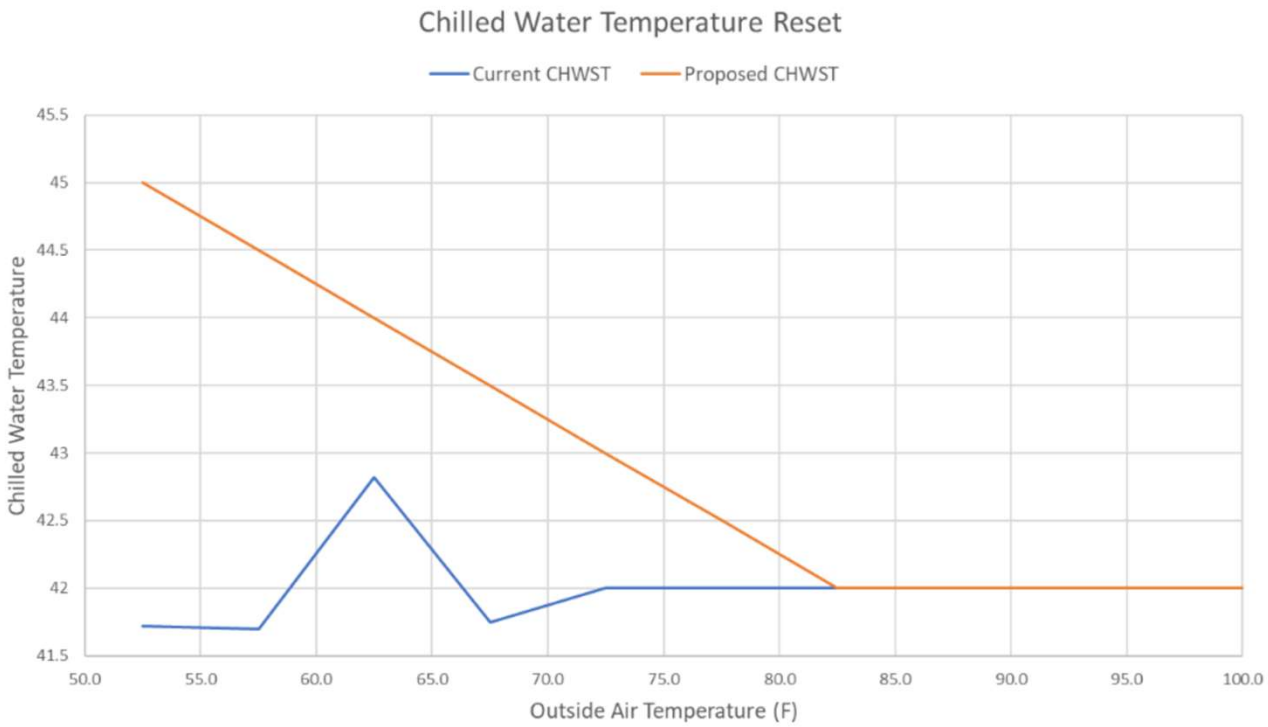
- Quick-win measures are defined as non-capital, low-cost projects with a simple payback of 18 months or less

- Customers will need to track their implementation spend but can use their own time and materials or subcontractors however they wish – template tool to track this



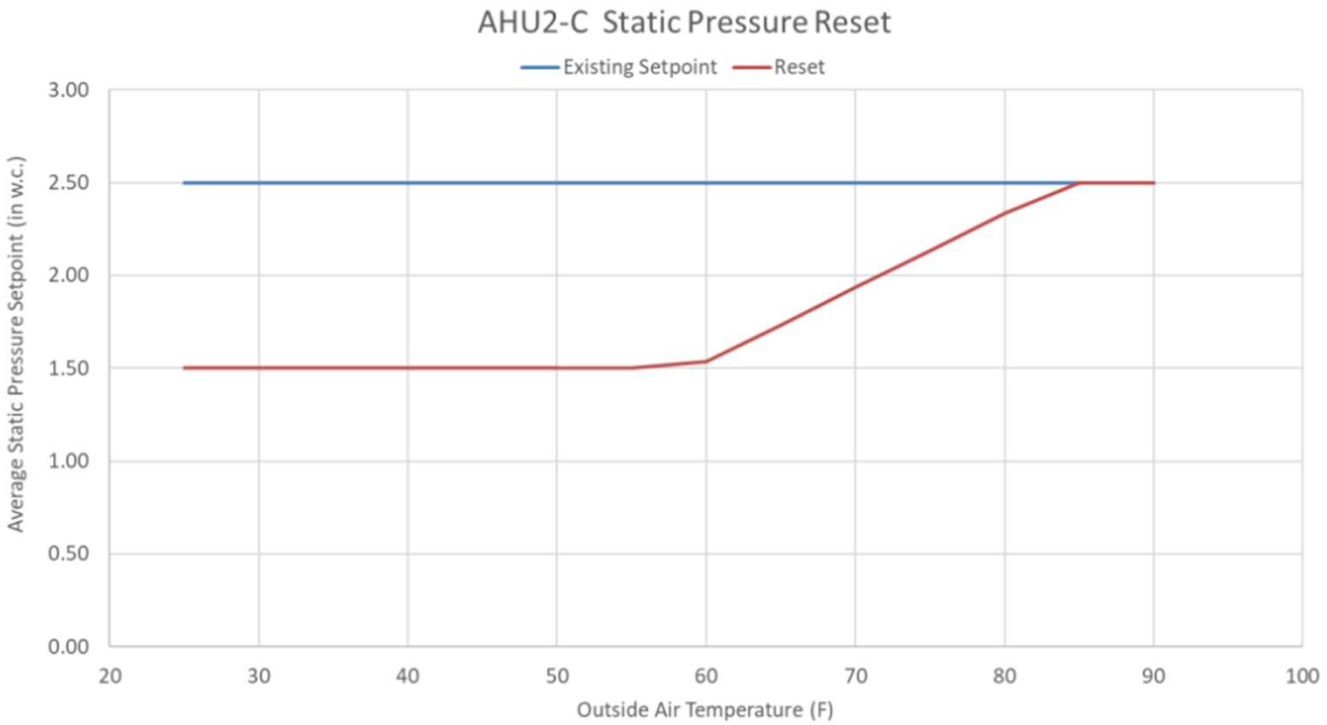
Common RCx Measures and Typical Scope Elements

- **Operational & Controls Improvements**
  - Refine system scheduling & resets
  - Adjust improper setpoints
  - Improve sequence of operation
  - BMS controls optimization
  - Ventilation controls adjustments
  - Lighting controls adjustments
- **Maintenance Fixes**
  - Damper and Actuator Repairs
  - Failed Sensors
  - Incorrect/false readings and data points
- **Targeted Systems**
  - Chiller and cooling tower optimization
  - Compressed Air Systems
  - Load-side process systems



Common RCx Measures and Typical Scope Elements

- **Static Pressure Reset**
  - Full airflow is generally not needed 99% of the year
  - Cooler ambient temperatures generally warrant less airflow



Common RCx Measures and Typical Scope Elements

- **Compressed Air Systems**
  - Ultrasonic leak detection surveys
  - Staging issues
  - Excessive run-time beyond the load



Image Info

Capture Mode	LeakQ™
Distance	1.6 ft
Sound Pressure Level at Source	71.23 dB
Sound Pressure Level at Sensor	67.16 dB

Notes

Capture Notes
Inventory Room - threaded fitting at disconnect

Action Notes
No notes provided.



Leak Number	Bldg/ Floor/ Room, Location, Elevation	Leak Description	Type of Gas	Pressure at Leak	Meter Reading at 50% Scale	Size of Leak CFM	Estimated Annual Losses	Estimated kWh Losses
1	225 / Roof / Roof, Bottom Level Of 225-Dcdev-52, A. 0-5'	From Instrument Air Regulator	Compressed Air	90	7.0	1.6	$358.80	2,759.99
2	225 / Ground / Boiler Rm, By Storage Tank Against East Wall, C. 10-15'	Gate Valve Flange	Compressed Air	90	7.5	1.1	$246.67	1,897.49
3	225 / Ground / Developer Blender Room 5, On Platform For Equipment 225-Tcom-1, A. 0-5'	From Pneumatic Hose	Compressed Air	90	6.0	2.3	$515.77	3,967.48

Technical Service Provider (TSP) Network

- Aero Performance Group
- American Plant Maintenance
- Arcadia
- Atlas Copco
- C.J. Brown Energy
- Cascade Energy
- Colliers Engineering
- Comairco
- Dalkia Energy Solutions
- Daylight Savings Company
- Dent Development
- DNV Energy Insights
- Ecosave
- Emcor Betlem
- Energy Group
- Frontier Energy
- Grumman Butkus Associates
- IBC Engineering
- Johnson Controls
- LaBella Associates
- M/E Engineering
- Noresco
- Popli Design Group
- Postler & Jaeckle
- Quest Energy Group
- RW Lindsay
- Siemens
- Tetra Tech
- Trane
- Wellman Energy Solutions
- Wendel Energy Services
- Yadav Solutions
- ZENO Controls
- **And growing!**

Workshops for Customers and TSPs

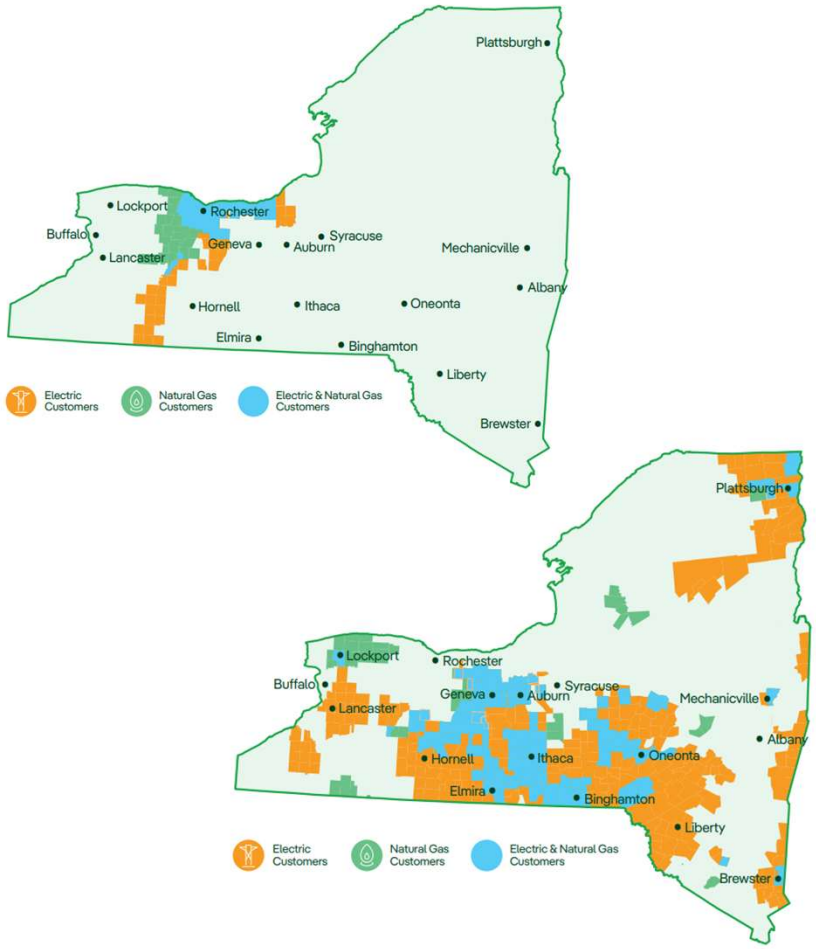
- Technical knowledge sharing
- Putting peers in the same space as each other
- Share common wins, case studies, and lessons learned
- Programmatic overviews & direction
- Often virtual, sometimes in-person
- Always looking to highlight different and unique successful projects



Eligibility

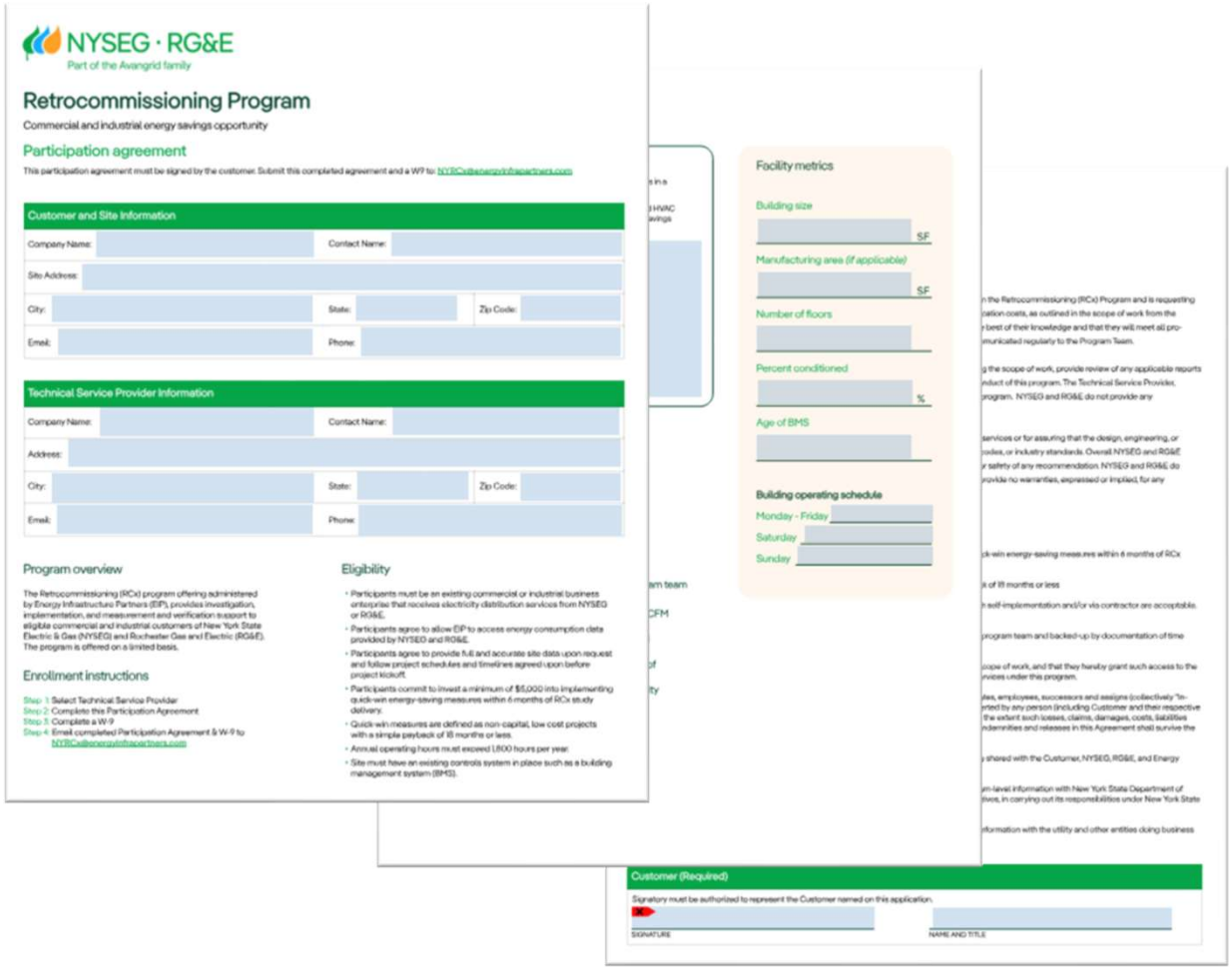
- NYSEG or RG&E electric customers, only
- Customer/leadership implementation commitment
- Annual operating hours > 1,800 hours per year
- Site must have an existing controls system in place such as a building management system (BMS)

- Ideal candidates are as follows but is subject to program team review and approval:
  - **Compressed air:** At least 75 horsepower or 250 SCFM of usable capacity
  - **HVAC:** At least 50,000 square feet of conditioned area served
  - **Process cooling & refrigeration:** At least 100 tons of cooling capacity
  - **Process heating:** At least 50 kW of heating capacity



How to Get Started - Participation Agreement

- Serves as the formal start to a utility-funded RCx project
- Outlines customer commitment, signature required to start
- Customer chooses their TSP
- Gathers some basic site data and contact information to determine eligibility
- Simple and easy fillable 3-page PDF
- Send to EIP
  - ❖ EIP notifies TSP to begin developing SOW and fee



Program Team

Primarily implemented by EIP

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