

Required Retrocommissioning Scope

If the retrocommissioning is conducted through a local energy utility program, the scope for that will satisfy the requirements of the ordinance, as long as it addresses both electricity and natural gas-consuming equipment and controls.

If the retrocommissioning is conducted outside of a local energy utility program, the scope of the retrocommissioning shall include the activities below. A monitoring-based commissioning approach may be used to investigate and evaluate building systems as part of the retrocommissioning process. However, while monitoring based commissioning is an excellent strategy to maintain the persistence of savings generated from a full RCx effort, but it is not a substitute for the RCx.

Activity	Buildings ≥ 50,000 sf	Buildings < 50,000 sf	Activity Description
Develop and RCx Plan	✓		Develop a plan that outlines the activities, roles and responsibilities, schedule and documentation requirements of the RCx process.
Review and Optimize Equipment Scheduling	✓	✓	Any time of day schedules that are programmed in a building management system (BMS), programmable thermostat or time clock system shall be reviewed and if necessary, corrected to ensure they reflect the current facility requirements.
Review BMS Sequence of Operations	✓	✓	The current BMS sequence of operations shall be reviewed to ensure they are appropriate for the current facility requirements.
Review BMS Temperature, Pressure and Airflow Setpoints	✓	✓	The current BMS setpoints shall be reviewed to ensure they reflect the sequence of operations and current facility requirements. If needed, adjust the setpoints to meet the current facility requirements.
Test BMS Automatic Reset Functionality	✓	✓	Any automatic reset function that is currently programmed in the building management system shall be tested to confirm proper operation per the sequence of operations. An automatic reset function may include but is not limited to supply air temperature reset, static pressure reset, and chilled water supply temperature reset.
Pre-functional Checks on All Major Equipment	✓		Visually check all equipment identified in the RCx plan as ones to be functionally tested to ensure proper equipment and component assemblies are in proper condition and sensors are properly calibrated.

Boulder Building Performance Ordinance
 July 15, 2021

Comprehensive Functional Testing on All Major Base Building Equipment	✓		Perform functional testing on all major Base Building Systems to verify the sequence of operations and proper component functionality to include but not be limited to damper and valve actuation, motor modulation, on/off commands, lighting occupancy sensors and controls, etc.
Boiler Combustions Testing	✓		A combustion efficiency test shall be conducted for each boiler serving a Base Building System.
Review Economizer Functionality	✓	✓	If economizer functionality exists and is included in the sequence of operations, perform functional testing to verify proper operation during economizer conditions including proper damper controls. If economizer is not functioning properly, adjust sequence of operations and setpoints, adjust and/or repair damper linkage and actuator motors for proper operation and current facility requirements.
Sensor Calibration Checks (All Critical Sensors)	✓		Each critical sensor that is part of an HVAC control sequence shall be tested to ensure proper calibration. For each sensor that is out of calibration, recalibrate or replace this sensor.
Sensor Calibration Checks (OAT & RAT Only)		✓	All outside air temperature (OAT) sensors and return air temperature (RAT) sensors that are part of an HVAC control sequence shall be tested to ensure proper calibration. For each sensor that is out of calibration, recalibrate or replace the sensor.
Check Coils for Cleanliness	✓	✓	Visually inspect hot water, chilled water, steam and DX coils for cleanliness. If coils are visually loaded, clean all coils as appropriate.
Boiler/Furnace Tune-Up	✓	✓	Perform a tune-up on any boilers or furnaces serving Base Building Systems.
Review & Adjust Domestic Hot Water Temperatures	✓	✓	Review current domestic hot water temperature setpoints and compare to the current facility requirements. If needed, adjust the setpoints to meet the current facility requirements.
Check Air Filters	✓	✓	All air filters shall be checked to verify that the pressure drop across the filters are within the manufacturer's recommended limits.
Install Programmable Thermostats if No Controls Exist	✓	✓	If there is no central building Energy management system, and no programmable thermostats, install programmable thermostats in every regularly occupied thermal zone.