



## CenterPoint Energy Retro-Commissioning Program Application

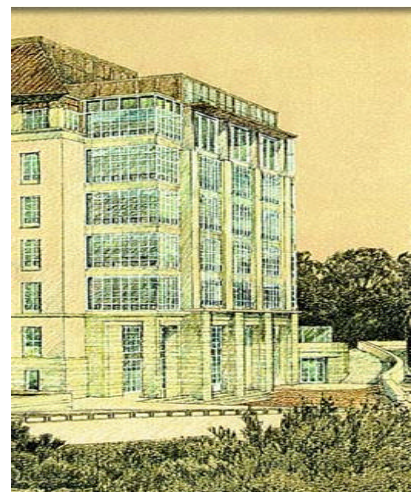
CenterPoint Energy Retro-Commissioning Program is offered to Commercial and Industrial customers in our service territory to enhance their facility's comfort, productivity, and environment, while reducing energy cost. As a participant in the program, the customer will be responsible for the following:

- ☆ Provide access to the building and a time for building personnel to interface with the contracted retro-commissioning service provider (RCx Agent).
- ☆ Be willing to provide at least \$10,000 for implementation, in a timely manner, approved low-cost savings measures that both the customer and Nexant, Inc., the Program Administrator (PA) agree are feasible for the facility.
- ☆ Provide and assist with the reporting and collection of information pertaining to the retro-commissioning of their facility(s).
- ☆ Proactively and in good faith, work with the PA to maximize the effectiveness of the program by implementing cost-effective demand and energy saving measures.
- ☆ Provide to the RCx Agent all facility electric contract information.
- ☆ The PA's decision relating to customer eligibility for retro-commissioning assistance or other issues will be final and binding for all parties.
- ☆ Provide twenty-four (24) months of natural gas billing data to the RCx Agent / PA to be used for utility analysis.
- ☆ Authorize CenterPoint Energy to provide the RCx Agent and PA twenty-four (24) months of electrical billing data to the RCx Agent / PA to be used for utility analysis.

For complete information about program terms and conditions, please contact either the PA or CenterPoint Energy at the information below:



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## General Information:

Contact Person: \_\_\_\_\_

Position: \_\_\_\_\_

Phone #: \_\_\_\_\_

Email: \_\_\_\_\_

Facility Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

Facility Owner Name: \_\_\_\_\_

Property Manager Name: \_\_\_\_\_

Company: \_\_\_\_\_

\_\_\_\_\_

Facility Engineer Name: \_\_\_\_\_

Company: \_\_\_\_\_

## Program referred to you by: \_\_\_\_\_

What is the level of capability of the chief engineer and/or facility staff for interacting with the Energy Management Control System (EMCS)? (e.g.. Change setpoints, basic program changes and trending)

Do facility operators have some discretionary time to devote commissioning projects?

## Facility Energy Use:

ESI Id(s): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Meter Number(s): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Annual peak demand: \_\_\_\_\_ kW

Annual energy consumption: \_\_\_\_\_ kWh



Facility Age: \_\_\_\_\_  
 Total floor area: \_\_\_\_\_ Ft<sup>2</sup>  
 Number of floors: \_\_\_\_\_  
 Average Square-footage per floor: \_\_\_\_\_ Ft<sup>2</sup>  
 Total facility conditioned area: \_\_\_\_\_ Ft<sup>2</sup>  
 Percent of conditioned space currently occupied: \_\_\_\_\_ %



## Building and System Details:

Describe major facility space types, their scheduling and typical occupant density (e.g. 10,000 square foot, 24-hour computer center that is unoccupied).

Describe major interior loads. Which of these loads, if any, dictate how the HVAC system is operated?

Complete the table to list the major facility energy systems/equipment contributing to peak electric load (add sheets as needed).

Equipment	Type	Size	Age
<b>Chiller(s)</b>			
Chiller 1A (Example)	Centrifugal	600 tons	15 yrs
<b>Air Handling Unit(s) - AHU</b>			
AHU 1A (Example)	VAV	25,000 CFM (Design)	5 yrs
<b>Lighting Systems</b>			
Lighting 1A (Example)	32W-T8 w/electronic ballast	40% of floor area	4 yrs

Briefly describe facility cooling equipment and controls. Can the equipment meet peak building load? How much excess capacity does the system have on a hot summer day?

Briefly describe lighting system on/off controls and scheduling.

What type of window glazing does the building have (e.g. single-pane tinted)?

When is the chiller (or packaged units, if no chiller) likely to be replaced or receive a major upgrade?

Are as-built drawings and sequences of control for the HVAC systems available? Are they current?

## **Type of Control/Hardware:**

Does the facility have an EMCS system?

If so, what type of EMCS is in place (manufacturer, type, year installed)?

What components of the central plant, air handlers, and zone level (e.g. VAV boxes) are controlled (not just actuated) pneumatically?

If an EMCS is utilized, approximately how many points (actuators/sensors) throughout the facility are monitored by the system? What types of points are controlled?

Is the EMCS capable of trending and storing data for numerous points simultaneously? Can the data trends be converted to a format readable by spreadsheet programs?

What are the specifications of the computer workstation that runs the EMCS interface (for example, 266 MH Pentium II, 32 MB Ram, 2.0 GB HD, CD, and so forth)?

When is the BAS likely to be replaced or receive a major upgrade?

## **Facility Performance:**

Describe any peak load shedding strategies currently employed.

Describe problems that currently exist related to the HVAC system or equipment.

What is the source of the majority of tenant or employee complaints?

### Facility Performance (Continued):

What is currently the worst building problem, and how is it managed?

Describe operation and maintenance opportunities you are aware of.

Briefly describe past energy efficiency projects completed for the facility. Describe planned future projects.

Are there any scheduling issues that will delay or expedite the retro-commissioning work (e.g. major renovations or equipment replacements/upgrades planned)?

### Control Strategy:

Strategy	Description
Does system have automatic shutdown?	
Does facility use a zone temperature setback strategy?	
What is supply air temperature setpoint during the summer? Is a reset strategy used?	
What is the supply chilled water temperature? Is it reset?	
What is condenser water setpoint? Is it reset?	
Does central air system have reheat?	
How is the outdoor air controlled? What is the minimum outside air fraction setting?	
Is free cooling used, i.e. with an air-side or water-side economizer?	
Is air distribution system VAV or CV?	

For VAV systems, what is the supply static pressure setpoint? Where is the pressure sensor located?	
For VAV systems, is supply static pressure reset used?	
Are VAV boxes DDC controlled?	
Is an optimum start or stop strategy used?	
Is system equipped with zone isolation devices for minimizing energy use in off-hour operation?	
Is there exhaust air heat recovery?	
Is there dehumidification equipment? If so, describe.	

### Customer's Declaration:

Customer agrees to provide at least \$10,000 for implementation, in a timely manner, of approved low-cost savings measures.

The information in this application is accurate and complete. The customer has read the above project outline, and will make a good faith effort to meet the outlined program requirements. As part of the application process, the customer also agrees to release copies of monthly utility billing statements and provide additional application information to the PA if requested.

Customer (Owner) Representative Printed: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

### Please mail or fax completed applications to:



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