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Retrocommissioning Program Participant Manual

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Section 1: Introduction

1.1 Program Overview

Focus on Energy, Wisconsin's statewide resource for energy efficiency and renewable energy, offers assistance to eligible Wisconsin businesses and residents to install cost effective energy efficiency and renewable energy projects. Focus on Energy provides financial and technical support to customers of participating Wisconsin utilities for a wide variety of energy efficient technologies and products available today.

Most Focus on Energy programs apply to energy efficiency projects with simple payback periods between 1.5 and 10 years. However, the Retrocommissioning Program (RCx Program) complements these programs by offering incentives for energy engineering services which identify low cost and no cost efficiency measures with simple payback periods of less than 1.5 years. RCx Program participants are then required to implement these identified measures at their own expense.

The RCx Program is designed to achieve gas, electric demand and electric energy savings in commercial, industrial, school and government facilities by optimizing existing facility systems for present building usage. In many cases, occupant comfort improvements accompany the energy efficiency gains realized through the RCx Program.

Existing facilities with a building automation system (BAS) and direct digital controls (DDC) may be eligible for the RCx Program. RCx Program applicants should have no major renovation or large capital investments pending. Additionally, the nature of many RCx Program measures requires that the customer and its operations and maintenance (O&M) staff are committed to achieving and maintaining RCx Program goals.

While Focus on Energy recognizes that the RCx Program is a best practice and can benefit most facilities, Focus on Energy is required to maintain a level of cost effectiveness per unit of energy savings and cannot approve all applicants for participation. Please contact your energy advisor or call 800.762.7077 for alternative programs if your facility is not accepted into the RCx Program.

Section 2: Retrocommissioning Program Parameters

2.1 Eligibility Requirements

Eligible facilities must meet the following minimum eligibility requirements before submitting an application for consideration in the RCx Program:

- The facility must be a commercial, industrial, school or government building consuming at least \$400,000 of natural gas and/or electricity annually from energy providers which participate in Focus on Energy. Energy costs associated with manufacturing processes may not be counted towards the minimum annual energy cost. A list of participating energy providers is available on the Web site at focusonenergy.com, or by calling Focus on Energy at 800.762.7077.
- The customer must express a willingness to commit funding according to the implementation requirements defined in section 2.3.
- The facility must have a building automation system (BAS) with direct digital control (DDC).
- The facility must be free of major problems requiring costly repairs or replacements and have no planned major system renovations or retrofits.
- The facility should have accessible and up-to-date building documentation and records.
- The customer and its O&M staff must express a commitment to be actively involved in the RCx process with a commitment of at least 40 hours by the O&M staff.
- The customer and its O&M staff must deliver a persistence plan prior to project completion demonstrating strategies for maintaining energy savings identified in the RCx Program.
- Applicants not meeting all of the eligibility requirements above may be eligible for participation if they can demonstrate sufficient potential energy savings to warrant funding at the RCx Program's rates in lieu of the unmet eligibility requirement(s).
- Facilities that are involved in an energy performance contract are not eligible for participation in the RCx Program.

2.2 Applicant Selection

In order to maintain the cost effectiveness of the RCx Program, applications are analyzed for energy savings potential prior to being accepted in the RCx Program. Upon receiving a completed application, a Focus on Energy representative will schedule a site visit to review RCx Program guidelines and goals with facility personnel, to gather additional information about the existing systems and to estimate energy savings potential.

Many factors will be considered when reviewing an application. Facilities that are inefficient relative to facilities of similar type and size are particularly good candidates for the RCx Program. The RCx Program will also consider types of heating, cooling, and ventilation systems present, system robustness, BAS capabilities, and facility staffing. If Focus on Energy staff is able to determine sufficient potential energy savings for acceptance in the RCx Program, the

project will be approved to proceed into the planning phase. A grant application and agreement will be delivered to RCx Program candidates who are accepted into the RCx Program.

To be eligible for an incentive, the customer MUST agree to the terms of and complete the grant application and agreement PRIOR to initiation of the planning phase of the RCx Program. This grant application and agreement for the RCx program applies only for the planning phase. Subsequent phases of the RCx Program require additional screening and the completion of an additional grant application and agreement. Approval for the planning phase does not ensure subsequent phases will be included in the RCx Program.

2.3 Funding and Incentives

Program funding and incentives are provided to accepted participants as follows:

- Planning phase market provider fees are reimbursed 100%, not to exceed \$7,500 following the submission of a completed Business Programs grant application and agreement for the planning phase. The incentive is dependent on successful delivery of the planning phase deliverables according to program guidelines within the timeframe allotted (typically eight weeks). Planning phase incentives are processed upon phase completion.
- Investigation phase market provider fees are reimbursed 85%, not to exceed the investigation phase incentive limits shown in Table 2 for eligible services identified in the Retrocommissioning Market Provider Manual. A separate Business Programs grant application and agreement for the investigation phase must be submitted before the investigation phase is initiated. Investigation phase incentives are paid upon receipt of the final investigation report, completion of the implementation requirements and receipt of the owner's persistence plan. If the customer fails to meet all of the requirements, no incentive will be paid and the customer will be responsible for all costs associated with the RCx Program after the planning phase.
- In addition, implementation incentives may be provided through the standard Focus on Energy custom or prescriptive incentive programs to offset the cost of identified low-cost measures if the simple payback period of the measure exceeds 1.5 years. Focus recommends that all measures identified in the RCx Program be pursued even if the simple payback period exceeds 1.5 years. Incentives can buy-down these implementation costs for the customer.
- Customers whose annual energy costs exceed \$1,500,000 may have difficulty completing the RCx Program for the entire facility within the 1 year time frame. These facilities may apply for the RCx Program in two phases. The central plants and a majority of the floor space are investigated during the first phase and the remainder of the facility is evaluated in a second phase. The phases will be treated as two separate RCx Program projects by Focus and will receive incentives accordingly. Focus on Energy reserves the right to accept or reject the application for the second phase on its own merits, independent of the analysis or success of the first phase.

Table 1 Incentives Summary

Phase	Costs	Maximum Incentive	Maximum Reimbursement
Planning	Market Provider Fees	\$7,500	100%
Investigation	Market Provider Fees	See Below	85%
Implementation, <1.5 year simple payback	Implementation Costs	\$0	0%
Implementation, >1.5 year simple payback	Implementation Costs	Standard Focus on Energy incentive limitations apply	30%

Table 2 Investigation Phase Incentive Limits

Total Annual Energy Cost	Implementation Requirement	Investigation Incentive Limit
\$400,000-\$749,999	\$15,000	\$12,500
\$750,000-\$999,999	\$20,000	\$22,500
≥ \$1,000,000	\$25,000	\$32,500

2.4 Retrocommissioning Market Providers

A list of RCx Program market providers (RMP's) with demonstrated qualifications to perform work according to the RCx Program is provided on the RCx Program page of the Focus on Energy Web site at focusonenergy.com/rcx.

Prior to accepting a facility into the RCx Program, the market provider selected for the project must identify the RCx Program project team leader and sufficient support personnel to implement measures for the RCx Program according to the Focus on Energy Market Provider Manual dated August 2010. The market provider page of the RCx Program application allows the market provider to identify the resources that will be dedicated to the project, examples of previous projects and contact information for references on previous projects. Customers are encouraged to utilize this information in conjunction with proposal pricing when selecting a market provider.

After being accepted into the RCx Program, the customer will contract directly with the RMP for their RCx Program project. The contract should delineate costs for different phases of the RCx Program project – planning, investigation and implementation (if the participant desires the implementation to be performed by the RMP). Note that implementation costs are not eligible for the RCx Program incentives detailed above. Focus on Energy encourages RCx Program participants to execute contracts which explicitly require the RMP to provide the RCx Program services as described in the Focus on Energy Retrocommissioning Market Provider Manual.

Capital improvement investigations (see ineligible services below) should not be included in the RCx Program project. Incentives will NOT be paid for investigation phase studies that include detailed investigation of capital improvement projects (e.g. major retrofit projects with an estimated simple payback greater than four years). Capital improvement investigations may

apply for funding through feasibility study grants independent of the RCx Program. Customers should contact their Focus energy advisor for more information.

2.5 Retrocommissioning Persistence Plan

As many RCx Program energy conservation measures are O&M in nature, Focus requires participants to deliver a strategic plan for maintaining the energy savings after implementation. All plans must include training of existing and future O&M staff on improved operation of the facility according to the results of the RCx Program study including all changes made as a result of the study. The plan must also show an energy management strategy that includes routine analysis of energy benchmarks and an action plan to minimize any drift or degradation from the new performance level.

2.6 Implementation Requirement

Participants in the RCx Program are required to reserve funding for the implementation of facility improvement measures identified during the investigation phase. Focus will work with the customer and the RMP to identify a group of RCx Program measures with a 1.5 year or shorter payback period which meet the customer's energy use, comfort and maintenance requirements. Facilities with greater, non process related energy costs as identified in Table 2 may receive greater incentives for the investigation phase if they are willing to commit additional funding towards implementation.

Section 3: Retrocommissioning Process

RCx Program project administration is performed in five distinct phases:

1. Application Phase
2. Planning Phase
3. Investigation Phase
4. Implementation Phase
5. Verification Phase

3.1 Application Phase

The program begins with the application phase when RCx Program applications are submitted, reviewed and selected. Applications are completed by the customer or owner's representative and RMP before being submitted to Focus. Once a program application is received, Focus on Energy reviews it and evaluates if the facility is a good candidate for participation. Focus on Energy may require a site visit prior to application approval to determine the energy savings potential of a project. If an application is accepted, a project kick-off meeting will be held. Attendees in the kick-off meeting will include representatives from Focus on Energy, the RMP, the customer or owner's representative and the facility's chief engineer.

Accepted facilities will receive a grant application and agreement to be completed for the planning phase. If a facility is not selected to participate in the program, Focus on Energy will make recommendations for participation in one of the other Focus on Energy programs better suited for the facility.

Deliverable: Focus – Application review status

Duration: 2 to 3 weeks

3.2 Planning Phase

The RMP may begin the planning phase following the kick-off meeting and submission of the Business Programs grant application and agreement for the planning phase. The purpose of the planning phase is to perform a high-level review of low-cost and no-cost energy savings opportunities. The RMP visits the facility to assess building characteristics, collect documentation and identify areas requiring further investigation in the planning phase. After the site visit, the RMP submits the appropriate RCx Program phase deliverables, including an RCx Program Plan, to Focus on Energy and the customer for review. If the customer and Focus on Energy accept the RCx Program Plan, Focus on Energy will authorize the RMP to progress to the next phase.

To help ensure that the project will result in cost-effective savings, Focus on Energy will compare the proposed RCx Program incentive against a theoretical tier two custom incentive for identified FIMs computed at rates of \$0.45 per therm, \$0.45 per kWh, and \$150 per peak kW. For projects where preliminary RCx Program savings estimates fail to meet the tier two equivalent calculations, Focus on Energy may require the customer to revise the work scope with the RMP. Alternatively, the project may be redirected towards another Focus on Energy program. If the project is not approved to move beyond the planning phase, an incentive of \$7,500 not to exceed 100% of the planning phase costs will be issued. No additional work will be performed under the RCx Program or payments made.

The customer may request, under their own cost and contracting responsibilities, additional services from the RMP such as detailed design, life-cycle costs calculations, etc.

Deliverable: RMP – Planning phase deliverables (See RSP Manual)
Focus – Planning phase Incentives paid to customer

Duration: 4 to 8 weeks

3.3 Investigation Phase

The investigation phase builds upon the RCx Program Plan and typically includes activities such as conducting detailed site assessments, diagnostic testing and trending analyses to evaluate current facility operating procedures and equipment functionality.

The results of the extended evaluation are documented in the investigation report, which also includes recommended improvements, energy savings estimates and simple payback calculations. A project meeting will be held to review the investigation report and the project recommendations. The measures to be implemented will be agreed upon by the customer and Focus on Energy. In select instances, a project incentive may be offered to buy down the recommended measures. Upon selection of the measures, the existing program agreement will be amended to include a commitment to implement the selected measures, any incentive offer and a mutually agreed-upon implementation timeline.

Deliverable: RMP – Investigation phase deliverables (See RMP Manual)

Duration: 7 to 26 weeks, depending on the month in which Investigation activities commence

3.4 Implementation Phase

The customer may choose to implement the measures identified in the RCx Program process at their cost using in-house staff, contractors, or the RMP. The customer will be responsible for the full cost of RCx Program services if the customer does not implement recommended measures summing to at least the minimum implementation requirement in Table 2 within the allotted time. When all measures are completed, the owner will submit the project completion form.

Deliverable: Owners Rep – Project completion notice
Facility Manager Persistence Plan

Duration: Not to exceed one year from project kick off.

3.5 Verification Phase

During the verification phase, Focus on Energy representative(s) visit the site to verify that measures have been properly installed, new control strategies have been implemented, repairs have been performed, etc. Once implementation has been verified and the expenses accepted, Focus will pay the incentive to the customer.

Deliverable: Focus on Energy – Incentive paid to customer

Duration: 6 to 12 weeks

3.6 Withdrawal from Program

At the end of the planning phase, the customer or Focus on Energy may withdraw from the program for the following reasons:

- The customer may withdraw from the RCx Program if the facility has maintenance issues that need to be resolved before the RCx Program project can proceed and the customer wishes to address these issues first.
- The customer may withdraw from the RCx Program if he is dissatisfied with the results or energy savings potential identified during the planning phase.
- Focus on Energy may withdraw if the RCx Program manager is dissatisfied with the quality of work performed, the timeliness of submittals or the energy savings potential identified during the Planning Phase.

Deliverable: Planning phase incentive

Timeline: End of planning phase

Section 4: Participant Resources

4.1 Focus on Energy website

The most current information about program information, eligibility requirements, application forms, and current updates are available from the program Web site at **focusonenergy.com/rcx**.

4.2 Retrocommissioning Program Administrator Contact Information

All questions about Focus on Energy's Retrocommissioning Program should be directed to the Focus on Energy Retrocommissioning Program manager.

Commercial participants should direct questions to:

Focus on Energy Retrocommissioning Program
10535 N Port Washington Rd, Suite 201
Mequon, WI 53092
Phone: 888.598.4376
Fax: 262.240.0825
Email: commercialRCx@focusonenergy.com

Industrial participants should direct questions to:

Focus on Energy Retrocommissioning Program
5609 Medical Circle, Suite 201
Madison, WI 53719
Phone: 608.277.2949
Fax: 608.277.2947
Email: industrialRCx@focusonenergy.com

School and Government participants should direct questions to:

Focus on Energy Retrocommissioning Program
725 W. Park Ave.
Chippewa Falls, WI 54729
Phone: 715.720.2130
Fax: 715.720.2070
Email: sandgRCx@focusonenergy.com