



**FY23 SRP Business Solutions
Retrocommissioning Program
Qualified Service Provider Manual**

May 1, 2022

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1.1 PROGRAM OVERVIEW

The SRP Business Solutions Retrocommissioning Program offers energy analysis services to identify low-cost and no-cost energy efficiency measures as well as providing incentives to assist customers with managing their energy expenses. The SRP Business Solutions Retrocommissioning Program helps customers achieve energy and average peak demand savings in commercial and industrial facilities that are quantifiable and persistent. Retrocommissioning projects realize savings through the systematic evaluation of facility systems and the customer's implementation of cost-effective measures targeted to improve facility operation that, in many cases, also improve occupant comfort and production efficiency.

Program participants are commercial/industrial facility owners who have demonstrated a commitment to spend a minimum of \$3,000 on identified retrocommissioning measures. Participants implement the agreed-upon measures with an estimated total project simple payback of 2.0 years, calculated before rebates and based upon electric and associated gas savings, or less within 120 days of the completion of the Investigation Phase.

Eligible sites include existing facilities that are on an SRP commercial or industrial price plan and are at least 2 years old. Eligible commercial customers will have 50,000+ sq. ft. of conditioned space or 1,000,000 kWh of annual energy usage, possess a functioning direct digital control energy management system (EMS), and have a relatively high Energy Use Index (EUI) compared to the EUIs of buildings of the same class. No major renovation or significant capital investments for the facility shall be pending, and owner/O&M staff shall express a commitment for active involvement in the process.

The rebate cap is the maximum rebate amount that a customer is eligible to be paid for that program year. For the FY23 program year, the rebate cap is \$300,000 per customer for all SRP Business Solutions programs. This rebate cap includes both the cost of qualified service provider (QSP) fees and any incentives a customer receives directly. SRP reserves the right to waive or adjust the rebate cap on a case by case basis and determine at its sole discretion the program year to which a rebate is attributed.

Customers with existing facilities will be paid a performance rebate (\$0.05/kWh saved + \$100/average peak period¹ kW reduced) for eligible projects after the Verification Phase, subject to a 100% cost cap minus the minimum \$3,000 commitment. Eligible measure costs incurred by the customer in connection with the detailed evaluation, construction, installation, and implementation of an eligible measure. A customer's internal labor costs are **not** eligible in determining a measure's eligible costs. If a customer uses a combination of internal and external labor, the actual invoice costs will be used for the purposes of the customer rebate.

The QSP will be paid a performance rebate (\$0.052/kWh of identified project savings) for eligible projects after the Investigation Phase (IP). Additionally, the QSP will be paid a performance rebate of (\$0.028/kWh saved) for eligible projects at the end of the Verification Phase (VP). Both the IP and VP rebates are subject to the Customer rebate cap. QSPs who actively bring in eligible projects will receive a higher rebate rate at each phase (\$0.06/kWh @ IP; \$0.04/kWh @ VP), subject to the Customer rebate cap.

Large customers participating with eligible projects may also choose to follow a Monitoring-Based Commissioning (MBCx) path rather than a traditional retrocommissioning (RCx) path if desired. This path permits the customer to take a more data-driven, continuous approach to commissioning. Customers that are eligible to take the MBCx approach will be customers who have facilities that have at least 150,000 sq. ft. of conditioned space or use more than 3,000,000 kWh annually. The customer will be reimbursed 50% of the hardware and software integration costs, up to \$15,000, after completing the integration. The

¹ The program peak period is defined as the hours during 4 p.m. to 7 p.m. Monday – Friday, in July and August.

Retrocommissioning Program pays a customer refund of the remaining 50% of the hardware and software integration costs, up to \$15,000 after the VP.

New construction facilities that have at least 150,000 sq. ft. of conditioned space are eligible only to participate in MBCx path. The building age requirement of at least 2 years is waived for new construction MBCx projects. The customer will be reimbursed up to \$12,000 (capped at 100% of the integration and monitoring cost) after completing the integration. Customers must sign up for 12 months of monitoring after agreeing to the post-installation operation for any current New Construction Solutions (NCS) project if applicable or after the facility reaches steady operation so this may necessitate a contract longer than 12 months if monitoring starts before this steady-state operation. Six (6) months after the start of monitoring phase, the QSP will review opportunities for energy savings.

Rebates are available for capital improvements such as lighting, HVAC, and refrigeration through SRP's Standard and Custom Business Solutions Programs.

1.2 CONTACT INFORMATION

SRP has retained Resource Innovations. as the Program Administrator for SRP's Business Solutions Retrocommissioning Program. Direct questions about the program to the Program Administrator via:

- Web
 - www.savewithsrpbiz.com
- Telephone
 - Customer informational hotline: (602) 236-3054
 - Qualified Service Provider direct line: (602) 236-1611
- Fax - (480) 345-7601
- Email
 - Customer inquiries: savewithsrpbiz@srpnet.com
- Mail
 - SRP Business Solutions Retrocommissioning Program
 - 3100 W Ray Rd, Ste 230
 - Chandler, AZ 85266

1.3 MANUAL USE AND ORGANIZATION

This manual provides specific information about the program and the roles and responsibilities of QSPs in SRP's Business Solutions Retrocommissioning Program offering and is organized as follows:

- Section 2 addresses eligibility requirements
- Section 3 discusses the rebate format
- Section 4 outlines the program overview
- Section 5 discusses the role of the Retrocommissioning Qualified Service Provider (QSP)
- Section 6 details the Application Phase
- Section 7 describes the Investigation Phase

- Section 7 **Error! Reference source not found.** discusses the Implementation Phase
- Section 9 addresses the Verification Phase

Section 2

Eligibility Requirements

For SRP's energy efficiency programs, a customer is a company or organization that receives electric service from SRP under an approved SRP price plan. A customer is a holder of a single account, multiple accounts in aggregate, or corporate accounts. A customer who is the holder of multiple accounts or corporate accounts with a single SRP customer identification number will be considered a single customer and may participate in multiple SRP programs subject to rebate caps and program requirements.

To participate in the SRP Business Solutions Retrocommissioning Program, customers must purchase electricity from SRP on an eligible non-residential retail electric price plan. Table 2.1 lists eligible customer price plans.

Table 2.1. Eligible Price Plans for the SRP Business Solutions Retrocommissioning Program

Description	Price Plan
General Service	E-31
Time-of-Use General Service	E-32
Super Peak Time-of-Use General Service	E-33
M-Power for Pre-Pay General Service	E-34
Standard General Service	E-36
Standard Pumping Service	E-47
Time-of-Week Pumping Service	E-48
Standard Large General Service	E-61
Primary Large General Service	E-63
Substation Large General Service	E-65
Substation Large General Service with Interruptible Load	E-66
Large Extra High Load Factor Substation Large General Service	E-67

Customers can verify their price plan by looking at a recent bill. Figure 2.1 shows where to find the price plan and account number on a typical SRP customer bill. Customers with questions regarding their account should contact the Program Administrator or their SRP Account Manager. SRP retains the right to make final determination of customer eligibility.

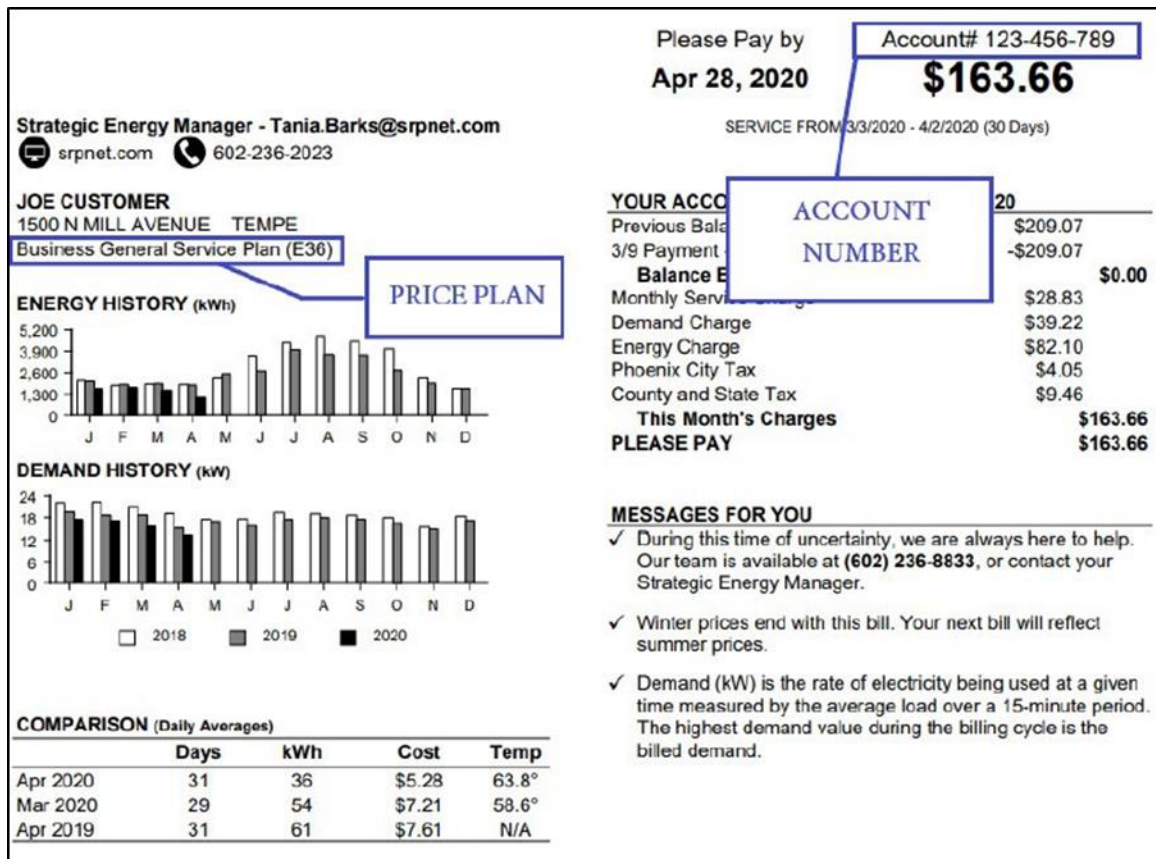


Figure 2.1 Representative SRP Electric Bill

2.1 FACILITY ELIGIBILITY

The facility owner and O&M staff must express a commitment to being actively involved in the retrocommissioning process. Active involvement will include:

- Providing access to the facility and EMS.
- Giving time for facility personnel to interface with the Qualified Service Provider (QSP).
- Providing and assisting with the reporting and collection of information regarding the retrocommissioning of the facility.
- Spending at least \$3,000 on a set of agreed-upon retrocommissioning measures (RCMs) that result in an estimated total project simple payback of 2 years or less, before rebates and based on electric and gas savings.
- Measures with paybacks >5 years before rebates are not eligible for the investigation phase report.

The estimated time commitment from the customer to support the retrocommissioning effort is 60 to 100 hours of a senior facility engineer or manager over the 8 to 10-month project duration.

In reviewing Project Applications, SRP will also look for evidence that cost-effective retrocommissioning opportunities exist. SRP will consider the following factors when reviewing customer RCx applications:

- The facility should have accessible and up-to-date building documentation and records, including EMS screenshots and equipment lists
- The facility should have a relatively high Energy Use Index (EUI) compared to the average EUIs of buildings of the same class and/or have a low ENERGY STAR rating from Portfolio Manager
- The facility should be at least 2 years old with at least 50,000 ft² of conditioned area or a minimum facility annual usage of 1,000,000 kWh
- The facility should be free of significant problems requiring capital repairs or replacements and have no planned major system renovations or retrofits
 - A significant renovation is a change in facility use or where the existing system will not meet owner / customer projected requirements within existing facility square footage
 - A retrofit is a change, modification, or addition to systems or equipment in existing facility square footage
- The facility must have a current, functional energy management system (EMS) with direct digital control (DDC)

In reviewing Project Applications for Monitoring-Based Commissioning (MBCx), SRP will consider the following factors:

- The Existing facilities must have at least 150,000 sq. ft. or a minimum facility annual usage of 3,000,000 kWh.
- The customer must commit to contract with an SRP approved Service Provider for MBCx software and hardware integration and at least 24 months of monitoring after integration
- New construction must have at least 150,000 sq.ft and the customer must commit to contract with an SRP approved service provider for MBCx software and hardware integration and at least 12 months of monitoring after agreeing to the post-installation operation for any current New Construction Solutions (NCS) project if applicable or after the facility reaches integration steady operation.

SRP will select program participants based on the above considerations and based on the level of opportunity for savings. SRP's selection decisions will be final and binding for all parties.

2.2 PROGRAM DATES

The SRP Business Solutions Retrocommissioning Program became effective on May 1, 2022. Retrocommissioning rebates are not eligible for prior customer-funded Retrocommissioning activities or without necessary pre-approvals.

3.1 REBATES

The SRP Business Solutions Retrocommissioning Program (RCx Program) provides analysis and implementation technical assistance fully funded by SRP along with a customer rebate to support the implementation

In the program, retrocommissioning services are conducted exclusively by pre-approved Qualified Service Providers (QSPs). SRP offers performance-based retrocommissioning incentives (\$/kWh) for both the QSP and the Building Owner/Customer under a **Traditional Retrocommissioning (RCx)** path and a **Monitoring-Based Commissioning (MBCx)** path.

QSP Incentives:

Under the RCx and MBCx paths, incentives are paid to the QSP at the Investigation Phase (IP) and Verification Phase (VP) as compensation for the cost of the study. QSPs are eligible for incentives at \$0.052/kWh after the IP and \$0.028/kWh after the VP. QSPs who actively solicit an RCx project will be eligible to receive \$0.06/kWh after the IP and an additional incentive of \$0.04/kWh after the VP for each solicited project. For both of these scenarios, the maximum IP incentive will not exceed 15% of the customer's annual energy usage.

Building Owner Incentives:

Under the RCx and MBCx paths for existing facilities, the building owner is required to spend at least \$3,000 or the total cost of the recommended measure package if less than \$3,000, to contract and arrange for the implementation of a set of agreed-upon retrocommissioning measures (RCMs) that result in an estimated total project simple payback of 2 years or less, before rebates and based on electric and associated gas savings. Also, customers are responsible for covering the costs associated with attending meetings and assisting QSPs in acquiring facility information. To help offset implementation costs that exceed the customer's minimum commitment of \$3,000, the customer may be eligible to receive a rebate paid at \$0.05/verified kWh saved plus \$100/average peak period² kW reduced. These rebates are subject to a 100% cost cap, and are only available after the minimum \$3,000 commitment is met. Eligible measure costs are "external" or "3rd party" costs incurred by the customer in connection with the detailed evaluation, construction, installation, and implementation of an eligible measure. A customer's internal labor costs are **not** eligible in determining the building owner incentive cost cap. A customer using internal labor with costs of at least \$3,000 will retain eligibility to receive the remaining QSP services, though the customer will be ineligible for any building owner incentives. If a customer uses a combination of internal and external labor, the actual invoice costs will be used for the purposes of the customer rebate.

Building owner rebates are contingent upon implementing the agreed-upon RCMs within 120 days following the Investigation Phase report review meeting (or a longer timeline if agreed-upon by SRP) and after the first year's energy savings are verified. Upon successful implementation of the agreed-upon RCMs to meet the minimum customer commitment of \$3,000, building owner rebates may be available for additional measures implemented within 1 year of the completion of the Verification Phase report.

Additionally, under the MBCx path, the customer will be eligible for the software and hardware integration incentives. Software and hardware integration incentives will be available for customers installing MBCx software and implementing the necessary integration with the customer's EMS (hardware). To receive

² The program peak period is defined as the hours during 4 p.m. to 7 p.m. Monday – Friday, July and August.

this software and hardware integration incentives, participants must contract with an SRP approved QSP for MBCx software integration and at least 24 months of monitoring after integration.

The customers with existing facilities will be eligible to receive an incentive up to 50% of the software and integration cost, up to at \$15,000 after completing the initial MBCx integration, and will be eligible to receive the remaining 50% of the cost, up to \$15,000, once a customer implements identified RCMs within the 120-day agreement timeframe after the Investigation phase report review meeting. The Retrocommissioning program pays this incentive along with the customer implementation incentive once the QSP and SRP complete the verification of energy savings.

The customers who participate in the MBCx path for their new construction projects, will be eligible to receive an incentive up to 100% of the hardware and software integration and monitoring cost, up to at \$12,000 after completing the initial MBCx integration. To be eligible for software and hardware integration incentives, participants must contract with an SRP approved QSP for MBCx software integration and at least 12 months of monitoring after integration and after agreeing to the post-installation operation for any current New Construction Solutions (NCS) project if applicable or after the facility reaches steady operation.

Program participants are responsible for covering the costs associated with attending meetings and assisting QSPs in acquiring facility information. Customers of existing facilities are also required to spend at least \$3,000 to contract and arrange for the implementation of identified retrocommissioning measures with an estimated total project simple payback of 2.0 years or less (before rebates) within the 120-day timeframe. Customers that fail to comply with this requirement will be required to reimburse SRP for the full cost of any completed program-funded retrocommissioning investigation and verification costs incurred by the QSP.

No additional rebates will be available to participants through this program. However, if energy efficiency measures identified are beyond the scope of the SRP Business Solutions Retrocommissioning Program, the customer may seek to qualify those measures through the Standard or Custom elements of the SRP Business Solutions Programs.

Customers will be subject to an overall rebate cap of \$300,000 per customer per program year from all FY23 SRP Business Solutions offerings. The FY23 Program Year is from May 1, 2022, through April 30, 2023. SRP will reserve the right to determine at their sole discretion the program year to which a rebate is attributed.

3.2 REBATE CAPS AND AVAILABILITY

Rebate funding for the Retrocommissioning Program is limited, and applications will be accepted on a first-come, first-served basis until all rebate funding is committed. After that time, customers will have the option to be placed on a waiting list in the order requests were received by SRP. The current availability of rebate funds can be checked at www.savewithsrpbiz.com or by contacting the Program Administrator.

SRP's Business Solutions programs allow customers to participate in multiple programs subject to the rebate cap established by SRP. The rebate cap is the maximum rebate amount that a customer is eligible to be paid for that program year. For the FY23 program year, the rebate cap is \$300,000 per customer for all SRP Business Solutions programs. SRP reserves the right to waive or adjust the rebate cap on a case by case basis and determine at their sole discretion the program year to which a rebate is attributed.

The SRP Business Solutions Retrocommissioning Program is an energy efficiency offering that provides customers with a performance-based retrocommissioning incentive to help lower customers' electric energy costs by optimizing a facility's energy-using systems. The SRP Business Solutions Retrocommissioning Program does not provide engineering support or rebates for capital equipment measures – rebates for these types of measures may be available under other SRP Business Solutions Program offerings. The focus of the SRP Business Solutions Retrocommissioning Program is no- and low-cost Retrocommissioning Measures (RCMs) that save electric energy. Table 4.1 lists some typical RCMs.

Table 4.1. Example Eligible and Ineligible RCMs

Eligible RCMs	Ineligible RCMs
<p><i>Commercial and Industrial</i></p> <ul style="list-style-type: none"> • Correct economizer operation • Reduce minimum outside airflow • Eliminate simultaneous heating and cooling • Implement supply-air static pressure reset • Chilled and condenser water resets • Improve equipment sequencing & scheduling • Improve waterside economizer operation • Reduce airflow in CV air handling systems • Add photocells to outdoor lighting • Optimize data center systems <p><i>Industrial Specific</i></p> <ul style="list-style-type: none"> • Refrigeration system control improvements including compressor sequencing • Eliminate compressed air leaks and reduce pressure • Process control improvements 	<ul style="list-style-type: none"> • Fuel switching • Measures that negatively affect occupant comfort • Major equipment replacement (capital expenditure) • Measures necessary for basic facility operation • Measures that produce electricity • Terminate or relocate existing processes/operations

The program administrative process for either an RCx project or an MBCx project participating in the Retrocommissioning Program consists of four primary phases.

The normal program follows four phases:

- 1) Application Phase
- 2) Investigation Phase
- 3) Implementation Phase
- 4) Verification Phase

Below is an overview of the RCx rebate program delivery and MBCx program delivery processes in Figure 4.1 and Figure 4.2.

Figure 4.1: Retrocommissioning Process Overview

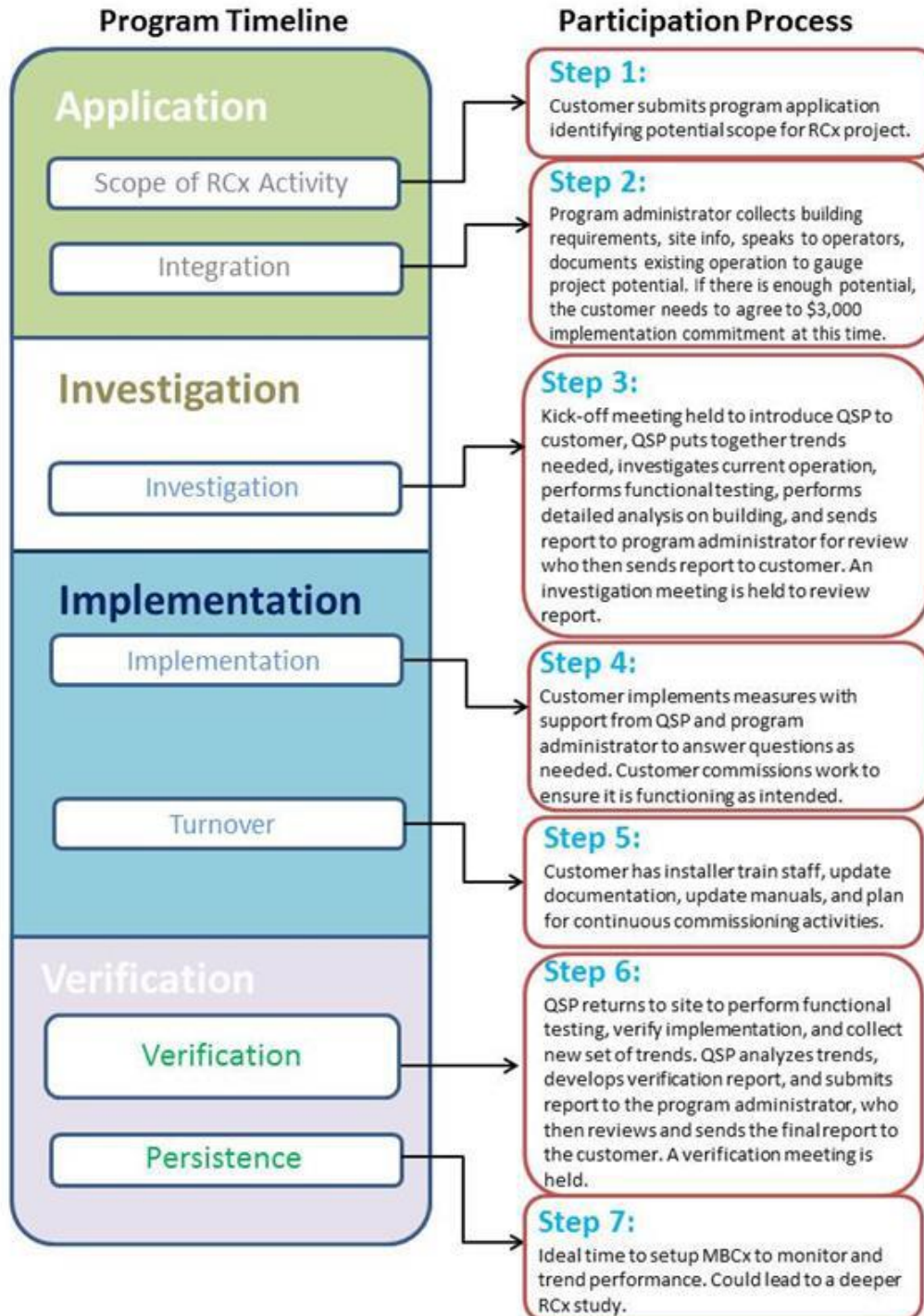
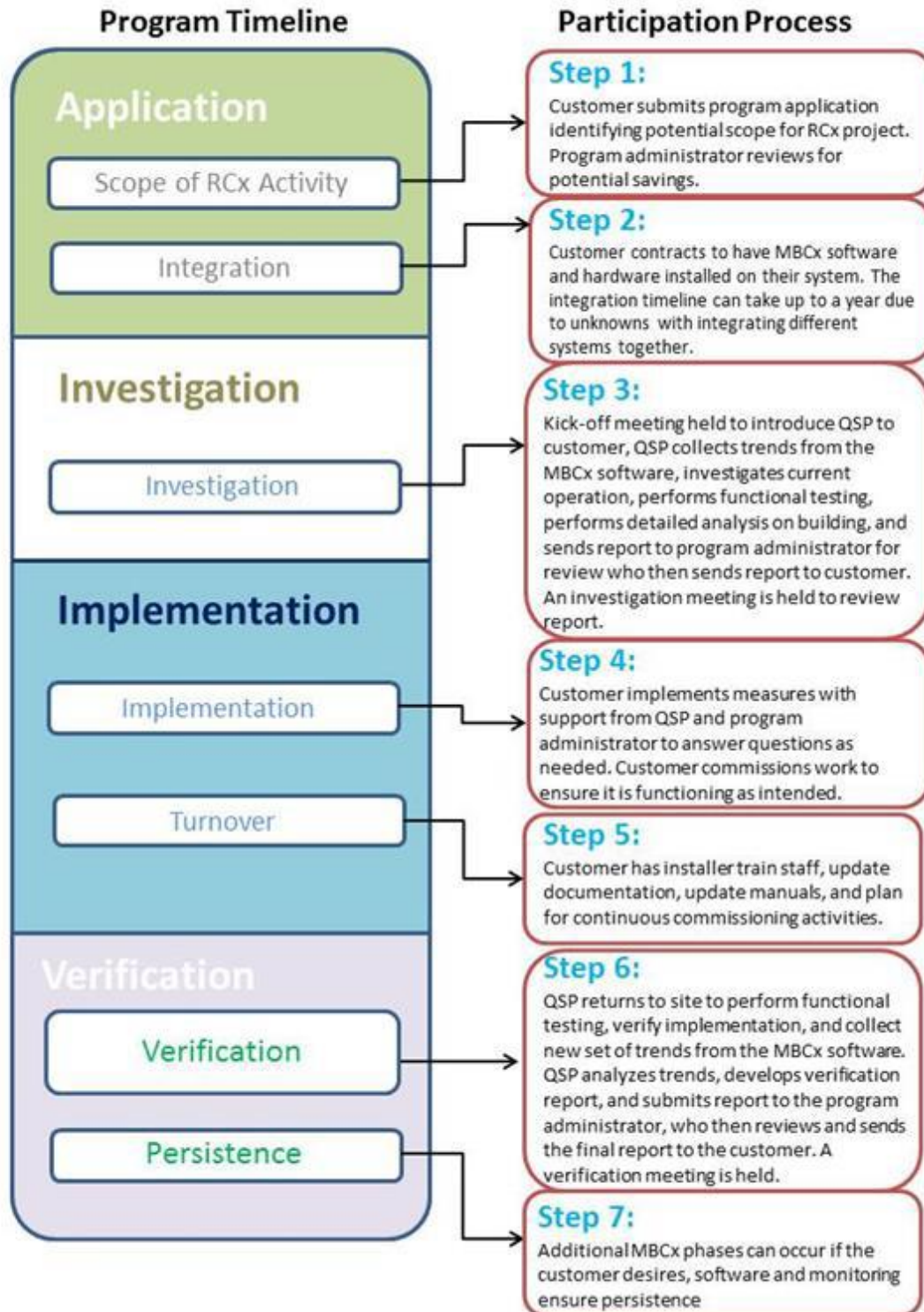


Figure 4.2: Monitoring-Based Commissioning Rebate Program Process Overview



Approved Qualified Service Providers (QSPs) deliver retrocommissioning activities and services available through the SRP Business Solutions Retrocommissioning Program. Below is an overview of the QSP program administration and coordination issues. The information below details information regarding the roles and responsibilities of QSPs during each of the project phases.

5.1 RETROCOMMISSIONING QSPS

QSPs selected through an application process will sign a Participation Application and become a part of the pool of qualified individuals/firms that provide services under the program. The Program Administrator may remove QSPs from the program at their discretion. Examples of activities that will lead to removal include, but are not necessarily limited to:

- failure to meet project timelines
- poor quality deliverables
- false representation or marketing of the program to SRP customers

5.2 PROGRAM MARKETING AND CUSTOMER COMMUNICATION

QSPs play a critical role in identifying viable retrocommissioning project opportunities and facilitating the customer application process. However, because not all program applications will be accepted, extreme care must be taken to avoid creating false customer expectations and dissatisfaction with the process or SRP. Therefore, QSPs are responsible for understanding the entire suite of energy efficiency program options available from SRP and determining which program is best suited to a customer's particular needs. The Program Administrator will provide education and training to QSPs regularly to help meet this objective.

During the process of completing a project under the SRP Business Solutions Retrocommissioning Program, QSPs are encouraged to contact the designated customer contact as necessary to coordinate retrocommissioning activities and exchange information. However, **all written and electronic correspondence about the program between the customer and the QSP must include the Program Administrator on the distribution list.**

5.3 PAYMENT FOR PROGRAM SERVICES

The Retrocommissioning QSP Participation Application signed by approved QSPs outlines the general Terms and Conditions for services provided by QSPs. Also, SRP will issue a written authorization to proceed with each approved project to the selected QSP. This authorization will include the payment schedule of fixed project rebates for the delivery and satisfactory completion, in SRP's sole opinion, of the critical QSP deliverables. For both the traditional RCx path and the MBCx path these are:

- 1) Investigation Phase: Investigation Report and the Customer RCx Recommended Measures Table
- 2) Verification Phase: Functional Testing and Final Verification Report

The Retrocommissioning Program pays rebates associated with completed and approved deliverables for the normal process after the Investigation Phase and Verification Phase according to the applicable rebate structure and once SRP has issued the final report for each phase to the customer. Please contact the program administrator for additional information on this payment structure.

5.4 ADDITIONAL CUSTOMER SERVICES

The primary objective of the program is to identify and verify the customer implementation of RCMs targeting electric energy savings. However, complementary economies of scale can be realized during the retrocommissioning process to identify other non-electric savings opportunities within a facility. As such, customers are free to pursue additional contracting with the QSP to expand the work scope (e.g., identify water, natural gas, or other fuel type savings opportunities) and cover all QSP time and costs associated with these additional services. Implementation commissioning and project management are also acceptable extra QSP work. The addition of these services must not create an unnecessary delay in the SRP-sponsored retrocommissioning services.

Under the SRP Business Solutions Retrocommissioning Program, QSPs provide implementation assistance to customers during implementation to assist them in completing the RCMs. Due to the expertise of the QSPs and their involvement in the retrocommissioning process, some customers may request that QSPs conduct more in-depth RCM implementation services that are outside the QSP's program-funded scope. Examples of these enhanced implementation activities include mechanical contracting, significant control modifications, and electrical installation. Under these circumstances, the QSP and customer will be responsible for all contracting activities related to providing these services. Depending on the level of implementation activities conducted by the QSP, the Program Administrator may reduce the scope of the QSP's Verification Phase activities to ensure independent verification of the RCMs. QSPs should contact the program administrator when they intend to conduct in-depth implementation services.

6.1 APPLICATION PHASE OVERVIEW

The facility owner or representative completes and submits to the Program Administrator a project application to begin the Application Phase. The Program Administrator will evaluate applications and select program participants with a high potential for cost-effective energy-saving measures. The Program Administrator's decision regarding the selection of program applicants to participate in the program will be final and binding for all parties. The Application Phase typically takes about two to three weeks.

Upon acceptance of a participant application, the Program Administrator will work to assign the project to a QSP with a written authorization outlining deliverable dates and costs under the terms of the Custom & Retrocommissioning QSP Application.

QSP responsibilities associated with the application phase of the program center around providing supplemental outreach and marketing support for the program and submitting a scope of work, including targeted savings upon request from the Program Administrator. The customer holds the primary responsibility for completing and submitting an application to the Program Administrator.

6.2 MONITORING-BASED COMMISSIONING INTEGRATION (OPTIONAL)

Customers may choose to pursue Monitoring-Based Commissioning (MBCx) rather than following the traditional Retrocommissioning path. The MBCx path will allow customers to take a systematic, data-driven approach to achieve RCx savings using continuous monitoring to ensure that the customer implements RCMs successfully and that savings are persistent.

The customer is not required to contract directly with the QSP that is conducting the RCx services for an MBCx hardware & software package. However, if a customer chooses the MBCx path, they must contract with an SRP approved QSP to provide at least 24 months (or 12 months for new construction) of monitoring and data trending through the integrated MBCx hardware and software package after completing integration. The QSP or customer may aggregate trended data on other systems, but the data collection must be performed continuously with a trending interval of 15 minutes or less.

The service provider will install the monitoring equipment and software at the customer's facility and test the system to ensure that everything is operating correctly and meets the program requirements. The service provider will make any necessary changes to the system. The MBCx Service Provider is required to provide a record of the Scope of Work completed for the installation of the MBCx system, read-only access to the Customer MBCx web portal, and a draft of an MBCx customer-facing report. The MBCx Service Provider must also provide the following (typically in a MS Excel file or CSV file): a list of all monitored equipment, a list of all monitored points, a sample of the trend data file pulled from the EMS system or another storage system, and a list of top 10-20 algorithms (i.e., Fault Detection Diagnostics, FDD) for identifying RCx measures.

6.3 QSP ASSIGNMENT

Upon acceptance of a participant application, the Program Administrator will begin the assignment process to approved Retrocommissioning QSPs. Factors considered when assigning projects will include, but are not necessarily limited to:

- The role of a QSP in soliciting the project
- Customer QSP preference
- A match between the QSP's experience and anticipated RCMs
- QSP availability to complete the work promptly
- QSP performance and work quality on previous retrocommissioning projects
- Distribution of projects among QSPs

To complete the QSP assignment, the Program Administrator will request from one or more QSPs a scope of work, including a project schedule and preliminary target savings goal. Except in limited cases, the QSP, who identifies a project opportunity and facilitates the application process accepted program applications, receives the project assignment. In all cases, customers are free to request services from another participating QSP.

To help ensure that projects will result in cost-effective savings for SRP, the Program Administrator, in consultation with the QSP, will establish a target annual electric energy savings value for the facility. This target savings will be a function of the facility type, size, and the estimated retrocommissioning service costs. This value will serve as a benchmark against which the Program Administrator will review the Retrocommissioning Investigation Report. If needed, they may revise the contracted work scope with the QSP, or redirect the project towards another energy efficiency program offering from SRP.

Before commencing the Investigation Phase, the customer must sign the Retrocommissioning Approval form. This document includes several components that define the roles and responsibilities of each party, the project goals, and customer information release language. The primary purpose of this process is to mutually agree to and formally document the customer's commitment to spending at least \$3,000 for the implementation of mutually accepted retrocommissioning measures that result in a bundled estimated simple payback of 2.0 years or less, before rebates. For projects not completed within an agreed-to timeframe, SRP requires the customer to reimburse SRP for the cost of any program-funded retrocommissioning Investigation and/or Verification costs incurred by the QSP.

Upon acceptance of a participant application, the Program Administrator will assign the project to a QSP with a written authorization outlining project deliverable dates and the variable QSP pricing per the terms of the Retrocommissioning QSP Participation Application.

Key QSP Application Phase Deliverables

- 1) Project Scope of Work proposal including:
 - Proposed project schedule
 - Scope of systems to be investigated
 - Target energy savings value

7.1 INVESTIGATION PHASE OVERVIEW

The Investigation Phase is the second step in an RCx project. It consists of detailed analysis followed by the implementation of the agreed-upon measures. This phase begins with a kick-off meeting for the Program Administrator and SRP Strategic Account Manager to introduce the QSP to the customer. The Investigation Phase involves the detailed identification and investigation of the RCMs. The investigation includes activities such as conducting detailed site assessments, diagnostic testing, and trend analysis to evaluate current facility operating procedures and equipment functionality. After the Investigation Phase, the retrocommissioning measures and associated costs, savings, and economic impacts will be updated and summarized in the Customer Selection Form. This phase may require eight to twenty weeks during times when affected building systems are operational.

During the Investigation Phase, the QSP, with assistance from the facility engineering staff, will conduct site assessment activities to develop detailed plans for implementing the retrocommissioning measures. The principal QSP Investigation Phase activities include the following:

- Working with facility staff to guide the Retrocommissioning actions and identify RCMs
- Gathering information to assess equipment operation
- Updating the Customer Selection Form
- Developing the Investigation Report detailing each RCM
- Estimating the potential electric energy savings for identified RCMs
- Evaluate the cost to implement RCMs
- Assisting the customer's implementation team in implementing the RCMs

The facility owner typically implements RCMs after the Investigation Report is complete. An essential requirement for the success of this phase is that sufficient information is collected by the QSP to document the baseline and estimate the RCMs' electric energy savings potential before implementation begins.

The Customer Selection Form is used throughout the entire retrocommissioning process to communicate retrocommissioning opportunities and seek customer approval to proceed with implementation. If the QSP finds additional retrocommissioning measures or existing measures are modified, the QSP will update the Customer Selection Form. The Investigation Report and updated Customer Selection Form will be reviewed with the customer at an Investigation Review meeting to provide guidance regarding measure implementation and answer any questions. The customer will complete and return the Customer Selection Form once they decide which measures they will implement, including the estimated implementation date. Measures with paybacks >5 years before rebates are not eligible for the investigation phase report.

The implementation costs used to calculate project economics under the program are based upon reasonable market costs as determined by the QSP and approved solely by SRP. Resources to obtain market costs include, but are not limited to, industry-accepted project estimation resources, vendor quotes, or professional judgment. The customer has the flexibility to utilize in-house staff or an outside contractor to implement retrocommissioning measures implementation. Final implementation costs may vary from the estimated market costs. However, the market costs support the contractual obligations of the customer, making a minimum commitment of \$3,000 to the RCx project. If the customer is seeking the customer implementation rebate, invoicing or purchase orders will be required to document all associated costs with the retrocommissioning implementation.

7.2 FOCUSED ASSESSMENT

A focused assessment of the energy systems and equipment is necessary to develop a working knowledge of all facility systems. The assessment focuses on problem areas and potential RCMs identified by facility staff. At the facility level, typical information collected and documented includes:

- Facility location, use, and operating/occupancy schedule
- Systems with the highest electric energy use and demand
- Significant control, operational, and maintenance problems
- Comfort problems
- Operations and maintenance (O&M) practices
- Major equipment sequences of operation

At the system and equipment level, the assessment involves collecting nameplate information and conducting a minimum standard set of diagnostic tests and parameter measurements. The system and equipment assessments generally should include the following information:

- Nameplate data
- Design and operational intent
- Actual operation (e.g., set points, schedule, the sequence of operation)
- Exact operating parameters (e.g., temperature, pressure, flow)

Results from the assessment helps develop the Investigation Report and the Customer Selection Form. The tasks outlined in Table 7.1 provide a summary of the typical investigation activities expected for major system components. This scope of work is provided as an example and may change for different facility types.

Table 7.1. Retrocommissioning Survey Elements Summary (Example)

System or equipment	Typical Investigation Activities
Central Plant	<ul style="list-style-type: none"> • Document and verify sequence of operations • Spot measure actual performance (kW, kW/ton) • Document system type and temperature, pressure, and flow setpoints • Verify temperature and pressure sensor calibration • Collect trended data to identify operational problems and establish baseline operation • Collect equipment lists from facility personnel • Collect clearly labeled EMS screenshots

System or equipment	Typical Investigation Activities
Air Handling Unit	<ul style="list-style-type: none"> • Document and verify sequence of operations • Document system type and nameplate ratings • Document temperature and pressure at control points • Verify economizer operation (if present) • Verify damper and valve operation from 0-100% • Verify temperature and pressure sensor calibration • Measure motor/fan load and kW, flow, and pressure • Verify inlet guide vane / discharge damper / VFD operation (if present) • Collect trend data to identify operational problems and establish baseline operation • Collect equipment lists from facility personnel • Collect clearly labeled EMS screenshots

7.3 INVESTIGATION REPORT

Because the SRP Business Solutions Retrocommissioning Program relies heavily on accurate and comprehensive characterization of all RCMs, the QSP must exercise additional diligence in collecting data, documenting field conditions, and calculating savings. During the early part of the investigation, the QSP will develop the Investigation Report to record the following for each RCM:

- Functional tests required for characterizing the RCM
- Governing equations for calculating electric energy savings
- Necessary inputs to the equations (trended or measured)
- Operating conditions for which savings will occur and the required verification data collection period

For non-capital measures identified in the Customer's Selection Form, the QSP calculates the estimated annual electricity savings and associated gas savings, determines implementation costs, and calculates a simple payback period based on both electric and associated gas savings. Measures with paybacks >5 years before rebates are not eligible to be included in the investigation phase report. QSPs provide their calculations and any supporting documentation (such as trended data) with the Investigation Report.

Because the customer pays implementation costs based on the estimates provided in the Investigation Report, the savings calculations must be accurate. Estimates for implementation costs must be accurate market costs and must be obtained directly from the Owner/representative, vendor, or an accepted cost estimating source. The QSP must document these estimates in the Investigation Report. Should the customer request the QSP to assist in the implementation of identified RCMs, the QSP must honor the costs prepared for the Investigation Report.

Table 7.2 below shows the expectations for calculating electric demand and energy savings.

Table 7.2. Savings Calculation Guidelines

Savings Calculation	Calculation Guidelines
Average peak electric demand (kW)	Calculate SRP's average peak billing demand savings (based on the facility operation from 4-7 pm, M-F, in July and August)

Annual electric energy (kWh/yr.)	Use system operating hours and operating characteristics (e.g., demand dependence on outside air temperature)
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Calculations must be done in a spreadsheet format and presented for review. The calculations must use Typical Meteorological Year X (TMYx) data, derived from hourly weather data through 2018. The QSP shall perform an hourly analysis for July and August with kW savings. Using TMYx data ensures that the resulting savings estimates are representative of typical weather, not the weather that occurred during the project study period. Weather data are available from the Program Administrator or online from https://rredc.nrel.gov/solar/old_data/nsrdb/1991-2005/tmy3/by_state_and_city.html. Calculations done using whole-building simulation software will not be accepted without prior written approval from the Program Administrator.

The QSP must submit a copy of the Investigation Report to the Program Administrator for review and approval during the Investigation Phase. Deviations from the program approved template must be pre-approved in writing by the Program Administrator. The QSP shall not send the deliverables directly to the customer as the Program Administrator will send these once approved.

7.4 PRESENTATION OF RCMS

The QSP will provide an updated Customer Selection Form with the Investigation Report for review by the Program Administrator. This form includes measure descriptions, energy savings, implementation costs, simple payback periods, and estimated completion dates. The Customer Selection Form also identifies three separate RCM bundles recommended by the QSP with an option for customization.

Together with the QSP, the Program Administrator, and SRP, the facility representatives review the project recommendations. The bundle of RCMs to be implemented is agreed upon by all parties. Factors considered include occupant comfort, safety, or liability, as discussed by all participants in the meeting. Also to be considered is the customer's commitment to spending at least \$3,000 for implementation of agreed-upon RCMs that result in a bundled estimated simple payback of 2.0 years or less, calculated before rebates and based on electric and associated gas savings. Although this meeting provides a singular formal communication of results, the QSP is also encouraged to review RCM status with the building owners on an ongoing basis after establishing the baseline operation to facilitate a quick implementation timeframe.

7.5 INTEGRATING OTHER PROJECT OPPORTUNITIES

QSPs are encouraged to find other energy efficiency opportunities at the facility and to suggest that customers also implement those projects under SRP's other energy efficiency programs. These other project opportunities should be opportunities that would be eligible under the following programs:

- The SRP Business Solutions Standard Program
- The SRP Business Solutions Custom Program
- SRP Business Solutions Electrification Program
- SRP Business Solutions Workplace EV Program
- SRP Business Demand Response Program

QSPs are also encouraged to work with the relevant Program Administration staff for these project opportunities. See Appendix A SRP Energy Efficiency Programs for the program descriptions.

Key QSP Investigation Phase Deliverables

- 1) Investigation Report for all RCMs
- 2) Updated Customer Selection Form
- 3) Participation in presentation of Investigation Report and Customer Selection Form to customer
- 4) Attendance at Investigation Meeting

8.1 IMPLEMENTATION SUPPORT

During the Implementation Phase, the QSP will work with the customer's implementation team to provide assistance and resolve any problems that arise during implementation. After the Program Administrator approves the Investigation Report, the QSP will oversee the measure installation and ensure that the customer implements all measures correctly. The customer's implementation team includes facility engineers, operational staff, and mechanical, electrical, and controls contractors. As the customer approves RCMs, the implementation team will implement the items associated with the relevant measures. The goal of this phase is to fully implement all agreed-upon retrocommissioning measures to meet the minimum customer commitment within 120 days of the finalization of the Investigation Phase. Additional measures beyond the minimum customer commitment may be implemented within 1 year of the Verification Phase review meeting date to remain eligible for building owner rebates.

Implementation of the RCMs is the sole responsibility of the customer. However, the QSP is required to provide technical support during this phase for the customer to implement the RCMs. Shown below are the customer's role and the QSP's role in implementation.

- **Customer Implementation** activities are specific to funding the implementation of the recommended RCMs (\$3,000 minimum commitment). Examples may include contracting with contractors, design consultants, or other industry professionals to provide: mechanical/electrical site work, professional engineering design, controls modifications, and installation of equipment for the RCM. The customer may choose to solicit these services from the QSP, in which case the QSP would be working under direct contract with the customer and not the SRP Program.
- **QSP Implementation** assistance is provided to customers to guide them from a recommended solution to the physical installation of the RCM. These activities may take the form of troubleshooting recommended control sequences, suggesting alternative RCM strategies during implementation, commenting on alternative design solutions, and answering technical questions. QSPs will oversee measure installation and ensure that the customer implements all measures correctly. The QSP includes costs for this support as part of the price for the Investigation Phase of the project.

Key QSP Investigation Phase Deliverables

- 1) Ongoing RCM implementation support for customer

9.1 VERIFICATION PHASE OVERVIEW

During the Verification Phase, the QSP evaluates facility trending data (from the building EMS, facility sub-meters, or utility meter). The QSP also revisits the site to verify that measures are complete (e.g., new control strategies are functioning correctly, repairs are working as intended, etc.). The QSP prepares and submits the Verification Report that summarizes the final findings and impacts from the project. The target timeline for completion of the Verification Phase is approximately three to ten weeks for a typical project.

9.2 VERIFY RCM IMPLEMENTATION

Initial QSP verification activities will include a site visit to confirm the installation of the RCMs approved in the Customer Selection Form. Activities will consist of visual inspections and functional testing as appropriate to ensure RCMs are working as anticipated. The QSP will report these preliminary findings to the Program Administrator. If the QSP finds discrepancies between the implemented RCMs and those agreed to with the building owner during the Implementation Phase of the project, the Program Administrator may require halting all verification activities until the customer completes implementation.

To confirm that the recommended RCMs are working correctly and savings estimates are accurate, the QSP is required to complete the verification activities identified in the Investigation Report. The verification may consist of data trending, spot measurements, visual checks, and/or interviews with the party responsible for implementation. Generally, the verification procedures follow Option A or Option B of the International Performance Measurement & Verification Protocol.

9.3 VERIFICATION REPORT

The Verification Report serves as final documentation for each of the projects implemented RCMs. The purpose of this report is to verify that the customer correctly installed RCMs and document verified electric demand and energy savings for each RCM. The results of the verification activities for each implemented RCM will be used by the QSP to prepare the Verification Report. This report includes a summary of completed RCMs, a review of trending and functional testing, and the final estimated costs and energy savings. The QSP documents any discrepancies noted between the actual and recommended RCMs and presents these in the Verification Report. It is essential that recorded data be included in the report to support the final savings calculations and account for such implementation discrepancies. If discrepancies exist, the QSP recalculates associated savings, and the QSP presents revised savings for each measure in the report.

The QSP submits the Verification Report to the Program Administrator for review and comment. Any requested changes are incorporated, and the Program Administrator sends a copy of the approved report to the customer. Deviations from the program approved template must be pre-approved in writing by the Program Administrator.

Key QSP Verification Phase Deliverables

- 1) Verification Report and Final Customer Selection Form
- 2) Attendance at Verification Phase meeting

SRP offers a range of energy efficiency opportunities to help commercial and industrial customers save energy and money. Reduced energy costs, technical assistance, and/or incentives are available for qualifying customers. Below is a summary of other available commercial and industrial energy efficiency and electrification programs. Additional information regarding eligibility requirements, rebates, and participation processes are available at www.savewithsrpbiz.com or by contacting the Program Administrator.

SRP Business Solutions Standard Program

The SRP Business Solutions Standard Program promotes the purchase of industry-proven, high-efficiency equipment. Rebates serve to buy down the difference between the cost of high-efficiency and standard equipment, thereby making the high-efficiency equipment a more attractive option for customers. Rebates are available for qualifying lighting, HVAC, data center, building envelope, kitchen equipment, compressed air, and refrigeration measures.

SRP Business Solutions Custom Program

The SRP Business Solutions Custom Program provides a comprehensive platform for cost-effective non-residential energy efficiency projects not addressed by the SRP Business Solutions Standard Program. One of the primary goals of the program is to obtain verifiable, cost-effective, and persistent electrical energy savings that result from the installation of energy efficiency measures.

In addition to equipment rebates, SRP offers eligible customers the opportunity to receive energy efficiency assessments performed by a Qualified Service Provider (QSP). These assessments focus on a predefined system or scope of energy efficiency business practices, strategies, and capital improvement opportunities. They can provide both initial and investment-grade reports to assist customers in screening, evaluating, and prioritizing complex energy efficiency projects.

SRP Business Solutions New Construction Program

The SRP Business Solutions New Construction Program provides technical assistance and financial rebates to help architects, engineering professionals, and building owners optimize energy and demand savings, and reduce operating costs in commercial new construction projects. Projects must be new construction or major renovation and must be 20,000 square feet or greater for commercial, industrial, retail, multifamily, or core and shell use. Projects that are most likely to succeed in meeting the program's goals will be accepted. The program offerings are scalable for projects of varying sizes under two different tracks and flexible to grow with customer demand.

The Expedited Track is suitable for projects with accelerated design schedules that are unable to invest the time necessary for participating under the enhanced performance track. The buildings under this track will have less aggressive savings targets; typically, these buildings will have less than 75,000 square feet of conditioned floor space but must be $\geq 20,000$ square feet (new construction/renovation/additions).

The Enhanced Performance Track will offer two types of Energy Design Assistance (EDA) service incentives, Energy Modeling and Lighting Design Services Incentives. This track employs a whole building performance-based strategy that fosters an integrated design approach with the project's design team starting during the project's schematic design phase. Early involvement combined with the comprehensive interaction of key project stakeholders afford the opportunity to cost-effectively evaluate and incorporate efficiency strategies while design components are still fluid. Under the Enhanced Performance Track, the buildings will have $\geq 50,000$ square feet of conditioned floor space (new construction/renovation/additions).

SRP Business Solutions Retrocommissioning Program

The SRP Business Solutions Retrocommissioning Program helps customers achieve demand and energy savings in commercial and industrial facilities. Savings are realized through the systematic evaluation of facility systems and customer's implementation of cost-effective, energy efficiency measures targeted to improve facility operation that, in many cases, also improve occupant comfort and production efficiency.

Program participants are customers with 50,000+ sq. ft. of conditioned space or 1,000,000 kWh in usage, which have demonstrated a commitment to spend \$3,000 or more to implement identified retrocommissioning measures with an estimated total project simple payback of 2.0 years or less calculated before rebates and based upon electric and associated gas savings. A streamlined Building Tune-up program is available for customers with facilities 15,000+ sq. ft. in size.

SRP Business Solutions Small Business Program

The SRP Business Solutions Small Business Program promotes the purchase of high-efficiency lighting and HVAC upgrades in small commercial and industrial facilities. No-cost assessments are available to qualifying customers to help identify lighting efficiency and HVAC upgrade opportunities. Rebates are also available to pre-approved installation contractors to buy down the difference between the cost of energy-efficient systems and standard lighting and HVAC equipment, thereby making the high-efficiency equipment a more attractive option for customers. Rebates are available for qualifying lighting and HVAC measures.

SRP Business Solutions Electrification Program

Thinking of switching to electrically fueled equipment at work? The SRP Business Solutions Electrification Program promotes the purchase of qualifying equipment to convert fossil-fuel-powered equipment to electric to reduce carbon emissions and make for healthier and safer work environments. Rebates for electric forklifts, electric truck refrigeration, and electrified truck parking spots are available, with additional custom rebates available for site-specific equipment like industrial process heating or mid or large heavy-duty fleet conversions. More information can be found at <https://savewithsrpbiz.com/etech>, by calling 602-236-9650, or by emailing etechrebates@srpnet.com

SRP Business Solutions Business EV Program

The SRP Business Solutions Business EV Program promotes the purchase of qualifying charging equipment to power electric vehicles. Your customers and employees will welcome the convenience to charge at work, to encourage customers to stay longer, and to count this initiative towards your sustainability goals. The program provides a per port rebates for level 2 chargers. For technical assessments or program support visit <https://savewithsrpbiz.com/rebates/evcharger.aspx>

SRP Business Solutions Multifamily Program

The SRP Business Solutions Multifamily Program promotes the purchase of high-efficiency lighting, HVAC, building envelope, and tenant upgrades in apartments and other multifamily properties. Contractors promote rebates for both tenant spaces and common areas, with a variety of rebate opportunities available. Be on the lookout for more information at <https://savewithsrpbiz.com>

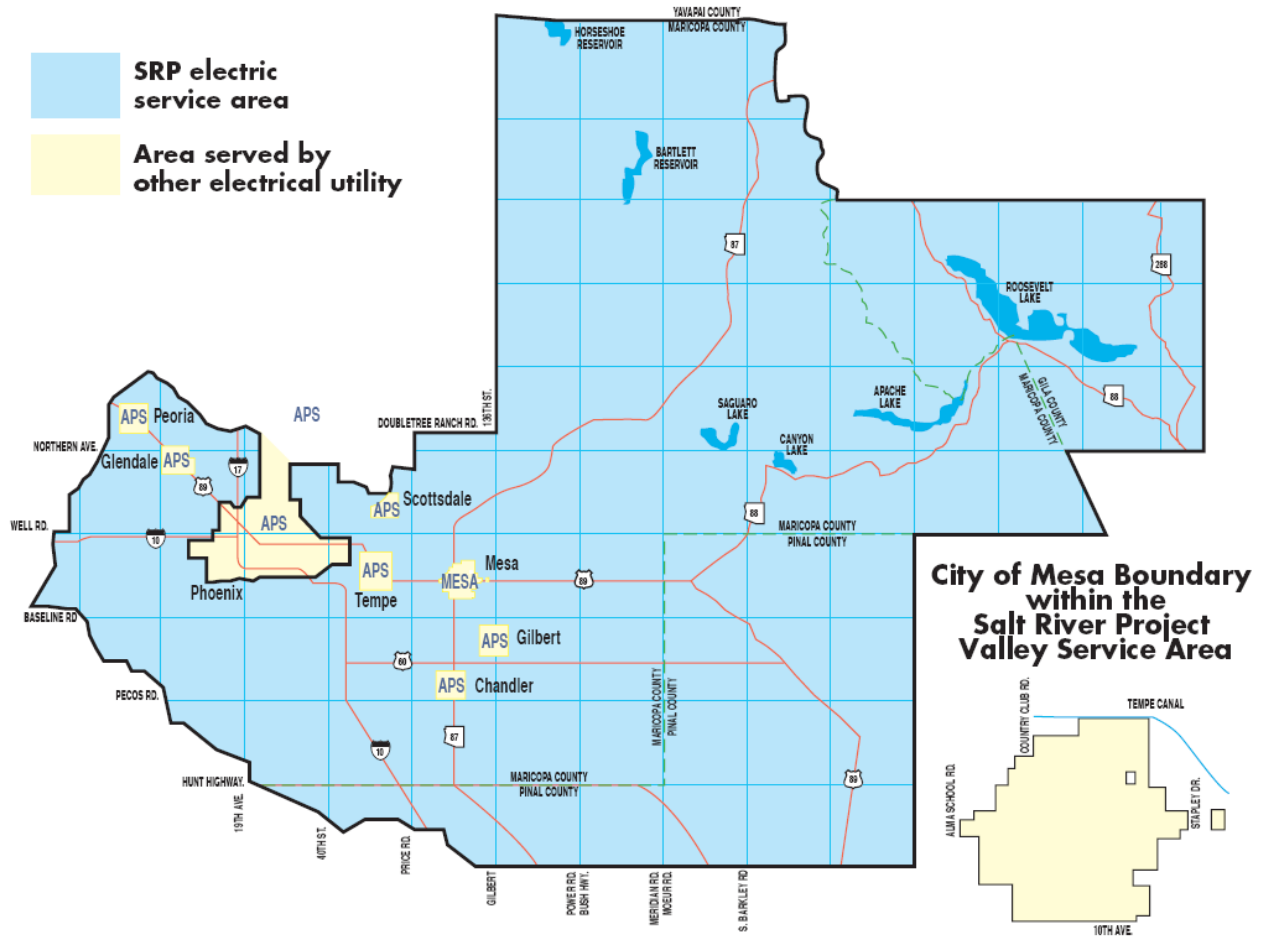
SRP Business Demand Response Program

SRP is collaborating with a company called Enel X to offer commercial, institutional, and industrial organizations incentive payments for participating in a new program to maintain a reliable and cost-effective electric grid. Between May and October each year, large energy consumers can earn payments for making targeted energy reductions during times of peak demand. Interested customers can contact their Strategic Energy Manager (SEM) for more details and to determine if they would be a good fit for the program.

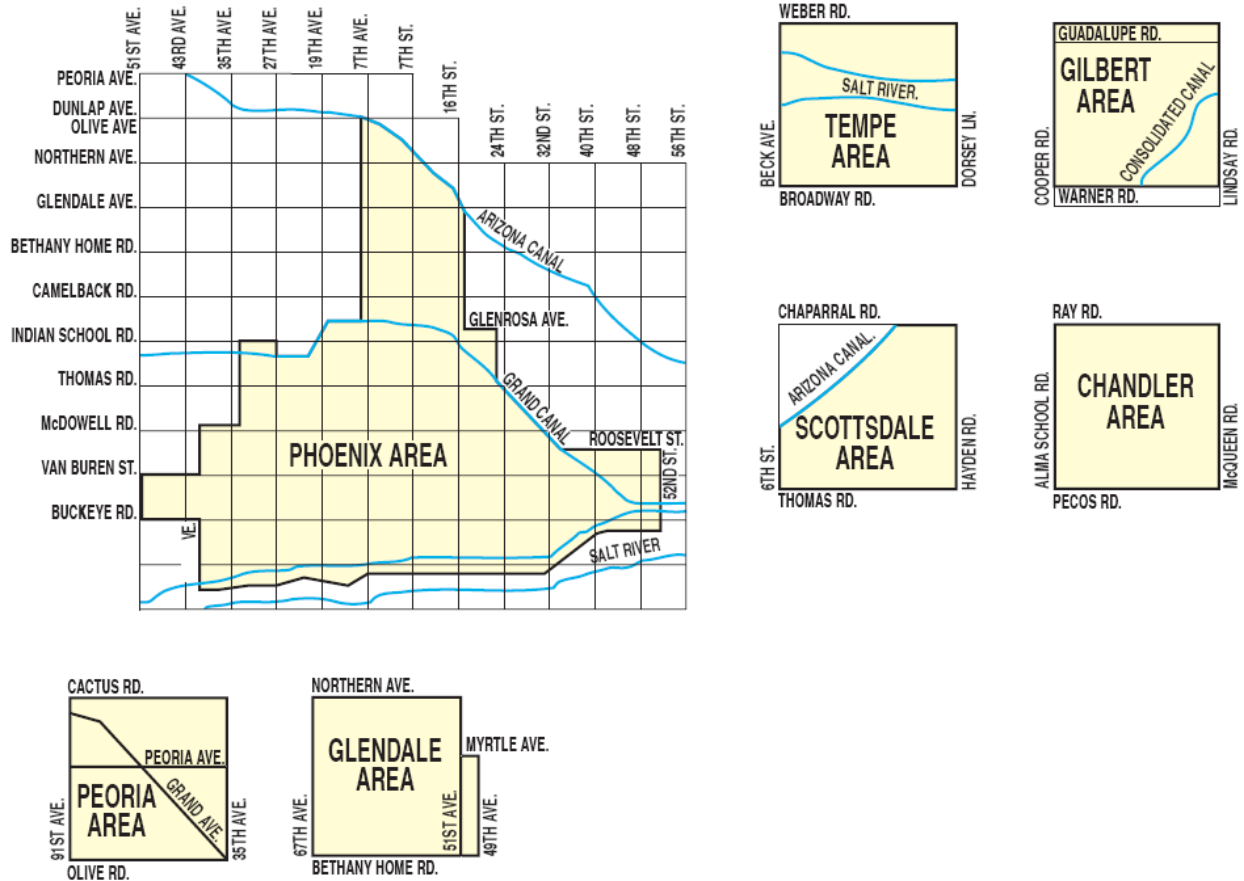
Appendix B

SRP Service Territory

An illustration of SRP's service area is provided below. A more detailed map of SRP service area is available by contacting the Program Administrator.



APS Boundaries within the Salt River Project Valley Service Area



*SRP service territory in these areas is the area surrounding the APS highlighted areas.



Customer Hotline: (602) 236-3054

Qualified Service Provider hotline: (602) 236-1611

savewithsrpbiz@srpnet.com