



Delivering water and power™

# FY21 SRP Business Solutions Program

Sustainable Cities Network – June 9, 2020



# Welcome / SRP & Nexant

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# Dimitrios Laloudakis

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# FY20 Recap - kWh Achievement

- FY20 Energy Savings Goal:  
156,275,453 kWh
- FY20 Energy Savings Achieved:  
155,351,094 kWh
- 7,700 Projects Completed
- \$11,772,456 Rebate dollars paid out



# Environmental Impact



**14,008,067,543**

**Cell Phones Charged**



**272,554,435**

**Miles driven average  
passenger vehicles**



**12,675**

**Homes' energy use for  
one year**





# FY21 SRP Business Solutions Program

# FY21 Business Solutions Offerings

- Concierge Service – SEMs to Large Customers - **NEW**
- Standard Program
- Technical Services & Equipment Rebates
  - New Construction Program – **NEW PROGRAM!**
  - Retrocommissioning Program – **NEW PROGRAM!**
  - Custom Program

# FY21 Updates

- Code Change ASHRAE 90.1 – 2013
- Updated rebate levels for Custom measures
- Expanded HVAC Measure Offerings
- New Kitchen Equipment Measures



# FY21 Rebate Caps

- \$300,000 per customer per SRP Fiscal Year
  - Can be used in any amounts across all programs
  - Multiple site operators equals one customer
- No individual program cap
- Individual Projects are capped at 120% lighting/150% Custom of pre-approved amount
  - subject to available funding

A hand holding a magnifying glass over a laptop keyboard. The word "STANDARD" is overlaid in large white letters.

# STANDARD

# Standard Program Overview

- Rebates pre-determined based on equipment size, efficiency, etc.
- **Pre-approval required** for retrofit lighting projects – all other Standard measures are post purchase
- Rebates capped at 100% of invoice cost
- Measure Categories:
  - Lighting
  - HVAC (chillers, rooftop units, etc.)
  - Compressed Air
  - Refrigeration
  - Kitchen Equipment
  - Data Centers (Cooling, IT Equipment)
  - Window Film & Shade Screens



# Standard Lighting

## Retrofit Lighting

- Pre-approval required
- Eligible LED products (DLC, Energy Star)
- Eligible lighting control rebates:
  - occupancy sensors
  - daylighting controls
  - networked lighting controls
- Exterior lighting controls not eligible for rebates

## New Construction Lighting

- No pre-approval required
- Eligible LED Products (DLC, Energy Star)
- Eligible lighting control rebates:
  - networked lighting controls ONLY
- Lighting must exceed ASHRAE 90.1 – 2013 by at least 10%

# FY21 Lighting & Controls Measure

Interior LED Lighting  
\$0.30 per watt reduced

Exterior LED Lighting  
\$0.20 per watt reduced

Existing Control	New Control	Retrofit Rebate	New Build Rebate
None	Occ and/or Daylight	\$0.15	N/A
None	Networked	\$0.40	\$0.25
Occ and/or Daylight	Networked	\$0.25	N/A

# Standard Non-Lighting

- **No pre-approval or pre-inspection required**
- **Rebates capped at 100% of invoice cost**
- Submit Required Documents once project is completed:
  - Mechanical Project Plans/ Blueprints
  - Pay Apps/Invoices with Matching Part Numbers and Quantities
  - Rebate Application with “Customer Information” tab filled out
  - Ink Signed Terms and Conditions
  - W-9
- Projects may require post-inspection



# Standard Non-Lighting Measures

- Prescriptive rebates available for:
  - **Unitary HVAC Equipment**
  - **PTACs/PTHPs and VTAC/VTHP**
  - **HVAC VFD & EC Motors**
  - **Chillers**
  - **Economizers & CO2 Sensors**
  - **Smart Thermostats and EMS**
  - **Advanced Rooftop Controls**
  - **Kitchen Equipment** – Griddles, Dishwashers, Ovens/Fryers, etc
  - **Refrigeration** – Compressors, Evap/Cond VFDs, Door Gaskets, Strip Curtains, Evap Condensers, etc
  - **Compressed Air** – dryers, compressors, condensers
  - **IT & Data Center** – CRAC Units, ECM, Server Virtualization
  - **Building Envelope** – window film, shade screen
  - **Other** – heat pump water heaters, pool pump VFDs

# New Construction Standard Measures

- **Code Change – ASHRAE 90.1-2013**
- No New Construction Rebates:
  - EC Motors (Refrigeration, HVAC, & CRAC/CRAH)
  - Evaporative Condensers
  - Floating Head Pressure Controls
  - ASH Controls
  - Door-Closers
  - High Efficiency Open Display Cases
  - Refrigerated Occupancy Control Sensors
- Eligibility Changes to Other Measures:
  - Evap Coolers, VFDs, Chillers, CO<sub>2</sub> Sensors



The background of the slide is a blurred architectural drawing. It features a large, dark, semi-circular frame, possibly a window or a part of a building model, with a detailed sketch of a building facade inside it. The drawing is on a light-colored paper, and there are other faint sketches and lines visible around it. The overall tone is professional and technical.

# NEW CONSTRUCTION

Building Modeling/Energy Design Assistance



# FY21 New Construction Program (Whole Building Approach)

## Two Participation Tracks:

- Enhanced Performance Track – program provides Energy Design Assistance (EDA) services
- Expedited Track – program does not provide EDA services

### ➤ Enhanced Performance Track

- Large Facilities
- $\geq 75,000$  sq ft or  $\geq 20,000$  sq ft for Multifamily
- Early in the design process (at Schematic design or earlier)

### ➤ Expedited Track

- Smaller/medium Facilities
- $\geq 20,000$  sq ft
- Can be later in the design process (at Design Development or earlier)

# FY21 NCS Program Eligibility

- Rebates for projects whose whole building design exceeds Performance of the ASHRAE Std. 90.1-2013 Appendix-G compliant base building by 10% or more
- Buildings planned for new construction, major renovation or additions
  - Major renovation/additions must require professional design services and review by code authorities or involve change in space type
- Must use Energy Modeling software compliant per ASHRAE 90.1-2013 Appendix G

# Common Measures under NCS Program

- Improved wall insulation
- Building Thermal Mass
- Reflective Cool Roof
- High efficiency lighting fixtures
- Networked lighting controls
- High efficiency chiller
- High Efficiency Refrigeration Equipment
- Water side economizer
- Chilled beams
- Energy Recovery Systems
- Evaporative cooling technologies
- Demand control ventilation



# FY21 NCS Program Customer Rebates

- Customer equipment rebates
  - \$0.10 per kWh saved over a calculated year
  - 50% of the eligible customer equipment rebate paid once construction begins
- \$300,000 total in a Given Program Year (May 1 – April 30)
  - All service rebates (such as, EDA and Design Team rebates) and equipment rebates paid from all Business Solutions Programs including NCS will apply to the customer rebate cap
  - No individual program cap (customer can receive \$300,000 rebates from a single program or from multiple programs)



# RETROCOMMISSIONING

# Retrocommissioning Program Overview

- Buildings between construction and major renovation
- Focus on improving operation of existing systems - controls changes and minor improvements
- QSPs provide engineering support at NO cost to customer
- 2 Paths - Traditional and Monitoring-Based Commissioning (MBCx)

# Retrocommissioning Customer Rebates

- Customer Implementation Commitment - \$3,000
  - Commitment can **NOT** be met with internal labor
- Customer Verification Rebate:
  - \$0.05/kWh + \$150/average peak kW, up to 100% of cost after \$3,000 commitment met
  - Submit invoices to verify costs
  - Customer's internal labor costs are not eligible for customer rebate
- MBCx – Integration - 50/50, up to \$15,000, other 50% up to \$15,000 after implementation, invoices verify costs
  - New Construction – 100%, up to \$12,000



# RCS Project Eligibility

- Large facilities ( $\geq 50,000$  sq. ft. of conditioned space or  $\geq 1,000,000$  kWh of annual usage)
- $\geq 2$  years in age
- EMS or DDC control systems
- Functional equipment not in need of repair or replacement
- Facility high energy use indices



# Monitoring-Based Commissioning (MBCx)

- Optional data-driven, continuous commissioning approach
- Customers with  $\geq 150,000$  sq. ft. of conditioned space or  $\geq 3,000,000$  kWh annual electric usage
- New construction buildings can qualify
- MBCx system must be integrated prior to starting Investigation phase
  - May delay start of project 3 months to a year
- Integration Provider must be approved by SRP

# Monitoring-Based Commissioning

- Customer Must Sign-up for 24 Months of Monitoring
  - 12 Months if New Construction
- QSP to test the system operation & make changes as necessary
- Provide a record of the Scope of Work for Customer Rebate
- Software Requirements for Program Administrator:
  - Read-only access to the Customer MBCx web portal
  - Draft of an MBCx customer-facing report
  - List of all monitored equipment
  - List of all monitored points
  - Sample of trend data
  - List of top 10-20 algorithms for RCx Measures (i.e., Fault Detection Diagnostics, FDD)

# Retrocommissioning Building Tune-up

- Delivered by Trade Allies - Package Unit Program
- 15,000 square feet minimum
- Pre-Approval Required
- SRP and Customer co-fund tune-up service fees
  - Rebate to Contractor: \$270-\$600 per unit based on unit tonnage
  - Customer must commit to spending \$500 per 50,000 sq. ft. or \$500 minimum
  - Targeted Measures: Scheduling, OA Adjustments, Economizer Repairs
  - Won't pay to repair every economizer





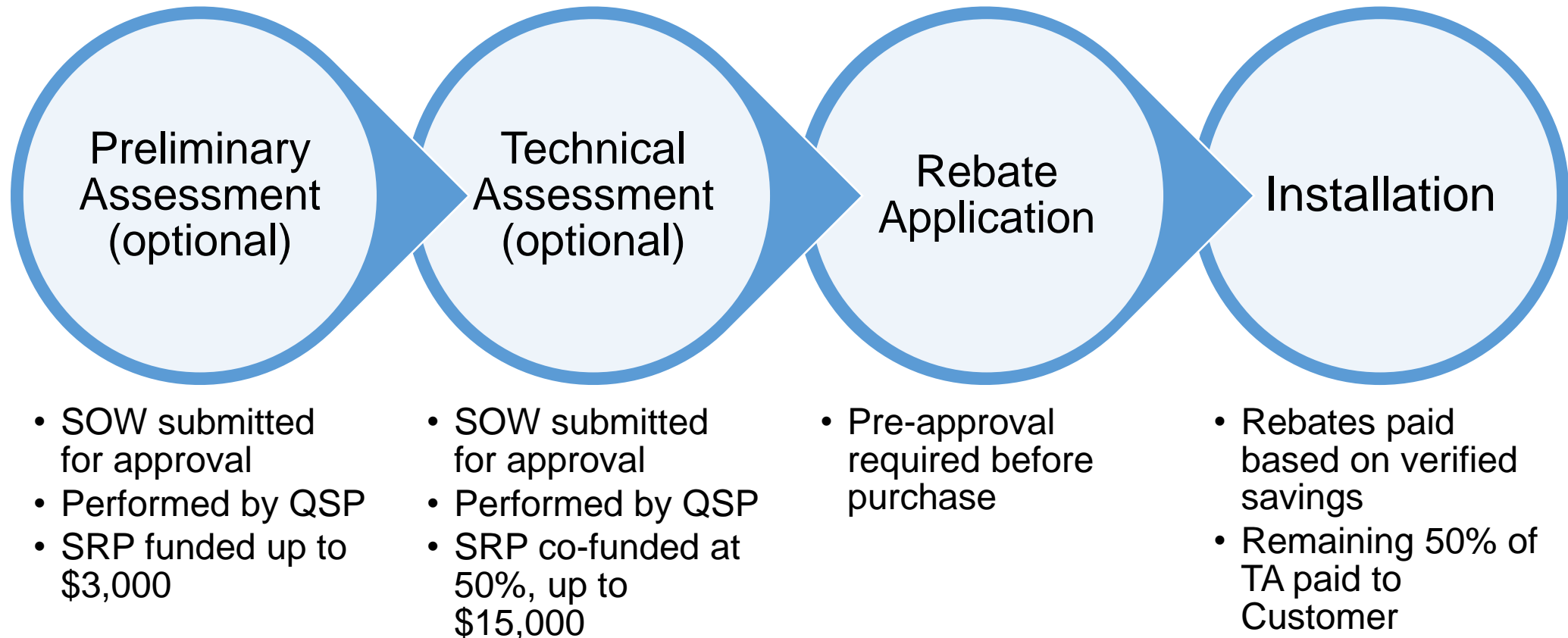
# CUSTOM



# Custom Program Overview

- Customer Equipment Rebates
  - Rebates paid at \$0.08 per kWh first year savings PLUS \$300 per average peak kW saved
- Technical Service Rebates
  - Preliminary Assessments – SRP funded up to \$3,000
  - Technical Assessments – SRP co-funded 50/50, up to \$15,000
- Customer Equipment and Technical Service Rebates Count Towards \$300,000 Rebate Cap

# Custom Program Overview



# Custom Assessments

- Preliminary & Technical Assessment Eligibility
  - EEM assessments – E-60 series customers
  - Active compressed air systems  $\geq 100$  HP
  - Data center space  $\geq 1000$  SF with dedicated cooling
  - **One** assessment per year, per customer
- Pump Test Assessments – \$500/pump up to \$3,000
  - Non-HVAC pumping systems  $\geq 25$  HP
  - **One** pump test every 23 months
- Compressed Air Leak Test Assessments – \$25/HP up to \$1,500
  - 25 HP to  $< 100$  HP of active compressed air capacity
  - **One** leak test on same compressed air system every 23 months



# Custom Program Eligibility



- Any measure that is not Standard is Custom
- Must produce verifiable electric energy savings
- Must pass SRP Total Resource Cost (TRC) test
- **PRE-APPROVAL REQUIRED**
  - Flexible pre-approval process for New Construction & end of life replacement custom projects

# Custom Excluded Measures



- Measures that:
  - Are eligible under Standard Program
  - Require no capital investments
  - Substitute another energy source for electricity (cogen, renewables)
  - Terminate or relocate existing processes, facilities or operations
  - Are required by law; building codes or standard energy practice
  - Involve plug loads



# Common Custom Projects

- Cool Roof and Insulation
  - NEW – Easier Qualification
- VFD's over 100HP for HVAC application
- VFDs of any size for Process/non-HVAC application
- Chiller VFDs & Central Chilled Water Plant Optimization
- EMS systems for buildings over 100,000 sq. ft.
- Constant-volume to variable volume box conversion
- Water-side Economizers
- Data Center: Adiabatic/IDEC cooling; Airflow containment systems; and Higher efficiency UPS systems
- High Efficient Process Equipment
  - Better than current industry standard
- Industrial Process Optimization for higher efficiency
- Upgrades of Industrial Refrigeration systems and controls
- Compressed air system improvements
- And many more.....

# Custom Program Baseline

- Retrofit/Early Retirement on functional equipment
  - Existing equipment is baseline if there is some (>2 yrs) remaining life available and the equipment is in good working condition
- New Installations/Failed Equipment/End of Useful Life
  - ASHRAE 90.1 – 2013 or Standard Industry Practice
- Benchmark used to determine savings and define incremental costs



# Custom Equipment Rebates

- Paid at \$0.08 per kWh first year savings PLUS \$300 per average peak kW saved
  - Capped at 75% of incremental project cost
  - Rebates up to 150% of pre-approved amount, subject to available funding



# Custom Rebate Pre-Approval

- SRP must pre-approve the Rebate Application (RA) in writing prior to the purchase, agreement to purchase or installation of eligible energy efficient equipment
- Pre-approval Letter identifies:
  - Reserved Rebate Amount & Deadline
  - Post M&V requirements
  - Penalties if M&V requirements not met
- Invoices used to verify:
  - Amount of incremental project cost
  - Date of purchase commitment



# Impact of COVID-19

- SRP is actively monitoring and following all guidance from the CDC, including taking necessary steps to reduce the threat of COVID-19 exposure
- All in-person meetings and non-essential visits to customer facilities are halted until further guidance
- Program staff will continue supporting the programs and individual projects through remote interactions



# Commercial EV Charging Station Rebate Program FY 2021



# SRP and EVs

SRP is taking decisive action to develop the EV market.

SRP's fleet has

**135**

EV vehicles –  
one of the largest  
fleets in the  
valley.

SRP currently has

**300**

charging ports for  
employees/visitors

SRP's goal is to support  
EV market growth to

**500,000**

EVs in the service  
territory as well as  
managed charging.

# Commercial EV – What's New

- \$1,500 rebate per port for networked Level 2 EV chargers
- Non-networked chargers are eligible for a **limited time** rebate of \$500 for the first 3 months of the program.
- Equipment purchased or leased and installed between 5/1/2020-4/30/2021. Apply as late as July 31, 2021.
- The EV program has no annual rebate limits but program funds are limited for the year.
- Level 2 EV chargers must:
  - Be able to supply an output current of at least 20 amps per port minimum at 208/240 volts.
  - Include a charge connector compliant with SAE J1772.
  - Comply with NEC article 625.
  - Be rated for outdoor usage, NEMA 3R or better, and an operating temperature range of 0 to 122F.
  - Be installed with consideration to ADA compliance.
  - Include network-ready software certified to receive an OpenADR 2.0b signal.

# Level 2 EV Chargers

## Level 2 Chargers

- 208/240 Volts
- ~24 miles per hour charge
- 6.6kW / 7.7kW

### Advantages of Networked Chargers

Real-time Monitoring and Trouble Shooting

Customizable Payment Option

Easy Software Updates

Real-time Data and Reporting



# Commercial EV Customer Targets

- All non-residential SRP customers
- Workplaces
  - Offices
  - Parking Garages
  - Business Parks
  - Government Facilities
- Multi-Unit Dwellings (MUDs)
  - Apartments
  - Condos
  - Multi-Use Spaces
- Fleets
  - Government
  - Local Service Vehicles – Plumbers, Pests, HVAC, Electricians, Delivery Services, etc.
  - Last Mile Delivery Services
  - Auto Dealerships
- Destination Centers
  - Sports Arenas
  - Malls
  - Hospitals
  - Restaurants/Bars
  - Grocery Store/Strip Centers
  - On-Street Parking by Local Government
  - Golf Clubs/Resorts
  - Convention/Conference Facilities
  - Hotels
- New Construction
- Progressive Companies with Strong Sustainability Goals (Tech, Defense, Professional Services)



# E-Tech: Rebates

- Forklifts:
  - Class 1- 2 (Replacement)\* \$2000/per unit
  - Class 1- 2 (Fleet expansion or First-time Purchase)\* \$ 500/ per unit
  - Class 3 (Replacement) New \$ 350/ per unit
- Forklifts Charging
  - DR Capable Forklift Charger \$ 250/ per unit
- E/S TRUs and Truck Stop Electrification \$1000/per unit
- Custom Program \$0.10/kWh\*\*

*\*\$500 bonus forklift incentive available for qualified small businesses for the first two electric forklifts*

*\*\*First year usage*

# Residential Rebates & Discounts

- HVAC – Up to \$1,125 on a new energy efficient AC.
- \$99 Home Energy Assessment
- Duct repairs up to \$400 of testing and repairs
- Shade Screen Installs – \$0.08 / sq ft for installed shade screens
- FREE Shade Trees – Up to two (2) desert adapted trees

# Bill Payment / Assistance

- SRP Customer Resource counselors – (Team of 10)
- Project SHARE – One time emergency for crisis (Salvation Army)
- SRP Bill Assistance
- Weatherization Assistance – (Energy Efficiency / Maricopa County)
- Home Energy-Savings Checklist
- My Account / Account Alerts
- Budget Billing
- Bill payment assistant programs: Call SRP @ 602-236-8888

# Wrap Up and Questions

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*Thanks!*