Short Form Work Paper WPSDGENRHC1010

**Revision 2**

**San Diego Gas & Electric**

**Energy Efficiency Engineering**

**Commercial Evaporator Coil Cleaning**

**December 21, 2018**

**SDG&E Commercial Evaporator Coil Cleaning**

## Introduction

This short form workpaper documents the values adopted from PGE’s workpaper entitled “Evaporator Coil Cleaning” (PGE3PHVC158 Revision 3). SDG&E adopts all the values in PGE3PHVC158 Revision 3, with the following exceptions:

1. Measure Application Type was adjusted to BRO-RCx from Retro-Commissioning (RC) per E-4818.
2. SDG&E is in the process of simplifying its internal Ex Ante data and tracking data warehouse.   Part of that process requires that there be savings values for all potential climate zone and building type combinations READi v2.5.1 did not include all impacts for building types ECC, EUn, Gro, Hsp, Mtl, SUn nor WRf, so the data tables include Gro, SUn or WRf for all climate zones with zero savings. The following building types ECC, EUn, Hsp, SUn and WRf were only missing location 15 climate zone, so the ex-ante data adopted SCG energy efficiency impacts for climate zone 15.

## Document Revision History

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| --- | --- | --- | --- |
| **Rev** | **Date** | **Author** | **Summary of Changes** |
| 0 | 06/04/2012 | Charles Harmstead/SDG&E | - Adopted from Conservation Services Group WPSDNRHC-EvapCoilClean Rev0.  - Updated NTG to DEER 2011 |
| 0.1 | 06/12/2014 | Rocaciano Vega/RMS | INTERNAL REVISION ONLY – no material impact made  - Updated to new workpaper template  - Added GSIA  - Updated EUL\_ID, no change to EUL or RUL  - Revised Measure Cost language to indicate that cost is from the program due to it being a Direct Install measure |
| 1 | 06/28/2016 | Martin Vu/RMS | - Adopted Evaporator Coil Cleaning Energy Savings values from the May 2, 2013 WORKPAPER DISPOSITION FOR Non-Residential HVAC Rooftop Quality Maintenance California Public Utilities Commission, Energy Division. |
| 2 | 12/21/18 | Keith Valenzuela (AESC) | - Adopted PGE3PHVC158 Revision 3 energy impact and cost values. |

## Measure Summary

Table 1: Measure Summary Table

| **Section** | **Value** |
| --- | --- |
| **1.1 Measure & Baseline Data** | Please reference PGE3PHVC158 Revision 3 Section 1.1 Measure Description & Background. |
| **1.2 Technical Description** | Please reference PGE3PHVC158 Revision 3 Section 1.2 Technical Description |
| Measures | Measures and Codes   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Measure Codes** | | | | **Measure Name** | | SCG | SDG&E | SCE | PG&E | | N/A | 465661  465662 | N/A | HV391 | Evaporator Coil Cleaning on Small Pkg AC system with No TXV | | N/A | 465663  465664 | N/A | HV392 | Evaporator Coil Cleaning on Small Pkg AC system with TXV |   Note: SDG&E has two measure codes per measure to account for each available delivery type (Direct Install and Downstream Incentive) |
| Code for All Measures | Please reference PGE3PHVC158 Revision 3 Section 1.4.2 Codes and Standards Analysis |
| Requirements | Please reference PGE3PHVC158 Revision 3 Section 1.1 Measure Description & Background.  Note: Contractor must be SDG&E approved. |
| **1.3 Installation Type and Delivery Mechanisms** | |
| Installation Type | BRO-RCx |
| Delivery Mechanisms | Please reference PGE3PHVC158 Revision 3 Section 1.3 Installation Type and Delivery Mechanisms and SDG&E Ex-ante database table submission. |
| **1.4 DEER Data** | |
| Net-to-Gross Ratio | Please reference PGE3PHVC158 Revision 3 Section 1.4.1 DEER Data and SDG&E Ex-ante database table submission. |
| Effective and Remaining Useful Life | Please reference PGE3PHVC158 Revision 3 Section 1.4.1 DEER Data and SDG&E Ex-ante database table submission. |
| GSIA | Please reference PGE3PHVC158 Revision 3 Section 1.4.1 DEER Data and SDG&E Ex-ante database table submission. |
| **Section 2. Calculation Methodology** | |
| Energy Savings/Peak Demand Reduction – All Measures | Please reference PGE3PHVC158 Revision 3 Section 2 Calculation Methodology and SDG&E Ex-ante database table submission. |
| **Section 3. Load Shapes** | |
| Load Shape | Please reference PGE3PHVC158 Revision 3 Section 3 Load Shapes |
| **Section 4. Cost** | |
| **Section 4.1 Base and Measure Costs** | |
| Base Cost | Please reference PGE3PHVC158 Revision 3 Section 4.1 Base Case Cost for details on how baseline cost estimates were determined.  SDG&E adopts all cost and created SDG&E measure cost IDs for reporting purposes. SDG&E measure cost IDs are included in Ex-Ante tables submission.  Base Cost ID = BaseCostZero = $0.00 |
| Measure Cost | Please reference PGE3PHVC158 Revision 3 Section 4.2 Measure Case Cost for details on how measure cost estimates were determined.  SDG&E adopts all cost and created SDG&E measure cost IDs for reporting purposes. SDG&E measure cost IDs are included in Ex-Ante tables submission. Units = “Cap-Tons”  Measure CostID= “SDG-EvapCoilCleanCom” = $23.14/Unit  IMC= $23.14/Unit |