03/10/2009

# Southern California Gas Company 2009 Program Cycle Workpapers

Page 1 of 23

### **#SW-C&SA - Building Standards Advocacy (#SW-C&SA)**

Msr # 501001 Desc: Therm Savings from HMG Whitepaper 2-13-09

**Grs kWh: Grs Therms:** 1.00 **Grs kW: Grs NC kW: NTG:** 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW: End Use: Units: Life: 10 Qty: 0 Incentive: Msr Cost:

Measure Life Type: Climate Zone: Region-wide Baseline Vintage: No vintage distinction

03/10/2009

# Southern California Gas Company 2009 Program Cycle Workpapers

Page 2 of 23

Msr Cost: \$0.00

### #y LIEE - Low Income EE (LIEE) (#y LIEE)

Msr # 502001 Desc: Placeholder for LIEE

Grs kWh: Grs Therms: 1.00 Grs kW: Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Units: Life: 15 Qty: 0 Incentive:

Measure Life Type: Climate Zone: Region-wide Baseline Vintage: No vintage distinction

#### #3P-Res03 - Multifamily Home Tune-Up (#3P-Res03)

Msr # 503001 Desc: Residential Duct Test and Sealing

Grs kWh: 92.8805 Grs Therms: 9.57979 Grs kW: 0.13661 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Space Cooling/Heating Units: Home Life: 18 Qty: 0 Incentive: \$497.62 Msr Cost: \$497.62

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (02/21/09 10:05pm) - SFM-wSCG-vEx-hAC-tWt-bCA-eMS-mRB-HV-SFDuctSeal-24pct-12pct + Duct Sealing (Total Leakage Reduced from 24% of AHU

flow to 12%)

Cost Comment (02/21/09 10:06pm) - Duct Sealing (Total Leakage Reduced from 24% of AHU flow to 12%)

Page 4 of 23

### #3P-Res04 - Multifamily Solar Pool Heating (#3P-Res04)

Msr # 504001 Desc: Solar Pool Heaters, gas back-up

Grs kWh: Grs Therms: 4,000.00 Grs kW: Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: 1000 sqft pool are. Life: 15 Qty: 0 Incentive: \$8,500.00 Msr Cost: \$11,250.00

Measure Life Type: Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (07/11/08 04:30pm) - Cost effectiveness parameters were derived from proposed projects. In many cases parameters were rounded or averaged among

projects.

### #3P-Res06 - Multifamily Direct Therm Savings (#3P-Res06)

Msr # 505001 **Desc: Water Heating Controls** 

Grs kWh: Grs Therms: 1.00 Grs kW: Grs NC kW: **NTG:** 1.00

Interactive Eff. kW: Coincidence Factor kW: **Run Hours:** Interactive Eff. kWh:

End Use: Water Heating Units: Therm **Qty:** 0 Msr Cost: \$1.00 **Life:** 10 Incentive: \$1.00

**Measure Life Type:** Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (07/11/08 04:30pm) - Cost effectiveness parameters were derived from proposed projects. In many cases parameters were rounded or averaged among

Cost Comment (02/26/09 07:29am) - The cost is estimated since this is a representative measure for a third party program not finalized. Since the incentive may not exceed the cost, the cost is set to the incentive to be conservative.

#### #3P-Res09 - Manufactured Mobile Home (#3P-Res09)

Msr # 506001 Desc: Low Flow Showerhead

Grs kWh: 0.00 Grs Therms: 4.80 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Showerhead Life: 10 Qty: 0 Incentive: \$31.06 Msr Cost: \$31.06

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (07/11/08 04:30pm) - Measure is expected to be direct install.

Cost Comment (07/12/08 05:17pm) - DEER 2008 ID: showerhead - 2.5 gal/minute, including labor

Msr # 506002 Desc: Faucet Aerators

Grs kWh: 0.00 Grs Therms: 6.047 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Household Life: 10 Qty: 0 Incentive: \$13.24 Msr Cost: \$13.24

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (07/11/08 04:30pm) - Measure is expected to be direct install. Cost Comment (07/12/08 05:17pm) - DEER 2008 ID: HWU-0p5G, including labor.

Savings Comment (03/10/09 02:31pm) - Savings are from 2005 DEER

Page 7 of 23

### #3P-Xc02 - SaveGas - Hot Water Control (#3P-Xc02)

Msr # 507001 Desc: DWH Controllers

Grs kWh: Grs Therms: 35.00 Grs kW: Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: room Life: 10 Qty: 0 Incentive: \$86.00 Msr Cost: \$135.00

Measure Life Type: Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (07/11/08 04:30pm) - Cost effectiveness parameters were derived from proposed projects. In many cases parameters were rounded or averaged among

projects.

#### **#SW-AgA - Calculated (#SW-AgA)**

Msr # 508001 Desc: PER Boiler Replacement

Grs kWh: 0.00 Grs Therms: 1.00 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Space Cooling/Heating Units: Therm Life: 20 Qty: 0 Incentive: \$1.00 Msr Cost: \$1.00

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (10/03/06 04:22pm) - See "BEEP 2006\_07 Data Custom Measure Cost and Projects.xls" in the NR\_Calculated folder. Cost Comment (02/26/09 10:18am) - Since the incentive may not exceed the cost, the cost is set to the incentive to be conservative.

Msr # 508002 Desc: Burners and burner related equipment (IEU)

Grs kWh: Grs Therms: 1.00 Grs kW: Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Other Units: Therm Life: 20 Qty: 0 Incentive: \$1.00 Msr Cost: \$1.00

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (04/22/08 05:29pm) - See "BEEP 2006\_07 Data Custom Measure Cost and Projects.xls" in the NR\_Calculated folder. Cost Comment (02/26/09 08:14am) - Since the incentive may not exceed the cost, the cost is set to the incentive to be conservative.

Msr # 508003 Desc: Equipment repair/upgrades (IEU)

Grs kWh: Grs Therms: 1.00 Grs kW: Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Other Units: Therm Life: 3 Qty: 0 Incentive: \$1.00 Msr Cost: \$1.00

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (04/22/08 05:29pm) - See "BEEP 2006\_07 Data Custom Measure Cost and Projects.xls" in the NR\_Calculated folder. Cost Comment (02/26/09 08:16am) - Since the incentive may not exceed the cost, the cost is set to the incentive to be conservative.

### #SW-AgB - Deemed (#SW-AgB)

Msr # 509001 Desc: Infrared Film for Greenhouses

Grs kWh: 0.00 Grs Therms: 0.128 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Space Cooling/Heating Units: Sqft Life: 5 Qty: 0 Incentive: \$0.03 Msr Cost: \$0.03

Measure Life Type: ROB Climate Zone: San Diego Baseline Vintage: No vintage distinction

General Comment (11/01/05 08:07am) - See "Greenhouse IR Film PGECOAGR102 R0.pdf"

Page 10 of 23

### #SW-AgB - Deemed (#SW-AgB)

Msr # 509002 Desc: Greenhouse Heat Curtain

Grs kWh: 0.00 Grs Therms: 0.191 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Space Cooling/Heating Units: Sqft Life: 5 Qty: 0 Incentive: \$0.25 Msr Cost: \$1.50

Measure Life Type: ROB Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (11/01/05 08:09am) - See "Greenhouse Thermal Curtains PGECOAGR101 R0.pdf"

Cost Comment (12/14/06 10:38am) - DEER 2005 is the source for cost data.

### **#SW-ComA - Calculated (#SW-ComA)**

Msr # 510001 Desc: Steam Traps

Grs kWh: Grs Therms: 1.00 Grs kW: Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Other Units: Therm Life: 6 Qty: 0 Incentive: \$1.00 Msr Cost: \$1.00

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Cost Comment (04/22/08 07:11am) - Since the measure will be custom, the incentive can not exceed the measure. Set to same value as placeholder.

Savings Comment (02/25/09 09:22pm) - Savings are per therm. Savings will be calculated on a project by project basis.

#### #SW-ComB - Deemed (#SW-ComB)

Msr # 511001 Desc: Water Heating -Commercial Pool Heater

Grs kWh: 0.00 Grs Therms: 2.41 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Mbtuh Life: 5 Qty: 0 Incentive: \$2.00 Msr Cost: \$2.00

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (05/19/05 04:47pm) - See "Commercial Pool Heater Workpapers.doc" Cost Comment (05/20/05 04:47pm) - See "Commercial Pool Heater Workpapers.doc"

Msr # 511002 Desc: Pipe Insulation - Medium pressure steam >15 psi >= 1" pipe

Grs kWh: 0.00 Grs Therms: 63.00 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Other Units: LinearFt Life: 20 Qty: 0 Incentive: \$3.00 Msr Cost: \$16.57

Measure Life Type: Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (04/11/07 03:37pm) - See "Pipe and Tank Insulation Workpaper.doc" Cost Comment (04/23/08 12:27pm) - See "Pipe and Tank Insulation Workpaper.doc"

Msr # 511003 Desc: High Efficiency Small Gas Storage Water Heater - 50 Gal , 0.62 EF (50,000 btu)

Grs kWh: Grs Therms: 0.51704 Grs kW: Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: MBTU Life: 11 Qty: 0 Incentive: \$2.00 Msr Cost: \$2.90

Measure Life Type: ROB Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (03/10/09 03:30pm) - RFF-wSCG-vEx-bCA-eMS-mNG-WtrHt-SmlStrg-Gas-lte75kBtuh-50G-0p62EF

Cost Comment (03/10/09 03:30pm) - High Efficiency Small Gas Storage Water Heater - 50 Gal , 0.62 EF - Inc cost = \$144.82/50 gals = \$2.90

Msr # 511004 Desc: High Efficiency Large Gas Storage Water Heater - 0.83 Et (100,000 btu)

Grs kWh: Grs Therms: 2.99976 Grs kW: Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: MBTU Life: 11 Qty: 0 Incentive: \$2.00 Msr Cost: \$2.09

Measure Life Type: ROB Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Cost Comment (02/26/09 08:36am) - Storage-gt75kBtuh-ge82pctTE - assume 100 KBTU: 2.09 per MBTUH = \$209/100KBTU

Savings Comment (03/10/09 03:32pm) - Htl-wSCG-vEx-bCA-eMS-mNG-WtrHt-LrgStrg-Gas-gte75kBtuh-0p83Et

#### **#SW-IndA - Calculated (#SW-IndA)**

Msr # 512001 Desc: CPI Heat Recovery

Grs kWh: 0.00 Grs Therms: 1.00 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Other Units: Therm Life: 20 Qty: 0 Incentive: \$1.00 Msr Cost: \$1.34

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (03/15/07 04:55pm) - See "BEEP 2006\_07 Data Custom Measure Cost and Projects.xls" in the NR\_Calculated folder.

Msr # 512002 Desc: PER Misc. Process Equip. and Replacement Equip

Grs kWh: 0.00 Grs Therms: 1.00 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Other Units: Therm Life: 20 Qty: 0 Incentive: \$1.00 Msr Cost: \$6.55

Measure Life Type: ROB Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (10/03/06 04:22pm) - See "BEEP 2006\_07 Data Custom Measure Cost and Projects.xls" in the NR\_Calculated folder.

Msr # 512003 Desc: CPI Equip. Modernization

Grs kWh: 0.00 Grs Therms: 1.00 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Other Units: Therm Life: 20 Qty: 0 Incentive: \$1.00 Msr Cost: \$1.03

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (03/15/07 04:52pm) - See "BEEP 2006 07 Data Custom Measure Cost and Projects.xls" in the NR Calculated folder.

Msr # 512004 Desc: Pipe Wrap

Grs kWh: 0.00 Grs Therms: 8.063 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Household Life: 11 Qty: 0 Incentive: \$5.22 Msr Cost: \$6.81

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

**DEER Run ID:**RSFM01AVWHPwr-A **Weight %:** 100 **Name:** Pipe Wrap

Cost Comment (07/09/08 01:02pm) - DEER 2008 ID: Pipelns-1inch-200to250F-lt15psigsteam - D08

Savings Comment (07/11/08 04:30pm) - DEER 2005

#### **#SW-IndA - Calculated (#SW-IndA)**

Msr # 512005 Desc: Process Optimization

Grs kWh: Grs Therms: 1.00 Grs kW: Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Other Units: Therm Life: 20 Qty: 0 Incentive: \$2.50 Msr Cost: \$6.55

Measure Life Type: Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (07/11/08 04:30pm) - Cost effectiveness parameters were derived from proposed projects. In many cases parameters were rounded or averaged among projects.

Msr # 512006 Desc: Boiler Replacement

Grs kWh: Grs Therms: 1.00 Grs kW: Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Space Cooling/Heating Units: Therm Life: 20 Qty: 0 Incentive: \$1.00 Msr Cost: \$1.00

Measure Life Type: Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (07/11/08 04:30pm) - Cost effectiveness parameters were derived from proposed projects. In many cases parameters were rounded or averaged among

projects.

Cost Comment (02/26/09 10:17am) - Since the incentive may not exceed the cost, the cost is set to the incentive to be conservative.

Msr # 512007 Desc: Nonresidential Equipment Modernization/Upgrades

Grs kWh: Grs Therms: 1.00 Grs kW: Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Other Units: Therm Life: 20 Qty: 0 Incentive: \$1.25 Msr Cost: \$1.25

Measure Life Type: Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (07/11/08 04:30pm) - Cost effectiveness parameters were derived from proposed projects. In many cases parameters were rounded or averaged among

projects.

#### **#SW-IndB - Deemed (#SW-IndB)**

Msr # 513001 Desc: Tank Insulation - High Temperature Applic. (LF) 2 in

Grs kWh: 0.00 Grs Therms: 10.40 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: SquareFT Life: 20 Qty: 0 Incentive: \$4.00 Msr Cost: \$4.00

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (05/19/05 04:48pm) - See "Pipe and Tank Insulation Workpaper.doc"

Cost Comment (05/20/05 04:48pm) - See "Pipe and Tank Insulation Workpaper.doc" - set to \$4 since DEER does not identify the square feet of insulation and the saving

are not updated.

Msr # 513002 Desc: Pipe Insulation - Low Pressure Steam Applic. (LF) 1 in

Grs kWh: 0.00 Grs Therms: 13.40 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: LinearFt Life: 20 Qty: 0 Incentive: \$3.00 Msr Cost: \$3.63

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (05/19/05 04:52pm) - See "Pipe and Tank Insulation Workpaper.doc" Cost Comment (05/20/05 04:52pm) - DEER 2008 ID: PipeIns-1inch-120to200F-hth2o

Msr # 513003 Desc: EER Convection Oven

Grs kWh: 0.00 Grs Therms: 323.00 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Cooking Units: Unit Life: 12 Qty: 0 Incentive: \$500.00 Msr Cost: \$3,144.00

**Measure Life Type:** RET **Climate Zone:** Region-wide **Baseline Vintage:** No vintage distinction General Comment (11/09/05 03:10pm) - Life derived from Food Service Gas Measure Workpapers 11-08-05.xls Savings Comment (11/10/05 03:10pm) - Savings derived from Food Service Gas Measure Workpapers 11-08-05.xls Cost Comment (11/11/05 03:10pm) - IMC derived from Food Service Gas Measure Workpapers 11-08-05.xls

Msr # 513004 Desc: EER Fryer - High Effic. Unit

Grs kWh: 0.00 Grs Therms: 505.00 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Cooking Units: Unit Life: 12 Qty: 0 Incentive: \$500.00 Msr Cost: \$3,796.00

Measure Life Type: ROBClimate Zone: Region-wideBaseline Vintage: No vintage distinctionGeneral Comment (11/09/05 03:06pm) - Life derived from Food Service Gas Measure Workpapers 11-08-05.xlsSavings Comment (11/10/05 03:06pm) - Savings derived from Food Service Gas Measure Workpapers 11-08-05.xls

Cost Comment (11/11/05 03:06pm) - IMC derived from Food Service Gas Measure Workpapers 11-08-05.xls

#### #SW-IndB - Deemed (#SW-IndB)

Msr # 513005 Desc: EER Cabinet Steamer Tier II

Grs kWh: 0.00 Grs Therms: 8.67 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Cooking Units: MBTU Life: 12 Qty: 0 Incentive: \$4.00 Msr Cost: \$11.11

Measure Life Type: ROB Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (01/04/06 09:00am) - See "Food Service Workpapers.doc" Savings converted from therms per unit to therms per mbtuh = 780/90=4 Therms per mbtu. (mbtu per Fisher Nickel oven study)

Cost Comment (01/05/06 09:00am) - See "Food Service Workpapers.doc" IMC converted from dollars per unit to dollars per mbtuh = \$1,000/90=\$11.11 Therms per mbtu.

(mbtu per Fisher Nickel oven study)

Page 17 of 23

### **#SW-NCNR - NRNC Savings By Design (#SW-NCNR)**

Msr # 514001 Desc: Whole Building (per Therm)

Grs kWh: 20.00 Grs Therms: 1.00 Grs kW: 0.0022 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Space Cooling/Heating Units: Therm Life: 20 Qty: 1,000,000 Incentive: \$1.00 Msr Cost: \$3.03

Measure Life Type: NEW Climate Zone: Region-wide Baseline Vintage: Built 2006 and later (measures as new construction for nonresidential)

Savings Comment (04/21/08 06:27am) - Savings are per Therm. Calculated on a site by site basis

Cost Comment (04/23/08 04:20pm) - See HMG IMC White Paper v1.doc at page 11.

03/10/2009

# Southern California Gas Company 2009 Program Cycle Workpapers

Page 18 of 23

### **#SW-NCResA - RNC (#SW-NCResA)**

Msr # 515001 Desc: Whole Building Gas

Grs kWh: 20.00 Grs Therms: 1.00 Grs kW: 0.022 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Space Cooling/Heating Units: Home Life: 20 Qty: 0 Incentive: \$4.00 Msr Cost: \$6.40

Measure Life Type: NEW Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (04/17/08 08:00am) - See SW-NCResA Folder

#### **#SW-ResA - Multifamily EE Rebates (#SW-ResA)**

Msr # 516001 Desc: Gas Storage Water Heater (EF>= 0.62)

Grs kWh: 0.00 Grs Therms: 19.508 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Hot Water Tank Life: 13 Qty: 5,000 Incentive: \$30.00 Msr Cost: \$67.24

Measure Life Type: ROB Climate Zone: Riverside Baseline Vintage: No vintage distinction

Savings Comment (02/21/09 10:05pm) - SFM-wSCG-vEx-hAC-tWt-bCA-eMS-mRG-WtrHt-SmlStrg-Gas-lte75kBtuh-40G-0p62EF + High Efficiency Small Gas Storage

Water Heater - 40 Gal, 0.62 EF

Cost Comment (02/21/09 10:06pm) - EWH-40G-0p626EF + High Efficiency Small Gas Storage Water Heater - 40 Gal, 0.62 EF

Msr # 516002 Desc: Faucet Aerators/Self Install - kits

Grs kWh: 0.00 Grs Therms: 2.7092 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Units: Household Life: 10 Qty: 0 Incentive: \$6.54 Msr Cost: \$6.54

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (12/19/07 11:12am) - The DEER values are reduced to account for the installation rate from the December survey. the installation rate is 40%. See

"SF\_WH\_Kits" folder.

Cost Comment (12/19/07 11:19am) - DEER 2008 ld: HWU-0p5G

Msr # 516003 Desc: Low Flow Showerhead/Self Install

Grs kWh: 0.00 Grs Therms: 5.92 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Showerhead Life: 10 Qty: 0 Incentive: \$8.00 Msr Cost: \$14.32

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (12/19/07 11:25am) - The DEER value is the base, however there appears to be an error in the DEER 2005 computation. We re-modeled the 2001

DEER value referenced in the report and calibrated to the savings in 2001 and then adjusted the EF of the end use to 0.6

Savings Comment (12/19/07 11:27am) - The shower head provided is 1.5 gpm compared to the 2.0 gmp assumed in DEER. See workpapers. See "SF WH Kits" folder.

Cost Comment (12/19/07 11:28am) - DEER 2008 ld: HWU-0p5G

#### **#SW-ResA - Multifamily EE Rebates (#SW-ResA)**

Msr # 516004 Desc: Attic Insulation

Grs kWh: 0.17975 Grs Therms: 0.04524 Grs kW: 0.0001 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Space Cooling/Heating Units: SQFT Life: 20 Qty: 60,000 Incentive: \$0.15 Msr Cost: \$0.76

Measure Life Type: RETClimate Zone: Region-wideBaseline Vintage: No vintage distinctionDEER Run ID:RMFm1075RCV30Weight %: 60Name: Ceiling Vintage to R-30 Insulation-BattsDEER Run ID:RMFm1085RCV30Weight %: 30Name: Ceiling Vintage to R-30 Insulation-BattsDEER Run ID:RMFm1096RCV30Weight %: 10Name: Ceiling Vintage to R-30 Insulation-Batts

Savings Comment (10/28/05 07:19pm) - Savings are converted to per sqare foot consistent with program and IMC. Used Riverside climate zone as representative climate

zone for the forecast.

Cost Comment (07/12/08 03:51pm) - DEER 2008 ld: D08-RB-BS-FlrIns-R19-R30

Msr # 516005 Desc: Central System Natural Gas Water Heater

Grs kWh: 0.00 Grs Therms: 257.00 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Unit Life: 13 Qty: 0 Incentive: \$500.00 Msr Cost: \$514.00

Measure Life Type: ROB Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (12/10/05 03:51pm) - Savings value is from November 26, 2001 analysis performed by A. Ahmed for SoCalGas. See Excel workbook

"MFRCPNov26.xls".

Cost Comment (12/11/05 03:51pm) - IMC from Statewide Express Efficiency (GAS B) - Need DEER 2008 Update: measure cost set to rebate per unit saved = \$2 8 257 =

\$514

Msr # 516006 Desc: Central System Gas Boiler: Water Heating Only

Grs kWh: 0.00 Grs Therms: 750.00 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Unit Life: 15 Qtv: 0 Incentive: \$1.500.00 Msr Cost: \$4,060.00

Measure Life Type: ROB Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (06/24/05 03:44pm) - Savings value is from November 26, 2001 analysis performed by A. Ahmed for SoCalGas. See Excel workbook

"MFRCPNov26.xls".

Cost Comment (06/25/05 03:44pm) - IMC from Statewide Express Efficiency (GAS D)

General Comment (08/17/07 07:55am) - See workpapers

#### **#SW-ResA - Multifamily EE Rebates (#SW-ResA)**

Msr # 516007 Desc: Gas Wtr Htr Controller Small Complex

**Grs kWh:** 0.00 **Grs Therms:** 850.00 **Grs kW:** 0.00 **Grs NC kW:** NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Unit Life: 10 Qty: 0 Incentive: \$750.00 Msr Cost: \$1,400.00

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (01/25/06 11:05am) - See "2006-2008 water-heater controller workpaper,doc". PY 2009 savings will be calculated on a project by project basis.

Msr # 516008 Desc: Energy Star Dishwasher EF=.65

Grs kWh: 0.00 Grs Therms: 3.90 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Dishwasher, DWa: Life: 11 Qty: 0 Incentive: \$35.00 Msr Cost: \$297.45

Measure Life Type: ROB Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (11/11/05 05:40pm) - See: Dishwasher standards update conversion.xls"

General Comment (04/23/08 03:56pm) - DEER 2008 ID: Dishwasher, EF=0.65, 215 wash cycles/year

Cost Comment (02/21/09 10:06pm) - EffDW-StdSize-Elec-0p68 +

Msr # 516009 Desc: Tankless Water Heater

Grs kWh: 0.00 Grs Therms: 30.235 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Tank, WtrHtr Life: 20 Qty: 0 Incentive: \$200.00 Msr Cost: \$285.47

Measure Life Type: RET Climate Zone: Riverside Baseline Vintage: No vintage distinction

Savings Comment (02/21/09 10:05pm) - SFM-wSCG-vEx-hAC-tWt-bCA-eMS-mRG-WtrHt-Smllnst-Gas-lte75kBtuh-lt2G-0p82EF + High Efficiency Small Gas Instantaneous

Water Heater

Cost Comment (02/21/09 10:06pm) - InsHtr-76to200kBtuh-ge63pctEF-lt10gal + High Efficiency Small Gas Instantaneous Water Heater

Msr # 516010 Desc: Gas Wtr Htr Controller Large Complex

Grs kWh: 0.00 Grs Therms: 1,699.00 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Unit Life: 10 Qty: 0 Incentive: \$1,500.00 Msr Cost: \$1,550.00

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

General Comment (01/25/06 11:05am) - See "2006-2008 water-heater controller workpaper,doc". PY 2009 savings will be calculated on a project by project basis.

#### **#SW-ResB - Home Efficiency Rebates (#SW-ResB)**

Msr # 517001 Desc: Attic Insulation

Grs kWh: 0.16305 Grs Therms: 0.03133 Grs kW: 0.0001 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Space Cooling/Heating Units: sqft Life: 20 Qty: 2,700,000 Incentive: \$0.15 Msr Cost: \$0.61

Measure Life Type: RETClimate Zone: Region-wideBaseline Vintage: No vintage distinctionDEER Run ID:RSFm1075RCV30Weight %: 50Name: Ceiling Vintage to R-30 Insulation-BattsDEER Run ID:RSFm1085RCV30Weight %: 50Name: Ceiling Vintage to R-30 Insulation-Batts

Savings Comment (10/27/05 07:52pm) - Savings are converted to per sqare foot consistent with program and IMC. Used Riverside climate zone as representative climate

zone for the forecast.

Cost Comment (04/11/07 05:14pm) - DEER 2008 ld: D08-RB-BS-FlrIns-R19-R30

Msr # 517002 Desc: Wall Insulation

Grs kWh: 0.4139 Grs Therms: 0.09928 Grs kW: 0.00019 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Space Cooling/Heating Units: sqft Life: 20 Qty: 0 Incentive: \$0.50 Msr Cost: \$0.62

Measure Life Type: RET Climate Zone: Riverside Baseline Vintage: Built before 1978

DEER Run ID: RSFm1075RW413 Weight %: 100 Name: Wall Blow-In R-0 to R-13 Insulation

Savings Comment (10/27/05 07:56pm) - Converted from per 1,000 sqft to sqft Cost Comment (04/11/07 05:14pm) - Deer 2008 ld: D08-RB-BS-BlowInIns-R0-R13

Msr # 517003 Desc: Energy Star Labeled Dishwasher EF=0.65

Grs kWh: 0.00 Grs Therms: 5.30 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Dishwasher Life: 11 Qty: 0 Incentive: \$35.00 Msr Cost: \$297.45

Measure Life Type: ROB Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (11/09/05 05:38pm) - See: Dishwasher standards update conversion.xls"

Cost Comment (04/23/08 04:33pm) - DEER 2008 ID: Dishwasher, EF=0.65, 215 wash cycles/year

Cost Comment (02/21/09 10:06pm) - EffDW-StdSize-Elec-0p68

Msr # 517004 Desc: Central Gas Furnace 92% AFUE

Grs kWh: 0.00 Grs Therms: 0.43202 Grs kW: 0.00 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Space Cooling/Heating Units: Per KBTU Life: 20 Qty: 0 Incentive: \$3.08 Msr Cost: \$5.80

Measure Life Type: RET Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (02/21/09 10:05pm) - SFM-wSCG-vEx-hAC-tWt-bCA-eMS-mRG-HV-EffFurn-92AFUE + High Efficiency Furnace 92 AFUE(1.08 HIR)

Cost Comment (02/21/09 10:06pm) - EffFurn-cond-92AFUE + High Efficiency Furnace 92 AFUE(1.08 HIR)

### #SW-ResB - Home Efficiency Rebates (#SW-ResB)

Msr # 517005 Desc: Energy Star Clothes Washer - MEF=1.80

Grs kWh: 61.1611 Grs Therms: 30.9961 Grs kW: 0.01381 Grs NC kW: NTG: 1.00

Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:

End Use: Water Heating Units: Clothes Washer, C Life: 11 Qty: 0 Incentive: \$35.00 Msr Cost: \$147.69

Measure Life Type: ROB Climate Zone: Region-wide Baseline Vintage: No vintage distinction

Savings Comment (02/21/09 10:05pm) - SFM-wSCG-vEx-hAC-tWt-bCA-eMS-mRG-Appl-EffCW-med-gasDHW-gasCDryer-2p0mef + Clothes Washer - CEE Tier 2 - Med -

(Gas DHW - Gas Dryer)

Cost Comment (02/21/09 10:06pm) - EffCW-lrg-gasDHW-gasCDryer-Gas-2p0mef + Clothes Washer - CEE Tier 2 - Med - (Gas DHW - Gas Dryer)