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**#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

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**#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:**                    **Msr Cost:** \$0.00  
**Measure Life Type:**                    **Climate Zone:** Region-wide                    **Baseline Vintage:** No vintage distinction

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**#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:** 0.78**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%)

**#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: 0.85**  
**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: \$11,250.00**                    **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.

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

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

<b>Grs kWh:</b>	<b>Grs Therms: 1.00</b>	<b>Grs kW:</b>	<b>Grs NC kW:</b>	<b>NTG: 0.70</b>	
<b>Run Hours:</b>	<b>Interactive Eff. kW:</b>	<b>Interactive Eff. kWh:</b>	<b>Coincidence Factor kW:</b>		
<b>End Use: Water Heating</b>	<b>Units: Therm</b>	<b>Life: 10</b>	<b>Qty: 0</b>	<b>Incentive: \$0.61</b>	<b>Msr Cost: \$1.00</b>
<b>Measure Life Type:</b>	<b>Climate Zone: Region-wide</b>	<b>Baseline Vintage: No vintage distinction</b>			

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 07:32am) - 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: 0.70**

**Run Hours:**

**Interactive Eff. kW:**

**Interactive Eff. kWh:**

**Coincidence Factor kW:**

**End Use: Water Heating**

**Units: Showerhead**

**Life: 10**

**Qty: 0**

**Incentive: \$14.32**

**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: 0.70**

**Run Hours:**

**Interactive Eff. kW:**

**Interactive Eff. kWh:**

**Coincidence Factor kW:**

**End Use: Water Heating**

**Units: Household**

**Life: 10**

**Qty: 0**

**Incentive: \$6.54**

**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

**#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: 0.70**  
**Run Hours:**                    **Interactive Eff. kW:**                    **Interactive Eff. kWh:**                    **Coincidence Factor kW:**  
**End Use: Water Heating**                    **Units: room**                    **Life: 10**                    **Qty: 0**                    **Incentive: \$135.00**                    **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:** 0.69**Run Hours:****Interactive Eff. kW:****Interactive Eff. kWh:****Coincidence Factor kW:****End Use:** Space Cooling/Heating **Units:** Therm**Life:** 20**Qty:** 0**Incentive:** \$0.93**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.

General 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:** 0.69**Run Hours:****Interactive Eff. kW:****Interactive Eff. kWh:****Coincidence Factor kW:****End Use:** Other**Units:** Therm**Life:** 20**Qty:** 0**Incentive:** \$0.79**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 08:13am) - 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:** 0.69**Run Hours:****Interactive Eff. kW:****Interactive Eff. kWh:****Coincidence Factor kW:****End Use:** Other**Units:** Therm**Life:** 3**Qty:** 0**Incentive:** \$0.06**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 08:15am) - 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: 0.70**

**Run Hours:**

**Interactive Eff. kW:**

**Interactive Eff. kWh:**

**Coincidence Factor kW:**

**End Use: Space Cooling/Heating Units: Sqft**

**Life: 5**

**Qty: 0**

**Incentive: \$0.02**

**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"

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**#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: 0.70****Run Hours:****Interactive Eff. kW:****Interactive Eff. kWh:****Coincidence Factor kW:****End Use: Space Cooling/Heating Units: Sqft****Life: 5****Qty: 0****Incentive: \$1.50****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: 0.69**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Other Units: Therm Life: 6 Qty: 0 Incentive: \$0.12 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.

General Comment (02/25/09 09:23pm) - 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: 0.70**  
**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: 0.70**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Other Units: LinearFt Life: 20 Qty: 0 Incentive: \$16.57 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: 0.70**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Water Heating Units: MBTU Life: 11 Qty: 0 Incentive: \$2.90 Msr Cost: \$2.90**  
**Measure Life Type: Climate Zone: Region-wide Baseline Vintage: No vintage distinction**  
 Savings Comment (03/10/09 03:21pm) - RFF-wSCG-vEx-bCA-eMS-mNG-WtrHt-SmlStrg-Gas-lte75kBtuh-50G-0p62EF  
 Cost Comment (03/10/09 03:23pm) - 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: 0.70**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Water Heating Units: MBTU Life: 11 Qty: 0 Incentive: \$0.76 Msr Cost: \$2.09**  
**Measure Life Type: Climate Zone: Region-wide Baseline Vintage: No vintage distinction**  
 Cost Comment (02/26/09 08:35am) - 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: 0.69**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Other Units: Therm Life: 20 Qty: 0 Incentive: \$1.34 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: 0.69**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Other Units: Therm Life: 20 Qty: 0 Incentive: \$6.55 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: 0.69**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Other Units: Therm Life: 20 Qty: 0 Incentive: \$1.03 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: 0.70**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Water Heating Units: Household Life: 11 Qty: 0 Incentive: \$6.81 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-It15psigsteam - 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:** 0.69  
**Run Hours:**                    **Interactive Eff. kW:**                    **Interactive Eff. kWh:**                    **Coincidence Factor kW:**  
**End Use:** Other                    **Units:** Therm                    **Life:** 20                    **Qty:** 0                    **Incentive:** \$6.55                    **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:** 0.69  
**Run Hours:**                    **Interactive Eff. kW:**                    **Interactive Eff. kWh:**                    **Coincidence Factor kW:**  
**End Use:** Space Cooling/Heating                    **Units:** Therm                    **Life:** 20                    **Qty:** 0                    **Incentive:** \$0.93                    **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 10:16am) - 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:** 0.69  
**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:** 0.70  
**Run Hours:**      **Interactive Eff. kW:**      **Interactive Eff. kWh:**      **Coincidence Factor kW:**  
**End Use:** Water Heating      **Units:** SquareFT      **Life:** 20      **Qty:** 0      **Incentive:** \$3.41      **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:** 0.70  
**Run Hours:**      **Interactive Eff. kW:**      **Interactive Eff. kWh:**      **Coincidence Factor kW:**  
**End Use:** Water Heating      **Units:** LinearFt      **Life:** 20      **Qty:** 0      **Incentive:** \$1.59      **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: Pipelns-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:** 0.70  
**Run Hours:**      **Interactive Eff. kW:**      **Interactive Eff. kWh:**      **Coincidence Factor kW:**  
**End Use:** Cooking      **Units:** Unit      **Life:** 12      **Qty:** 0      **Incentive:** \$3,144.00      **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:** 0.70  
**Run Hours:**      **Interactive Eff. kW:**      **Interactive Eff. kWh:**      **Coincidence Factor kW:**  
**End Use:** Cooking      **Units:** Unit      **Life:** 12      **Qty:** 0      **Incentive:** \$3,796.00      **Msr Cost:** \$3,796.00  
**Measure Life Type:** ROB      **Climate Zone:** Region-wide      **Baseline Vintage:** No vintage distinction

General Comment (11/09/05 03:06pm) - Life derived from Food Service Gas Measure Workpapers 11-08-05.xls

Savings 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: 0.70**

**Run Hours:**

**Interactive Eff. kW:**

**Interactive Eff. kWh:**

**Coincidence Factor kW:**

**End Use: Cooking**

**Units: MBTU**

**Life: 12**

**Qty: 0**

**Incentive: \$11.11**

**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)



**#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: 0.93****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: \$3.03****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.

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**#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: 0.41**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Space Cooling/Heating Units: Home Life: 20 Qty: 0 Incentive: \$6.40 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:** 0.70**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:** \$67.24**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:** 0.70**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 Id: 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:** 0.70**Run Hours:****Interactive Eff. kW:****Interactive Eff. kWh:****Coincidence Factor kW:****End Use:** Water Heating**Units:** Showerhead**Life:** 10**Qty:** 0**Incentive:** \$14.32**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 Id: 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:** 0.89  
**Run Hours:**      **Interactive Eff. kW:**      **Interactive Eff. kWh:**      **Coincidence Factor kW:**  
**End Use:** Space Cooling/Heating      **Units:** SQFT      **Life:** 20      **Qty:** 60,000      **Incentive:** \$0.76      **Msr Cost:** \$0.76

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

**DEER Run ID:** RMFm1075RCV30      **Weight %:** 60      **Name:** Ceiling Vintage to R-30 Insulation-Batts

**DEER Run ID:** RMFm1085RCV30      **Weight %:** 30      **Name:** Ceiling Vintage to R-30 Insulation-Batts

**DEER Run ID:** RMFm1096RCV30      **Weight %:** 10      **Name:** Ceiling Vintage to R-30 Insulation-Batts

Savings Comment (10/28/05 07:19pm) - Savings are converted to per square 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 Id: 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:** 0.70  
**Run Hours:**      **Interactive Eff. kW:**      **Interactive Eff. kWh:**      **Coincidence Factor kW:**  
**End Use:** Water Heating      **Units:** Unit      **Life:** 13      **Qty:** 0      **Incentive:** \$208.88      **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:** 0.70  
**Run Hours:**      **Interactive Eff. kW:**      **Interactive Eff. kWh:**      **Coincidence Factor kW:**  
**End Use:** Water Heating      **Units:** Unit      **Life:** 15      **Qty:** 0      **Incentive:** \$4,060.00      **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: 0.81**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Water Heating Units: Unit Life: 10 Qty: 0 Incentive: \$1,400.00 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: 0.80**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Water Heating Units: Dishwasher, DWa Life: 11 Qty: 0 Incentive: \$297.45 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: 0.70**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Water Heating Units: Tank, WtrHtr Life: 20 Qty: 0 Incentive: \$108.32 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-SmlInst-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: 0.81**  
**Run Hours: Interactive Eff. kW: Interactive Eff. kWh: Coincidence Factor kW:**  
**End Use: Water Heating Units: Unit Life: 10 Qty: 0 Incentive: \$1,550.00 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:** 0.70  
**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:** \$0.61      **Msr Cost:** \$0.61

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

**DEER Run ID:**RSFm1075RCV30      **Weight %:** 50      **Name:** Ceiling Vintage to R-30 Insulation-Batts

**DEER Run ID:**RSFm1085RCV30      **Weight %:** 50      **Name:** Ceiling Vintage to R-30 Insulation-Batts

Savings Comment (10/27/05 07:52pm) - Savings are converted to per square 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 Id: 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:** 0.70  
**Run Hours:**      **Interactive Eff. kW:**      **Interactive Eff. kWh:**      **Coincidence Factor kW:**  
**End Use:** Space Cooling/Heating      **Units:** sqft      **Life:** 20      **Qty:** 0      **Incentive:** \$0.62      **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 Id: 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:** 0.40  
**Run Hours:**      **Interactive Eff. kW:**      **Interactive Eff. kWh:**      **Coincidence Factor kW:**  
**End Use:** Water Heating      **Units:** Dishwasher      **Life:** 11      **Qty:** 0      **Incentive:** \$297.45      **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:** 0.70  
**Run Hours:**      **Interactive Eff. kW:**      **Interactive Eff. kWh:**      **Coincidence Factor kW:**  
**End Use:** Space Cooling/Heating      **Units:** Per KBTU      **Life:** 20      **Qty:** 0      **Incentive:** \$5.80      **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:** 0.81

**Run Hours:**

**Interactive Eff. kW:**

**Interactive Eff. kWh:**

**Coincidence Factor kW:**

**End Use:** Water Heating

**Units:** Clothes Washer, C

**Life:** 11

**Qty:** 0

**Incentive:** \$147.69

**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)