Appendix E

Engineering Calculation Worksheet

2006 Engineering Calculation Worksheet

Project Name: _____ Contact Name: _____

1. Process / Measure Description

1.1. Existing Process / Equipment Description

Fully describe the existing process and equipment listing all pertinent data in the tables provided below. Attach additional sheets (see Supplemental Info. Sheet) as needed. Identify the source of all data and/or attach any manufacturer's data, production data and/or other documentation that supports the inputs and assumptions used in your calculations or descriptions.

Existing Equipment List:

Equip. Name	Manuf.	Model	Serial #	Full Load Capacity (output)		Effcy (%)	Other/Comments
				Value	Units		

Existing Operating Hours / Load:

Equip. Name	% of Full Load	Estimated Efficiency	Annual Op. Hours	Operation Description / Basis (i.e. 2nd shift – 8 hours/day, 20 days/month, etc.)	Measured Data Available?

2006 Engineering Calculation Worksheet

Project Name: _____ Contact Name: _____

1.2. Proposed New Equipment Retrofit or Enhancement Description

Describe the proposed equipment retrofit or enhancement referring to either the equipment list and operating hours / load table in the previous section (existing process/equipment) and/or the new equipment list and operating hours/load tables below. Attach additional sheets (see Supplemental Info. Sheet) as needed. Identify the source of all data and/or attach any manufacturer's data, production data and/or other documentation that supports the inputs and assumptions used in your calculations or descriptions.

New Equipment List:

Equip. Name	Manuf.	Model	Serial #	Full Load Capacity (output)		Effcy (%)	Other/Comments
				Value	Units		

New Operating Hours / Load (if applicable):

Equip Name	% of Full Load	Estimated Efficiency	Annual Op. Hours	Operation Description / Basis (i.e. 2nd shift – 8 hours/day, 20 days/month, etc.)	Other/Comments

2006 Engineering Calculation Worksheet

Project Name: _____ Contact Name: _____

2. Establish Baseline Annual Energy Use

Calculate the estimated annual energy use of the existing process/equipment being replaced using efficiency values based on either accepted State or Federal Standards (see Appendix C) or the existing equipment efficiency, whichever is higher. Fully describe the basis of all data used in the calculation using the tables shown below to document data that differs from equipment or process data noted previously. Refer to the existing process and equipment by equipment name or serial number consistent with information shown in previous tables. Attach additional sheets (see Supplemental Info. Sheet) as needed.

Standard (Baseline) Equipment List:

Equip. Name	Serial #	Baseline Efficiency (%)	Applicable Standard (i.e., Title 24, etc.)	Other / Comments

Baseline Energy Use:

Equip Name	Operation Description (i.e. 2nd shift, etc.)	% of Full Load	Baseline Efficiency	Baseline Input (kw, therms)	Annual Op. Hours	Baseline Energy Use
			Annual Totals:			

2006 Engineering Calculation Worksheet

Project Name: _____ Contact Name: _____

3. Establish Post-Installation Annual Energy Use

Calculate the estimated annual energy use of the process/equipment using the new equipment or enhancement. Fully describe the basis of all data used in the calculation using the tables shown below to document data that differs from equipment or process data noted previously. Refer to the existing process and equipment using equipment names or serial numbers consistent with information shown in previous tables. Attach additional sheets (see Supplemental Info. Sheet) as needed.

Post Installation Energy Use:

Equip Name	Operation Description (i.e. 2nd shift, etc.)	% of Full Load	Effcy	Input (kw, therms)	Annual Op. Hours	Post Installation Energy Use
			Annual Totals:			

2006 Engineering Calculation Worksheet

Project Name: _____ Contact Name: _____

4. Estimate the Annual Energy Savings

Calculate the estimated annual energy use as the difference between the Baseline and Post-Installation annual energy use values.

5. Calculate the Maximum Incentive Amount

Calculate the program incentive amount (subject to program limitations) by multiplying the estimated annual savings by the applicable incentive rate (see table below).

Program Incentive Rate Table

Measure Type	Incentive Rate
Lighting (Fluorescent or Other Lighting controls)	5.0¢ / annual kWh
Motors and Other Equipment	8.0¢ / annual kWh
Air Conditioning and Refrigeration (AC&R)	14.0¢ / annual kWh
Gas*	$0.80 / annual therms

* - Incentives for gas savings are not available in SCE service territory.

2006 Engineering Calculation Worksheet

Project Name: _____ Contact Name: _____

Supplemental Information for Section _____