



# County of Santa Cruz

295

## DEPARTMENT OF PUBLIC WORKS

701 OCEAN STREET, ROOM 410, SANTA CRUZ, CA 950604070  
(931) 454-2160 FAX (931) 454-2385 TDD (831) 454-2123

JOHN A. FANTHAM  
DIRECTOR OF PUBLIC WORKS

AGENDA: DECEMBER 15, 1998

December 3, 1998

### SANTA CRUZ COUNTY BOARD OF SUPERVISORS

701 Ocean Street  
Santa Cruz, California 95060

SUBJECT: LIGHT EMITTING DIODE (LED) TRAFFIC SIGNAL LIGHT UPGRADE  
COUNTY SERVICE AREA NO. 9, HIGHWAY SAFETY

#### Members of the Board:

The Public Works Department entered into a Power Saving Partners Program Memorandum of Agreement dated July 20, 1998, with Electro-Test, Inc. (ETI), establishing the terms and conditions to undertake an evaluation of an energy efficient improvement project for the installation of LED units. Our department requested and received permission from P.G. & E. to include the 113 fixtures that were installed by our crew as part of the expired Retrofit Efficiency Options Program into the new Power Saving Partners program. The old program provided an incentive rebate from P.G. & E. in the amount of \$22,000, while the new program provides total compensation of \$54,495 received in payments over a five-year period.

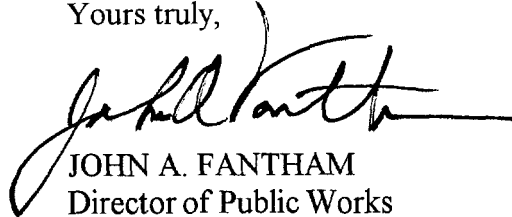
Attached are the Customer Project Proposal and Host Customer Agreement described in the Memorandum of Agreement. The Customer Project Proposal defines the preliminary Targeted Energy Savings that will result from the LED traffic signal retrofit project and the proposed incentive payments ETI will provide to the County of Santa Cruz for those energy savings. The Host Customer Agreement defines the terms and conditions for participating in the Power Saving Partners Program with ETI. It establishes a Targeted Energy Savings amount whereby the County will receive a stream of annual payments for about five years totaling \$51,495. The final Targeted Energy Savings value will be appended to the executed Host Customer Agreement at the completion of construction of the retrofit project.

It is therefore recommended that the Board of Supervisors take the following action:

1. Approve the Host Customer Agreement and authorize the Director of Public Works to sign the Agreement on behalf of the County.

2. Direct Public Works to return the annual payments to the Structures and Improvement fund of County Service Area No. 9 Highway Safety account.

Yours truly,

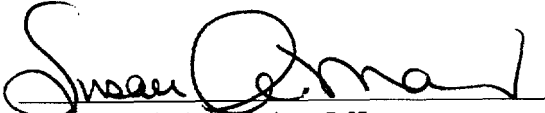


JOHN A. FANTHAM  
Director of Public Works

HLP:rw

Attachments

RECOMMENDED FOR APPROVAL:



County Administrative Officer

Copy to: Electro Test, Inc.  
P.G. & E.  
Public Works

LER

# COUNTY OF SANTA CRUZ

## REQUEST FOR APPROVAL OF AGREEMENT

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TO: Board of Supervisors  
County Administrative Officer  
County Counsel  
Auditor-Controller

FROM: PUBLIC WORKS

*[Signature]* (Signature) 11/24/98 (Date)

The Board of Supervisors is hereby requested to approve the attached agreement and authorize the execution of the same.

1. Said agreement is between the COUNTY OF SANTA CRUZ (Agency)  
Electro Test Inc.  
and 1320 El Capitan Drive, Danville, CA 94526 (Name & Address)
2. The agreement will provide the opportunity to participate in an incentive payment program  
designed to promote energy saving through installation of P.G. & E. approved  
conservation measures.
3. The agreement is needed because this service can be provided through this program.
4. Period of the agreement is from Board Approval to June 30, 1999
5. Anticipated Revenue \$2,676 (Fixed amount; Monthly rate; Not to exceed)
6. Remarks: Estimated revenue over five years is \$51,495. Fiscal year 1998/99 \$2,676;  
Fiscal year 1999/2000 \$8,443; Fiscal Year 2000/2001 \$9,055; Fiscal year 2001/  
2002 \$9,711; Fiscal Year 2002/2003 \$10,411; Fiscal Year 2003/2004 \$11,199.
7. Appropriations are budgeted in 622115 (Index#) 2384 (Subobject)

NOTE: IF APPROPRIATIONS ARE INSUFFICIENT, ATTACH COMPLETED FORM AUD-74

Appropriations are available and have been encumbered.  
are not N/A will be

Contract No. R 686 Date 12/01/98

GARY A. KNUTSON, Auditor - Controller

By Ron Silva Deputy.

Proposal reviewed and approved. It is recommended that the Board of Supervisors approve the agreement and authorize the  
Director of to execute the same on behalf of the Department of Public Works  
Public Works (Agency). County Administrative Officer

Remarks:

(Analyst)

BY \_\_\_\_\_ Date \_\_\_\_\_

Agreement approved as to form. Date \_\_\_\_\_

HLP:rw

### Distribution:

Bd. of Supv. - White  
Auditor-Controller - Blue  
County Counsel - Green \*  
Co. Admin. Officer - Canary  
Auditor-Controller - Pink  
Originating Dept. - Goldenrod

\*To Orig. Dept. if rejected.

State of California )  
County of Santa Cruz ) ss

I \_\_\_\_\_ ex-officio Clerk of the Board of Supervisors of the County of Santa Cruz,  
State of California, do hereby certify that the foregoing request for approval of agreement was approved by  
said Board of Supervisors as recommended by the County Administrative Officer by an order duly entered  
in the minutes of said Board on \_\_\_\_\_

\_\_\_\_\_ 19 \_\_\_\_\_

By \_\_\_\_\_ County Administrative Officer

**electro • test inc.®**

**Host Customer Agreement for  
County of Santa Cruz**

**Light Emitting Diode (LED)  
Traffic Signals Retrofit Project**

**October 23, 1998**

**eti<sup>®</sup>**  
**electro • test inc.®**

Corporate Headquarters  
1320 El Capitan Dr., 4th Floor  
Danville, CA 94526  
(510) 824-0330  
FAX (510) 824-0333  
[www.electro-test.com](http://www.electro-test.com)

Albuquerque

Anchorage

Atlanta

Austin

Baton Rouge

Denver

Eastern Washington

El Paso

Elko

Kansas City

Las Vegas

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Natchitoches

New Orleans

Phoenix

Portland

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Salt Lake City

San Diego

San Francisco

Seattle

St. Louis

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## ENERGY SERVICES HOST CUSTOMER AGREEMENT

This Energy Services Host Customer Agreement (hereinafter the "Agreement") is made and entered into as of this 0 day of                     , 1998 by and between **Electro Test, Inc.**, a California corporation, having its principal offices at 1320 El Capitan Dr., Danville, CA, 94526 (hereinafter "**ETI**") and the County of Santa Cruz, Public Works Department, a municipal government entity having its principal offices at 701 Ocean Street, Santa Cruz, CA 95060 (hereinafter "**CUSTOMER**"),

### WITNESSETH

WHEREAS, **PG&E** has developed a new Power Saving Partners (PSP) energy conservation incentive payment program (hereinafter "PSP Program") designed to promote peak demand reduction and energy savings through installation and use of **PG&E** approved energy conservation measures (hereinafter "ECM's") at **PG&E** customer facilities; and

WHEREAS, **ETI** has submitted a bid to **PG&E** and has been selected by **PG&E** to participate in the PSP Program to administer and facilitate peak **kW** demand reduction and **kWh** energy savings through appropriate projects providing for installation of ECM's, including (1) lighting efficiency through efficient lamps (CFL, T-8, MH, HPS, LED), electronic ballasts, reflectors, efficient exit signs, time clocks, occupancy sensors, day lighting controls, day lighting, and Light Emitting Diode (LED) traffic signals and (2) mechanical efficiency through HVAC, motors, variable speed drives, and building automation and controls, and refrigeration curtains; and others.

WHEREAS, **CUSTOMER** is eligible to receive compensation for energy savings from **PG&E** through **ETI** as provided in this Agreement based on measured and verified peak demand **kW** reduction and **kWh** energy savings capability achieved before 4 July 1999 and sustained through 4 July 2004 resulting from installation and the continued operation of ECM's and energy conservation projects specific to **CUSTOMER** facilities (hereinafter '**CUSTOMER PROJECTS**'); and

WHEREAS, ECM equipment purchase, installation and maintenance for **CUSTOMER PROJECTS** are available to **CUSTOMER** from and under separate agreement with **CUSTOMER** selected qualified contractors; and

WHEREAS, **ETI** has undertaken the audit, operations sampling, energy analysis, feasibility study, and proposal activities envisioned by the Memorandum of Agreement dated                     , 1998 between **ETI** and **CUSTOMER** and **CUSTOMER** has reviewed and approved the proposed **CUSTOMER PROJECT**.

NOW THEREFORE, in consideration of the premises and promises set forth herein, **ETI** and **CUSTOMER** agree as follows:

## 1.0 SCOPE OF AGREEMENT

CUSTOMER shall adopt, install, operate, and maintain PG&E approved energy efficient CUSTOMER PROJECTS with its own personnel and/or under separate agreement with approved contractors. This Agreement provides for either a stream of annual, or other mutually agreed upon frequency, payments or single lump sum payment to CUSTOMER (hereinafter "Payment") for realization and sustaining of energy savings established herein. The amount of the Payment shall be established at the completion of the installation of the ECM's based upon the projected ECM energy savings performance. It is understood by CUSTOMER and ETI that the Payment will be function of the dates of installation of the ECM's, the precise numbers of ECM's installed, the specific functions of the ECM's installed and the actual kW demand ratings and energy savings of the specific ECM's installed.

ETI agrees that the projected energy savings target value may be revised once during the first Agreement year based upon the actual verified energy savings.

Proposed CUSTOMER PROJECTS must be approved by PG&E, installed, completed, and operating not later than 180 days after execution of this Agreement, or, in any event, not later than 4 July 1999, and subsequently properly operated and maintained through 4 July 2004 by CUSTOMER to qualify for Payments as they come due as provided in this Agreement.

ETI agrees to seek PG&E approval of the proposed CUSTOMER PROJECT and to provide compensation in the form of payment(s) for peak demand reduction and energy savings realized by PG&E approved CUSTOMER PROJECTS as specified in this Agreement. CUSTOMER agrees to implement and maintain the PG&E approved CUSTOMER PROJECT at intersections identified in Appendix A (hereinafter "FACILITIES").

## 2.0 CUSTOMER PROJECT/APPROVALS

Portions of the CUSTOMER PROJECT relevant to this Agreement, once approved by CUSTOMER, ETI, and PG&E shall be attached as Appendix A to this Agreement. NO LED TRAFFIC SIGNAL INSTALLATIONS SHALL BE UNDERTAKEN BY CUSTOMER OR CONTRACTOR UNTIL ETI AND PG&E APPROVALS ARE CONFIRMED IN WRITING TO CUSTOMER.

## 3.0 IMPLEMENTATION/MAINTENANCE

Once ETI provides the ETI and PG&E approval confirmation to CUSTOMER, CUSTOMER, through its own personnel or a qualified contractor, shall initiate and complete the design, equipment purchases, and installation of the CUSTOMER PROJECT. CUSTOMER PROJECTS MUST BE COMPLETED AND OPERATIONAL NOT LATER THAN 4 JULY 1999 TO QUALIFY FOR PARTICIPATION IN THE PSP PROGRAM.

Once the CUSTOMER PROJECT is completed, CUSTOMER will maintain the Facilities, and ECM, in accordance with all applicable standards and regulations and in accordance with Appendix B attached to this Agreement. CUSTOMER will identify to ETI the maintenance option chosen at time of execution of this Agreement.

CUSTOMER shall provide ETI written notification of any ECM equipment changes that could substantially affect the achieved energy savings occurring during the duration of this Agreement within thirty (30) days of occurrence. Suitable notification could include as built drawings.

#### 4.0 VERIFICATION

CUSTOMER agrees to permit ETI or its designee to install measurement and verification (M&V) equipment and access to the ECM equipment on a monthly basis to verify peak demand reduction and energy savings, CUSTOMER maintenance compliance, and review of CUSTOMER energy billing records. M&V results will be provided to CUSTOMER. PG&E shall also be provided reasonable access to the Facilities to conduct inspections until 4 July 2006.

#### 5.0 ETI PAYMENT AND OTHER PG&E REBATES

5.1 ETI's single lump sum Payment shall be made within thirty (30) days of **PG&E's** approval of ETI's post-installation documentation. **ETI's** Payment stream to CUSTOMER shall be earned and paid annually in arrears within thirty (30) days after the completion of each Contract Year. For purposes of this Agreement, the first Contract Year shall commence on the date the PG&E and ETI approved CUSTOMER PROJECT is commissioned for operation and continue for a period ending the following 4 July. CUSTOMER must confirm in writing to ETI the dates of completion for the commissioning and operation of the **ECM's**. Each subsequent Contract Year shall be for a period of 365 days after completion of the preceding Contract Year. Final Payment shall be made within sixty (60) days of 4 July 2004.

5.2 To the extent the approved CUSTOMER PROJECT qualifies for **PG&E** PSP Program incentive payment, ETI shall make Payment to CUSTOMER for verified energy savings resulting from the **PG&E** and ETI approved CUSTOMER PROJECT in accordance with ETI's spot measurements and engineering analysis of peak demand reduction and energy savings. A preliminary estimate of ETI's Payment to CUSTOMER is provided in Appendix A, Table 2. A final payment stream will be recorded as a replacement to Appendix A, Table 2 based upon **as-built** results verified by post-installation inspection.

5.3 The PSP Program and CUSTOMER PROJECT are designed to provide the sole and exclusive payments from PG&E arising from any PG&E program. CUSTOMER agrees as a material aspect of this Agreement to refrain from applying for or collecting any other **PG&E** rebates arising from the **ECM's** qualifying for ETI Payment.

#### 6.0 CUSTOMER BUYOUT

6.1 An Event of Termination as specified in Section 11 which is not corrected or altered as provided therein, shall, upon ETI election and notice, cause a CUSTOMER buyout at the amount specified in Appendix C to this Agreement. If the Event of Termination is the result of a Force Majeure, as defined by Section 9.0 and is agreed to by ETI as being the result of a Force Majeure, then that Event of Termination shall not cause a CUSTOMER buyout.

6.2 CUSTOMER shall permit ETI and **PG&E** access to the Facilities for the purpose of verifying CUSTOMER buyout values, and to take possession of any M&V and other ETI equipment.

6.3 ETI shall timely notify CUSTOMER of CUSTOMER buyout value in writing and CUSTOMER shall timely pay same to ETI not later than thirty (30) days after receipt of ETI notice.

#### 7.0 CUSTOMER CONTRIBUTION AND FINANCING

Any CUSTOMER contribution and any financing arrangements are identified in Appendix D.

## 8.0 INSURANCE

8.1 ETI shall maintain for itself and CUSTOMER shall cause any elected qualified contractor to maintain for itself the following insurance coverage for the duration of this Agreement:

(a) Workers' Compensation and Employers' Liability

- (1) Workers' Compensation insurance complying with any applicable labor codes, acts, laws or statutes, state or federal, where work is performed by or for ETI.
- (2) Employers' Liability insurance with coverage not less than **\$1,000,000** for injury or death for each incident.

(b) Commercial General Liability

Coverage at least as broad as the Insurance Services Office (ISO) Commercial General Liability Coverage "occurrence" form, with no coverage deletions. The limit shall not be less than \$1,000,000 each occurrence for bodily injury and property damage. If coverage is subject to a general aggregate limit, this aggregate limit shall be twice the occurrence limit.

(c) Business Auto Coverage

Coverage at least as broad as the Insurance Services Office (ISO) Business Auto Coverage form covering Automobile Liability, code 1 "any auto." The limit shall not be less than \$1,000,000 each accident for bodily and property damage.

## 9.0 FORCE MAJEURE

### 9.1 Definition

- (a) The term Force Majeure as used herein means unforeseeable causes beyond the reasonable control of and without the fault or negligence of the party claiming Force Majeure including, but not limited to, acts of God, labor disputes, flood, earthquake, storm, fire, lightning, epidemic, war, riot, civil disturbance, sabotage, change in law or applicable regulation subsequent to the date hereof and material action or inaction by any federal, state or local legislative, executive, administrative or judicial body, which, in any of the foregoing cases, through the exercise of due foresight, such party could not reasonably have been expected to avoid, and which, by the exercise of due diligence, it is unable to overcome.
- (b) Notwithstanding anything to the contrary contained in this Agreement, the term Force Majeure shall not include any of the following:
  - (1) Any ECM outage attributable to a defect or inadequacy in the manufacture or design of the ECM that prevents, curtails, interrupts or reduces the ability of the CUSTOMER PROJECT to provide actual or targeted savings; or
  - (2) Full or partial curtailment or cessation of operations at CUSTOMER Facilities, unless and then only to the extent caused by Force Majeure related to CUSTOMER Facilities.



- (3) Any change in law or regulations which either prohibits, discontinues, or for ninety (90) days suspends the activities and performance of the PSP Program or any activity or performance necessary for CUSTOMER to earn and continue to earn Payments under this Agreement.

#### 10.0 SUSPENSION OF PERFORMANCE

Subject to Section 11.3, the Parties shall be excused from performing their respective obligations under this Agreement and shall not be liable in damages or otherwise if and to the extent that they are unable to so perform or are prevented from performing by a Force Majeure, provided that:

- (a) The non-performing party, as promptly as practicable after the occurrence of the Force Majeure, but in no event later than ten (10) days thereafter, gives the other party written notice describing the particulars of the occurrence;
- (b) The suspension of performance is of no greater scope and of no longer duration than is required by the Force Majeure;
- (c) As soon as the non-performing party is able to resume performance of its obligations excused as a result of the occurrence, it shall give prompt written notification thereof to the other party.

#### 11.0 TERMINATION

##### 11.1 PG&E Approval

In the event PG&E fails to approve and include the proposed CUSTOMER PROJECT in PG&E's PSP Program, ETI will give written notice to CUSTOMER and this Agreement will be terminated in full and final satisfaction of all rights and obligations of the parties under this Agreement.

##### 11.2 Notice

ETI will give written notice to CUSTOMER upon the occurrence of an Event of Termination, as defined below, and CUSTOMER shall have thirty (30) days to take corrective action in order to comply with the terms of this Agreement. If not in compliance at the end of thirty (30) calendar days from the date of ETI notice, this Agreement may be terminated via written notice. Failure to exercise this right shall not constitute a waiver of right to subsequently exercise this right for the same or different Event of Termination continuing or occurring thereafter. Termination will result in a CUSTOMER buyout in accordance with the procedures specified in Section 6.0.

##### 11.3 Events of Termination

- (a) The failure of CUSTOMER to timely purchase, install, commence operation, complete ECM or CUSTOMER PROJECT by July 4, 1999.
- (b) Failure of the CUSTOMER to continue to receive electrical service from PG&E's local distribution system during the Agreement period. CUSTOMER may choose electric power suppliers other than PG&E if such options should become available to CUSTOMER as a result of electric industry deregulation so long as energy is delivered through the PG&E distribution system.

- (c) CUSTOMER shall immediately notify ETI of the amount, if any, of electrical energy that will be delivered to the ECM's from any existing form of self generation power system at CUSTOMER's facility, other than an emergency stand-by generator(s), or of any plans to add any form of self generation power system that may serve the electrical requirements of the installed ECM's.
- (d) Failure of CUSTOMER to follow the maintenance plan specified in Appendix B for the duration of the Agreement period, or to provide access to the Facilities as provided herein, or any CUSTOMER tampering, alteration, or removal or failure to maintain the ECM's or CUSTOMER PROJECTS, or Facilities, in good repair, or to preserve proper operating conditions and standards of performance.
- (e) Change in CUSTOMER operation which causes monthly Energy Savings to drop below seventy five percent (75%) of the monthly targeted value as determined by ETI in any continuous ninety (90) day period. See Table 1 of Appendix A for targeted values.
- (f) At the sole election of ETI, in the event of any Force Majeure extending ninety (90) days from notice of the Force Majeure condition.
- (g) CUSTOMER election to sell or lease or otherwise convey any interest in the Facilities to another who does not agree to abide by and assume the obligations and terms specified for CUSTOMER in this Agreement.
- (h) Any change in law or regulations which either prohibits, discontinues, or for ninety (90) days suspends the activities and performance of the PSP Program or any activity or performance necessary for CUSTOMER to earn and continue to earn Payments under this Agreement.

11.4 CUSTOMER shall notify ETI immediately in writing of any Event of Termination.

## 12.0 DISPUTES

### 12.1 Written Notice

Except as provided in Section 1 I, in the event of any dispute between the parties to this Agreement arising with respect to the performance or other obligations under this Agreement, a written notice setting forth in reasonable detail the matter or material in question shall be delivered by one party to the other and the parties shall comply with the following provisions of this Section 12.0.

### 12.2 Good Faith Negotiations

CUSTOMER or ETI shall attempt to negotiate in good faith and resolve any dispute. Any dispute which cannot be settled by good faith negotiation between the parties within sixty (60) calendar days of the dispute, must be submitted to arbitration.

### 12.3 Appointment of Arbitrator/Authority

The parties shall request the American Arbitration Association to appoint an arbitrator or arbitrators knowledgeable in commercial matters. The arbitrator shall have no authority to amend or add to this Agreement or to award indirect, special, incidental, exemplary, or consequential damages.

### 12.4 Arbitrator Decision

Federal procedural law and California substantive law shall govern the arbitration. The arbitrator or arbitrators, as the case may be, after opportunity for each of the parties to be heard, shall consider and decide the dispute and notify the parties in writing of the decision, setting forth therein the basis for the rendered decision.

#### 12.5 Binding Nature of Decision

Any arbitration decision shall be subject to appeal only for appeals filed within thirty (30) days of the date of the decision. In the absence of timely filing such appeal, the arbitration decision shall become final and binding on both parties.

#### 12.6 Fees and Costs of Arbitration

The expenses of the arbitration shall be divided equally between the parties and each party shall bear their own attorney fees.

#### 13.0 OBLIGATIONS

CUSTOMER and ETI are responsible to the other only for the obligations specified as to them in this Agreement. Except where otherwise specifically stated herein the rights, obligations, and liabilities of ETI, PG&E, CUSTOMER, or other approved contractor are intended to be individual and several, and not joint or collective obligations. Nothing in this Agreement shall be construed to create an association, trust, partnership, joint venture, or impose a trust or partnership duty, obligations, or liability with regard to or among or between ETI, PG&E, CUSTOMER or other CUSTOMER selected qualified contractor, or any of them.

#### 14.0 NOTICE

All notices under this Agreement shall be in writing and delivered personally or by certified mail, return receipt requested, to the address of the parties specified in this Agreement, attention to the person identified in Section 15. Mail notification shall be deemed received five (5) days after deposit in the U.S. Mail, with certified mail, return receipt requested postage prepaid.

#### 15.0 REPRESENTATIVES:

All notices must be sent to the designated representatives of the receiving party. Each party may change its designated representative at any time upon written notice to the other party.

(a) CUSTOMER representative:

County of Santa Cruz  
701 Ocean Street  
Santa Cruz, CA 95060  
Attn. John A. Fantham

Director of Public Works

(b) ETI's representative:

Electro Test, Inc.  
1320 El Capitan Drive, 4th Floor  
Danville, CA 94526  
Attn.: Jay H. Raggio

#### 16.0 GOVERNING LAW

The validity of this Agreement, the construction and enforcement of its terms, and the interpretation of the rights and duties of the parties shall be governed by the laws of the State of California without regard to conflict of law principles.

#### 17.0 CONFIDENTIALITY

To the extent permitted by law, this Agreement shall be maintained by ETI and CUSTOMER as confidential information. Absent entry into a mutually agreeable written confidentiality agreement, no confidential information shall be exchanged between the Parties.

#### 18.0 SEVERABILITY

In the event any one or more of the provisions of this Agreement shall for any reason be held to be invalid, illegal, or unenforceable, the remaining provision of this Agreement shall be unimpaired, and the invalid, illegal, or unenforceable provision shall be replaced by a mutually acceptable provision, which, being valid, legal, and enforceable, comes closest to the intention of the parties underlying the invalid, illegal, or unenforceable provision.

#### 19.0 FINAL AGREEMENT

This Agreement, including the completed and approved Appendices hereto, comprises the final and complete agreement of the parties concerning this subject matter, superseding any prior or contemporaneous proposals, negotiations, and agreements.

The following Appendices are attached hereto and made part of this Agreement by this reference.

Appendix	A	-	CUSTOMER PROJECT Table 1 ECM locations and Target Energy Savings Table 2 Payments for CUSTOMER Actual Energy Savings
Appendix B	-		CUSTOMER ECM Maintenance & Management
Appendix C			CUSTOMER Buyout Values
Appendix D			CUSTOMER Contribution & Financing

#### 20.0 AMENDMENT, MODIFICATION, OR WAIVER

Any amendments or modifications to this Agreement shall be in writing and agreed to by both parties. The failure of any party, at any time or times, to require performance of any provision hereof shall in no manner affect the right of such party at a later time to enforce the same. No waiver, by any party, of the breach of any term or covenant contained in the Agreement, whether by conduct or otherwise, shall be deemed to be construed as a further or continuing waiver of any such breach, or of any other term or covenant, unless such waiver is in writing.

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IN WITNESS WHEREOF, and intending to be legally bound, the parties hereto subscribe their names to this Agreement by their duly authorized officers on the date first above written.

READ & AGREED

ETI

By: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

CUSTOMER

COUNTY OF SANTA CRUZ

By: \_\_\_\_\_

Name: John A. Fantham

Title: Director of Public Works

Date: \_\_\_\_\_

APPROVED AS TO FORM:

By: *Samuel T. Lee* 12/1/98  
Chief Assistant County Counsel

Approved as to insurance:  
*Janeet McKinley*  
12/7/98

**Table LE1**  
**County of Santa Cruz**  
**LED Traffic Signals Retrofit Project**

10/21/98

## APPENDIX A - TABLE 1

Targeted Annual Energy Savings	437,445 kWh
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Line ID	Intersection Name	Unique Intersection No.	ETI Usage Areas	EXISTING LIGHTING EQUIPMENT				PROPOSED LIGHTING EQUIPMENT				Control Device	# of Signal Phases	PG&E Account Number	Notes
				Existing Incandescent Fixture Codes	Number of Fixtures	Number of Non-operating Fixtures	kW per Fixture	kW per Space	Proposed New LED Fixture Codes	Number of Fixtures	kW per Fixture	kW per Space			
1	Soquel Drive and Porter	1	CTRMS	1150/1	8	0	0.15	1.2030	SC LED12RB	8	0.0115	0.1200	SC	PVT4937301	
2	Soquel Drive and Porter	1	CTRTC	1150/1	8	0	0.15	1.2000	SC LEDIZRA	8	0.0097	0.0776	SC		
3	Soquel Drive and Porter	1	CTRMS	169/1	3	0	0.069	0.2070	SC LED8RB	3	0.0097	0.0291	SC		
4	Soquel Drive and Porter	1	CTPED	169/1	8	0	0.069	0.5520	SC LEDPEDHAND	8	0.01	0.0600	SC		
5	Freedom Boulevard and Airport	2	CTRMS	1150/1	4	0	0.15	0.8000	SC LED12RB	4	0.015	0.0600	SC	WVT2512041	
6	Freedom Boulevard and Airport	2	CTRTC	1150/1	8	0	0.15	1.2000	SC LEDIZRA	6	0.0097	0.0776	SC		
7	Freedom Boulevard and Airport	2	CTRMS	169/1	8	0	0.069	0.5520	SC LED8RB	6	0.0097	0.0776	SC		
8	Freedom Boulevard and Airport	2	CTPED	169/1	8	0	0.069	0.5520	SC LEDPEDHAND	6	0.01	0.0800	SC		
9	Green Valley Road and Holohan Road	3	CTRMS	1150/1	10	0	0.15	1.5000	SC LED12RB	10	0.015	0.1500	SC	SW6549371	
10	Green Valley Road and Holohan Road	3	CTRTC	1150/1	0	0	0.15	0.0000	SC LEDIZRA	0	0.0097	0.0000	SC		
11	Green Valley Road and Holohan Road	3	CTRMS	169/1	10	0	0.069	0.6900	SC LED8RB	10	0.0097	0.0970	SC		
12	Green Valley Road and Holohan Road	3	CTPEO	16911	8	0	0.069	0.5520	SC LEDPEDHAND	a	0.01	0.0800	SC		
13	Capitola R&d and 7th Avenue	4	CTRMS	1150/1	7	0	0.15	1.0500	SC LEDIZRB	7	0.015	0.1050	SC	LUT0906711	All of these fixtures were already converted to LED
14	Capitola Road and 7th Avenue	4	CTRTC	1150/1	4	0	0.15	0.6000	SC LED12RA	4	0.0097	0.0386	SC		All of these fixtures were already converted to LED
15	Capitola Road and 7th Avenue	4	CTRMS	169/1	0	0	0.069	0.0000	SC LED8RB	0	0.0037	0.0000	SC		
16	Capitola Road and 7th Avenue	4	CTPED	169/1	4	0	0.060	0.5520	SC LEDPEDHAND	6	0.01	0.0800	SC		
17	17th A- and Capitola Road	5	CTRMS	1150/1	3	0	0.15	0.4500	SC LED12RB	3	0.015	0.0450	SC	MUT1720301	All of these fixtures were already converted to LED
18	17th A- and Capitola Road	5	CTRTC	1150/1	7	0	0.15	1.0500	SC LEDIZRA	7	0.0097	0.0679	SC		All of these fixtures were already converted to LED
IS	17th A- and Capitola Road	5	CTRMS	169/1	6	0	0.069	0.5520	SC LED8RB	8	0.0097	0.0776	SC		
m	17th A- and Capitola Road	5	CTPED	169/1	8	0	0.069	0.5520	SC LEDPEDHAND	6	0.01	0.0800	SC		
21	Chanticleer Avenue and Capitola Road	6	CTRMS	1150/1	8	0	0.15	1.2000	SC LEDIZRB	8	0.015	0.1200	SC	NVT2737641	All of these fixtures were already converted to LED
22	Chanticleer Avenue and Capitola Road	6	CTRTC	1150/1	a	0	0.15	1.2000	SC LED12RA	8	0.0097	0.0776	Bc		All of these fixtures were already converted to LED
23	Chanticleer Avenue and Capitola Road	6	CTRMS		4	0	0.069	0.2760	SC LED8RB	4	0.0097	0.0386	Bc		
24	Chanticleer Avenue and Capitola Road	6	CTPED	169/1	8	0	0.069	0.5520	SC LEDPEDHAND	6	0.01	0.0800	SC		
25	Freedom Boulevard at Aptos High	7	CTRMS	1150/1	2	0	0.15	0.3000	SC LED12RB	2	0.015	0.0300	SC	RVT3903541	
26	Freedom Boulevard at Aptos High	7	CTRTC	1150/1	1	0	0.15	0.150-J	SC LED12RA	1	0.0097	0.0097	SC		
27	Freedom Boulevard at Aptos High	7	CTRMS	169/1	6	0	0.069	0.4140	SC LED8RB	6	0.0097	0.0582	Bc		
28	Freedom Boulevard at Aptos High	7	CTPED	169/1	7	0	0.069	0.4830	SC LEDPEDHAND	7	0.01	0.0700	Bc		
29	Bremmer Street and 17th Avenue	8	CTRMS	1150/1	4	0	0.15	0.6000	SC LED12RB	4	0.015	0.0600	SC	MVT2106851	All of these fixtures were already converted to LED
30	Bremmer Street and 17th Avenue	8	CTRTC	1150/1	8	0	0.15	1.2000	SC LED12RA	8	0.0097	0.0776	SC		All of these fixtures were already converted to LED
31	Bremmer Street and 17th Avenue	8	CTRMS	169/1	4	0	0.069	0.2760	SC LED8RB	4	0.0097	0.0388	SC		
32	Bremmer Street and 17th Avenue	8	CTPED	169/1	a	0	0.069	0.5520	SC LEDPEDHAND	8	0.01	0.0800	SC		
33	Soquel Drive and 41st Street	9	CTRMS	1150/1	2	0	0.15	0.3000	SC LED12RB	2	0.015	0.0300	SC	NVT3027721	
34	Soquel Drive and 41st Street	9	CTRTC	1150/1	1	0	0.15	0.1500	SC LEDIZRA	1	0.0097	0.0097	SC		
35	Soquel Drive and 41st Street	9	CTRMS	169/1	6	0	0.069	0.4140	SC LED8RB	6	0.0097	0.0582	SC		
36	Soquel Drive and 41st Street	9	CTPED	169/1	4	0	0.069	0.2760	SC LEDPEDHAND	4	0.01	0.0400	SC	PVT3612291	
37	Soquel Drive and MarVista	10	CTRMS	1150/1	4	0	0.15	0.6000	SC LED12RB	4	0.015	0.0600	SC		
38	Soquel Drive and MarVista	10	CTRTC	1150/1	0	0	0.15	0.0000	SC LED12RA	0	0.0097	0.0000	SC		
39	Soquel Drive and MarVista	10	CTRMS	169/1	0	0	0.069	0.0000	SC LED8RB	0	0.0097	0.0000	SC		
40	Soquel Drive and MarVista	10	CTPED	169/1	2	0	0.069	0.1360	SC LEDPEDHAND	2	0.01	0.0200	SC		
41	Soquel Drive and Thurber Lane	11	CTRMS	1150/1	3	0	0.15	0.4500	SC LEDIZRB	3	0.015	0.0450	SC	MVT7506261	
42	Soquel Drive and Thurber Lane	11	CTRTC	1150/1	1	0	0.15	0.1500	SC LED12RA	1	0.0097	0.0097	SC		
43	Soquel Drive and Thurber Lane	11	CTRMS	169/1	6	0	0.069	0.4140	SC LED8RB	6	0.0097	0.0582	SC		
44	Soquel Drive and Thurber Lane	11	CTPED	169/1	4	0	0.069	0.2760	SC LEDPEDHAND	4	0.01	0.0400	SC		
45	Soquel Drive and Park Avenue	12	CTRMS	1150/1	5	0	0.15	0.7500	SC LED12RB	5	0.015	0.0750	SC	RVT195001	
46	Soquel Drive and Park Avenue	12	CTRTC	1150/1	4	0	0.15	0.6000	SC LEDIZRA	4	0.0097	0.0388	SC		
47	Soquel Drive and Park Avenue	12	CTRMS	169/1	2	0	0.069	0.1380	SC LED8RB	2	0.0097	0.0194	SC		
48	Soquel Drive and Park Avenue	12	CTPED	169/1	8	0	0.069	0.5520	SC LEOPEDHANO	a	0.01	0.0800	SC		
49	Soquel Drive and Rodeo Gulch Road	13	CTRMS	1150/1	10	0	0.15	1.5000	SC LED12RB	10	0.015	0.1500	SC	- 2 1	
50	Soquel Drive and Rodeo Gulch Road	13	CTRTC	1150/1	0	0	0.15	0.0000	SC LEDIZRA	0	0.0097	0.0000	SC		
51	Soquel Drive and Rodeo Gulch Road	13	CTRMS	169/1	0	0	0.069	0.0000	SC LED8RB	0	0.0097	0.0000	SC		
52	Soquel Drive and Rodeo Gulch Road	13	CTPED	169/1	6	0	0.089	0.4140	SC LEDPEDHAND	6	0.01	0.0600	Bc		
53	Soquel Drive and Standle Park Drive	14	CTRMS	1150/1	9	0	0.15	1.3500	Bc LEDIZRB	9	0.015	0.1350	SC	QVT4331601	
54	Soquel Drive and Standle Park Drive	14	CTRTC	1150/1	2	0	0.15	0.3000	SC LED12RA	2	0.0097	0.0194	SC		
55	Soquel Drive and Standle Park Drive	14	CTRMS	169/1	6	0	0.069	0.4140	SC LED8RB	6	0.0097	0.0582	Bc		
56	Soquel Drive and Standle Park Drive	14	CTPEO	169/1	6	0	0.069	0.4140	SC LEDPEDHAND	6	0.01	0.0690	SC		
57	Soquel Avenue and 7th Avenue	15	CTRMS	1150/1	1	0	0.15	0.1500	SC LED12RB	1	0.015	0.0150	SC	MVT5356341	All of these fixtures were already converted to LED
58	Soquel Avenue and 7th Avenue	15	CTRTC	1150/1	2	0	0.15	0.3000	SC LED12RA	2	0.0097	0.0194	SC		All of these fixtures were already converted to LED
59	Soquel Avenue and 7th Avenue	15	CTRMS	169/1	6	0	0.069	0.4140	SC LED8RB	6	0.0097	0.0582	SC		
60	Soquel Avenue and 7th Avenue	15	CTPED	169/1	4	0	0.069	0.2760	SC LEOPEDHANO	4	0.01	0.0400	SC		
61	7th Avenue and Eandon Street	16	CTRMS	1150/1	11	0	0.15	1.6500	SC LED12RB	11	0.015	0.1650	SC	KVT4539801	4 of these fixtures were already converted to LED
62	7th Avenue and Eandon Street	16	CTRTC	1150/1	0	0	0.15	0.0000	SC LEDIZRA	0	0.0037	0.0000	SC		
63	7th Avenue and Eandon Street	16	CTRMS	169/1	2	0	0.069	0.1380	SC LED8RB	2	0.0097	0.0194	Bc		
64	7th Avenue and Eandon Street	16	CTPED	169/1	a	0	0.069	0.5520	SC LEDPEDHAND	a	0.01	0.0800	SC		
65	Soquel, San Jose and O'Neill	17	CTRMS	1150/1	a	0	0.15	1.2000	SC LED12RB	a	0.015	0.1200	Bc	PVT4950101	
66	Soquel, San Jose and O'Neill	17	CTRTC	1150/1	.	0	0.15	0.6000	SC LEDIZRA	4	0.0097	0.0388	SC		

Line ID	Intersection Name	Unique Intersection No.	ETI Usage Area	Existing Incandescent Fixture Codes	Number of Fixtures	Number of Non-operating Fixtures	kW per Fixture	kW per Space	Control Device	Proposed New LED Fixture Codes	Number of Fixtures	kW per Fixture	kW per Space	Control Device	# of Signal Phases	PG&E Account Number	Notes
67	Soquel, San Jose and O'Neill	17	CTRMS	I69/1	6	0	0.069	0.4140	SC	LED8RB	6	0.0097	0.0582	SC			
68	Soquel, San Jose and O'Neill	17	CTPED	I69/1	6	0	0.069	0.5520	SC	LEDPEDHAND	8	0.01	0.0800	SC			
69	East, Cm, Portola and 17th	18	CTRMS	I150/1	7	0	0.15	1.0500	SC	LED12RB	7	0.015	0.1050	SC		MVT2345251	All of these fixtures were already converted to LED
70	East, Cliff, Portola and 17th	13	CTRTC	I150/1	7	0	0.15	1.0500	SC	LED12RA	7	0.0097	0.0679	SC			All of these fixtures were already converted to LED
71	East, Cliff, Portola and 17th	18	CTRMS	I69/1	4	0	0.069	0.2760	SC	LED8RB	4	0.0097	0.0388	SC			
72	East, Cliff, Portola and 17th	18	CTPED	I69/1	8	0	0.069	0.5520	SC	LEDPEDHAND	6	0.01	0.0800	SC			
73	Graham Hill and E. Zayante	19	CTRMS	I150/1	12	0	0.15	1.8000	SC	LED12RB	12	0.015	0.1800	SC		NVT3531241	
74	Graham Hill and E. Zayante	19	CTRTC	I150/1	2	0	0.15	0.3000	SC	LED12RA	2	0.0097	0.0194	SC			
75	Graham Hill and E. Zayante	19	CTRMS	I69/1	0	0	0.069	0.0000	SC	LEDBRB	0	0.0097	0.0000	SC			
76	Graham Hill and E. Zayante	19	CTPED	I69/1	4	0	0.069	0.2760	SC	LEDPEDHAND	4	0.01	0.0400	SC			
77	Graham Hill and E. Zayante	19	CTFLASH	I120/1	1	0	0.12	0.1200	SC	LED12YB	1	0.12	0.1200	SC			
78	Aptos Ranch Road and Soquel Drive	m	CTRMS	I150/1	6	0	0.15	1.2000	SC	LED12RB	8	0.015	0.1200	SC		QVT4326701	
79	Aptos Ranch Road and Soquel Drive	m	CTRTC	I150/1	4	0	0.15	0.6000	SC	LED12RA	4	0.0037	0.0396	SC			
80	Aptos Ranch Road and Soquel Drive	20	CTRMS	I69/1	4	0	0.069	0.2760	SC	LED8RB	4	0.0097	0.0388	SC			
81	Aptos Ranch Road and Soquel Drive	20	CTPED	I69/1	a	0	0.069	0.5520	SC	LEDPEDHAND	8	0.01	0.0800	SC			
a2	Spreckles Drive and Soquel Drive	21	CTRMS	I150/1	12	0	0.15	1.8000	SC	LED12RB	12	0.015	0.1800	SC		SVT4518231	
83	Spreckles Drive and Soquel Drive	21	CTRTC	I150/1	0	0	0.15	0.0000	SC	LED12RA	0	0.0097	0.0000	SC			
a4	Spreckles Drive and Soquel Drive	21	CTRMS	I69/1	0	0	0.069	0.0000	SC	LEDBRB	0	0.0097	0.0000	SC			
85	Spreckles Drive and Soquel Drive	21	CTPED	I69/1	2	0	0.069	0.1380	SC	LEDPEDHAND	2	0.01	0.0200	SC			
86	Main Street and Soquel Drive	22	CTRMS	I150/1	10	0	0.15	1.5000	SC	LED12RB	10	0.015	0.1500	SC		PVT4943801	
a7	Main Street and Soquel Drive	22	CTRTC	I150/1	0	0	0.15	0.0000	SC	LED12RA	0	0.0097	0.0000	SC			
88	Main Street and Soquel Drive	22	CTRMS	I69/1	1	0	0.069	0.0690	SC	LEDBRB	1	0.0097	0.0097	SC			
89	Main Street and Soquel Drive	22	CTPED	I69/1	8	0	0.069	0.5520	SC	LEDPEDHAND	8	0.01	0.0600	SC			
90	Daubinbiss Avenue and Soquel Drive	23	CTRMS	I150/1	10	0	0.15	1.5000	SC	LED12RB	10	0.015	0.1500	SC		PVT4943801	
91	Daubinbiss Avenue and Soquel Drive	23	CTRTC	I150/1	0	0	0.15	0.0000	SC	LED12RA	0	0.0097	0.0000	SC			
92	Daubinbiss Avenue and Soquel Drive	23	CTRMS	I69/1	1	0	0.069	0.0690	SC	LED8RB	1	0.0097	0.0097	SC			
93	Daubinbiss Avenue and Soquel Drive	23	CTPED	I69/1	8	0	0.069	0.5520	SC	LEDPEDHAND	8	0.01	0.0800	SC			
94	17th Avenue and Felt Street	24	CTRMS	I150/1	10	0	0.15	1.5000	SC	LED12RB	10	0.015	0.1500	SC		MVT2110371	All of these fixtures were already converted to LED
95	17th Avenue and Felt Street	24	CTRTC	I150/1	4	0	0.15	0.6000	SC	LED12RA	4	0.0097	0.0388	SC			All of these fixtures were already converted to LED
96	17th Avenue and Felt Street	24	CTRMS	I69/1	3	0	0.069	0.2070	SC	LEDBRB	3	0.0097	0.0291	SC			
97	17th Avenue and Felt Street	24	CTPED	I69/1	a	0	0.069	0.5520	SC	LEDPEDHAND	a	0.01	0.0800	SC			
98	Capitola Avenue and Soquel Drive	25	CTRMS	I150/1	6	0	0.15	0.9000	SC	LED12RB	6	0.015	0.0900	SC		PVT5405111	
99	Capitola Avenue and Soquel Drive	25	CTRTC	I150/1	4	0	0.15	0.6000	SC	LED12RA	4	0.0097	0.0388	SC			
100	Capitola Avenue and Soquel Drive	25	CTRMS	I69/1	3	0	0.069	0.2070	SC	LEDBRB	3	0.0097	0.0291	SC			
101	Capitola Avenue and Soquel Drive	25	CTPED	I69/1	4	0	0.069	0.2760	SC	LEDPEDHAND	4	0.01	0.0400	SC			
102	17th Avenue and Soquel Avenue	26	CTRMS	I150/1	10	0	0.15	1.5000	SC	LED12RB	10	0.015	0.1500	SC		NVT1224901	
103	17th Avenue and Soquel Avenue	26	CTRTC	I150/1	2	0	0.15	0.3000	SC	LED12RA	2	0.0097	0.0194	SC			
104	17th Avenue and Soquel Avenue	26	CTRMS	I69/1	0	0	0.069	0.0000	SC	LEDBRB	0	0.0037	0.0000	SC			
105	17th Avenue and Soquel Avenue	26	CTPED	I69/1	4	0	0.069	0.2760	SC	LEDPEDHAND	4	0.01	0.0400	SC			
106	Soquel Drive and Cabrillo College	27	CTRMS	I150/1	4	0	0.15	0.6000	SC	LED12RB	4	0.015	0.0600	SC		PVT3605101	
107	Soquel Drive and Cabrillo College	27	CTRTC	I150/1	4	0	0.15	0.6000	SC	LED12RA	4	0.0097	0.0396	SC			
108	Soquel Drive and Cabrillo College	27	CTRMS	I150/1	3	0	0.15	0.4503	SC	LED12RB	3	0.015	0.0450	SC			
109	Soquel Drive and Cabrillo College	27	CTRTC	I150/1	4	0	0.15	0.6000	SC	LED12RA	4	0.0097	0.0388	SC			
110	Soquel Drive and Soquel Avenue	26	CTRMS	I69/1	6	0	0.069	0.4140	SC	LEDBRB	6	0.0097	0.0582	SC		MVT5352181	1 of these fixtures was already converted to LED
111	Soquel Drive and Soquel Avenue	26	CTPED	I69/1	4	0	0.069	0.2760	SC	LEDPEDHAND	4	0.01	0.0400	SC			
112	Soquel Drive and Soquel Avenue	26	CTRMS	I150/1	5	0	0.15	0.7500	SC	LED12RB	5	0.015	0.0750	SC			
113	Soquel Drive and Soquel Avenue	28	CTRTC	I150/1	2	0	0.15	0.3000	SC	LED12RA	2	0.0097	0.0194	SC			
114	Graham Hill and Mt. Hermon	29	CTRMS	I69/1	6	0	0.069	0.4140	SC	LEDBRB	6	0.0097	0.0582	SC		HVT3555561	
115	Graham Hill and Mt. Hermon	29	CTPED	I69/1	4	0	0.069	0.2760	SC	LEDPEDHAND	4	0.01	0.0400	SC			
116	Graham Hill and Mt. Hermon	29	CTRMS	I150/1	5	0	0.15	0.7500	SC	LED12RB	5	0.015	0.0750	SC			
117	Graham Hill and Mt. Hermon	29	CTRTC	I150/1	6	0	0.15	0.9000	SC	LED12RA	6	0.0097	0.0562	SC			
118	Graham Hill and Mt. Hermon	23	CTFLASH	I120/1	2	0	0.12	0.2400	SC	LED12YB	2	0.12	0.2400	SC			
119	Park Avenue and Cabrillo College	30	CTRMS	I150/1	10	0	0.15	1.5000	SC	LED12RB	10	0.015	0.1500	SC		PVT2506051	
120	Park Avenue and Cabrillo College	30	CTRTC	I150/1	4	0	0.15	0.6000	SC	LED12RA	4	0.0097	0.0366	SC			
121	Park A - and Cabrillo College	30	CTRMS	I69/1	2	0	0.069	0.1390	SC	LEDBRB	2	0.0097	0.0194	SC			
122	Park Avenue and Cabrillo College	30	CTPED	I69/1	a	0	0.069	0.5520	SC	LEDPEDHAND	a	0.01	0.0800	SC			
123	Porter Street and Main Street	31	CTRMS	I150/1	a	0	0.15	1.2000	SC	LED12RB	8	0.015	0.1200	SC			
124	Porter Street and Main Street	31	CTRTC	I150/1	4	0	0.15	0.6000	SC	LED12RA	4	0.0097	0.0366	SC			
125	Porter Street and Main Street	31	CTRMS	I69/1	7	0	0.069	0.4830	SC	LEDBRB	7	0.0097	0.0679	SC			
126	Porter Street and Main Street	31	CTPED	I69/1	6	0	0.069	0.4140	SC	LEDPEDHAND	6	0.01	0.0600	SC			
127	Soquel Drive and Mission Street	32	CTRMS	I150/1	10	0	0.15	1.5000	SC	LED12RB	10	0.015	0.1500	SC		MVT7508981-6	
128	Soquel Drive and Mission Street	32	CTRTC	I150/1	4	0	0.15	0.6000	SC	LED12RA	4	0.0037	0.0366	SC			
129	Soquel Drive and Mission Street	32	CTRMS	I150/1	4	0	0.15	0.6000	SC	LED12RB	4	0.015	0.0600	SC			
130	Soquel Drive and Mission Street	32	CTRTC	I150/1	a	0	0.15	1.2000	SC	LED12RA	a	0.0097	0.0776	SC			
131	Soquel Drive and Commercial Circle	33	CTRMS	I69/1	a	0	0.069	0.5520	SC	LED8RB	6	0.0097	0.0776	SC		MVT7510651-1	
132	Soquel Drive and Commercial Circle	33	CTPED	I69/1	4	0	0.069	0.2760	SC	LEDPEDHAND	4	0.01	0.0400	SC			
133	Soquel Drive and Commercial Circle	33	CTRMS	I150/1	4	0	0.15	0.6000	SC	LED12RB	4	0.015	0.0600	SC			
134	Soquel Drive and Commercial Circle	33	CTRTC	I150/1	a	0	0.15	1.2000	SC	LED12RA	8	0.0097	0.0776	SC			
135	Soquel Drive and Rio Del Mar Boulevard	34	CTRMS	I69/1	6	0	0.069	0.4140	SC	LEDBRB	6	0.0097	0.0562	SC		new service	
136	Soquel Drive and Rio Del Mar Boulevard	34	CTPED	I69/1	5	0	0.069	0.3453	SC	LEDPEDHAND	5	0.01	0.0500	SC			
137	Soquel Drive and Rio Del Mar Boulevard	34	CTRMS	I150/1	3	0	0.15	0.4500	SC	LED12RB	3	0.015	0.0450	SC			
138	Soquel Drive and Rio Del Mar Boulevard	34	CTRTC	I150/1	6	0	0.15	0.9000	SC	LED12RA	6	0.0097	0.0562	SC			
139	Empire Grade at Heller Drive	35	CTFLASH	I120/1	1	0	0.12	0.1200	SC	LED12YB	1	0.0025	0.0025	SC			

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Line ID	Intersection Name	Unique Intersection No.	ETI Usage Areas	Existing Incandescent Fixture Codes	Number of Fixtures	Number of Non-operating Fixtures	kW per Fixture	kW per Space	Control Device	Proposed New LED Fixture Codes	Number of Fixtures	kW per Fixture	kW per Space	Control Device	# of Signal Phases	PG&E Account Number	Notes
140	Graham Hill Road at Michael Lane	36	CTFLASH	1120/1	1	0	0.12	0.1200	SC	LED12YB	1	0.0025	0.0025	SC			
141	Graham Hill Road 4.5 N. at Ocean Street ext.	37	CTFLASH	1120/1	2	0	0.12	0.2400	SC	LED8YB	2	0.0025	0.0050	SC			
142	Graham Hill Road 4.7 N. at Ocean Street ext.	38	CTFLASH	1120/1	2	0	0.12	0.2400	SC	LED8YB	2	0.0025	0.0050	SC			
143	Graham Hill Road 4.6 N. at Ocean Street ext.	39	CTFLASH	1120/1	2	0	0.12	0.2400	SC	LED8YB	2	0.0025	0.0050	SC			
144	Graham Hill Road 4.9 N. at Ocean Street ext.	40	CTFLASH	1120/1	1	0	0.12	0.1200	SC	LED8YB	1	0.0025	0.0025	SC			
145	Zayante Fire Station East Zayante Road	41	CTFLASH	1120/1	2	0	0.12	0.2400	SC	LEDBYS	2	0.0025	0.0050	SC			
146	Quail Hollow Road 500' east of Marion Avenue	42	CTFLASH	1120/1	1	0	0.12	0.1200	SC	LED12YB	1	0.0025	0.0025	SC			
147	Mt. Herman Road at Lone Star Quarry	43	CTFLASH	1120/1	1	0	0.12	0.1200	SC	LED12YB	1	0.0025	0.0025	SC			
148	Summit Road west of Loma Prieta School	44	CTFLASH	1120/1	1	0	0.12	0.1200	SC	LED12YB	1	0.0025	0.0025	SC			
149	Summit Road east of Loma Prieta School	45	CTFLASH	1120/1	1	0	0.12	0.1200	SC	LED12YB	1	0.0025	0.0025	SC			
150	Soquel-San Jose Road at Mountain School	46	CTFLASH	1120/1	2	0	0.12	0.2400	SC	LED12YB	2	0.0025	0.0050	SC			
151	Soquel Drive between Daub Biss and Robertson Street	47	CTFLASH	1120/1	2	0	0.12	0.2400	SC	LED8YB	2	0.0025	0.0050	SC			
152	Freedom Boulevard and Bonita Drive	48	CTFLASH	1120/1	2	0	0.12	0.2400	SC	LED12YB	2	0.0025	0.0050	SC			
153	San Andreas Road at Seascap Boulevard EW	49	CTFLASH	1120/1	2	0	0.12	0.2400	SC	LED12RB	2	0.0025	0.0050	SC			
154	Sand Dollar Drive 2 miles from San Andreas Road	50	CTFLASH	1120/1	1	0	0.12	0.1200	SC	LED8YB	1	0.0025	0.0025	SC			
155	Corralitas Road at Bradley Street	51	CTFLASH	1120/1	2	0	0.12	0.2400	SC	LED8YB	2	0.0025	0.0050	SC			
156	Hames Road west of Enos Lane	52	CTFLASH	1120/1	1	0	0.12	0.1200	SC	LED8YB	1	0.12	0.1200	SC			



## CUSTOMER ECM Maintenance & Management for Measures Installed at CUSTOMER's Facilities

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### Scope:

CUSTOMER is responsible for sustaining the proper operation and maintenance of the energy efficiency equipment installed under this Agreement. CUSTOMER shall implement one of either of two options to satisfy this responsibility.

### Maintenance Options:

#### Option 1 - Maintenance by CUSTOMER or CUSTOMER'S ASSIGNEE

CUSTOMER or CUSTOMER'S ASSIGNEE agrees to maintain the functionality of the installed energy efficiency measures through the implementation of an appropriate corrective/preventive maintenance program.

In the corrective/preventative maintenance program, CUSTOMER or CUSTOMER'S ASSIGNEE shall make reasonable efforts to correct, repair or replace non-functioning energy efficiency equipment within two weeks of its detection. Further, CUSTOMER or CUSTOMER'S ASSIGNEE shall take reasonable steps to conduct periodic preventative maintenance as recommended by the equipment suppliers. CUSTOMER shall arrange for appropriate training of CUSTOMER's staff OR CUSTOMER'S ASSIGNEE'S staff on the features, operation and maintenance of the installed energy efficiency equipment.

In this corrective/preventative maintenance program, CUSTOMER or CUSTOMER'S ASSIGNEE shall replace non-functioning energy efficiency equipment with equivalent or more efficient equipment.

#### Option 2 - Maintenance by CUSTOMER's Service Contractor

CUSTOMER agrees to contract with a qualified Service Contractor to maintain the functionality of the installed energy efficiency measures through the implementation of an appropriate corrective/preventive maintenance program.

Through a corrective/preventative maintenance program contract, CUSTOMER's Service Contractor shall make reasonable efforts to correct, repair or replace non-functioning energy efficiency equipment within two weeks of its detection. Further, CUSTOMER's Service Contractor shall take reasonable steps to conduct periodic preventative maintenance as recommended by the equipment suppliers.

In this corrective/preventative maintenance program, CUSTOMER's Service Contractor shall replace non-functioning equipment with equivalent or more efficient equipment.

CUSTOMER hereby agrees to implement Option \_\_\_\_ of the required maintenance programs.

\_\_\_\_\_  
CUSTOMER's Representative

John A. Fantham, Director of Public Works

Appendix B

dsm\10-23HCA

\_\_\_\_\_  
Date

ETI Project ID # 1581029

Program ID # 95PSP106

**HOST CUSTOMER AGREEMENT -TABLE 2**  
**Customer Payment Stream for Targeted Energy Savings**  
**County of Santa Cruz LED Retrofit Project**  
**1581029**

ETI provides Customer the opportunity to sell energy savings as shown in Table 2, column 5 below. The customer agrees to achieve a target kwh amount of 437,445 kWh per year. ETI further agrees to make payments for energy saved for up to 10% above the targeted amount at the rate shown in Table 2, column 5 below.

During the years after 4 July 1999 Customer agrees to reduced payments for energy savings below the targeted amount as shown in Table 2, column 6.

1	2	3	4	5	6
Year	From	To	ETI Payment to Customer for Targeted Energy Savings (\$)	ETI Payment increase to Customer for kWh Above Target (\$/kWh)	ETI Payment Reduction to Customer for kWh Below Target (\$/kWh)
1 (Partial)	3/1/99	7/3/99	\$2, 676	\$6.01800	\$0. 0360
2	7/4/99	7/3/00	\$8. 443	\$0.01930	\$0. 0386
3	7/4/00	7/3/01	\$9,055	\$0. 02070	\$0.0414
4	7/4/01	7/3/02	\$9,711	\$0. 02220	\$0.0444
5	7/4/02	7/3/03	\$10,411	\$0. 02380	\$0.0476
6	7/4/03	7/3/04	\$11,199	\$0. 02560	\$0.0512
Total			\$51, 495	\$0. 02202	

Table 2

Note: Payments are escalated at the rate of: 7.390% per year.

Note also that this payment stream is preliminary and subject to change after review of the post-installation inspection results. At that time the actual savings and payment stream will be recorded on a replacement Table 2.

**HOST CUSTOMER AGREEMENT**  
**Customer Buyout Values**  
**County of Santa Cruz LED Retrofit Project**  
**1581029**

During each Contract Year			Buyout Value
1 Partial	3/1/99	7/3/99	\$7,000
2	7/4/99	7/3/00	\$19,000
3	7/4/00	7/3/01	\$19,000
4	7/4/01	7/3/02	\$19,000
5	7/4/02	7/3/03	\$19,000
6	7/4/03	7/3/04	\$19,000

**Effective Date: 10/23/98**

**HOST CUSTOMER AGREEMENT**  
**Customer Buyout Values**  
**County of Santa Cruz LED Retrofit Project**  
1581029

From	To	Buyout Formula	Buyout Value
7/4/97	7/3/99	1 x Initial Payment	<i>\$32,500</i>
7/4/99	7/3/00	5/6 x Initial Payment	<i>\$27,100</i>
7/4/00	7/3/01	4/6 x Initial Pavment	<i>\$21,700</i>
7/4/01	7/3/02	3/6 x Initial Payment	<i>\$16,300</i>
7/4/02	7/3/03	2/6 x Initial Payment	<i>\$10,800</i>
7/4/03	7/3/04	1/6 x Initial Payment	<i>\$6,400</i>

Effective Date:      10/23/98

**CUSTOMER Contribution**  
**County of Santa Cruz LED Retrofit Project**

1581029

Note: the Project Cost is assumed to be \$95,000. The County shall provide the final as-built project cost

For the purposes of the PG&E Power Saving Partners Program the Customer Contribution is determined as follows:

Year			Project Cost	ETI Incentive to Customer	Maintenance Savings	Customer Contribution
1 Partial	3/1/99	7/3/99	\$95,000	(\$2,676)	(\$1,155)	\$91,169
2	7/4/99	7/3/00	\$0	(\$8,443)	(\$3,400)	(\$11,843)
3	7/4/00	7/3/01	\$0	(\$9,055)	(\$3,400)	(\$12,455)
4	7/4/01	7/3/02	\$0	(\$9,711)	(\$3,400)	(\$13,111)
5	7/4/02	7/3/03	\$0	(\$10,411)	(\$3,400)	(\$13,811)
6	7/4/03	7/3/04	\$0	(\$11,199)	(\$3,400)	(\$14,599)
Total						\$25.350

Financing:

CUSTOMER is installing the ECM with no financing.