2009 Nonresidential Retrofit - Demand Response (NRR-DR) Procedures Manual

Utility Administrator:

Pacific Gas and Electric Company
Customized Energy Efficiency/Demand Response Progam

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The 2009 Nonresidential Retrofit (NRR-DR) Program is a statewide program administered by Pacific Gas and Electric (PG&E), Southern California Edison (SCE), and San Diego Gas & Electric (SDG&E) in their respective territories. The program rules, incentive rates, incentive limits, and program requirements are identical for all three Utilities. The program packaging and individual offering may vary slightly between the Utilities.

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NRR-DR

Summary of Program Rules

The Nonresidential Retrofit – Demand Response (NRR-DR) program offers cash incentive payments for business energy efficiency projects involving the installation of high-efficiency equipment or systems. A project may consist of the retrofit of existing equipment/systems associated with same or increased load. The program is open to projects involving commercial, industrial and agricultural Customers. Customers can also apply for Demand Response (Technical Incentives) measures through this program (refer to Section 2.0).

A Calculated approach is used to estimate the energy savings and incentive. Customers use the Customized Energy Efficiency/Demand Response Incentive application forms to apply for Calculated and Demand Response measures. Itemized (Express Efficiency) type measures are available through Pacific Gas and Electric's Mass Market Program and may be applied for under this program using the Energy Efficiency Rebate forms. Refer to the following website for further details: http://www.pge.com/mybusiness/energysavingsrebates

Calculated Measures are paid based on the quantity of kWh or therm savings resulting from installation of the high efficiency equipment or system. This value is calculated by the Applicant and submitted to the Utility Administrator for review. Incentives are paid on the energy savings above and beyond minimum federal- and state-mandated energy efficiency performance. If there are no government standards for a particular measure, current industry practices are used to establish baseline performance.

Applicants are eligible to receive up to 50 percent of the total project costs for Calculated Measures, not to exceed a Customer Project Site cap of $3,780,000.

Under the NRR-DR program, a Project Sponsor follows a multi-step application process using forms supplied specifically for the NRR-DR program. The forms are submitted to the Utility Administrator for evaluation and payment. Depending on the nature of the project, the application process may involve one or more site inspections by the Utility Administrator prior to payment. In all cases, the Utility Administrator will work closely with the Project Sponsor to facilitate the review and payment process.

Participation in the NRR-DR program is entirely voluntary. Applicants incur all costs associated with preparing an application, installing equipment, conducting measurement and verification (M&V) activities, and otherwise reviewing or executing the program agreement. Receipt of incentive funds depends on careful adherence to program policies. In return, Customers (or otherwise indicated payee) obtains cash payments and acquire high-efficiency equipment that will help lower energy costs and reduce energy consumption.

The following sections briefly summarize the NRR-DR programs. For additional information refer to the 2009 NRR-DR Program Procedures Manual or contact your local Utility Administrator.

A. PROGRAM DEFINITIONS & ELIGIBILITY

Utility Administrator

Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric (SDG&E), and Southern California Edison (SCE) administer the NRR-DR (or SPC) programs in their respective service territories. While the programs may be marketed or packaged differently, the policies and procedures remain consistent.

Project Sponsor

The Project Sponsor is responsible for completing the application. The Project Sponsor may be the Customer for whom the energy saving equipment or system(s) is installed or may be a third-party authorized to act on behalf of the Customers. NOTE: The Project Sponsor is the primary contact with the Utility and will receive all correspondence regarding the project.

Customer / Applicant (Customer of Record/Business Owner)

The Customer is the Utility Customer whose site or sites is implementing the energy saving measure(s) and ultimately receives or designates the payment from the Utility Administrator. See Section 1.8 for more information. All non-residential Customers who: (1) receive electric and/or natural gas services from PG&E, SCE, or SDG&E and (2) pay the Public Purpose Programs (PPP) surcharge on their Utility bills are eligible for Program participation as a Customer.

Project

A project is defined as all of the measures included in a single NRR-DR application. The project may include multiple sites and multiple measures as long as they are all located within a single Utility service territory. Program payments are provided based on one-year project energy savings for the measures installed and therefore all measures to be installed in a project must be completed before any payment is made.

Any project measures included in your application may not have received rebates, incentives or services from another Utility, state or local program funded by the PPP surcharge. In addition, applicants cannot apply to two or more energy efficiency programs at the same time for the same measures. Other California end user energy efficiency programs include, but are not limited to, any end user program offered by or through Southern California Gas Company, Southern California Edison, Pacific Gas and Electric Company, and San Diego Gas & Electric, the California Energy Commission, and the California Public Utilities Commission, including, Local Programs / Third Party Programs / Local Government Partnerships funded by the PPP surcharge. Projects involving measures that qualify for the Early Retirement feature may be an exception to this rule. Contact the Utility Administrator for further details.

Customer Project Site

A Customer Project Site is defined by either a single free-standing building/structure or an individual utility meter.

Energy Savings Measures

An energy saving measure (“measure”) is the installation of high-efficiency equipment or systems. This can involve installations associated with retrofits and/or replacements of existing equipment. **Measures involving cogeneration projects are not eligible.** Measures cannot be removed or installed until the Utility can conduct an on-site inspection.

Measures must exceed applicable government and/or industry minimum efficiency standards to qualify and must operate and produce verifiable energy savings for at least five years. **Incentives are paid for direct energy savings only**; energy savings due to interactive effects such as the reduced cooling load due to installing more efficient lamps are not eligible for incentives.

T8 and T5 Fluorescent Lamps must meet the Color Rendering Index and Rated Lamp Life standards listed in Table A-1:

Table A-1. Eligible Fluorescent Lamp Characteristics

Lamp Type & Size	Ballast Type	CRI	Minimum Rated Lamp Life (3 hrs/start)
T8 – 2-ft, 3-ft, 4-ft	Programmed Start/ Programmed Rapid-start	>= 80	24,000 hours
T8 – All Sizes	Instant Start	>= 80	18,000 hours
T5 – All Sizes	Programmed Start/ Programmed Rapid-start	>= 82	20,000 hours

Early Retirement

The Early Retirement feature is designed to encourage the replacement of older, less efficient equipment with high efficient models, earlier than the customary replacement date. For qualifying equipment, the energy savings are calculated using the baseline efficiencies of the actual equipment rather than the current minimum standards. **This results in a larger incentive than would be possible using the traditional Calculated approach.** Currently the Early Retirement calculation procedure can be applied to chillers, packaged air conditioners, and motors. To use this feature, the savings must be calculated using the estimating software tools on the CD-ROM (this feature applies only to specific measures - see Section 1.4.6).

Eligibility

All non-residential Customers who: (1) receive electric and/or natural gas services from PG&E, SCE, or SDG&E and (2) pay the PPP surcharge on their PG&E Utility bills are eligible for Program participation as a Customer.

B. ESTIMATING ENERGY SAVINGS, PEAK DEMAND SAVINGS, AND INCENTIVES

The Calculated Approach determines the amount of the incentive based on the annual kWh, CPUC Mandated Peak reduction (DEER Peak), and/or therm saved. Energy savings may be estimated using the software estimating tools provided in the software or the Project Sponsor may elect to use their own engineering calculations.

Incentives are paid based on kWh and kW or therm savings achieved above and beyond minimum industry or government standards. To calculate savings the applicant uses Title 24 or government minimum standards as the baseline. If there are no government standards for a particular measure, current industry practices are used to establish baseline performance.

To calculate savings for Early Retirement, the Project Sponsor must use the software to determine the energy savings and incentive.

All energy savings estimates are reviewed and approved by the Utility Administrator as part of the application process. Additional information may be required to verify the inputs and variables used to determine the incentive.

Occasionally, energy savings cannot be substantiated to the satisfaction of the Utility. In these cases the Utility Administrator may require the Measured Savings approach or measurement and verification (M&V) of energy use before and up to 2 years after implementation of the energy saving measure. If the Utility determines that M&V is necessary to accurately determine the energy savings, the Project Sponsor must prepare and submit an M&V plan to the Utility Administrator for review and approval. Should M&V be required, then the Program incentive

payment will be increased by 10 percent to help defray the M&V costs, not to exceed $50,000 (See section 1.7.1).

C. INCENTIVES

The incentive payment amount is based on a flat incentive rate (per kWh or therm) applied to one year of energy (kWh or therms) savings. The final incentive amount for measures that require M&V is based on the measured performance and can therefore vary between 0 and 110 percent of the amount originally indicated on the contract.

Incentive Rates

The incentive rate varies based on the measure category as shown in Table C-1 below.

Table C-1. Incentive Rates

Measure Category	Annual Energy Savings Incentive Rate (kWh)	Peak Demand Incentive Reduction Rate (kW)
Lighting (Fluorescent, Other Lighting, or Lighting Controls)	$0.05 per kWh saved	$100 / kW
Air Conditioning and Refrigeration (AC&R) I	$0.15 per kWh saved	$100 / kW
Air Conditioning and Refrigeration (AC&R) II	$0.09 per kWh saved	$100 / kW
Motors and Other Equipment	$0.09 per kWh saved	$100 / kW
Natural Gas	$1.00 per therm saved	

Project Costs Limitations

Calculated Measure incentives are limited to 50 percent of their total project costs.

Incentive Amount Limitations

The maximum incentive that can be paid is $3,780,000.

Incentive Payment Schedule:

After project measure(s) are installed, either one or two incentive payments are made, depending on whether M&V is required. For projects without M&V, 100 percent of the approved incentive amount is paid after installation of the project measure(s) is confirmed (Installation Review is approved). For projects where M&V is required, 60 percent of the approved incentive is paid after the installation of the project measure(s) is confirmed. The balance of the incentive amount for the measure(s) installed is determined based on the M&V results and is paid upon receipt and approval of the final report (Operating Report). For approved seasonal measures, 60 percent is paid when the Installation Review is approved; the remainder is paid after the equipment is fully operating, measurements are complete, and the Seasonal Operating Report is submitted by the Project Sponsor and approved by the Utility Administrator.

D. HOW TO APPLY (SEE SECTION 1.9 FOR DETAILS)

To apply for incentives under the NRR-DR program, the Project Sponsor follows a multi-step process using forms specific to the program. These forms can be completed manually using the hand-written (PDF) forms, or can be completed electronically using either Excel forms or with the program software available on Program CD-ROM. (To obtain the CD-ROM, access the Utility Administrator's Customized Energy Efficiency website). The application process consists of the following two or three steps depending on whether or not M&V is required.

First Milestone - Project Application

The Project Sponsor prepares and submits a Project Application, which includes Customer information, site information, data regarding specific measures to be installed and the estimated energy savings. The Utility Administrator reviews the Application and schedules an inspection of the existing equipment. **Pre-installation inspections are required for all Projects prior to approval unless waived by the Utility Administrator.** Once the Application is approved a contract is executed between the Project Sponsor and Utility Administrator and incentive money is reserved for the Project, pending timely installation of the Project measures. ***Note that neither decommissioning of existing equipment nor construction or implementation of an energy saving measure may begin prior to Application approval.***

Second Milestone – Installation

The Project Sponsor notifies the Utility Administrator and submits invoices after all project measure(s) have been installed **and are operational**. If any changes have occurred the Project Sponsor submits revised calculations as well. The Utility Administrator schedules an inspection of the installed equipment prior to approval. The Utility Administrator issues the incentive payment upon approval of the Installation Review for the project measure(s) installed.

Third Milestone - Operating Report – Projects requiring M&V ONLY.

For projects requiring M&V, the Project Sponsor must prepare and submit an Operating Report. The Operating Report is prepared using the results of the M&V activities during the first year of operation. The Utility Administrator reviews the Operating Report and may choose to inspect the installed equipment prior to approval. The Utility Administrator calculates the final incentive amount based on the M&V results for the project measure(s) installed and issues the final incentive payment.

E. IMPORTANT DATES AND DEADLINES:

- Program opens: January 1, 2009
- Application deadline: December 31, 2009 or before all of the Utility Administrator's NRR-DR incentive funds are committed.
- Installation deadline: June 1, 2010

NRR-DR

Section 1: NRR Program Overview and Policies

1.1 Introduction

Welcome to Pacific Gas and Electric's 2009 Nonresidential Retrofit – Demand Response (NRR-DR) Program. This section describes the program and rules specific to the Nonresidential Retrofit (NRR) portions of the umbrella NRR-DR program. This program provides financial incentives for the installation of high-efficiency equipment or systems. A project may consist of the retrofit of existing equipment/systems associated with same or increased load. Businesses that install energy-saving equipment are rewarded with cash payments, based on the actual annual kWh or therm savings that are achieved. Incentives are paid on the energy savings above and beyond minimum federal- and state-mandated energy efficiency performance. If there are no government standards for a particular measure, current industry practices are used to establish baseline performance. The 2009 program opens January 1st 2009. Applications are accepted until December 31, 2009 or until all of the Utility Administrator's NRR-DR incentive funds are committed.

Administered by Utilities. The program is administered by three of California's investor-owned Utilities — Pacific Gas and Electric Company, San Diego Gas & Electric, and Southern California Edison — and funded by Utility Customers through the Public Purpose Programs (PPP) surcharge on their Utility bills.

Designed for All Business Customers. The NRR-DR program serves all business Customers — i.e., commercial, industrial, and agricultural Customers — of any size. In the 2009 program, all Utilities share the same rules and procedures. In the 2009 program, San Diego Gas & Electric, Southern California Edison and Pacific Gas & Electric share the same rules and procedures.

Program Materials. Because incentive payments are based on careful adherence to program requirements, please read this entire *Program Overview and Policies* section of the *2009 Nonresidential Retrofit – Demand Response Program Procedures Manual* before starting a project. Additional sections of the *Procedures Manual* — including forms and instructions — are available from your Utility Administrator both in hardcopy and on CD-ROM. Most of these materials are also available on Utility websites.

Changes for 2009. Refer to Table 1-1 below for a list of specific program changes for 2009.

Table 1-1. What's New in 2009

- **Peak Incentive (kW)** – An incentive has been added based on the reduction of CPUC Mandated Peak Demand. $100/Peak kW
- **Energy Incentive (kWh and Therms) Increase** - Energy Incentives for AC&R I, AC&R II, Other, and Gas have increased. AC&R I - $0.15/kWh; AC&R II - $0.09/kWh; Other - $0.09/kWh; (Lighting remains at $0.05/kWh); Gas $1/therm.
- **Cool Roofs -** Cool roofs no longer qualify.
- **LED Lighting -** LED retrofits utilizing approved fixtures are eligible for incentives (see NRR-DR Procedures Manual Appendix G for approval process prior to application submittal and table of currently approved fixtures) (Excluding Screw-in lamps and lamp-only replacements)
- **Customer Project Site Cap –** The NRR Customer Project Site Cap has been increased from $3,600,000 to $3,780,000.
- **Peak Definition -** CPUC Mandated Peak (DEER Peak) dates have been updated from DEER 2005 to DEER 2008.
- **New Equipment -** Projects that involve the installation of new equipment are potentially now eligible for the program (see section 1.4.4).

1.2 How the NRR-DR Program Works

1.2.1 The Main Players

The NRR-DR program involves three key parties:

1. **Customer (Applicant)**—A business Utility Customer who conducts, or authorizes an outside Project Sponsor to conduct, an energy efficiency project at one or more sites. All incentives are paid directly to the Customer unless otherwise indicated.
2. **Project Sponsor**—An entity that submits a project application and enters into a NRR-DR Agreement with a Utility Administrator. Customers can serve as their own Project Sponsor, i.e. "self-sponsor", or may elect to have a third party enter into the agreement on their behalf.

   The Project Sponsor is responsible for ensuring all the required paperwork is submitted correctly and for ensuring the project is completed.
3. **Utility Administrator**—Pacific Gas and Electric Company, San Diego Gas & Electric, or Southern California Edison, whichever provides natural gas and or electric services to the Customer Project Site.

1.2.2 The Basic Process

The NRR-DR program works as follows:

1. **Application Submission.** The Project Sponsor submits an application to the Utility Administrator. The application describes the project and determines the incentives. The energy savings and incentive estimating approaches are discussed in Section 2.
2. **Application Review.** The Utility Administrator reviews the application and may conduct a pre-installation site inspection. **All existing equipment required to establish the project baseline must be operating and available for inspection, or the project may be ineligible.** The Utility Administrator may revise the energy savings and /or incentive calculation as applicable. The Utility Administrator may also require the Project Sponsor to submit an M&V plan, if the Utility Administrator determines at its sole discretion that an M&V process is appropriate for the proposed project (see section 1.7.1).
3. **Application Approval.** If the application is approved, incentive funding for the project is reserved and the Project Sponsor and Utility Administrator enter into a project Agreement that defines the energy savings and incentive payment.

   Installation cannot begin until after the Utility Administrator provides the Application Approval (as stated above) and any needed baseline measurements are completed.
4. **Project Installation and Installation Notification**. Once the replacement equipment is installed and operational, the Project Sponsor notifies the Utility Administrator in writing and submits project invoices.

   Important: Project Sponsor should provide Installation Notification only when projects are actually installed and operational, commissioned to their satisfaction to ensure the post-installation inspection is conducted under the conditions for which the project would normally be operating.
5. **Installation Review.** Upon notification, the Utility Administrator schedules a post-installation inspection to verify project installation and ensure the scope of work has not altered from the agreed-upon project.

6. **Installation Review Approval and Incentive Payment.** Upon approval of the Installation Review, the Customer receives the incentive payment. Most customers are paid 100 percent of the Installation Review approved incentive upon project completion and approval. Projects that require M&V are paid 60 percent of the approved incentive at the time of installation. Certain seasonal measures are also paid 60 percent of the approved incentive at the time of installation (see section 1.8.1).

1.3 Eligibility

1.3.1 Customer Eligibility

The program is open to all business customers who (1) receive natural gas and/or electric services from PG&E, SCE, SoCal Gas or SDG&E and (2) pay the PPP surcharge on the gas or electric meter on which the energy efficient equipment is installed.

Energy savings for which incentives are paid cannot exceed the actual usage provided by the utility. Non-utility supply, such as cogeneration or deliveries from another commodity supplier, does not qualify as usage from the utility (with the exception of Direct Access customers or customers paying departing load fees for which the utility collects PPP surcharges).

1.3.2 Project Sponsor Eligibility

Customers can self-sponsor their own projects or projects can be sponsored by outside parties such as energy efficiency service providers (EESPs), which include energy service companies (ESCOs), lighting installers, HVAC contractors, consulting engineers, energy management companies or other entities. **The Utility Administrators do not qualify as Project Sponsors; the Customer bears full responsibility for selecting a Project Sponsor if one is desired.**

1.4 Qualifying Energy Efficiency Measures

The NRR-DR program accepts a wide variety of energy-saving projects, including a pre-defined list of common measures as well as custom-designed measures. All projects must meet the following criteria:

1. **Must Exceed Government Standards.** Incentives are paid only on the energy savings above and beyond minimum federal- and state-mandated energy efficiency performance. If there are no government standards for a particular measure, current industry practices are used to establish baseline performance. The only exception to this policy is with the Early Retirement feature for qualifying equipment, which allows the efficiency standards of the existing equipment being replaced to determine the baseline.
2. **Must Operate at Least Five Years.** The program contract requires the replacement equipment to have a useful life of and be in operation for at least five years.

3. **Measures Cannot Overlap Other Incentive Programs.** It is important to note that if any of the project measures are included in applications to any other California energy efficiency incentive or rebate program, the project may be ineligible for NRR-DR participation. In addition, applicants cannot apply to two or more energy efficiency programs at the same time for the same measures. Other California end user energy efficiency programs include, but are not limited to, any program offered by or through Southern California Gas Company, Southern California Edison, Pacific Gas and Electric Company, and San Diego Gas & Electric, the California Energy Commission, and the California Public Utilities Commission, including PPP surcharge funded Local Programs / Third Party Programs / Local Government Partnerships. Applicants cannot receive incentives from more than one energy efficiency program for the same measures. Projects involving measures that qualify for the Early Retirement feature may be an exception to this rule. Contact the Utility Administrator for further details.
4. **Baseline Equipment Must be Decommissioned.** The baseline equipment must be decommissioned and removed from site prior to Installation Review approval. Under certain circumstances and subject to Utility Administrator discretion, baseline equipment may be kept for backup purposes. Additional documentation may be required in these cases.
5. **Screw-In Lamps.**

   Screw-In lamps of any type are not eligible for the NRR-DR program.
6. **LED Fixtures**

   LED fixtures must be specifically listed in or comply with the testing standards and requirements described in Appendix G. Table G1 includes approved EnergyStar rated and Utility Approved LED fixtures
7. **T8 and T5 Fluorescent Fixtures**

   T8 and T5 Fluorescent Lamp Fixtures must meet the Color Rendering Index and Rated Lamp Life Standards described in Table 1-2.

Table 1-2 Eligible Fluorescent Lamp Characteristics

Lamp Type & Size	Ballast Type	CRI	Minimum Rated Lamp Life (3 hrs/start)
T8 – 2-ft, 3-ft, 4-ft	Programmed Start/ Programmed Rapid-start	>= 80	24,000 hours
T8 – All Sizes	Instant Start	>= 80	18,000 hours
T5 – All Sizes	Programmed Start/ Programmed Rapid-start	>= 82	20,000 hours

1.4.1 Examples of Eligible Measures

In general, if a measure is not specifically excluded by rules, and the Applicant can provide documentation supporting energy savings beyond state and federal standards, then it may be eligible for NRR-DR program incentives, subject to the approval of your Utility Administrator. Table 1-3 provides an illustrative (not a comprehensive) list of qualifying efficiency measures. Please note that the category of a given measure — Lighting $0.05/kWh, Air Conditioning & Refrigeration I $0.15/kWh (AC&R I), Air Conditioning & Refrigeration II $0.09/kWh (AC&R II), Other equipment $0.09/kWh, or Natural Gas $/1.00/therm — is important because the category determines the incentive rate that will be paid (see Section 1.8 of this manual).

Air conditioning and refrigeration related measures that qualify for the AC&R I incentive rate category include those retrofits that improve the efficiency of the A/C system (i.e. kW/Ton improvements). Evaporative cooler and evaporative condenser retrofits are also classified under the AC&R I incentive rate category. AC&R measures that involve reduced operation or reduced load such as controls, building shell retrofits, or components retrofits (i.e. motors, pumps, component VSDs or fans) are classified under the AC&R II incentive rate category. System retrofits involving both AC&R I and AC&R II measures will be incented at $0.15/kWh for the complete system measure.

Table 1-3. Examples of Eligible Measures

Air Conditioning and Refrigeration I **Energy – $0.15 / kWh** **Peak Demand $100 / kW**	▪ High-efficiency chillers replacements ▪ Packaged air conditioners and heat pumps (>760,000 Btu/hr or 63.3 tons) ▪ Variable Speed Drive installations on existing air conditioning or refrigeration compressor motors. ▪ Air conditioning complete subsystem replacements (evaporative condensers, air-cooled condensers, cooling towers, or compressors) ▪ Refrigeration complete subsystem replacements (condensers, evaporators, cooling towers, or compressors) ▪ Constant air volume to variable air volume conversions ▪ Chiller heat reclaim ▪ Evaporative cooling unit installations ▪ Evaporative pre-cooling unit installations ▪ Indirect evaporative cooling (single stage and dual stage) ▪ Heat transfer (including heat pumps) to heat sinks, such as ground source cooling in air-conditioned buildings ▪ A/C compressor replacements ▪ Data center free cooling ▪ Refrigeration floating head controller installations
Air Conditioning and Refrigeration II **Energy - $0.09 / kWh** **Peak Demand - $100 / kW**	▪ Controls and energy management systems for HVAC or refrigeration equipment ▪ Variable speed drives on fans (including supply fans, exhaust fans, and cooling tower fans) ▪ Variable speed drives on pump motors (including chilled water and cooling tower pumps) ▪ Fan, pump, and/or motor replacements ▪ Refrigeration evaporator fan controls ▪ Insulating chilled water, condenser water, or refrigerant pipes ▪ Insulating cool air ducts ▪ Insulating storage tanks ▪ Demand control ventilation installation (CO_2 sensors) ▪ Installation of high-speed cold storage doors ▪ Air Conditioner air-side or water-side economizer installations on units not already equipped with a 100% economizer ▪ Building shell improvements ▪ Cooling tower upgrades ▪ Refrigerated case doors

Lighting **Energy - $0.05 / kWh** **Peak Demand - $100 / kW**	▪ Interior and exterior lighting retrofits including linear fluorescent, HID, induction, and compact fluorescent lamps (Excluding all Screw-In Lamps) ▪ LED luminaire retrofits utilizing approved fixtures (see Appendix G for approval process prior to application submittal and table of currently approved fixtures) (Excluding all Screw-In Lamps) ▪ Other retrofits such as high efficiency signage or architectural lighting (Excluding all Screw-In Lamps) ▪ Lighting control systems ▪ LED traffic lights ▪ LED exit signs ▪ Day lighting systems and dimmable ballast ▪ De-lamping measures performed as part of an integral lighting efficiency upgrade
Motors and Other Equipment **Energy - $0.09 / kWh** **Peak Demand - $100 / kW**	▪ Motor upgrades (all sizes) ▪ Variable-speed drives (e.g., on industrial fans, industrial pumps, and on air compressor motors) ▪ Industrial process applications ▪ Industrial fan replacements ▪ Industrial pump replacements ▪ Trimming impellers on industrial fans and pumps ▪ Projects improving building hot water efficiency ▪ Water flow controls resulting in electric savings ▪ Exhaust hood and fan projects ▪ Window films and glazing ▪ Dairy Vacuum Pumps/ Variable-speed drives (VSDs) ▪ Pulse cooling devices for injection molding machines ▪ Injection molding machines ▪ Professional wet cleaning equipment
Natural Gas Measures **$1.00 / Therm**	▪ Thermal Oxidizers ▪ Boiler or furnace replacements ▪ Boiler heat recovery ▪ Boiler economizers

1.4.2 Summary of Ineligible Measures

Table 1-5 summarizes the types of measures that do not qualify for program incentive funds.

Table 1-5. Ineligible Measures

- T8 and T5 fluorescent lighting retrofits where the proposed equipment does not meet the CRI and Lamp Life requirements (Table 1-2)
- Compact fluorescent lamps not equipped with electronic ballasts.
- LED luminaires that are not listed or do not comply with the testing standards and requirements described in Appendix G. (The table of approved fixtures includes EnergyStar rated and Utility Approved fixtures)
- LED replacement lamps
- Screw-in lamps of any type (including CFL, LED, and Incandescent)
- Incandescent to incandescent retrofits (including halogen incandescent)
- Measures that are installed before the Application is approved
- Technologies that fail to meet or exceed federal and state minimum standards
- Technologies with a useful life of less than five years
- Technologies where there is no significant replacement/installation of equipment or modification to existing equipment
- Measures that are not permanently installed and can be easily removed, such as computer inactivity time-out controls or measures to decrease building plug loads
- Measures that save energy because of operational changes
- Cool roof systems
- Fuel-switching measures that do not meet the Utility's three-prong test
- Self-generation or cogeneration projects
- Repair or maintenance projects. Exceptions are granted for specific measures listed in section 1.4.3.
- Re-commissioning activities
- Power correction or power conditioning equipment
- Pre-owned equipment that doesn't meet specific conditions (please contact the Utility Administrator for eligibility)
- Plug Load Sensors
- Power Controllers for Non-Perishable Refrigerated Coolers

1.4.3 Non-Operational Existing Equipment Eligibility

Non-operational, existing equipment replaced with higher efficiency equipment will be eligible for incentives:

1. All proposed equipment must meet all other requirements of the program and exceed Title 24 or industry standards;
2. The baseline is Title 24 or industry standards of the proposed equipment type; and
3. Measure costs are the incremental costs above similarly configured standard efficiency equipment.

The following measures are also eligible for incentives if the equipment has not been fully operational for at least one year. Measure costs are the total costs associated with the installation of the measure.

Table 1-6. Additional, Eligible, Non-Operational Measures:

▪ Failed Steam traps ▪ Failed HVAC air-side economizers ▪ Failed Boiler economizers

1.4.4 New Load Project Eligibility (Effective September 1, 2009)

The NRR Program will pay incentives for the installation of new, high-efficiency equipment to meet the expanded process needs of an existing facility or to accommodate new production loads. New Construction projects will continue to be eligible for the Non-Residential New Construction (NRNC) program.

Projects that involve modifying an existing operation, structure or process due to growth or expansion that do not qualify for NRNC will be reviewed under the NRR Program guidelines. This includes projects that are not direct, one-for-one replacements and enables the calculated process to capture and account for efficient increases in electric and/or gas load.

The following guidelines designate projects that fall under NRR:

- no walls are removed or constructed, or no significant impact to existing structures are affected to accommodate the new equipment
- footprint of the facility remains the same

Projects that involve a gut rehab, expansion, complete remodel, demolition or renovation where architectural design assistance is involved would fall under PG&E's NRNC program.

Examples of new load projects:

- A refrigerated warehouse owner adds compressors and condensers to increase cooling capacity.
- A plastics manufacturer installs a new injection-molding machine to accommodate a new production run.
- An industrial facility adds additional air compressors to facilitate a new production line in the existing site.
- A drilling company installs a new, state-of-the art oil well to pump oil into an existing pipeline.

All equipment must meet all other requirements of the program, and exceed Title 24 or current minimum industry standards to be eligible. The baseline is Title 24 or current minimum standards. Measure costs are evaluated as the incremental costs above and beyond similarly configured standard-efficiency equipment.

1.4.5 Increased Load / Production Measures Project Eligibility

The 2009 NRR-DR program will pay incentives for retrofit of existing equipment/systems with larger high-efficiency equipment/systems to accommodate increased load/production. In general, the incentives for these measures will be based on the post-installation load/production rate, and the energy savings will be calculated as:

Eligible Energy Savings = (Baseline Efficiency – Proposed Efficiency) * Proposed Production Rate or Load * Proposed Operating Hours

Examples of increased load measures:

- A building owner replaces a dedicated package rooftop HVAC unit with a larger more efficient unit to accommodate increased load of an existing computer room.

- A hospital energy manager replaces a 300 ton chiller with a high efficiency 450 ton chiller to accommodate and meet increased cooling needs.
- A water district replaces a 150 HP pump/motor with a premium efficiency 200 HP pump/motor to respond to increased system demand.

All equipment must meet all other requirements of the program, and exceed Title 24 or minimum industry standards to be eligible. The baseline is Title 24 or current minimum standards.

1.4.6 Fuel Substitution Measures

Fuel substitution (fuel switching) measures involve retrofit projects where all or a portion of the existing energy use is converted from one commodity to another, e.g., "electricity to natural gas." Standard baselines are determined based on the applicable federal or state mandated energy performance (i.e. California's Title 24, Federal Title 10, NEMA, EPACT, etc.). In the absence of government standards, current industry practices are used to establish baseline performance. Incentives are paid on the energy savings above and beyond the baseline standard.

Fuel-substitution measures must reduce the need for source energy use without degrading environmental quality. Fuel-substitution measures must pass a three-prong test to be eligible for incentives. These tests include a source-BTU comparison, a benefit-cost ratio calculation, and an environmental impact analysis. The Utility Administrator will perform these analyses and may require additional information from the Project Sponsor.

1.4.7 Early Retirement Feature

This program feature is designed to accelerate the retirement of older, less efficient equipment with high efficiency replacements. Measures that are eligible for this feature are subject to an expanded definition of energy savings resulting in a larger incentive than would be possible using the traditional Calculated Approach. This approach can be applied to air conditioning units (packaged AC, heat pumps and chillers) and electrical motors with five or more years of remaining useful life. The replacement units are still required to exceed the current standards.

As compared to the traditional method of calculating the incentive, the early retirement feature credits savings from the original efficiency to the current minimum efficiency or the proposed efficiency (depending on size and type). This will normally result in greater savings and a larger incentive than through the traditional Calculated method (See example at end of this section).

Applicants MUST use the estimation software to determine the energy savings and incentive calculations. Manual forms are not available for this type of measure. If you need assistance with the software, please contact your Utility Administrator. For the HVAC equipment, DOE-2 hourly simulation will be used to account for the weather variations. For the motor replacement, the Motor Master algorithms will be used. The remaining useful life for motors and HVAC is determined from ASHRAE's published data on equipment life (see below). Table 1-7 lists the earliest year equipment must have been built or overhauled to qualify for the Early Retirement feature. A table of efficiencies for the various types and sizes (based on averages for a typical unit) is included in Appendix C. The baseline efficiencies for air conditioning equipment are developed from earlier versions of Title 24, while the baseline efficiencies for motors are developed from earlier NEMA standards.

Table 1-7. Early Retirement Equipment Eligibility

Equipment	Useful Life	Year Built or Later**	Overhauled Useful Life	Overhauled Since
Motor	18	1996	13	2001
Packaged Units*	15	1999	11	2003
Chillers - Reciprocating	20	1994	15	1999
Chillers - Centrifugal	23	1991	17	1997

*Useful life from ASHRAE, **For equipment not overhauled or rewound

To evaluate a project for Early Retirement, the Applicant uses the NRR-DR program software. . Upon selecting one of the measure types eligible for the Early Retirement feature, the participant enters the age of equipment, its size and other parameters which the software uses to determine if the measure qualifies for Early Retirement. If the measure qualifies for Early Retirement, the participant enters the necessary inputs for the measure, such as the operating hours, location (HVAC measures), electrical spot measurements (motors) and other parameters that are currently required. The NRR-DR software will then estimate the energy savings and the incentive amounts. The incentive rates are the same as retrofits, the motors using the Other rate of $0.09 and air conditioners using the AC&R I rate of $0.15. Below is a simplified energy savings calculation for 10-year old, 350 ton water cooled centrifugal chiller.

Assumptions

Existing Chiller 350 Ton, Efficiency = 5.612 COP, 8,760 hrs per year

Proposed Chiller 350 Ton, Efficiency = 6.39 COP, 8,760 hrs per year

Title 24 Standard Efficiency = 6.1; COP; Useful Life = 23 years

Calculations

Baseline Energy Usage = 555,784 kWh

Energy Usage at Standard Efficiency = 473,428 kWh

Proposed Energy Usage = 448,374 kWh

kWh savings = 555,784 kWh – 448,374 kWh = 107,410 kWh

Incentive = 107,410 kWh x $0.15 /kWh = **$16,111.50**

Using the Calculated Approach, this measure would have earned an incentive of $3,125.01, compared to an incentive of $16,111.50 using Early Retirement.

1.4.8 CPUC Mandated Peak Demand Reduction Calculations

The CPUC has determined that peak demand reduction will be evaluated using the DEER Peak approach (see DEER Peak Definition section 1.4.7.1 below). The CPUC mandated Peak approach more closely ties demand reduction to grid level impact. The complexity of estimating CPUC Mandated Peak varies based on the measure type, measure operation, and level of data available. The SPC/NRR software offers the most accurate calculations for weather dependant measures, so customers are encouraged to use the tool. All other calculations are subject to a rigorous review by IOUs engineers and consultants.

1.4.8.1 CPUC Mandated Peak Definition

The CPUC Mandated Peak method is summarized from Version 4 of California's Energy Efficiency Policy Manual as "*the average grid level impact for a measure between 2:00 p.m. and 5:00 p.m. during the three consecutive weekday periods containing the weekday temperature with the hottest temperature of the year."*

The CPUC Mandated Peak periods are further defined by individual climate zones. Because the definition is based on average grid-level impacts it has been determined that all measures must use the predefined "heat wave" periods (table 1-8).

Table 1-8. CPUC Mandated Peak Periods by CZ

Climate Zone	Start Date	End Date
1	30-Sep	2-Oct
2	22-Jul	24-Jul
3	17-Jul	19-Jul
4	17-Jul	19-Jul
5	3-Sep	5-Sep
6	9-Jul	11-July
7	9-Sep	11-Sep
8	23-Sep	25-Sep
9	6-Aug	8-Aug
10	8-Jul	10-Jul
11	31-Jul	2-Aug
12	5-Aug	7-Aug
13	14-Aug	16-Aug
14	9-Jul	11-Jul
15	30-Jul	1-Aug
16	6-Aug	8-Aug

The periods are based on a typical year using a 1991 calendar. If the CPUC Mandated peak period falls on a weekend, the proceeding three day period will be utilized.

1.5 Direct Savings and Multiple Measures

A project must achieve significant energy savings, subject to the following provisions:

1. **Direct Savings Only.** Only direct energy savings—not indirect energy savings due to interactive effects—count in determining a project's incentive. Direct savings occur as the primary purpose of the retrofit. Indirect energy savings from interactive effects are those savings that occur from other than the primary purpose of the retrofit. For example, high-efficiency lighting typically lowers the air conditioning load. However, only the avoided lighting energy, not the avoided air conditioning energy, would count as energy savings in determining the energy savings and incentives for a lighting project.

Either Single or Multiple Measures. A NRR-DR project may comprise a single energy efficiency measure (e.g., a boiler replacement or chiller plant upgrade) or a variety of measures (e.g., an air handler motor upgrade and a variable-speed drive, plus a day lighting measure).

1.6 Aggregating Customer Project Sites

A Project Sponsor may choose to combine individual projects of a single Customer at different sites into a single project using one program application form. NRR-DR program rules for 2009 are extremely flexible:

- The same Customer must own and/or occupy the Customer Project Sites**.** Please refer to Section 1.8.2.4 (Customer Project Site Caps) to review the total incentive amount available per Customer Project Site.
- There is no limit on the number of sites that can be aggregated.
- The sites can have entirely different measures, operating hours, energy use profiles, and M&V plans. If it is determined by the Utility Administrator that a measure needs to use the M&V Process, it will be separated from the non-M&V measures on a second application for processing.
- If the same measure is applied for at different sites, they must be considered separate measures, one for each site. The measure cost must be determined for each Customer Project Site.
- Customer sites **must be in the same Utility service territory**. Although the NRR-DR (SPC) program operates statewide, a given project application can be submitted to only one Utility Administrator.

When combining sites and measures into a single application, a Project Sponsors should be aware that such projects will not be reviewed, or approved, or receive payment until paperwork on all the individual sites and measures is complete.

1.7 Verification Requirements

As a performance-contracting program, the NRR-DR program requires some means of determining the energy savings from a given project and verifying that those energy savings have been achieved. The verification requirements have been greatly simplified over the years, so that for many straightforward retrofits, the Project Sponsor can use the Calculated Approach to validate the energy savings instead of measuring them directly.The Utility Administrator determines if a measure requires the Measured Savings approach or measurement and verification (M&V) of energy use before and up to 2 years after implementation of the energy saving measure. The Project Sponsor does not have the option of choosing to perform the M&V process. All calculations are provided using the program software or through engineering calculations. The M&V process is only required if the Utility determines that the energy savings cannot be substantiated without pre-and post-installation measurements. If the Utility requires the M&V process, the Applicant is required to comply. To help defray the M&V cost, the Applicant will then be eligible to receive an additional 10 percent of the approved incentive, not to exceed $50,000.

1.7.1 The Measurement & Verification Process

The M&V process begins after the Utility Administrator reviews the Project Sponsor's application submission, conducts a pre-installation site inspection, **and has determined at its sole discretion that an M&V process is appropriate for the proposed project.**

The M&V process proceeds as follows:

1. **M&V Requirement Notification.** The Utility Administrator contacts the Project Sponsor and notifies them of the M&V requirement. The Utility Administrator sends the Project Sponsor Measurement & Verification Guidelines.

2. **M&V Plan Development.** The Project Sponsor develops an M&V plan based on the M&V Guidelines. The Project Sponsor submits the M&V plan, and any required baseline data to the Utility Administrator.

3. **Application and M&V Plan Approval.** If the application and the M&V plan are approved, incentive funding for the project is reserved and the Project Sponsor and Utility Administrator enter into a project Agreement that defines the energy savings and incentive payment.

   Installation cannot begin until after the Utility Administrator provides the Application Approval (as stated above) and any needed baseline measurements are completed.

4. **Project Installation and Installation Notification**. Once the replacement equipment is installed and operational, the Project Sponsor notifies the Utility Administrator in writing and submits project invoices.

   Important: Project Sponsor should provide Installation Notification only when projects are actually installed and operational, commissioned to their satisfaction to ensure the post-installation inspection is conducted under the conditions for which the project would normally be operating.

5. **Installation Review.** Upon notification, the Utility Administrator reviews the data and schedules a post-installation inspection. The inspection verifies project installation and ensures the scope of work has not altered from the agreed-upon project.

6. **First Incentive Payment.** Upon approval of the Installation Review, the Customer receives 60 percent of the Installation Review approved incentive, along with an M&V adder (10% of the IR approved incentive amount, not to exceed $50,000).

7. **Project Performance Period.** The Project Sponsor performs the agreed-upon M&V activities on the replacement operating equipment for a period up to two years (at discretion of Utility Administrator). At the end of the project performance period, the Project Sponsor submits the Operating Report.

8. **Operating Report**. The Project Sponsor submits the Operating Report and operating data to the Utility Administrator. Upon receipt, the Utility Administrator reviews the report and data.

9. **Final Incentive Payment**. Upon approval of the Operating Report, the Customer receives the remaining balance of the incentive based on the measured savings.

1.7.2 Seasonal Agricultural/Food Processing Measures

Some agricultural/food processing measures are subject to seasonal operation and are not fully operating for some time after installation. In these cases the Utility Administrator may elect to offer the Project Sponsor the option of receiving the incentive payment in two installments. Measures that qualify for this option:

- require some level of short-term monitoring or measurement but do not require full M&V; and
- will be installed but will not be fully operating for an extended length of time based on the seasonality of the process (e.g. harvest season).

The review process begins after the Utility Administrator reviews the Project Sponsor's application submission, conducts a pre-installation site inspection, **and has determined at its sole discretion that a two-installment process is appropriate for the proposed measure.**

The process proceeds as follows:

1. **Two-Installment Payment Notification.** The Utility Administrator contacts the Project Sponsor and notifies them of the two-installment incentive payment process.

2. **Application Approval.** If the application is approved, incentive funding for the project is reserved and the Project Sponsor and Utility Administrator enter into a project Agreement that defines the energy savings and incentive payment.

   Installation cannot begin until after the Utility Administrator provides the Application Approval (as stated above) and any needed baseline measurements are completed.

3. **Project Installation and Installation Notification**. Once the replacement equipment is installed and operational, the Project Sponsor notifies the Utility Administrator in writing and submits project invoices.

   Important: Project Sponsor should provide Installation Notification only when projects are actually installed and operational, commissioned to their satisfaction to ensure the post-installation inspection is conducted under the conditions for which the project would normally be operating.

4. **Installation Review.** Upon notification, the Utility Administrator reviews the submitted information and schedules a post-installation inspection. The inspection verifies project installation and ensures the scope of work has not altered from the agreed-upon project.

5. **First Incentive Payment.** Upon approval of the Installation Review, the Customer receives 60 percent of the Installation Review approved incentive.

6. **Equipment Fully Operating.** Once the replacement equipment is fully commissioned and fully operating the Project Sponsor submits the Seasonal Operating Report.

7. **Seasonal Operating Report Review**. Upon receipt, the Utility Administrator reviews the report and will schedule an inspection to verify operation, verify that the required measurements are performed, and ensure the scope of work has not altered from the agreed-upon project.

8. **Final Incentive Payment**. Upon approval of the Operating Report, the Customer receives the remaining balance of the incentive based on the measured savings.

1.8 Incentive Payments

All incentives are paid directly to the Customer unless otherwise indicated. Incentive payments are determined using the Calculated Approach. The incentive payment amount is based on a flat incentive rate (per kWh or therm) applied to one year of energy (kWh or therms) savings. For measures that require M&V, the final incentive amount is based on the measured performance and can vary between 0 and 110 percent of the approved incentive amount.

For measures not requiring M&V, 100 percent of the incentive is paid after the Installation Review is approved. For measures requiring M&V, 60 percent, along with the 10 percent M&V adder (not to exceed $50,000), is paid when the Installation Review is approved; the remainder is paid at the end of the project performance period when the Operating Report is submitted by the Project Sponsor and approved by the Utility Administrator. For approved seasonal measures, 60 percent is paid when the Installation Review is approved; the remainder is paid after the equipment is fully operating, measurements are complete, and the Seasonal Operating Report is submitted by the Project Sponsor and approved by the Utility Administrator

As illustrated in Table 1-9, the incentive rate depends on what measure category is being installed (Lighting, AC&R I, AC&R II, Other equipment, or Natural Gas). When reviewing the project application, the Utility Administrator will verify that the Project Sponsor has designated the proper measure category and incentive rate for each measure.

Table 1-9. 2009 Energy Savings Incentive Rates

Measure Category	Annual Energy Savings Incentive Rate (kWh)	Peak Demand Reduction Incentive Rate (kW)
Lighting (Fluorescent, Other Lighting, or Lighting Controls)	$0.05 per kWh saved	$100 / kW
Air Conditioning and Refrigeration (AC&R) I	$0.15 per kWh saved	$100 / kW
Air Conditioning and Refrigeration (AC&R) II	$0.09 per kWh saved	$100 / kW
Motors and Other Equipment	$0.09 per kWh saved	$100 / kW
Natural Gas	1.00 per therm saved	

1.8.1 Incentive Payment May Vary from Contracted Value

Measures not requiring M&V: Under most circumstances, the incentive amount cannot exceed the contracted amount. **For example, measures that exceed contracted energy savings based on increased performance are held to the contracted incentive amount.**

The incentive may be **less** than contract amount, if actual equipment installation or operation differs from that described in the approved application. For example, if the operating schedule is different from the approved application and results in less energy savings, the incentive amount must be adjusted downward.

The Utility Administrator may approve an incentive that exceeds the contracted amount if one of the following conditions occurs (Effective 10/1/07):

- Increased Measure Costs –The actual installed costs are higher than the application estimated costs approved at the application review and there are no other limiting customer project site caps. The incentive is capped at 50% of the actual measure costs.
- Installation of More Efficient Equipment – The Customer has installed higher efficiency equipment than equipment indicated on the application and approved at the application review.

Measures that exceed contracted energy savings based on a change in project scope may be eligible for increased incentives (see Section 1.11.2 Change in Project Scope).

Measures requiring M&V: The Energy Savings Incentive is based on actual performance and can vary between 0 and 110 percent of the approved incentive amount. In the event that actual energy savings are higher than projected, the final incentive amount may include an additional incentive amount (up to 10 percent) above the contracted amount. If at the time the Installation Review is approved, the estimated energy savings are less that 70 percent of the contracted amount, the program contract shall be amended to reflect the lower amount.

In some cases, the amount of the adjusted Operating Report incentive could drop below the amount that was paid out at installation. In such a situation, the party who received the payment (the Customer or designated third party) is responsible for reimbursement of the difference to the Utility Administrator.

1.8.2 Incentive Limits

1.8.2.1 First Come, First Served

Program funds are available on a first-come, first-served basis. Incentive funds are reserved for a particular project when the project application is approved.

1.8.2.2 Incentives from other Programs

It is important to note that if any of the project measures are included in applications to any other California energy efficiency incentive or rebate program, the project may be ineligible for NRR-DR program participation. In addition, applicants cannot apply to two or more energy efficiency programs at the same time for the same measures. Other California end user energy efficiency programs include, but are not limited to, any program offered by, or through Southern California Gas Company, Southern California Edison, Pacific Gas and Electric Company, and San Diego Gas & Electric, the California Energy Commission, and the California Public Utilities Commission, including Local Programs / Third Party Programs / Local Government Partnerships funded by PPP surcharge. Projects involving measures that qualify for the Early Retirement feature may be an exception to this rule (Contact the Utility Administrator for further details).

1.8.2.3 Customer Project Site Caps

The Calculated Measure incentives are limited to the lesser of the following:

1) the calculated incentive based on the quantity of kWh, kW, and therm savings resulting from the installation of the replacement equipment on the meter(s) for which the utility collects the PPP surcharge;

Note: KWh, kW and therm savings are limited to the previous 12 months quantity of kWh, kW, and/or therms purchased from or delivered by the utility on the meter(s), serving the equipment to be installed, for which the utility collects the PPP surcharge. The previous 12 months are defined as the calendar year prior to the date the customer submitted the application to the utility (including usage from Standby Service and **less** savings associated with pending energy efficiency applications).

If available usage data is for less than 12 months, available data will be used to estimate remaining months.

2) 50 percent of the total project cost. The total project cost includes the cost of audits, design, engineering, construction, equipment and materials, overhead, and labor on a per measure basis. The cost of filling out NRR-DR forms and conducting M&V may be included in the project cost. Costs that do not directly pertain to measure installation, such as bidding and RFP labor expenses are not eligible. The measure savings adder, if applicable is not used in the calculation of the 50 percent cap. The Project Sponsor shall provide the project cost and a description of the cost items with their application.

3) $3,780,000.

1.8.3 Payment Schedule

For the Calculated Approach, 100 percent of the approved incentive amount is paid after the Utility Administrator approves the Installation Review. For measures requiring M&V, refer to section 1.7.1.

1.8.4 Payment Disbursement

The Utility Administrator will calculate the incentive payment based on its review of the submitted paperwork or site inspection. The Utility Administrator will notify the Project Sponsor of the incentive payment amount upon approval of the Installation Review or Operating Report, as applicable, and will begin processing the incentive check. As soon as the check is processed, the Utility Administrator will mail it to the Customer or the Project Sponsor/third party (if designated as the payee by the Customer). If the Project Sponsor disputes the findings of the review, the Project Sponsor should notify the Utility Administrator as soon as possible. This should be done before the Customer receives the incentive payment.

1.9 How to Apply

The application process requires careful attention to detail. Incomplete or incorrect applications will be returned, so it saves time to follow instructions carefully. Project Sponsors can call their Utility Administrator for assistance in completing their applications and to obtain answers to specific program questions as well. Table 1-10 lists the program representatives.

Table 1-10. Utility Administrators

Pacific Gas and Electric **http://www.pge.com/mybusiness/energysavingsrebates/**
Pacific Gas and Electric Company PG&E Integrated Processing Center P.O. Box 7265 San Francisco, CA 94120-7265 For overnight delivery: PG&E Integrated Processing Center 77 Beale Street, Mail Code BOB1U San Francisco, CA 94105-1814 Phone: (800) 468-4743 energymgmtprograms@pge.com

1.9.1 Overview of Paperwork

To receive NRR-DR program incentives, the Project Sponsor must perform certain actions and submit forms/reports at specific project milestones:

1. **First milestone: Submit Customized Energy Efficiency/Demand Response Incentive Application with NRR-DR Form, NRR-DR Savings Summary, and DR Dispatchable Peak Reduction Summary**
   The application describes the project and estimates the energy and peak savings. Supporting documentation and calculations must accompany the application forms. Additionally, all measure costs must be outlined.
2. **Second milestone: Installation Notification**
   The Project Sponsor notifies the Utility Administrator after installation and commissioning are complete. The Project sponsor also submits invoices and any required data or photos.

3. **Third milestone: Operating Report (Projects requiring the M&V process only)**
   This form is filed with the Utility at the end of the project performance period to confirm that the project is still in operation as installed and is submitted with M&V results. The Operating Report is the basis for the final incentive payment for Measured Savings.

1.9.2 Paper or Electronic Forms

There are two ways to fill out the program paperwork:

1. **On paper,** using hardcopy forms (a) obtained from your Utility Administrator, (b) downloaded from the program CD-ROM, or (c) downloaded from the Utility's energy efficiency website
2. **Electronically,** through interactive software on the Program CD-ROM

The software version of the forms allows for easier editing and can save time in preparing multiple project applications. The software also checks to make sure that necessary information is not missing, a feature that can speed processing of your paperwork.

1.10 Application

The project application (first submittal) consists of the following forms and supporting attachments:

1. Customized Energy Efficiency/Demand Response Incentive Application (information regarding Applicant, Project Type, and Payment)
2. NRR-DR Form (information regarding Customer Project Site, Property Type, and Project Sponsor)
3. NRR-DR Savings Summary Form (Information regarding Energy Savings)
4. DR Dispatchable Peak Demand Reduction Form (Information regarding DR Peak Savings)
5. Energy savings calculations showing how the energy and peak savings were determined; a printout of the estimation software results if you use the software method; and custom calculations if you use the engineering calculation method. If possible, please provide an electronic copy of the energy savings calculations. These calculations are required for all NRR-DR projects.
6. M&V plan (Submitted only after Utility Administrator determines the M&V process is required).

1.10.1 Utility Administrator Review Schedule

Utility Administrator review of a NRR-DR application not requiring the M&V process (including the site inspection) can often be completed within 10 business days. Complex and multiple-site projects may require more time and will be reviewed only when documentation is complete.

Typically, the Utility Administrator needs to contact the Project Sponsor for additional information or clarification. The quicker the response, the faster the application can be approved.

If the Utility Administrator determines that the M&V process is required (see Section 1.7), the Utility Administrator will advise the Project Sponsor. The Project Sponsor will then be required to develop and submit a Measurement & Verification (M&V) plan within 30 days. The application will not be approved until the M&V plan has been received and approved.

1.10.2 Utility Inspection

Upon receiving a NRR-DR application, the Utility Administrator will contact the Project Sponsor to schedule a pre-installation site inspection as soon as possible, usually within five business days. The purpose of this inspection is to verify that:

- The application accurately reflects the intended project.
- All existing equipment listed in the application is still operational (if not, the associated efficiency measures could become ineligible).
- Construction has not yet occurred (if field preparations for installation have begun, the project could become ineligible).

The Project Sponsor and Customer must be flexible in scheduling such inspections and provide complete access to Customer Project Sites. Pre-installation inspections are required for all projects unless waived by the Utility Administrator.

A representative of the Project Sponsor who is familiar with the project, as well as the facility manager or other responsible representative of the Customer should attend the inspection. When electrical measurements are necessary, the Customer is required to disrupt equipment operation, open any electrical connection boxes, and/or install current and power transducers, as needed. If the inspection cannot be completed in a timely manner because inspection representatives are unfamiliar with the facility or the project, the Customer Project Site will fail the inspection.

If the project fails the inspection twice, the Utility Administrator may decline the application. If the Utility Administrator allows a third inspection, the Project Sponsor must pay the cost incurred by the Utility Administrator for conducting the additional inspection.

1.10.3 Notice of Project Application Review Results

The Utility Administrator will give the Project Sponsor written notice of the results of the inspection and overall review of the project application:

- **Approved.** The approval email will alert the Project Sponsor that the project is acceptable under the terms of the NRR-DR program outlining the approved energy savings and incentive funds that will be reserved. The email will also include an official NRR-DR Agreement (contract). A sample contract is included as Appendix A of this *NRR-DR Procedures Manual.*
- **On Hold.** The review may be placed on hold if information was omitted or further clarification is needed. Upon receipt of the Project Sponsor's response, the Utility Administrator will resume the review process. Funds are limited and are not reserved until the application is approved.
- **Declined.** An application may be declined if:
  - the project fails inspection twice;
  - the application is missing information that the Project Sponsor is unwilling or unable to provide;
  - the existing equipment has been removed prior to inspection;
  - the project otherwise fails to meet program criteria; or
  - the application does not include an acceptable M&V plan (M&V process projects only).

1.11 Project Installation

1.11.1 Wait for Approval

As a general rule, actual project implementation should not begin until after the project application has been approved. However, sometimes the Utility Administrator, at their discretion, may allow construction to begin immediately after the pre-installation inspection. This Utility Administrator "go ahead" does not mean the application has been approved and will receive funding, but simply that proceeding with construction will not impair the application's chances for approval. The Project Sponsor should request this notification in writing from the Utility Administrator. Verbal notification is not binding.

"Construction" includes, but is not limited to, decommissioning and/or removal of existing equipment, demolition, facility alterations to prepare for replacement equipment, and installation of replacement equipment.

1.11.2 Change in Project Scope

If the scope of the project changes substantially from what was identified in the project application review, the project must be resubmitted. Substantial changes include significant modifications to the proposed equipment type, size, quantity, configuration, or the expansion of project to include additional retrofits. The revised project scope and supporting calculations are subject to an additional review and requires a new agreement – prior to the removal of existing equipment/systems or the installation of the replacement equipment/systems.

1.11.3 June 1st, 2010 Deadline

All projects must be installed and must be fully operational by June 1, 2010. If project is not fully installed and operational by this date the agreement is subject to cancellation.

1.12 Installation Review

Once the project has been installed and proper operation has been verified, the Project Sponsor notifies the Utility Administrator and submits project invoices to the Utility Administrator. The notification should confirm the application approved estimated energy savings or identify any changes to the project that were made during installation. In this later case, the anticipated energy and demand savings should be recalculated as necessary. Detailed project invoices must be submitted to verify costs. The Project Sponsor also submits data and analysis from any spot metering that may have been performed before or after installation. The revised incentive cannot exceed the approved incentive amount from the original application.

The Installation Review approval is the basis for the incentive payment.

1.12.1 Timeline

The Project Sponsor should notify the Utility Administrator within 30 days of project completion.

The Utility Administrator will typically review the project within 10 business days for non-M&V projects and 45 business days for M&V projects. Complex and multiple-site projects may take longer.

1.12.2 Utility Administrator Inspection

Upon notification, the Utility Administrator will schedule a post-installation inspection of the Customer Project Site. This inspection is subject to the same provisions as the pre-installation

inspection. If there are two failed inspections, the Project Sponsor must reimburse the Utility Administrator for conducting any further inspections that may be granted.

1.12.3 Notice of Review Results

The Utility Administrator will provide the Project Sponsor with written notice of the results of the inspection and review, typically within 14 days of receipt of the Installation Notification. The Utility Administrator will provide the Project Sponsor with written notice of the review results. If approved, the notice will include the approved incentive amount based on the Utility Administrator's review of the Installation and indicate that an incentive check is being processed.

If the Installation is not approved, the Project Sponsor has 30 days to provide the Utility Administrator with the requested information. Even after installation, a project may be denied incentive funds if:

- The installation is not consistent with the NRR-DR Agreement; or
- The Project Sponsor causes unreasonable delays in scheduling an inspection; or
- The Utility Administrator must ask for clarifying information more than three times.

If an Installation is not approved, the Utility Administrator may terminate the NRR-DR Agreement and release the incentive funding that had been reserved for the project.

1.12.4 Incentive Payment

Upon approval of the Installation, the Utility Administrator will pay the Customer the approved incentive amount. For projects requiring M&V, refer to section 1.7.1.

1.12.5. Installation Deadline

The deadline for project installation of all 2009 projects is June 1, 2010. Any projects not installed by this date will be dropped from the program, unless another agreement is made prior to this deadline and the Project Sponsor receives a written extension from the Utility Administrator.

1.13 Operating Report (Measured Savings only)

For the projects requiring M&V, the third and final submittal comes at the end of the project performance period. After the replacement equipment has been operating for the project performance period, the Project Sponsor submits the Operating Report. This form confirms that the equipment is still in operation as installed or notes any changes (e.g., equipment pulled out of service or changed operating hours). The Project Sponsor shouldinclude theM&V data and analyses with the Operating Report.

1.13.1 Timeline

The Operating Report is due within 30 days following the end of the project performance period.

The Utility Administrator will typically finish reviewing the Operating Report within 45 business days. The process will take longer for complex and multiple-site projects.

1.13.2 Utility Administrator Inspection

Upon receipt of the Operating Report — or at any time during the performance period — the Utility Administrator may request a site inspection, subject to the same provisions as the pre-installation inspection. If there are two failed inspections, the Project Sponsor must reimburse the Utility Administrator for conducting any further inspections that may be granted.

If the inspection reveals that the M&V activities are different from those described in the M&V plan, the Utility Administrator may deny any further incentive payments and may request repayment of the first incentive payment.

1.13.3 Notice of Review Results

The Utility Administrator will provide the Project Sponsor with written notice of the review results. If approved, the notice will include the approved incentive amount based on the Utility Administrator's review of the Operating Report and indicate that an incentive check is being processed.

A project may be denied further incentive funds if:

- The installation is not consistent with the NRR-DR Agreement (fails inspection); or
- The Project Sponsor causes unreasonable delays in scheduling an inspection; or
- The Utility Administrator must ask for clarifying information more than three times.

If an Operating Report is declined, the Utility Administrator may terminate the program Agreement and request that the initial payment be returned.

1.13.4 Final Incentive Payment (Projects requiring the M&V process)

Upon approval of the Operating Report, the Utility Administrator will pay the final installment of the Energy Savings Incentive (the remaining 40 percent or whatever adjusted amount is properly due).

If measurements show that the installation achieved greater energy savings than predicted, the Utility Administrator will pay up to 10 percent above the approved incentive amount, or the applicable percent of the measure cost, which ever is the lesser amount. Similarly, if the installation achieved lower energy savings than anticipated, the Project Sponsor will not receive the full incentive, and is responsible for returning to the Utility Administrator any overpayment that may have been made in the first installment.

1.14 Seasonal Operating Report

(Approved Seasonal Agricultural / Food Processing Measures)

For the approved seasonal projects, the third and final milestone comes after the equipment is fully operating and measurements are complete. The Project Sponsor submits the Seasonal Operating Report confirming that the equipment is operating as indicated in the Installation Review or notes any changes (e.g., equipment pulled out of service or changed operating hours). The Project Sponsor should include any required data and analyses with the Seasonal Operating Report.

1.14.1 Timeline

The Seasonal Operating Report is due within 30 days following full system operation.

The Utility Administrator will typically finish reviewing the Operating Report within 45 business days. The process will take longer for complex and multiple-site projects.

1.14.2 Utility Administrator Inspection

Upon receipt of the Seasonal Operating Report, the Utility Administrator will schedule an inspection, subject to the same provisions as the pre-installation inspection. If there are two failed inspections, the Project Sponsor must reimburse the Utility Administrator for conducting any further inspections that may be granted.

If the inspection reveals that the equipment has not been installed as indicated in the Application and the Installation Review, the Utility Administrator may deny any further incentive payments and may request repayment of the first incentive payment.

1.14.3 Notice of Review Results

The Utility Administrator will provide the Project Sponsor with written notice of the review results. If approved, the notice will include the approved incentive amount based on the Utility Administrator's review of the Seasonal Operating Report and indicate that an incentive check is being processed.

A project may be denied further incentive funds if:

- The installation is not consistent with the NRR-DR Agreement (fails inspection); or
- The Project Sponsor causes unreasonable delays in scheduling an inspection; or
- The Utility Administrator must ask for clarifying information more than three times.

If a Seasonal Operating Report is declined, the Utility Administrator may terminate the program Agreement and request that the initial payment be returned.

1.14.4 Final Incentive Payment (Approved Seasonal Projects)

Upon approval of the Seasonal Operating Report, the Utility Administrator will pay the final installment of the Energy Savings Incentive (the remaining 40 percent or whatever adjusted amount is properly due).

If the installation achieved lower energy savings than anticipated, the Project Sponsor will not receive the full incentive, and is responsible for returning to the Utility Administrator any overpayment that may have been made in the first installment.

1.15 Other Important Terms and Conditions

By virtue of participation in the program, Customers and Project Sponsors agree to the following terms and conditions:

1. All parties consent to participate in any evaluation of the program. The California Public Utilities Commission (CPUC) or its representatives may contact participants to answer questions regarding their NRR-DR experience and/or request a site visit. All participants agree to comply with such program evaluations.

2. Utility Administrators expressly reserve all their rights, which include, but are not limited to, the right to use others to perform or supply work of the type covered by the NRR-DR program, as well as the unrestricted right to contract with others to perform the work or to perform any such work themselves.

The CPUC has decided that the Utilities should continue to administer the program through the end of 2009. The CPUC has not decided who will administer the program thereafter. Thus, after December 31, 2009, existing program Agreements might be assigned to a new Administrator. In their program Agreements, Project Sponsors must agree to terms and conditions allowing for such a transfer.

Notice of Public Record

Participants should be aware that, because the program is funded by the PPP surcharge, NRR-DR submittals are a matter of public record and may not be kept confidential. The estimated total project costs will be part of the public record. The Utility Administrators are not liable to any Project Sponsor, Customer, or other party as a result of any public disclosure of any submittals.

Change in Sponsorship

If a change in sponsorship occurs after the application is submitted, a new Customized Energy Efficiency/Demand Response Incentive Application and NRR-DR Form are required. Please indicate the change request in writing, and resubmit the required forms. Written notification is also required from the original Project Sponsor. If written notification is not possible, (i.e. the Project Sponsor is no longer in business or non-responsive) the customer must submit a letter in writing requesting termination of the Project Sponsor to act on their behalf.

Contract Termination

NRR-DR contracts may be terminated under the following conditions:

- The project fails to be installed and operational prior to the June 1, 2010 deadline.
- The project sponsor formally requests withdrawal from the program, or requests the contract to be turned over to the Customer.

For more information see the sample NRR-DR agreement in Appendix A.