Proposal for the

Innovative Energy Partners Program for the PG&E Service Territory

2004 – 2005 Energy Efficiency Program Selection Proceeding Number R.01-08-028

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Other programs proposed:

Innovative Energy Partners Program for the SCE Service Territory

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I. Program Overview

A. Program Concept

Energy Innovation Group (EIG) is offering to implement our *Innovative* Energy Partners program — a hardware/incentive program that provides incentives exclusively through a diversified, statewide network of Organizational Sponsors that engage their members in the program. The Organizational Sponsors will be major trade and government associations, property management companies, chambers of commerce, and similar organizing forces representing hundreds of thousands of under-served and other business members and constituents across all company and building types, sizes, and geographies. Due to the unique concept of functioning exclusively under the active sponsorship of a broad and diversified aggregation of Organizational Sponsors, the *Innovative* Energy Partners program will have extraordinary reach and credibility creating awareness, confidence, and interest to speed the enrollment process and maximize participation. The program will be open to energy efficiency technology measures that meet the life cycle requirements of the program and have a measurable reduction in kW and/or kWh reduction — with special emphasis on innovative technologies that are not yet in general use in the marketplace. The program will provide a seamless, single source "concept through completion" service, providing participants with a no-cost, comprehensive building energy survey that includes a Demand Response analysis report along with a summary of energy efficiency opportunities and with rebates for the measures they elect to implement.

B. Program Rationale

EIG's *Innovative Energy Partners* program is a hardware/incentive program with a superior method to create greater economic results for both the energy user and the State. Through this program, we anticipate:

- Approximately 2.7 Megawatts Net Coincident Peak demand reduction
- Approximately 14.3 Million Net kWh savings

We can achieve such energy savings very cost effectively — benefiting from staffing and support from all the Organizational Sponsors.

Adel Suleiman, project manager for the California Energy Commission (CEC), reported on the success of this practical yet innovative concept, which EIG employed while operating the 2002-2003 CEC program for the Building Owners & Managers Association that produced 17 megawatts of peak period demand reduction. (See page 6 for details.)

Basis and Need for the Program

The proposed *Innovative Energy Partners* program:

- Is comprehensive, looking at energy efficiency measures for every area within a building, analyzing each site for Demand Response opportunities, and encouraging customers to implement as many energy efficiency measures as feasible
- Is cost effective, with approximately 65% of the available funds applied directly to energy efficiency measures
- Will result in long-term annual energy savings and electric peak demand reduction
- Will direct special attention on customer groups identified by the CPUC as high priorities, including hard-to-reach customers and those in transmission constrained areas
- Employs an innovative approach, building grass-root support for energy efficiency measures
- Overcomes market barriers through:
 - □ The uniquely credible and persuasive marketing vehicle of the company's own association, city, or other organizing force
 - □ A turnkey approach that makes it easy for customers to act
 - Incentives and financing options that make it economically attractive
- Secures broad participation, reaching diverse nonresidential energy users throughout the PG& E service area
- Establishes a powerful and proactive force for future programs, building a culture of and commitment to energy efficiency in numerous organizations representing hundreds of thousands of energy users

Comprehensiveness

The *Innovative Energy Partners* program takes a comprehensive, "whole building" approach to identifying and promoting energy efficiency measures. Participants must agree to a total building energy efficiency review. Then they may select appropriate measures from the recommendations identified through the survey.

Since incentive amounts are based on the actual savings realized by the equipment, customers will be doubly motivated to act on those measures that produce the greatest kWh savings and kW demand reduction.

In addition, all buildings will be analyzed for Demand Response, and customers will be encouraged to enroll in Demand Response programs as appropriate. The state has a need to find ways to reduce total system demand and to enroll customers in its Demand Response programs. Under the program we propose, the message will be taken everywhere the program goes.

Cost Effectiveness

With approximately 65% of the total available dollars provided to customers, the program creates maximum benefit and maximizes participation. In addition, the cost of implementing the recommended measures will be closely controlled. The combination should create extraordinary cost effectiveness.

- Because the proposed program uses Organizational Sponsors to facilitate communications and market directly to prospective customers, we are able to keep program marketing costs to a minimum while maximizing marketing effectiveness.
- We have negotiated favorable rates with the contractors who will be completing the energy surveys and implementing the targeted measures for participating customers.
- We have negotiated favorable pricing from equipment suppliers that will provide equipment to contractors serving the program's participating customers.

Long Term Annual Energy Savings and Electric Peak Demand Savings All of the incentive dollars will be used to provide and install the hardware to produce permanent energy savings. There are no incentives for outreach, energy surveys, engineering studies, etc.

Since approximately 65% of the program rebates are directed to measures that produce peak demand savings, a high megawatt demand reduction should be achieved.

Focus on High-Priority Customer Groups

This program's unique design of employing Organizational Sponsors makes us better able to focus on customer groups that the CPUC has identified as high priorities.

Organizational Sponsors will encompass membership in virtually every sector in the PG& E service area. Based on an analysis of the total target population, the *Innovative Energy Partners* program will direct the organizations to concentrate greater attention on:

- Hard-to-reach customers
- Transmission-constrained areas

Many of our Organizational Sponsors will have a significant number of very small nonresidential energy users in their membership. In addition, Organizational Sponsor membership will extend into the geographic areas identified by the CPUC as hard to reach. Normally, these hard-to-reach customers are less likely to participate in an energy incentive program on their own or be sought by utilities or energy service companies. However, we anticipate significant success with this population because our Organizational Sponsors will be able to direct attention on them, conveying the benefits offered by the program and providing them the opportunity to participate.

Some Organizational Sponsors will have membership largely composed of customers in transmission-constrained areas, such as San Francisco. These sponsors will be especially effective in engaging these high-priority customers in the *Innovative Energy Partners* program.

Innovation

In the *Innovative Energy Partners* program, the "marketplace becomes the marketeer." That is, through the organizational sponsorships, the program sells itself by leveraging existing relationships, like a master networking program.

This combination of proactive and high-profile organizational sponsorship, industry marketing specialists, rebate program experts, a managed program contractor network, required analysis and reports of all energy efficiency opportunities in a facility (comprehensiveness), and required Demand Response analysis is an innovative and uniquely effective approach to targeting energy efficiency measures throughout every sector in the PG&E service area.

In addition, the program embraces innovative technologies that are not yet in general use in the marketplace, such as power regulators to reduce lighting system current and voltage and CO₂ sensors to reduce unnecessary usage of heating and air conditioning.

Overcoming Market Barriers

A major impediment to success for many programs is the lack of cohesiveness and integration. For a program to achieve maximum success, it must be seamless for the customer.

If customers simply get a message through a communication program, it is unlikely they will act on that message alone. If a free survey and report of opportunities is completed for customers, but they are expected to act on that report on their own, many will not take charge of the process to implement the recommended measures. However, this program has several key features that help overcome these barriers. For example:

- The program design provides a "turnkey" solution to customers with a single source to integrate and oversee all activities, maintain contact with the customer, and ensure customer satisfaction.
- The advocacy, proactive communications, and outreach of the Organizational Sponsors are major factors in overcoming market barriers. These sponsors not only have in place the communication vehicles to reach very small businesses and other hard-to-reach customers, they have the credibility and influence to move them to act.
- The financial incentives make implementing the measures appealing and achievable. In addition, the program will arrange financing sources for those not in a position to pay cash for projects.
- We will apply skills and techniques to establish value and eliminate market barriers that our management team has developed and honed in previous programs. For example:
 - We have experience developing and implementing energy efficiency projects dating back to 1976.
 - As indicated below ("Previous Program Success"), we established sponsoring associations, cities, and chambers of commerce to reach businesses throughout the hard-to-reach areas (such as Ventura, San Bernardino, and Riverside counties) for the Small Business Energy Alliance.

Broad participation

The marketplace has its own organizing forces, such as local governments, chambers of commerce, trade associations, and property management companies. These organizations have established mechanisms for reaching their members — and communications from them capture attention and have credibility with their membership.

It is worthwhile to note that simply having such organizations sign up or join with a proposal doesn't make it happen. It requires a system and a driving marketing team to turn these organizations into a productive force— and EIG has demonstrated the ability to do that.

Our *Innovative Energy Partners* program will leverage these natural vehicles to reach their members, deliver the energy efficiency message, and influence decisions. With this approach, the State can most effectively reduce energy demand and usage, encompassing a greater number of participants, and at a lower cost than traditional approaches.

A powerful and proactive force

The State can anticipate long-term benefit from the considerable enthusiasm that has been developed among these organizations to help their members and communities throughout California.

Through these organizations, incentives may be provided to every sector in the PG&E service area.

- Communications with potential participants will emphasize the benefits of a comprehensive approach to energy efficiency.
- Every Innovative Energy Partners program participant will be exposed to Demand Response advantages.

Innovative Energy Partners will use industry-savvy professional managers and marketers to build an ingrained energy efficiency culture within the Organizational Sponsors, which will filter down throughout the state's business community.

We anticipate building an on-going energy efficiency ethic that will leave a "legacy" of energy aware citizens — empowering Organizational Sponsors and providing them infrastructure and precedent to serve as communications centers and driving forces to communicate about energy opportunities and incentives to their memberships.

This added dimension to the State's arsenal of managing energy use will benefit the Organizational Sponsors' members, their communities, and the State.

Previous Program Success

EIG, administrator of the *Innovative Energy Partners* program, has a strong track record of success applying concepts and techniques underlying the proposed program. For example, EIG and its management:

- Was the subcontractor responsible for the multi-family dwelling segment for the 2002-2003 South Bay Cities Energy Rewards rebate program
- Operated a CEC (California Energy Commission) program for BOMA (the Building Owners & Managers Association) during 2002-2003 that produced 17 megawatts of peak period demand reduction
- Marketed the SBEA (Small Business Energy Alliance) 2002-2003 program in Southern California Edison's hard-to-reach areas
- Built a network of over 20 organizations in marketing energy supply, utility rebate, and energy efficiency programs

The following excerpts from letters and other testimonials regarding EIG's involvement in previous programs highlight the unique strengths we bring to the *Innovative Energy Partners* program.

This is to express my appreciation for EIG's achievement in administering and marketing the BOMA contract with the California Energy Commission to deliver 17 megawatts of peak period electric demand reduction and in helping make the Commission Innovative Program so successful.

Yours was a noteworthy undertaking. You created a partnership with the property management industry, trade associations, individual companies, cities and energy services companies to communicate to the marketplace and to stimulate interest. Your use of the media, email, fax alerts, direct mail, phone contacts, and speaking engagements created an environment of enthusiasm.

You were able to secure participation of over 300 buildings in the program, encompassing virtually every type business from small buildings with a few hundred dollars in rebate to larger buildings receiving over \$150,000 in rebates. Your outreach brought many participants likely never before involved in rebates and energy programs. Your guidance of the customers in dealing with vendors appears to have greatly contributed to the comfort of many of those that participated in the program. In addition, it appears that you brought in and coordinated the efforts of over 25 suppliers, contractors and energy services companies to provide the products and services to program participants.

Through conversations I have had with many participants you secured, I learned that your integrated program management, facilitation, and comprehensiveness, made it easy for those companies to move ahead and contributed to their recognition of the opportunity and their decision to participate.

Adel Suleiman, Project Manager California Energy Commission [The] incentives, technical support, and savings verification [we received through your program] are of tremendous value to small school districts like Pleasant Valley; particularly in light of the current state budget crisis.

Poul Hanson, Director of Facilities, Maintenance & Operations Pleasant Valley School District

Your program not only produced rebates, but it led to many projects that otherwise wouldn't have happened. You helped us quantify the opportunities and then guided us through to their completion — much to the delight of my clients.

Jim Nagle, Managing Director CB Richard Ellis

The BOMA energy rebate made the difference whether we would complete our window film project. It was a powerful demonstration of BOMA's value.

David Thompson Jones Lang LaSalle

As Mayor of the City of Redondo Beach and Chairman of the South Bay Cities Standing Committee on Energy, I wish to express on behalf of the City of Redondo Beach and the South Bay Cities Council of Governments (COG) our appreciation of the benefit Energy Innovation Group (EIG) has brought to our communities through special energy rebate programs and innovative strategies to reduce energy costs...

The results have been gratifying and noteworthy. A true partnership formed between the COG, EIG, and Rita Norton & Associates (the SBER Program Administrator). EIG guided our cities to become proactive forces to bring these dollars to our MFD owners and to guide these owners to make their buildings more energy efficient. Each city passed a resolution or otherwise committed to be part of this program...

Mayor Gregory C. Hill, City of Redondo Beach

Continued Demand for Program Services

There is a huge interest in the marketplace to reduce energy costs and there are many innovative technologies that have application in a majority of nonresidential buildings. In the recently closed CEC and SBEA programs in which we worked, the programs oversubscribed — and we continuously receive communication from companies wishing to participate. In fact, more than 100 companies requested energy surveys and expressed interest in participating in both of the above programs, but were unable to participate because the programs were already fully subscribed. This clearly demonstrates that there is considerable continued demand for the proposed Innovative Energy Partners program.

EIG has developed an exceptionally strong base for Organizational Sponsor involvement. We have 22 cities, various chambers of commerce, and other organizations that have participated in our most recent programs and that await a new program to continue their work with us.

For example, some of the organizations we have worked with, have already established dialog with, or who have already expressed considerable interest in becoming Organizational Sponsors for the *Innovative Energy Partners* program include:

- Chambers of Commerce (many, various)
- Apartment Owners Association
- Association of Bay Area Governments
- Boston Properties
- Building Owners & Managers Association
- California Restaurant Association
- California Retailers Association
- California Small Business Association
- Carr America
- CB Richard Ellis

- Charles Dunn Company
- Cushman & Wakefield
- Equity Office Properties
- Hotel & Motel Association
- Insignia/ESG
- Institute of Real Estate Management
- International Facilities Managers Association
- Lowe Enterprises
- Morlin Management
- Shorenstein Company
- South Bay Cities Council of Governments
- Trammell Crow
- Transwestern Management

C. Program Objectives

Overall Program Objectives (2004 – 2005)	
Anticipated number of buildings served	300 or more buildings
Projected Net Coincident Peak demand reduction	2.7 Megawatts or greater
Projected Net kWh savings	14.3 million kWh or greater

Enabling objectives to achieve the overall program objectives include:

- Enlist 20 or more organizations as Organizational Sponsors to directly communicate the program benefits to the hundreds of thousands of businesses that they represent in more than 100 cities and counties
- Contact approximately 2,500 prospective program participants to determine whether they are qualified candidates for the program and to sign up qualified prospects for a comprehensive energy survey.
- Conduct at no cost to the customer approximately 350 comprehensive energy surveys for all qualified program participants to identify the appropriate energy efficiency measures, highlighting the economic advantage of implementing recommended measures and encouraging participants to implement multiple measures for maximum benefit
- For each energy survey, complete a Demand Response feasibility analysis and provide an Opportunity Report highlighting potential energy efficiency measures and cost-benefit considerations for those measures
- Establish a powerful and proactive energy efficiency marketing and communications force that will be a valuable resource to the State for future incentive programs
- Create a new culture of energy efficiency awareness composed of actively involved and committed people who care — people who see the value in energy conservation for themselves (their building), the state, and the nation.

II. Program Process

A. Program Implementation

The following describes the overall program implementation process. Plans for coordinating with other programs and a brief description of what differentiates the *Innovative Energy Partners* program are found at the end of this section.

1. Establish program framework

- Enlist Organizational Sponsors Innovative Energy Partners expects to develop understandings with no less than 20 organizations to become program Organizational Sponsors.
- Create network of service providers We plan to develop a network of up to 20 contractors and energy services companies throughout the PG&E service area to expand communication of the program to their customer base and to provide technical services.
- 2. Conduct outreach and respond to expressions of interest
- Implement communication strategy We will design marketing communications for each organization to reach their members repeatedly during the course of the *Innovative Energy Partners* program. Typically customers will receive communication from more
- Maximize direct exposure through customer meetings Innovative Energy Partners staff will attend trade shows of each organization and run a continuing series of organization-sponsored group meetings. Typically these will be breakfast meetings, with each organization sending out invitation to its members. Innovative Energy Partners' and Organizational Sponsors' staff will jointly present. Typically, members of the utility will be invited to participate to discuss other programs of the utility, and we will solicit press coverage of the meetings.
- Expression of interest from prospective participants Prospective participants may apply to be qualified for the program in several different ways:
 - Hand in a preliminary qualifying information at meetings or tradeshows
 - Mail or fax in qualifying information
 - □ Inquire online at the *Innovative Energy Partners* web site
 - □ Call our toll-free phone number for a representative's assistance
- Qualify prospective participants Innovative Energy Partners will make phone contact with each customer that expresses interest in the program to confirm that there may be opportunities for one or more energy projects.

3. Assess energy efficiency opportunities

- Conduct energy surveys Contractors in the Innovative Energy Partners network will conduct energy surveys for qualified customers in order to:
 - Identify comprehensive energy efficiency opportunities
 - Develop strategies with facility personnel
 - Assess cost-benefit considerations

Contractors will complete a standardized spreadsheet of energy usage for existing and proposed equipment. Spreadsheet calculations will establish the costs, savings, incentive, and simple payback for the identified energy efficiency opportunities.

Contractors then will submit the spreadsheets, a Program Application, and an electric bill for *Innovative Energy Partners* review and approval.

■ Report opportunities to customers and target selected measures

— The Innovative Energy Partners program will summarize the
opportunities for the customer in an Opportunity Report to encompass
energy efficiency and demand response — and summarize the
financing payment schedule, if relevant.

Our staff will work with customers to identify the measures they will implement, encouraging them to sign up for multiple measures for maximum demand reduction and energy savings.

- 4. Allocate incentives and implement
- Allocate incentives based on targeted measures Once the customer formally agrees to implement specific measures, Innovative Energy Partners will confirm the availability of rebates and arrange for an inspection to verify the existing conditions. Innovative Energy Partners will then authorize the project to commence.
- Monitor implementation After the project is authorized, a program staff member will notify the contractor and schedule the installation with the customer. The contractors resolve any issues and answer any questions the business owner may have. The customer signs a contract with the contractor for the work.
- 5. Verify and follow up
- Review Installation Completion Report Once a project is completed, the contractor submits an Installation Completion Report to Innovative Energy Partners with an updated spreadsheet specifying any changes from the originally indicated scope of work determined through the energy survey.

Innovative Energy Partners staff will review the spreadsheet for accuracy and arrange a post-installation inspection.

■ Conduct post-installation inspection and assess customer satisfaction — After reviewing the Installation Completion report, Innovative Energy Partners will arrange inspection to verify the installation and ensure the customer is satisfied with the work. Upon completion of the inspection, Innovative Energy Partners will secure a Customer Satisfaction Report and begin the rebate processing.

Coordination with Other Programs

We will integrate the *Innovative Energy Partners* program with all other relevant programs.

- We will identify all relevant programs run by other entities that complement this program or otherwise benefit the customer.
 Our Organizational Sponsors will include information on such programs as part of their communications, thus providing other entities with the benefit of this program's marketing machine.
- Innovative Energy Partners contractors will be required to provide information of these programs to building operators.
- Innovative Energy Partners staff will review spreadsheets and building data to determine where opportunities may exist for customers to benefit from other programs.
 - When such opportunities exist, they will be noted in the Opportunity Report provided to the customer.

How the Innovative Energy Partners Program is Different

A unique approach

The organizational sponsorship strategy has never been approached in this manner before. We believe that the sheer magnitude of the aggregation, the proactive marketing involvement of the organizations, the close guidance and direction of *Innovative Energy Partners* leadership, the ability to encompass the hard-to-reach, the comprehensive project analysis requirement, and the demand response analysis requirement differentiate us from any other program.

Comprehensiveness and innovative technologies

Comprehensiveness and a focus on innovative technologies are two areas of major attention. Customers will be guided to look for opportunities of their entire building, rather than engage in single, standalone projects to reduce energy costs.

We have been effective in packaging a broad energy technology portfolio and guiding building owners and managers to employ multiple energy efficiency strategies and to stimulate the development and use of innovative and alternative technologies, such as is evidenced by the California Energy Commission's Innovative Programs.

All the technologies provided will have measurable kW or kWh reduction.

B. Marketing Plan

Component	Description and Method of Distribution	Est. Quantity	Est. Cost
Program Brochures	Program brochures will describe the program, the requirement to be a member of a sponsoring organization, the availability of other programs, the comprehensive analysis requirement, the demand response analysis requirement, the process to begin, the process to qualify, the process of inspections, the process of rebate payment.	10,000	\$ 13,000
	These brochures will be distributed at all meetings and tradeshows.		
Case history reports	The case history reports will be "Success Stories" describing different technologies, comprehensive projects, and demand response applications — and the benefits that customers realized as a result of these measures.	different case histories	\$ 28,000
	Case history reports will be distributed electronically through Organizational Sponsors emailing and through the <i>Innovative Energy Partners</i> web site.		
Trade show exhibits and	The trade show exhibits will be booth displays, typically 8' high, 8-10' wide.	6	\$ 32,000
management	Booths will be staffed by the Organizational Sponsors and by <i>Innovative Energy Partners</i> staff.		
Direct mail letters	A focused direct-mail campaign by the Organizational Sponsors will pique interest in the program by highlighting customer benefits and inviting customers to apply.	10,000	\$ 25,700
	These letters will be mailed by <i>Innovative Energy Partners</i> staff or by the Organizational Sponsors.		
Flyer and email	Program flyers will provide program information.	30,000	\$ 20,000
alert	These flyers will be included as inserts with city business license mailings and will be emailed by the Organizational Sponsors to their membership.		
Newsletter copy and photos	Innovative Energy Partners will develop news releases and articles promoting the program — approximately one article or news release for each issue of each Sponsoring Organization's newsletter.	50,000	\$ 30,000
	Organizational Sponsors will publish these in their newsletters.		

Component	Description and Method of Distribution	Est. Quantity	Est. Cost
Fax alert copy	Single-sheet fax announcements alerting Organizational Sponsors' membership to the program or to upcoming events — or calling members' attention to other communications sent via email or direct mail.	5,000	\$ 11,000
Telephone campaign	Outbound calls to prospective participants who have expressed interest in the program.	2,000	\$ 15,326
Group meetings	Meetings at which <i>Innovative Energy Partners</i> staff and Sponsoring Organization staff present program features, benefits, and process — and utility representatives discuss other relevant programs sponsored by the utility. Refreshments will be provided for these meetings.	80	\$ 44,000
Presentation support materials	PowerPoint presentations (electronic "slide shows") will be tailored to each Organizational Sponsor's membership and will summarize program features, benefits, and process.	20	\$ 7,000
	These presentation materials will be used to support our speakers at meetings and other Organizational Sponsors' events.		
Website	The <i>Innovative Energy Partners</i> web site will support all aspects of the program, offer program information, and provide for easy on-line inquiries for prospective participants.	Unlimited (anyone with Internet	\$ 12,000
	The site also will offer key program documents, such as the program application form and contractor spreadsheets, for download.	access)	
Management of Incoming calls to Organization Sponsors	The Organizing Sponsors' communication activities are likely to generate numerous phone calls from interested customers. We will train Organizing Sponsors' staff in how to respond appropriately to callers and when to direct them to program staff.	500	\$ 8,000
Organization Sponsor Development	We will contact organizations throughout the PG&E service area to arrange their participation in the program. We will hold meetings with the organizations, including presentations to boards of directors; and we will train Supporting Organizations' staff on the program.	20	\$ 20,000

Coordination with Other Parties

Innovative Energy Partners will advise outreach providers with information of the Innovative Energy Partners program and its Organizational Sponsors for inclusion in any outreach programs.

Innovative Energy Partners will actively promote other programs that add value to our program participants, and our Sponsoring Organizations will publicize these other programs, as appropriate.

Innovative Energy Partners program will connect with all relevant programs to encourage them to communicate the Innovative Energy Partners program, as appropriate.

C. Customer Enrollment

Preliminary

Qualification

Customers express interest in becoming participants by completing a preliminary qualification form or by talking with an *Innovative Energy Partners* representative.

Qualification

Innovative Energy Partners conducts basic information gathering with prospective participants to determine whether their buildings are likely to have appropriate energy efficiency opportunities.

Confirmation of Eligibility Contractors in the *Innovative Energy Partners* network conduct energy surveys for qualified customers. They submit the following documentation to program staff for review and approval:

- Spreadsheet summarizing energy usage, current and proposed equipment, and calculations re. costs, savings, incentives, and simple payback calculations
- A representative electric bill for the prospective participant's facility
- A completed Program Application

Innovative Energy Partners staff reviews the documentation to determine whether the customer meets the program eligibility requirements. (See p. 24 for a summary of eligibility criteria.)

Program

Authorization

Once the customer formally agrees to implement specific measures, Innovative Energy Partners will confirm the availability of rebates and arrange for an inspection to verify the existing conditions.

Innovative Energy Partners will then authorize the project to commence, notify the contractor and schedule the installation with the customer.

D. Materials

Procurement, Delivery, and Installation

All installations will be performed by licensed and insured contractors that are screened for financial stability and customer satisfaction.

Installation quality will be reviewed during the inspections of projects.

Qualifying Equipment

To qualify for the *Innovative Energy Partners* program, equipment must have savings that are measurable and must either be on the Program-Approved list or be submitted and accepted by *Innovative Energy Partners* for approval. The following provides additional information regarding the targeted equipment.

Lighting

Energy efficient lighting systems

Specifications: T-8 retrofit will be "second" or "third generation" equipment; minimum 24,000 hours, CRI 80 or higher, with electronic ballast; name brand products, such as Sylvania and GE, etc. When T-8s are being installed for general illumination, instant start ballasts will be used.

Compact Fluorescent lamps will require electronic ballasts and must be Energy Star qualified. Power factor must be 0.90 or greater, and THD 20% or less. HID pulse start lamps: metal halide fixtures under 400W must be pulse start.

Installation Standards: Professional licensed contractors

Lighting controllers

Specifications: A power regulator that reduces power to the connected lighting is installed at the lighting panel. Controllers will be U.L. approved.

Installation Standards: Professional licensed contractors

HVAC

Carbon dioxide (CO₂) sensors

Specifications: There are several CO₂ sensor manufacturers that are commonly used in air conditioning today. These sensors, when controlling outside air ventilation, adjust the outside air dampers.

Site-specific sensor locations and damper interfaces will be designed for each individual application.

Installation Standards: Professional licensed contractors

Variable speed drives

Specifications: There are several manufacturers of variable speed drives. The drive manufacturer will be selected by the participating facility owner (or authorized representative).

System modifications may require new valves or dampers.

Drives will be U.L. approved.

Installation Standards: Professional licensed contractors

Other

High efficiency motors

Specifications: The motor manufacturer will be selected by the participating facility owner (or authorized representative) and will have NEMA Premium Efficiency[™] inscribed on the nameplate.

Installation Standards: Professional licensed contractors

Window film

Specifications: There are several film materials to chose from, and each site implementing this measure will be evaluated for visual transmittance requirements and level of shading desired.

Installation Standards: Product authorized installer

E. Payment of Incentives

Incentive Payment Process

Upon completion of projects, an inspection will be conducted to assure reasonable compliance with project specifications and confirmation of kW and/or kWh reduction.

A Satisfaction Report will be secured from every building operator. Upon verification through the inspection and the receipt of the customer Satisfaction Report, rebates will be paid to the contractor.

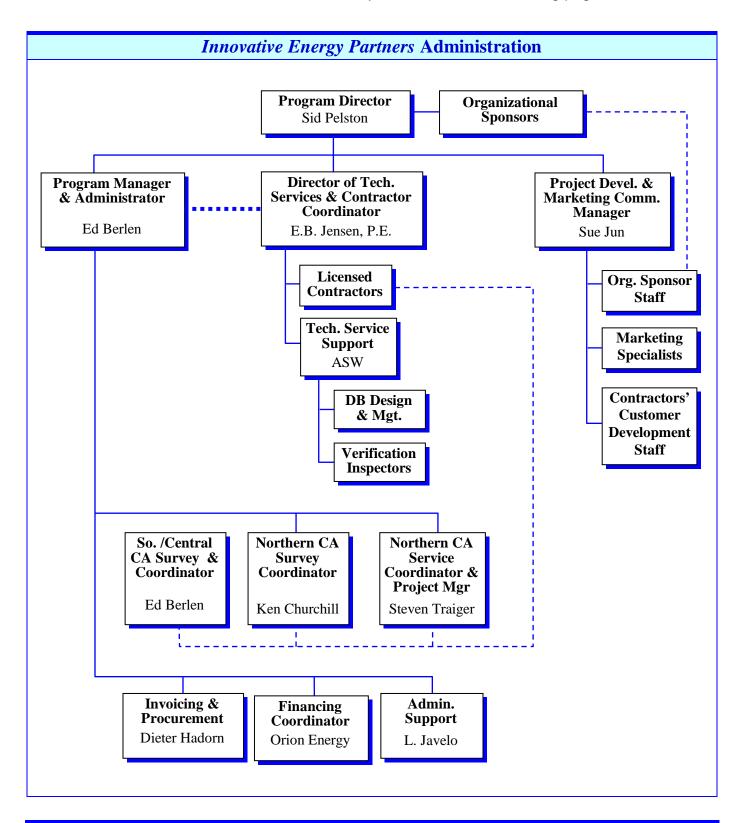
Program Incentive Amounts

All incentives will be based on kWh savings per measure completed and measurement of, or guideline for, kWh saved.

- The maximum rebate is 50% of the cost of equipment purchase and installation.
- Rebate amounts (cents per kWh saved) are listed under "Rebate Amounts" on p. 29 of this narrative.

F. Staff and Subcontractor Responsibilities

The figure below depicts the anticipated organizational structure for the *Innovative Energy Partners* program. Descriptions of responsibilities associated with each major role are on the following pages.



Program Director

Sidney Pelston, the Managing Partner of Energy Innovation Group, will be Program Director and will have primary responsibility for securing Organizational Sponsors and contractors. He will have a leadership role in program performance evaluation reviews and will provide strategic direction and help establish program policies and protocols.

Organizational Sponsors

Leadership from various Organizational Sponsors (government associations, property management companies, chambers of commerce, and similar organizing forces) will serve as program advocates and will enlist the support of their organizations' staff in promoting the program.

Program Manager & Administrator

Ed Berlen, of EIG, will serve as day-to-day program manager and administrator for this project, tracking all major activities, and monitoring progress relative to program goals, budget, and schedule milestones.

- Survey coordinators will be responsible for supervising the implementation of all survey activities within their assigned area.
- Service coordinators and project managers will help monitor installation activities and help ensure each projects proceed according to plan.

Director of Tech. Services & Contractor Coordinator

E.B. Jensen, P.E., of EIG, will serve as the director of technical services, and contractor coordinator. He will guide customers on energy efficiency measures, qualify and appoint contractors, coordinate all building energy surveys, review

all energy surveys for feasibility and accuracy, review energy efficiency recommendations with contractors, visit facilities with contractors, and maintain quality control overview over all projects.

- Licensed contractors will be responsible for implementing the specific measures identified for participating customers.
 - Their survey technicians will be responsible for visiting customer sites to complete comprehensive energy surveys identify energy efficiency opportunities, develop strategies with facility personnel, and describe cost-benefit considerations. Specifically, they will perform an inventory of relevant equipment installed at the business site and use a standardized spreadsheet to estimate energy usage with energy efficient equipment, calculate costs, and assess economic considerations; and they will submit the relevant documentation to *Innovative Energy Partners*.
- Technical Service Support will be provided by ASW Engineering Management Consultants, Inc.
 - □ Their data base designer and manager will be responsible for the overall structure and integrity of the program database, ensuring updates are made accurately and in a timely manner.
 - Their verification inspectors will be responsible for pre- and postinstallation inspections to verify that projects are completed as proposed and that the customer is satisfied.

Project Development & Marketing Communication Manager

Sue Jun, of EIG, will expand the pool of eligible contractors, and verify types of licenses (mechanical or electrical as appropriate), references from previous customers, liability and comprehensive insurance, bonding status, pricing agreements, equipment warranties, etc.

She also will be responsible for the overall direction of the marketing effort and coordinating the efforts of the marketing specialists, Organizational Sponsors staff, and contractors' customer development staff.

- Organizational Sponsors' staff will help coordinate communications with their organization's membership.
- Marketing specialists will develop promotional communications and provide guidance to the marketing and outreach efforts.
- Contractors' customer development staff also will assist in customer communications.

Invoicing and Procurement

Dieter Hadorn, of EIG, will provide invoicing and procurement services. He will be responsible for rebate reporting and payment to contractors, maintaining a database to track rebates reserved, rebates paid out and rebates available, and issuing daily summaries of rebate accounting. He also will be responsible for all accounts payable and will track budgets and actuals for all marketing and administrative functions and prepare monthly summaries of projected and actuals.

Financing Coordinator Jerry Davia, President of Orion Capital, will serve as financing coordinator, managing financing services for Customers who wish to finance projects. He will be responsible for packaging financing requirements and documents, conferring with and guiding customers, collecting financial qualification materials from customers, securing financing commitments from lenders, and completion of documents with customers.

Orion will structure financing so that energy efficiency projects can pay for themselves out of energy cost savings, generating immediate positive cash flow for the end-user with little or no up-front capital investment required.

Program Administrative Support Lizlette Javelo, of EIG, and supporting staff will be responsible for responding to telephone inquiries, and helping customers apply to the program. They also will assist in scheduling surveys, and provide ongoing clerical and administrative support as appropriate.

G. Work Plan and Timeline for Program Implementation

Task or Major Project Milestone A	pprox. Start
Project initiation	_
Agenda	12-1-03
Project startup meeting	
Develop refined work plan	
Draft program plan	12-10-03
Final program plan	12-20-03
Marketing strategies for customer enrollment	
Develop marketing plan	12-10-03
Begin marketing efforts	
Maintain marketing efforts	
Participant enrollment	
First Organizational Sponsor and contractor agreements	12-31-03
First customer project enter into agreements	1-31-04
5% subscription	3-31-04
15% subscription	
30% subscription	9-30-04
45% subscription	12-31-04
65% subscription	3-31-05
85% subscription	6-30-05
100% subscription	9-30-05
Final report submission	12-15-05
Measure selection, descriptions, and evaluations	
Select pool of contractors for participation	12-15-03,
	on-going
Develop survey instruments, measurement strategy, and customer agree	ments
Develop survey instrument design	12-20-03
Develop efficiency measure evaluation criteria	12-20-03
Develop customer agreements w/ program	12-20-03
On-site data collection & installation	
Scheduling surveys	on-going
On-site data collection for free survey begins	1-15-04
Approval of proposed measures	on-going
Coordination of customer agreement w/ program	on-going
Measure installation	on-going
Measurement & verification	on-going
Develop program tracking database	
Develop equipment specs	12-20-03,
	on-going
Development of database and status tracking tool	
	on-going

Task or Major Project Milestone	Approx. Start
Project management	on-going
Year one monthly reports	monthly
Project review and assessment	
Agenda	as required
Project assessment meeting	as required
Develop refined work plan	
Draft refined program plan	as required
Final refined program plan	as required
Review and evaluate marketing strategies	
Review marketing plan	quarterly, as required
Resume marketing efforts	as required
Complete marketing efforts	as required
Review measure selection, descriptions, and evaluations	
Review efficiency measure selections	quarterly, as required
Reassess pool of contractors	quarterly, as required
Review survey instruments, measurement strategy, and customer agree	eements
Survey instrument design	quarterly, as required
Revisit efficiency measure evaluation forms	quarterly, as required
Reassess customer agreements	quarterly, as required
Review on-site data collection	
Conduct training if changes to program or staff	as required
Scheduling procedures	quarterly
On-site data collection	•
Measure installation and coordination of customer agreements	
Measurement and verification	quarterly
Review efficiency of program tracking database	
Re-assess equipment specs	thereafter
Review database and status tracking tool	3-31-04, on-going
Draft program final report	December 2005
Final project meeting	December 2005
Final report and database	December 2005

III. Customer Description

A. Customer Description

The customers targeted by the *Innovative Energy Partners* program are members of the Organizational Sponsors (major trade and government associations, property management companies, chambers of commerce, and similar organizing forces). This encompasses a broad range of market segments and customer size, as indicated in the tables below.

Summary of Target Population Market Segments				
Market Segments Served	Est. % of Total Program Incentives	Est. Number of Locations		
Commercial	42.5 %	161		
Industrial	7.0 %	12		
Government	27.5 %	54		
Institutional	5.0 %	20		
Schools	15.0 %	45		
Residential — Multifamily	3.0 %	20		

Summary of Target Population Size				
Customer Size*		Est. % of Total Program Incentives	Est. Number of Locations	
Large	over 500 KW	50 %	52	
Medium	between 100 kW and 500 kW	40 %	80	
Small	between 20 kW and 100 kW	7.5 %	80	
Very Small	under 20 kW	2.5 %	100	

^{*} In the workbook, all customers have been listed as "medium" size as a placeholder. They will be broken out by actual size as participants are enrolled.

Market Actors

The market actors we have considered in designing the *Innovative Energy Partners* program include: nonresidential building, facility or plant manager, corporate management, business owner, contractor/builder, product dealer/distributor/wholesaler, designer/architect/engineer, lender, local/county/state government, product manufacturer, multi-family building owner/manager, nonresidential building owner, purchasing/ procurement official, and retailer.

Other market actors targeted by this program include: organizations, trade associations, chambers of commerce, and property management companies.

Hard-to-Reach Customers

Many of the targeted customers are considered "hard-to-reach" because of their geographic location (they reside in outlying regions and small or rural communities that are less well served). In addition, we anticipate a significant number of participants will be classified as hard-to-reach because of their size (very small nonresidential).

The program is ideally qualified and suited to overcome the typical barriers to participation in such an incentive program. The credibility of the Organizational Sponsors is a major factor. The expertise of EIG's management in dealing with market barriers, which dates back to 1976, is another key factor. The turnkey nature of the program, the attractive incentive, the economic challenges facing businesses today, and the financing availability have been effective tools in overcoming market barriers as has been demonstrated in the CEC and SBEA programs.

B. Customer Eligibility

Nonresidential customers that are members of Organizational Sponsors are eligible for the Program. Local governments, public schools, and multifamily residential facilities also are eligible. Specifically, in order to become qualified for the program, the customer must:

- Be a member of an Organizational Sponsor
- Have a verified opportunity to reduce energy demand and energy use with qualified measures
- Indicate that they have funds available for the customer contribution or would be willing and qualified for financing
- Agree to a comprehensive energy survey and to consider the recommendations
- Agree to provide the necessary data for an analysis of demand response opportunity
- Provide a bill from the utility in whose service area the program is being offered

C. Customer Complaint Resolution

The *Innovative Energy Partners* Program Administrator, EIG, has successfully implemented the California Energy Commission Innovation Program for BOMA members during 2002-2003 and the CPUC's South Bay cities multi-family program for 2002-2003 and has procedures in place for responding to customer questions and complaints.

- Innovative Energy Partners will have a toll-free hotline for all customer inquiries, which will go directly to a Program representative. When the representative is on the phone or unavailable, the caller is connected with an answering machine.
- Our program representative will have a working database for reference with the status of the customer.
- In cases where the call is in reference to services being provided, representatives will answer any questions they can and then pass on the information to the *Innovative Energy Partners* program manager or contractor to answer questions or reconcile complaints.
- Resolutions or sustained complaints will be recorded in our *Innovative Energy Partners* central database and under the accounts paper file.
- In the event that the customer complaint is not resolved, an arbitrator who is acceptable to both parties will be selected to review the complaint. The arbitrator will be provided at *Innovative Energy Partners*' expense.

D. Geographic Area

Innovative Energy Partners program will offer its program to all qualified customers in the PG&E territory.

Organizational Sponsors will target all members/customers in transmission constrained areas as identified by the California Independent System Operator.

IV. Measure & Activity Descriptions

Innovative Energy Partners will offer a comprehensive group of measures, all of which will reduce kWh, and either permanently reduce kW demand or reduce average kW demand, to include:

Lighting

- Lighting retrofits to reduce lighting kW demand and kWh
- Lighting power regulator and voltage control to reduce current and voltage through the lighting panels and reduce lighting kW demand and kWh
- Room occupancy sensors to reduce lighting kWh

HVAC

- Carbon monoxide (CO) sensors to reduce operation of garage exhaust fans and reduce average kW demand and kWh
- Carbon dioxide (CO2) sensors to reduce HVAC operation by matching the actual requirements for outside air for building ventilation to the amount of outside air brought into the building. Average kW demand is reduced and KWh.
- Variable speed drives to match the operation of fans and pumps to actual requirements. Average kW demand is reduced and KWh.

Other

- High Efficiency Motors often reduce power use by 15% when old motors are replaced.
- Window film reduces solar heat entering windows by over 50% and greatly reduces air conditioning during the hottest periods of the day.

A. Energy Savings Assumptions

All coincident peak demand reduction (kW) and electric energy savings (kWh) will be based on established manufacturer wattage data, utility savings schedules for savings reference, and/or metered measurements.

The table on the following page lists the data items that are used to calculate energy savings and the source for the type of data. Estimates have been derived using the following sources:

- Software developed by ASW Engineering Management Consultants
- Database for Energy Efficient Resources (DEER)
- Standard Performance Contracting lighting values
- Secondary sources
- Energy Policy Manual
- 2002 Energy Savers Data

Data	Source
Equipment costs	Lighting and HVAC supplier, contractor data, and prior program experience
Energy and demand savings (kWh, kW)	Lighting retrofit: We will use manufacturer data and previous experience in implementing the programs with comparable measures (reported wattage) to calculate energy and demand savings, with a database tracking system that uses Standard Performance Contracting (SPC) codes and values for tracking lighting savings.
	Lighting controls: For the power regulator, a before- and after-installation reading will be the basis for calculating energy savings for each site. Occupancy sensors for most spaces will be estimated as 30%; if longer off cycles are thought to exist, a lighting logger will be installed for an appropriate period after the new controls are installed.
	CO sensors: The existing garage exhaust fan horsepower and hours of operation will be used to determine baseline energy use; energy savings will be calculated from the new operation under the CO controller as derived from garage auto activity and historical data collected from other sites.
	CO2 sensors: This will require site-by-site specific energy saving calculation and will be based on existing ventilation conditions compared to controlled ventilation for a population profile as derived by the site survey. Ventilation quantities coupled with building use and air conditioning will render the energy savings.
	Variable speed drives: This will require site-by-site evaluation based on fan or pump usage profile and application of standard performance contract measurement and verification procedures.
	High efficiency motors: Existing motor nameplate data and operating hours will be used to establish savings when a new motor of NEMA Premium Efficiency™ is installed. A motor load of 80% will be assumed if more accurate load data is not available.
	Window film: Cooling load calculation methods from the American Society of Heating, Air conditioning, and Refrigeration Engineers (ASHRAE), in conjunction with site data (existing windows, orientation, occupancy, air conditioning systems, etc.) will be used to calculate annual savings.
	Coincident peak demand is calculated based on the hours of operation reported by participant customers in 2002. Hours outside of the peak period (i.e., 12-6 PM, Monday – Friday) are not considered peak demand measures, only energy saving measures.
Discount rate	8.15% (from the August 2003 Energy Efficiency Policy Manual)
Net-to-Gross Ratios	From the August 2003 Energy Efficiency Policy Manual Table 4.2
Measure lifetime data	From the <i>Energy Efficiency Policy Manual</i> Table 4.1 Effective Useful Lives of Energy Efficiency Measures.
Avoided costs	From the Energy Efficiency Policy Manual, Tables 4.3, 4.4, and 4.5

B. Deviations in Standard Cost-effectiveness Values

Net to Gross and Effective Useful Lives (EULs) of Measures

The table below shows the applicable measures and the corresponding EUL values extracted from Table 4.1 of the Energy Efficiency Policy manual.

Measure	NTG	Lifetime
Lighting retrofits: T-8/T-5 Lamp and electronic ballast	.96	16 years
Lighting power regulator and voltage control	.80	9 years*
CO sensors	.80	8 years
CO ₂ sensors	.80	8 years
Variable speed drives	.80	15 years
High efficiency motors	.80	15 years
Window film	.80	8 years

Incremental Measure Costs

For each of the measures offered by the SBEA program, we have determined the incremental measure costs based on our matching funds design of the program, which is up to 50% incentive. Therefore, for all measures except the lighting controls, window films, motor upgrades, and VSD, which had varying cost factors (documented in the workbook), we have defined the gross Incremental Measure Costs as the incentive plus the customer's incremental measure cost to be equal to the gross incremental cost per unit by measure.

Per Unit Energy Savings Estimates

We used standard performance contract methodology to establish per unit energy savings estimates. We applied the appropriate Net-to-Gross Ratio (NTGR) that is used to estimate "free-ridership" for the Program. NTGRs are used to estimate the free-ridership that occurs in energy efficiency programs. Free riders are "program participants who would have undertaken an activity, regardless of whether there was an energy efficiency program promoting that activity or not."

The NTGRs do exist in the DEER for the measures we are proposing. However, in all cases we have decided to use the NTGR the utilities used when filing their Express Efficiency programs.

^{*} A weighted average of a combination of lighting controls; not taken directly from the energy efficiency manuals

C. Rebate Amounts

Rebate levels are set to achieve expansion of program participation to companies that typically would not otherwise engage in energy efficiency without the incentive. The program will offset a maximum of 50% of the cost for projects.

Measure	Rebate Amount (up to 50% of total project cost)
Lighting retrofits (T-8/T-5 Lamp and electronic ballast)	\$0.13 per kilowatt-hour saved
Lighting power regulator and voltage control	\$0.16 per kilowatt-hour saved
CO sensors	\$0.20 per kilowatt-hour saved
CO ₂ sensors	\$0.20 per kilowatt-hour saved
Variable speed drives	\$0.20 per kilowatt-hour saved
High efficiency motors	\$0.18 per kilowatt-hour saved
Window film	\$0.13 per kilowatt-hour saved

D. Activities Descriptions

Innovative Energy Partners will not perform any of the direct work for the projects our primary role will be to:

- Secure Organizational Sponsors
- Direct and support the outreach/marketing program of Organizational Sponsors
- Build and qualify a contractor network
- Manage and assure high performance standards of contractors
- Assist companies in joining Organizational Sponsors
- Assist customers in identifying, selecting, and quantifying savings opportunities and in making decisions to proceed with projects
- Manage the project review, project approval, and inspection process
- Confirm customer satisfaction and handle the rebate process

Estimated costs for these activities are found under "Administrative Costs to Run Program" and "Marketing/Advertising/Outreach" in the budget summary on p. 44 of this narrative.

There are no Direct Implementation activities budgeted for this program.

- Site verification activities are budgeted under Administration in the Workbook. This budget item can be further defined once the program is implemented.
- There are no direct costs for conducting energy surveys. If no work is done, there is no cost to the program or its participants, and no incentive paid. Contractors will provide energy surveys under this program as part of their own cost to do business.

V. Goals

Two of the primary goals of the *Innovative Energy Partners* program are to provide:

- Permanent and verifiable long-term annual energy savings over the life of the measures
- Long-term and permanent electric peak demand savings over the life of the measures

The total program goals will be a gross usage reduction of approximately 16,662,966 gross kWh and 2,697 gross kW demand reduction over the course of the two years of the program.

The actual kWh savings resulting from the program will extend well over the two years of the program. For example, the effective useful life of the lighting retrofit equipment is 16 years. As another example, the effective useful life of variable speed drives and of high efficiency motors is 15 years.

We anticipate approximately 512 implementations of the various energy efficiency measures under this program. Total program savings is calculated as the kWh saved and the kW reduced that result from implementing the energy efficiency measures.

Estimated Gross Energy and Gross Peak Demand Savings

Summary of Estimated Annual Savings by Measure					
Description		Incentive	kW reduction	kWh savings	\$/kWh
Lighting					
Lighting retrofits	\$	938341	1,597	7,218,008	0.13
Lighting controls	\$	639416	473	3,996,350	0.16
HVAC					
CO sensors	\$	136214	_	681,069	0.20
CO ₂ sensors	\$	138188	_	690,942	0.20
Variable speed drives	\$	415140	_	2,075,700	0.20
Other					
High efficiency motors	\$	55556	111	308,646	0.18
Window film	\$	219993	516	1,692,251	0.13
	\$	2,542,848	2,697	16,662,966	1.2

Other Objective Measures for Evaluating Program Progress

We are considering other benchmarks and indicators for assessing program performance and determining to what extent the program has been successful.

We will consider the program a success when:

- We have received more than 500 inquiries and customer expressions of interest for program participation
- We have completed more than 350 energy surveys
- 25 or more buildings become Demand Response participants
- The "average" program participant completes two or more measures per building
- 50% or more of the program participants have less than 500 kW demand
- kW demand and kWh energy use reductions meet or exceed the program's forecasted numbers
- The number of measures implemented by the program approximate or exceed the program's anticipated numbers
- The project achieves excellent total cost-effectiveness scores
- We have demonstrated our ability to broadly reach and gain participation of hard-to-reach customers and customers in transmission constrained areas

VI. Program EM&V

EIG understands that we are required to have an independent EM&V consultant develop the evaluation plan for our program and to conduct the program evaluation itself. We propose to follow the instructions as presented in the *Energy Efficiency Policy Manual, Version 2*.

We will work with a consultant as required to develop an appropriate approach for evaluating program success and measuring and verifying energy and peak demand savings.

Measurement & Verification Plan Overview

We believe that an integrated approach to field data collection will meet the standards required by the PUC for this evaluation. The recruiter, the survey technicians, and the analysts will work together to ensure that all of the necessary data is collected as efficiently as possible.

EM&V budget should be allocated effectively. We recommend that the allocation is representative of the measures producing the energy savings. We also suggest including the larger energy savings projects in the EM&V since, by evaluating projects with greater amounts of energy savings, the EM&V contractor is able to increase the estimates of precision and keep sample sizes low.

For lighting measures, on-site engineering analysis and existing engineering data likely will be the primary method used to assess the savings associated with installed measures at the participants' sites. The focus of the on-site engineering assessments will be the development of an independent estimate of the energy savings associated with the installed measures.

For the other program measures, use of engineering analysis, secondary research, and review of program tracking data likely will be the primary method of EM&V.

The Evaluation, Measurement and Verification Plan for the *Innovative Energy Partners program* will utilize Option-A and consist of both Process and Impact Evaluations.

Process Evaluation

Process evaluation should rely on data obtained from a variety of sources, including:

- Program document reviews
- Interviews with program staff
- Customers participating in the program
- Studies of best practices among similar programs.

Program document reviews — Various program documents will be briefly reviewed to establish a general context for the program's implementation, as well as more specifically for application processing verification. Contractor will also will review quarterly reports, and examine program databases to determine whether there were any significant deviations from the original program design. The remainder of the program document reviews should focus primarily on verification processing issues.

Interviews with program staff — Following the document reviews, the contractor will conduct interviews with Program staff to "fill in the holes" where there are ambiguous issues. This querying step will be conducted to make sure that we understand exactly how the program was implemented as well as what verification processes were utilized. This step will facilitate the development of any recommendations about changes in process design or implementation, as well as help correctly interpret the results of the various impact evaluations.

Customers participating in the program — In this part of the process evaluation, the contractor will conduct telephone interviews with a sample of program participants. Participant interviews will focus on the following information:

Satisfaction with the program regarding such issues as:						
	The application process					
	Frequency of forms submission					
	Ease of use regarding forms and marketing materials					
	General helpfulness/sales ethics of program personnel, surveyor and installing contractors					
	Performance of the installed energy efficiency measures					

- How they were informed about the program, and how frequently
- General attitudes towards energy efficiency products

Participant interviews should correlate generally with program activity, and lag several months behind, so as to allow customers to develop useful perspectives regarding the program and the associated installed measures.

Studies of best practices among similar programs — Lastly, the contractor will collaborate with the consulting team that is awarded the statewide contract to develop the Best Practices database. As that team carries out their research in parallel with the EM&V contractor, the contractor will stay informed about their research findings, and will assess the extent to which these Best Practices can be incorporated into subsequent programs. The EM&V contractor will also examine the effective cost of reaching non-hard-to-reach customers relative to hard-to-reach customers, and will assess the general implications.

Impact Evaluations & Verifications

Impact evaluations will encompass three separate activities

- Engineering development of measure energy savings data
- Formal verification audits of application paperwork
- Participant self-reported verifications

Engineering development of measure energy savings data — These activities involve development of gross and net energy savings values for the program, since CPUC-approved program goals assumed measure-aggregated annual energy savings targets for each of the measures offered through the program. We recommend that a standard performance contracting protocol be used to calculate savings, and approaches to gross savings estimates vary by measure type, depending on the relative importance within the program.

Formal verification audits of application paperwork — Contractor will begin this step by obtaining and reviewing program documents pertaining to application processing (e.g., checklists and memoranda documents regarding what specific materials must be collected for the application to be approved). Contractor will note/identify any significant variances in these procedures. Contractor will augment this knowledge base by interviewing program staff regarding process ambiguities identified from the document reviews.

Contractor will utilize these findings as inputs to a formal checklist used in audits of application paperwork. Such a checklist might include criteria such as: customer is in fact in service territory targeted geographic; program authorization form attached; number of measure units appears reasonable; paperwork includes HTR identifier information; payment date; application was signed.

Using a checklist similar to the one described above, contractor will classify applications as fully compliant, having minor flaws (e.g., absence of customer's signature on the application), or having "fatal" flaws (e.g., no program authorization form attached) requiring the claimed energy savings data to be discarded. Based on the findings of this audit, we will estimate the correct savings for each application record in the sample.

Participant self-reported verifications — As an extension to participating customer satisfaction surveying, contractor will verify program participant participation and status on a self-reported basis by querying respondents regarding the types of measures installed, and the quarter in which the installations occurred. Contractor also will confirm HTR characteristics, and collect occupancy / lighting system utilization information (e.g., hours/day and days/week occupied). Based on the findings of this participant survey, contractor will estimate the correct savings for each application record in the sample.

Paperwork and Participant verifications would occur in distinct rounds prior to interim reporting requirements (so as to facilitate ongoing program process improvements and general program tracking).

Sample Design

Using extracts of versions of the program tracking database obtained during the course of the program, the contractor will draw a non-proportional, stratified random sample of participant application records. The strata will be defined by whether a customer has been defined as hard-to-reach (HTR) or non-hard-to-reach (NHTR). The contractor should expect to achieve a minimum of the 90%/10% level of precision, and probably substantially better.

Data Collection (Regarding Telephone Surveying Activities)

The contractor will conduct the telephone surveys of program participants described above. The contractor will draw an adequate pool of participant records from each of the participant classifications in the sample design.

The options and methods used in California's LNSPC program are adapted from those defined in the 1997 International Measurement and Verifications Protocol (IPMVP) and the 1996 Federal Energy Management Program (FEMP) M&V Guideline. (If a conflict arises between the IPMVP or the FEMP Guideline and this procedures manual, the procedures manual will take precedence.) Options outlined in the IPMVP:

- Option A Stipulated Savings: Savings are predicted using engineering or statistical methods that do not involve long-term measurement. Actual achieved energy savings are not verified over the performance period.
- Option B Metered Savings of Equipment or Systems: Involves short-term or continuous metering throughout the performance period to determine energy consumption. Measurements are usually taken at the device or system level. This option is preferred because savings are determined for each measure and incentive pricing in differentiated by measure category.

The choice of M&V option and method depends on the specific equipment being installed, the complexity and interaction of the EEMs, and the value of the incentive payments. Each available method is discussed in detail in Section III, Chapters 12 through 19, of this Manual.

Lighting Retrofit and Controls Measures

The required M&V methods for lighting efficiency and controls retrofits are defined in Chapters 12 and 13. Two methods are indicated – one employs standard fixture wattages and the use of sampling techniques to monitor lighting operating hours, and the other allows for the metering of dedicated lighting circuits. These methods are applications of IPMVP M&V Option B.

All projects with 70% or more of the direct energy savings resulting from lighting efficiency retrofit measures must use these methods for determining lighting energy savings. Other M&V methods may be used only when non-lighting, energy-efficiency equipment replacement savings (e.g. savings from high efficiency motors measures) represent more than 30% of the projected annual energy savings indicated in an approved Basic Project Application.

Non-Lighting Retrofit and Controls Measures Option B, pre- and post-installation end-use metering, is preferred for projects with no more than a few measures that are not strongly interrelated with respect to energy savings.

Reporting

All EM&V reporting will be done in accordance with the requirements described in the *Energy Efficiency Policy Manual*. Monthly and annual reports and the final report will be posted with Pacific Gas & Electric and with the Commission.

Preliminary Monthly Report Format and Content

Quarterly reports will include detailed project status information including:

- Number of sites surveyed
- Number of businesses signed up (participating)
- Number of installations completed by measure
- Estimates of kW demand and kWh saved (projected savings and comparison with program goals)
- Budget progress (amount spent, amount remaining)

Annual and Final Report Format and Strategy

The annual and final reports will contain the same content as the quarterly reports, but also will contain a cumulative budget, expenditure, savings, and other program activity information as requested in the Energy Efficiency Policy Manual.

EM&V Contractor information

Two potential EM&V contractors with whom we are acquainted and consider qualified are:
Mr. Phil Sisson, President Sisson and Associates
42 Moody Court
San Rafael, CA 94901
(415) 845-8820

Marc Schuldt, SBW Consulting, Inc. Energy and Environmental Research 2820 Northrup Way, Suite 230 Bellevue WA, 98004-1419 (425) 827-0330

Evidence of their qualification is the fact they have been approved by the CPUC for EM&V contracts for existing 2002-2003 programs.

VII. Qualifications

A. Primary Implementer

EIG is uniquely qualified to administer the proposed *Innovative Energy Partners* program.

- We already have a contractor network in place that encompasses the entire state and covers all the measures addressed in the proposed program.
- We already have the appropriate product manufacturers, covering every measure, in place to service the program customers.
- We have the proven experience, in a single organization, of organizing, marketing, managing, administering, and directing technical requirements. As such, we can do this job with greater efficiency and effectiveness than an organization what performs only certain roles and hands-off other major areas.

EIG staff and affiliates have experience that dates back to 1976 in developing, managing, and/or marketing energy rebate and other financial incentive strategies and programs to increase energy efficiency of commercial buildings throughout the country.

The Managing Partner of EIG, Sidney Pelston, was selected in 1981 as the commercial marketplace expert for energy efficiency, among the approximately 30 individuals invited nationally for the 3-day working conference at the Wye Institute, outside Washington D.C., to discuss policy and strategy to enhance the nation's energy efficiency.

During 2002 and 2003, EIG managed a California Energy Commission (CEC) program for the Building Owners & Managers Association, which reduced energy demand by 17 megawatts from over 300 diverse buildings throughout the State, including many companies that had never participated in energy rebate programs in the past.

In June 2002, EIG was contracted to develop, market, and manage a multi-family dwelling (MFD) energy efficiency rebate program for 15 South Bay Cities in the Greater Los Angeles area. This program is scheduled for completion in November 2003.

In March 2003, EIG engaged in the marketing of the Small Business Energy Alliance rebate program in SCE underserved service areas. We understand that this program is scheduled for completion by end of 2003.

B. Subcontractors

ACC Environmental Consultants

Ken Churchill will serve as survey coordinator for the northern California region. He is the co-founder and President of ACC Environmental Consultants, and has an in-depth knowledge of energy conservation and renewable energy that he obtained while he was building his previous company, Daystar Energy Systems. ACC Environmental Consultants is the 5th largest locally owned environmental and energy consulting firm in Northern California with 30 employees and over \$4.5 million in annual revenues.

ACC has extensive practical experience in energy audits, building modeling, lighting and control studies, HVAC system evaluation, energy monitoring and control systems, high efficiency motors, peak load shaving, rate analysis and real time pricing, as well as other areas related to energy efficiency and environmental measures.

Over the past 16 years, ACC has managed environmental and energy projects in thousands of facilities including high rise office buildings, schools, colleges, and manufacturing facilities. They have successfully managed over \$80 million dollars worth of construction contracts.

ASW Engineering Management Consultants, Inc.

ASW Engineering Management Consultants, Inc., personnel will be responsible for designing and managing the primary program data base as well as conducting site verification inspections and comprehensive energy surveys for selected facilities. ASW is a southern California (Tustin) engineering and facility management consulting company. In business since 1982, ASW has a broad client base throughout southern California and elsewhere. Present staff includes six mechanical and electrical engineers, fifteen survey technicians, and support personnel.

ASW goes far beyond traditional "prescriptive" engineering to provide the expertise needed to make informed financial and operational decisions. They have conducted hundreds of studies for southern California businesses and industries, for which they have developed software programs that translate the collected data in simple understandable reports.

ASW also has played a significant role in Southern California Edison's pilot ESCO programs, as well as the existing Standard Performance Contract Program, developing protocols and preparing the various reports for program implementation.

ASW's Small Business Energy Alliance (SBEA) administered the 2002 – 2003 *Energy Savers Program* on behalf of the CPUC.

Orion Energy, Inc.

Orion Energy, Inc., is a financial services company that provides financing for energy efficiency projects installed in the facilities of commercial, industrial, and institutional energy consumers or "end-users" pursuant to one of a variety of fixed payment contracts, performance-based contracts, and utility-sponsored efficiency programs.

Financing services that Orion provides include:

- Evaluation and recommendation of project and equipment financing structure alternatives
- Design of DSM financing programs for small commercial/industrial, large commercial/industrial, governmental/institutional, and residential sectors
- Training of Contractors, Organizational Sponsors and customers on financing options and processes, including preparation of finance program marketing and application materials
- Credit evaluation, including pre-screening of customer credits
- Implementation of the financing program including development of necessary financing/contract documents, placement and/or provision of financing to customers and/or contractors, and coordination of timely financing closings.

Steven Traiger

Steven Traiger will serve as the northern California service coordinator and project manager. He has a strong track record in identifying energy efficiency opportunities for commercial buildings, arranging for building surveys with contractors, arranging for energy analysis and energy efficiency opportunity reports, coordinating pre-installation inspections, managing installers, and serving as customers' and installers' main point of contact from concept to completion of projects.

Licensed Contractors (Surveys and Installation)

EIG has a current pool of qualified contractors. As necessary, we will contract with additional lighting, HVAC, and other appropriate contractors to help implement the program. We will ensure that all contractors will be licensed, can demonstrate references from previous customers, are bonded, and have the appropriate liability and comprehensive insurance.

C. Descriptions of Experience

Sidney Pelston

Sidney Pelston is the Managing Partner of Energy Innovation Group, LLC (EIG), an energy consulting and marketing firm with primary emphasis in managing utility rebate programs, assisting commercial building owners and businesses to identify and implement comprehensive strategies to reduce energy demand, control energy costs, improve reliability and manage risks.

Mr. Pelston has been a principal or senior officer of energy services firms for 27 years. Mr. Pelston is Senior Advisor, Energy & Environment with the RAND Corporation. During 2002-2003, EIG arranged a contract for BOMA to secure energy rebate funding through the California Energy Commission (CEC) Innovative Programs incentive program, which resulted in BOMA members completing energy efficiency projects which produced 17 megawatts of demand reduction.

For 2002-2003, EIG managed and marketed the multi-family dwelling (MFD) energy efficiency rebate program for the South Bay Cities Council of Governments in the Greater Los Angeles area.

Also in 2003, EIG marketed the Small Business Energy Alliance rebate program in the underserved areas in Southern California Edison's service area.

Through January 2000, Mr. Pelston was Senior Vice President of New Energy Ventures (NEV), a non-utility supplier of electricity. In this role, he was engaged in developing the company's marketing concepts, structuring customer agreements, appointing and supporting independent representatives and sales staff, and aggregating major companies throughout the country to competitively purchase energy. During this period, NEV became the nation's leading Energy Service Provider (ESP). During latter 1999, NEV was purchased for approximately \$140 million by AES, the independent power producer.

For the 19 years prior to joining New Energy Ventures in May 1995, Mr. Pelston was the founder, President, and Chief Executive Officer of Allied Energy International and Warner Technologies, both companies that engineered, supplied and installed energy efficiency retrofits for commercial buildings. Among the many companies served by Mr. Pelston in California, are: Cedars-Sinai Medical Center, Rockwell International, Paramount Pictures, Los Angeles Unified Schools, Ralphs Grocery, Safeway, Arden Realty, Equity Office Properties, Federated Stores; and outside California, buildings such as Chicago's John Hancock Center, New York's Trump Tower, City of Boston, Boston Schools, Brandeis University and Safeway Stores.

For the 16 years prior to his business activities in the energy industry, he was a principal or senior manager in the financial services industry. Mr. Pelston holds a business degree from UCLA, earned in 1960, and has been honorably discharged as an officer in the U.S. Army.

Ed Berlen

Ed Berlen, Program Manager at EIG, managed, Administered and Marketed the South Bay Energy Rewards Multi-Family rebate program. In this capacity, his duties included: coordinate and manage contractors, work with customers to educate them on energy efficiency and other programs they may benefit from, develop opportunity reports, resolve customer disputes, weekly & monthly reporting & tracking of projects and results, invoice for rebates, conduct meetings with associations and cities, send out flyers and letters to MFD owners within those associations and cities, manage follow-up and inspection activities.

He developed organizational sponsorship and participation for the Small Business Energy Alliance (SBEA) *Energy Savers* program, establishing a contractor base, coordinating and managing contractor activities, and reviewing spreadsheets for accuracy. He also worked with customers, developed opportunity reports, and facilitated reporting requirements to the SBEA Program Administrator.

Sue Jun

Sue Jun, Program Manager at EIG, managed, administered and marketed the California Energy Commission / BOMA Rebate Program. This program resulted in a 17 MW reduction in the State of California. In this capacity, her duties included: coordinate and manage contractors, work with property managers and building owners to educate them on energy efficiency and to develop projects, evaluate costs and benefits of the projects, develop opportunity reports, resolve customer disputes, provide monthly documentation and reporting to the CEC, invoice for rebates to the CEC, prepare monthly disbursement packages to BOMA, coordinate inspections, and coordinate project financing.

Prior to joining EIG, Sue Jun worked as the Director of Marketing & Business Development for several technology companies responsible for developing and negotiating partnership programs and fostered relationships with community and professional organizations in California.

E.B. Jensen

E.B. Jensen, P.E., Director of Technical Services at EIG, is a seasoned technical and operations manager with cross-functional management background. He has a record of achievement in introducing new services, expanding existing and new market opportunities, providing superior customer service, and developing exceptionally positive account relationships. His areas of expertise include: general management, operations management, manufacturing management, project and construction management, budget development and implementation, customer service and satisfaction, contract negotiations, customer capture and retention, and technical services and products.

Dieter Hadorn

Dieter Hadorn, Controller and Chief Administrative Officer at EIG, has a BS from the Basel School of Business, Basel, Switzerland, and has over 25 years experience in accounting and financial management. In his role at Norman Krieger, he established the entire financial reporting structure from G/L to Sales Analysis Reports, and was instrumental in setting up branch offices in San Diego, Tijuana, Calexico and Hong Kong and integrating them into the existing reporting structure. He also created daily management reports and financial analysis tools, formulated and wrote credit and collection procedures, and designed and administered "Project Turn Around" which refocused the company's sales and marketing strategy thereby dramatically increasing revenues and net profit margins.

Kenneth R. Churchill

Mr. Churchill is the co-founder and President of ACC Environmental Consultants. In addition to being an expert in asbestos, lead-based paint and indoor air quality, he has an in-depth knowledge of energy conservation and renewable energy that he obtained while he was building his previous company, Daystar Energy Systems.

Daystar Energy Systems was formed by Mr. Churchill in 1976. Under his leadership, Daystar became one of the largest solar heating and energy conservation contracting and consulting firms in Northern California.

In 1986 when PG&E incentive programs and state and federal tax credits for energy conservation and solar energy ended, he expanded the firm's focus and changed the name to ACC Environmental Consultants. He has grown ACC into the 5th largest locally owned environmental and energy consulting firm in Northern California with 30 employees and over \$4.5 million in annual revenues.

His professional experience includes business management (25 years), Energy consulting (15 years), Energy contracting (15 years), Environmental Consulting (15 years), and construction management (25 years). He also is a faculty member, UC Berkeley Programs for Environmental Management.

VIII. Budget

Item		First Year Cost		Second Year Cost		Total Cost	
Administrative Costs to Run Program	\$	484,894	\$	484,894	\$	969,788	
Managerial & Clerical:	\$	420,748	\$	420,748	\$	841,495	
HR Support & Development:	\$	8,762	\$	8,762	\$	17,523	
Travel & Conference Fees:	\$	16,428	\$	16,428	\$	32,855	
Overhead	\$	25,816	\$	25,816	\$	51,631	
Marketing / Advertising / Outreach	\$	172,917	\$	93,109	\$	266,026	
Program Brochures	\$	8,450	\$	4,550	\$	13,000	
Case History Reports	\$	18,200	\$	9,800	\$	28,000	
Trade Show Exhibits & Management	\$	20,800	\$	11,200	\$	32,000	
PowerPoint presentations	\$	4,550	\$	2,450	\$	7,000	
Direct Mail Letters	\$	16,705	\$	8,995	\$	25,700	
Newsletter Copy / Photos	\$	19,500	\$	10,500	\$	30,000	
Fax Alert Copy	\$	7,150	\$	3,850	\$	11,000	
E-mail alert / electronic flyer	\$	13,000	\$	7,000	\$	20,000	
Website	\$	7,800	\$	4,200	\$	12,000	
Group Meetings (refreshments provided)	\$	28,600	\$	15,400	\$	44,000	
Telephone Campaign (outbound calls to interested Customers)	\$	9,962	\$	5,364	\$	15,326	
Management of Incoming calls to Organization Sponsors	\$	5,200	\$	2,800	\$	8,000	
Organization Sponsor Development	\$	13,000	\$	7,000	\$	20,000	
Direct Implementation Costs		1,271,424	\$	1,271,424	\$2,542,848		
Other Costs	\$	50,000	\$	50,000	\$	100,000	
EM & V	\$	50,000	\$	50,000	\$	100,000	
TOTAL BUDGET	\$	1,979,235	\$	1,899,427	\$3,878,662		