



Global Energy Partners, LLC

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Orange County

Council of Governments

Energy Efficiency Program for Orange County's Hard-to-Reach Agencies

Confirmation Number: _____

Submitted by:

Orange County Council of Governments

and

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List of all other programs proposed to CPUC:

Programs proposed by Orange County Council of Governments:

None others proposed

Programs proposed by Global Energy Partners, LLC

Continuation of Energy Efficiency Services for Oil Production in the SCE Service Area

Expansion of Energy Efficiency Services for Oil Production into the PG&E Service Area

Energy Efficiency Program for California's Food Processors in PG&E's Service Area

Energy Efficiency Program for California's Food Processors in SCE's Service Area

Certified Organic Farmer Energy Efficiency Program

September 23, 2003

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Section I. Program Overview

Orange County Council of Governments (OCCOG) and Global Energy Partners, LLC (Global) are pleased to submit to the California Public Utilities Commission (CPUC) the following turnkey proposal to design, administer and implement an energy efficiency program targeted toward the energy-consuming end uses of the hard-to-reach agencies in Orange County to achieve a peak demand reduction of 2,166 kW and energy savings totaling 10.64 GWh. The highlights of this program are:

- We Will Reach Hard-to-Reach Public Agencies:

The objective of this Program is to bring energy efficiency to small and medium sized public agencies within Orange County. This target market traditionally has not implemented energy efficiency due to:

- Lack of consumer awareness about efficiency benefits
- Lack of information about financing opportunities
- Lack of technical knowledge and expertise
- High first costs

- We Will Develop an Innovative Partnership to Overcome Market Barriers:

With 52 member agencies, OCCOG has the established scope and respect necessary to effectively communicate the benefits of energy efficiency to “close the sale” on energy efficiency. As the largest single-county council of governments in California, OCCOG often sets the tone followed in other counties throughout the State. This innovative partnership combines this market reach into small and medium public agencies with Global's proven track record as an energy efficiency technical program designer, administrator and implementer.

- We Will Utilize Commercialized and Proven Efficient Technologies:

This Program will succeed in reaching hard-to-reach energy consumers through its innovative marketing of standard off-the-shelf energy efficiency technologies:

- Energy Efficient Lighting
- Energy Efficient Heating, Ventilation and Air Conditioning (HVAC)
- Energy Efficient Motors and Motor Control Systems

Energy Efficiency Program for Orange County's Hard-to-Reach Agencies

- We Will Deliver Results:

With the marketing and technical abilities of this innovative partnership in place we are proposing the following Program Results:

- Program Energy Savings: 10.64 GWh
- Program Peak Demand Reduction 2,166 kW
- Net-to-Gross Ratio 0.83
- Cost Effectiveness
 - Total Resource Cost (TRC) 1.78
 - Participant Test (PT) 6.47
- Additional results and benefits:
 - Sustainability: The involvement of the OCCOG into energy efficiency will bolster efficiency awareness and sustain savings
 - Equity: The target agencies have been contributing to the PGC funds without equitable participation in previous Programs
 - Efficiency Awareness: Global plans to develop with the OCCOG an Internet-based platform with links to promote awareness, education, best practices and Program involvement.

- Additional Program Highlights:

- Program Coordination: The OCCOG / Global Team plans to coordinate this Program with existing ones that address energy efficiency issues such as the California Energy Commission's Flex Your Power, those run by other third parties, and relevant local programs. We will clearly explain to this Program's participants how their participation relates to other programs and ensure that participants obtain full advantage of programs available to them as well as avoiding overlaps and confusion. We will develop a matrix of available programs in the territory.
- Secondary PGC Criteria: We have carefully taken into account the five secondary criteria for PGC Hardware/Incentive and Information-Only/Statewide Marketing and Outreach Programs. In particular, we expect that, through a reduction of over 2 MW this Program will contribute to criterion (5), "Alleviates Transmission Constraints in an Area Identified by California Independent System Operator." This Program would contribute to a reduction of transmission constraint for Path 15.

A. Program Concept

The Program Concept that we have developed is centered around the creation of a team that has the **communication ability to break through the market barriers** associated with small and medium sized public agencies and the technical ability to follow through with Program design, administration and implementation. The OCCOG / Global Team is proposing to design and implement a non-utility incentive program serving the hard-to-reach agencies of Orange County, California. The specific target market is the small and medium agencies that need information and incentives to reduce their energy costs. Our proposed Program is designed to achieve long-term demand and energy savings through the implementation of the following energy efficiency measures:

- HVAC system controls
- Lighting controls
- Motor controls
- High Efficiency Motor Replacement

B. Program Rationale

The basis and need for this program is to reach public agencies that have paid into PGC funding but have not yet taken advantage Programs to improve their efficiency. The OCCOG / Global Team believes that these agencies will implement efficiency programs only through the combination of effective marketing and proven technical implementation. It is to this end that our proposal is submitted. Orange County Council of Governments (OCCOG) is a voluntary advisory association representing 52 agencies, including member local governments and agencies throughout Orange County seeking cooperative sub-regional and regional planning, coordination and technical assistance on issues of mutual concern. In addition to providing a cost effective program that provides substantial energy and demand savings the partnership with OCCOG provides a well established path to program sustainability. OCCOG's membership is unique among other council of governments in the nation. Its member agencies include 34 cities, the County of Orange, and representation from transportation agencies, sanitation and water districts as well as the local air district.

OCCOG unifies Orange County so that it can speak with a collective voice on important regional issues, such as energy, air quality, transportation and demographics. OCCOG works efficiently by utilizing existing resources, collaboratively finding new ways to perform needed activities for less, while eliminating duplication of effort. The intent of this program is to develop program sustainability for the Orange County area.

C. Program Objectives

The primary objective of this program is to overcome the market barriers to the small and medium sized public agencies that do not typically participate in energy efficiency programs. Market barriers for this target market include high first cost, lack of consumer information about energy efficiency benefits, lack of staff and lack of information on available financing for energy efficiency improvements. Our Team will be able to develop relationships with small- to medium-sized agencies, who are underserved and struggling to keep up with the increasing cost of energy in their budgets. This target market is in need of program incentives and assistance to implement energy conservation measures and overcome the market barriers. This market is severely lacking financial and technical resources to get energy efficiency measures implemented. Our ultimate goal is to create long term energy savings in electricity and demand reduction by helping these agencies understand the financial and technical benefits of modifying their consumption behavior as well as understanding where and how to obtain the necessary financing to implement projects. To achieve these objectives, we will design, administer, and implement an energy efficiency program targeted toward the small- to medium-sized agencies in Orange County to realize a peak demand reduction of 2,166 kW and energy savings totaling 10.64 GWh.

Section II. Program Process

A. Program Implementation

Global is currently involved in the successful implementation of a rebate incentive energy efficiency program for the CPUC. To implement this Program, Global will develop and build off the existing processes, procedures, forms, and databases to efficiently and effectively deliver this Program. Our Team will develop the following program delivery strategies and mechanisms to meet our goals and objectives for the program:

Develop Customer Recruitment and Marketing Plan

Based on Global's experience with successful program administration, the team of OCCOG and Global will develop a plan to identify potential program participants. This plan will also address the needs and wants of the participants during the customer recruitment phase and then incorporate that information into the development of a marketing plan. This step will also include the development of the program tracking database to collect customer recruitment, technical and financial analysis results.

Develop Qualification and Survey Process

OCCOG and Global will develop a process to qualify and survey participants once they have been recruited into the program. This methodology includes the following steps: determine eligibility of customer, perform initial phone survey, qualify, and prioritize the opportunities.

Develop Energy Auditing Process

Global will develop a delivery mechanism to perform energy audits, technical, and economic analysis, of the qualified participants' opportunities. Global will expand its relationships with key trade allies and equipment vendors to help identify and capture critical opportunities. These are situations where equipment routinely fails or causes severe maintenance problems.

Develop Training and Outreach Plan

Both OCCOG and Global will develop a training and outreach plan targeted to promote ongoing interest in the program and help ensure program sustainability. Training and outreach plays a big role in the long-term effectiveness of the energy conservation program for agencies. Our plan will include the use of best practices and case studies to reduce hesitation in installing energy efficient equipment.

Develop Certification and Verification Process

Global will develop the process to certify the proper installation of any recommended measures before rebates are issued to the individual participants. Rebates will be issued based on

verification of savings for the successful installations. Global will also develop the process to transfer the results of the certification as well as any related data to the third party evaluator.

Develop Reporting Requirements

Global will develop reporting formats and requirements that contain information on program budgets and expenditures; projects, measures, and/or activities that were funded; the amount of energy savings and peak demand reductions associated with the program expenditures; and other information necessary to monitor compliance with Commission guidelines.

Coordination with Existing Utility Programs

Our team will establish a matrix of available California Energy Commission (CEC) and Southern California Edison (SCE) financing and rebate programs that would apply towards projects to be implemented under this program. Global will work to assure consistency between the incentive amounts available from this program and any SCE programs to avoid confusing participants. Complimentary rebate information will be reported in the economic analysis of the project to the individual participants.

B. Marketing Plan

Our Team's marketing plan is designed to educate agencies to make them aware of the available funding of energy saving measures. We will use a variety of marketing methods to target potential program participants. These methods include workshops, newsletters, E-campaigns and promotion of partner/ affiliate marketing. We will develop specific Program material that explains the benefits of the proposed approach and the savings the customer can anticipate as a direct result of implementing a comprehensive energy and demand reduction program. These marketing materials will be distributed through OCCOG to their member agencies. The well-established relationships OCCOG has with its member agencies will become a critical marketing asset to the success of this Program.

C. Customer Enrollment

OCCOG and Global will develop a plan for recruiting customers, collecting on site characteristics, historical energy use, and customer preferences. Global will work closely with OCCOG to identify and qualify participants for this program.

D. Materials

We will rely on the customer and the services of the trade allies and equipment vendors in the procurement, delivery, and installation of equipment. It has been Global's experience that there is a wide variety of equipment that can be selected based on a facility's preference. Global does not propose to specify qualifying equipment. Instead, we will utilize the energy auditing process to assure that potential projects and equipment produce energy savings for the participant and the utility.

E. Payment of Incentives

The proposed Incentive Payment Structure is to be based on Global's experience with previous PUC Programs. Global will provide incentives for qualifying projects for participants on a first-come-first-served basis. Our experience has been that 50/50 cost sharing programs for energy conservation measures have worked very well. Global will not provide incentive payments that exceed a participant's project cost under any circumstances. Additionally, no single program facility, nor participant, shall receive more than 20% of the total funds allocated from the Commission to the program administrator. Global will be responsible for the certification of the proper installation of any recommended measure before a rebate is issued.

F. Staff and Subcontractor Responsibilities

Global Energy Partners will be the Prime Contractor and Program Administrator for the proposed program. Global will be directly involved in each task. The following provides an outline of the relationship between the Team and the corresponding areas of responsibility.

Ms. Ingrid Bran will act as the Program Manager interfacing directly with the SCE Program Manager and maintaining overall responsibility for the program and all of its components. Ms. Bran and the Global team will be directly responsible for the development of the program definition, the development of the marketing and customer recruitment plan. Mr. Russ Goold with Global will assist in the necessary research and coordination of information and will be performing the Survey and Qualification of participants. Ms. Bran will be responsible for managing and coordinating the energy audits as well as the performance and review of the technical and economic analysis. Ms. Bran will also be responsible for the ongoing program

management and quarterly reporting.

OCCOG will act as marketing and outreach resource for the project and will provide assistance in the following areas: strategic planning, market analysis, customer analysis, workshop and training, and Program customer outreach.

Consultants to be identified will provide assistance in the following areas:

- Workshops and conferences
- Performing energy audits, training, troubleshooting, and
- Commissioning and certification

G. Work Plan and Timeline for Program Implementation

Task 1: Define Program

This task is to develop the guidelines and parameters by which this program will be operated. To that end, we will define the program objectives, develop a detailed project workplan, conduct a project kickoff meeting, and develop an inception report based on the above. The project kickoff meeting will be held immediately upon award of the contract.

Task 2: Develop and Implement Marketing Plan

This task is to develop a marketing plan to educate member agencies to make them aware of the funding of energy saving measures available. OCCOG's agency relationships will be fully utilized in all marketing / customer activities.

OCCOG and Global will use a variety of marketing methods to identify potential program participants. These methods include workshops, newsletters, E- campaigns and promotion of partner/ affiliate marketing. The collateral material will make full use of the industry association as well as the internet to increase awareness and participation, and explain the financial benefits of program participation.

Global, with OCCOG's advice and counsel, will develop a website for OCCOG members. The website will be a valuable tool for potential participants to get program information and also to

obtain other energy-related information. The website will also help to establish program sustainability.

Task 3: Develop and Implement Customer Recruitment Plan

Global, with the advice and counsel of OCCOG, will develop a plan for recruiting customers, collecting data on site characteristics, historical energy use, customer preferences, and on maintaining positive relationships with the customers participating in this effort. We will utilize a Customer Relationship Management (CRM) Database to collect, store, and sort the information obtained during the program.

One of the first areas of focus is recruitment of program participants and defining their eligibility requirements. Global will be working very closely with the OCCOG to target the member agencies in the area that are likely to require assistance or have known energy related needs. This program is the perfect vehicle for the many participants wanting to have engineering evaluations performed to determine the energy saving opportunities available at their facilities. The preliminary general requirement for the program will be that program participants must be customers of SCE.

The recruitment plan will discuss what types of equipment or services will be offered to customers to induce their participation in the program. For example, idealized cash flow or simple payback analyses for different types of customers may need to be developed. The recruitment process to be described in the plan will include developing tailored customer education materials, a customer participation agreement, customer education regarding the program and their roles and opportunities to save money through energy and demand saving projects, and CRM database administration. Global has had great success in its current California program with a simple 3-step approach:

- 1) Initial phone contact to develop relationship and determine interest
- 2) Email follow-up with educational packet explaining the detail of the program and the benefits to the participants
- 3) Phone follow-up to set up a phone survey with the appropriate person

Task 4: Survey and Qualify Participants

We have designed and implemented a methodology to qualify and survey participants once they have been recruited into the program. This methodology includes the following steps: determine eligibility of customer, perform initial phone survey, qualify and prioritize the opportunities.

Once an eligible customer qualifies for the program the site visit for the energy audit is scheduled. The steps are outlined in more detail below.

1) Determine Eligibility

The facility must be a customer of SCE.

The facility must be a small- to medium-sized customer as defined by the CPUC.

2) Conduct Initial Phone Survey

The initial survey to qualify a customer will be performed over the phone. It may be necessary to perform the survey on site to gather the necessary data. The purpose of the survey is to identify if the customer has adequate technical and financial opportunities for savings to meet the program criteria. The initial survey will focus on obtaining the following information:

- Field data to pre-qualify participant for an energy audit
- Historical energy use – Obtain 13 months of electric bills or get written permission and account number from agency to obtain information directly from utility
- Determination of whether the participant is willing to share the costs
- Determination of the technical and financial considerations of the agency – what retrofits or modifications they will consider and what financial hurdles they have to meet, such as simple payback
- Determination of whether the participant is willing to sign a document stating they are not participating in similar programs to obtain funding for this scope of work as well as a Letter of Understanding once the preliminary opportunities have been identified

3) Qualification and Evaluation of Opportunities

Once a customer has been surveyed, the results of the survey will be reviewed and the opportunities qualified and evaluated. Once the opportunity has been qualified and

evaluated, the next step is to schedule an on-site visit for the energy audit upon signature of the Letter of Understanding.

The qualification process is defined as follows:

- The bills are reviewed to make sure the potential participant is a SCE customer.
- The survey data is reviewed to make sure the customer is a small- to medium-sized customer.
- A list of equipment or potential list of retrofits is reviewed to make sure they make economic sense.
- A portion of this initial data also provides the basis for the establishment of the baseline energy consumption and demand conditions for future program evaluation.
- Once this is accomplished, the results are reported to the agency. The report includes a Letter of Understanding for the producer's signature to insure their commitment to move forward in the program once the opportunities are identified that meet the established technical and financial considerations of the owner.

Global has included a step to eliminate potential double dipping by program participants into more than one ratepayer- or taxpayer-funded public purpose program. The risk of abuse can be minimized through careful participant tracking and coordination among programs. Customers accepting financial incentives through any program approved by the CPUC will be required to acknowledge the source of funds by signing an affidavit or other paperwork declaring that they have received no funds for the same activity from another program or source along with the Letter of Understanding.

Task 5: Provide Energy Audits and Economic Analysis

Global has designed a delivery mechanism to perform energy audits, which include technical and economic analysis of the qualified participants' opportunities in a manner that reaches as many facilities and identify as many solutions as possible. The energy audits ~~for~~ will focus on the assessment of HVAC controls, lighting controls, and all motors, specifically identifying those

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running below peak efficiencies. We will also identify any other potential retrofits that make technical and economic sense.

Global's program focus is on the adoption of a "systems approach" to optimizing HVAC and lighting as well as motor-driven processes for industrial and government customers such as water treatment facilities. This type of evaluation captures much greater savings than is possible by simply replacing components with more efficient alternatives. Although doing so may have merit, a systems approach, which includes better matching of components (motors, pumps, blowers, fans, compressors, drives, etc.), appropriate application of variable speed drives and appropriate matching of operational regimens and system performance to loads, provides a far greater degree of savings.

The technology to support best practices for motors is readily available. Our Team's objective is to remove the barriers that are preventing widespread adoption of these practices. We plan to work with trade allies to use state-of-the-art analysis tools and controls as marketed and manufactured and provide field training on these systems when appropriate.

Global plans to utilize a combination of in-house expertise and local consultants to provide the energy audits and commissioning and certification tasks.

The interpretation of data collected during the audit will begin with the energy utilization analysis of historical electrical consumption and demand information and then focus on evaluation of eligible measures under the program. The following is an initial list of eligible measures for this energy saving and demand reduction program:

- HVAC system controls
- Lighting controls
- Motor controls
- High Efficiency Motor Replacement

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Once the technical analysis has been completed the economic analysis will be performed. Global will perform the economic analyses including cash flows and simple paybacks. Global will also provide a summary of financing alternatives for the specified solutions. The goal of this measure will be to educate the producers on alternate ways to continue investing in financially and technically sound energy efficiency projects, even without the utility rebates.

Global will provide a plan of action in the form of a report to the agency that will outline the steps the participants need to take in order to install the measures identified at their site with the specific program procedures for installation, and potential financing options. The following items will be included in the final report for the customer:

- Project description
- Estimated project installation cost
- Equipment specifications and available vendors
- Estimated energy savings resulting from project
- Cost effectiveness analysis
- Cash flow
- Guidelines for available financing
- Steps needed to be taken to implement the project and obtain the rebate, which includes recommended vendors and contractors

The results will then be reviewed to ensure the reported solutions meet the technical and financial criteria. Global will then contact the facility with report results and will discuss implementation, funding and schedule. This will include presentations to senior management to achieve program buy-in on an as-needed basis.

Task 6: Conduct Training and Outreach

The Team will also provide training and outreach to participants to promote ongoing interest in the program and help ensure program sustainability. Training and outreach plays a big role in determining the long-term effectiveness of the energy conservation program for the producers. The following outlines Global's strategy for an innovative training and outreach program.

OCCOG and Global will conduct workshops for training and outreach purposes in addition to marketing of the program. Over the course of the project, up to eight (8) workshops are to be held. The first set of workshops will focus on marketing, outreach and sharing the program progress and getting participants involved. The second set of workshops focus on recent results to encourage facilities that have not participated in the program to gain information and comfort in the technologies that lead them to invest in energy efficient systems. The last set of workshops will consist of a program wrap up to present the results of the program and provide training to promote program sustainability. Each workshop will last one half-day, with invitations sent to member agencies of OCCOG.

Task 7: Certify Installations

Global will be responsible for the certification of the proper installation of any recommended measures before rebates are issued to the individual participants. Rebates will be issued based on verification of savings for the successful installations.

The program incentives and rebates will be available on a first-come-first-served basis to qualified participants with 50/50 cost sharing for energy conservation measures. Global's experience has been that this percent of cost sharing is high enough to motivate customers. No incentive payment will exceed a participant's project cost under any circumstance. The project installation cost will be signed off by Global before the work begins to ensure the project estimated cost and actual costs are within a reasonable range. Global will be responsible for the certification of the proper installation of any recommended measure before a rebate is issued. The rebate will be issued based on verification of actual savings and Global's receipt of invoice funds from the contract manager.

Task 8: Verify Savings

As part of the requirements of this program, we will develop monitoring and verification procedures to properly track the activities of the customers as a result of the initial assessment. The process for measurement and verification (M&V) of the project results begins during the initial survey process. Our M&V procedures include the following:

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- Audit of existing operating conditions before any change of operation or installation of any equipment or software is performed
- Baseline measurement of energy use
- Verification of the installation of the energy saving equipment and/or software
- Post- installation measurement of energy use

The following is a summary of information collected for each measure installed for any given location:

- Measure description
- Physical location of measure
- Utility account number of the account serving the impacted facility
- Annual baseline energy usage (kWh)
- Annual post-installation energy usage (kWh)
- Incremental cost of measure
- Useful life of installed measure

Task 9: Provide Ongoing Program Management and Reporting

The ultimate success of this program greatly depends upon the project plan and methods used. This task will encompass all strategic, budgetary, program administration, and reporting elements of this program. Strategic direction will be provided to the project team with regard to goals, timelines, expected results, and other general planning factors. The Program Manager will:

- Develop and update quarterly a project plan showing all tasks, team members' roles and deliverables, budget requirements, and timelines
- Institute quality control procedures and frequently check progress with respect to deliverable schedule and quality
- Be the key interface with the SCE program manager, and provide monthly updates regarding progress

Budget management will be handled by the Program Manager to ensure the effective and efficient expenditure of funds, and that such expenditures are in line with technical progress and within the limits set in the project plan.

Program administration functions like day-to-day coordination of project team member activities, exception handling, contracting, personnel matters, and invoicing will be handled by the Program Manager. The project plan is a road map that will be used to guide us through the necessary steps. As with every project, the plan is modified as the project proceeds to address any requirements that are not clearly identified at the start of the project. Nonetheless, the methods for making such changes and for reporting the status of the project should be clear, as well as the mechanisms for approving any changes to the plan. Progress monitoring of the project is done through status reports and weekly team meetings and discussions. This approach facilitates the resolution of issues and ensures that implementation efforts are conforming to the plans outlined in the planning documents.

Global attempts to come as close as possible to the target dates and structure the program implementation around these dates. If the project is delayed unexpectedly, the contract manager will be consulted to evaluate the priorities in order to move the project forward in a positive manner.

Timeline

We are proposing to conduct the project over a two- year period beginning on January 1, 2004 and concluding December 31, 2005. Global Energy Partners is experienced in successfully managing projects on schedule and within budget requirements.

The following schedule of deliverables is proposed:

Deliverable 1. Marketing Plan:	January 31, 2004
Deliverable 2. Customer Recruitment Plan:	January 31, 2004
Deliverable 3. Quarterly Status Reports (11):	Starting 15th of April, 2004

The following task schedule is proposed based on a contract signature date of no later than December 15, 2003:

PROGRAM TIMELINE

	1Q04	2Q04	3Q04	4Q04	1Q05	2Q05	3Q05	4Q05
Task 1: Define Program	X							
Task 2: Develop & Implement Marketing Plan	X							
Task 3: Develop & Implement Customer Recruitment Plan								
Task 4: Survey & Qualify Participants								
Task 5: Provide Energy Audits & Economic Analysis								
Task 6: Conduct Training & Outreach								
1. Training								
2. Workshops								
Task 7: Certify Installations								
Task 8: Verify Savings								
Task 9: Provide Ongoing Program Management & Reporting	X	X	X	X	X	X	X	X

Section III. Customer Description

A. Customer Description

The proposed program will be targeted toward small- to medium-sized facilities, with this size defined as customers whose demand ranges between 20 kW and 500 kW. With 52 member agencies, OCCOG is the largest single-county council of governments in California. Its diverse membership and representation on the Board of Directors by jurisdictions, agencies, universities and the private sector is unmatched by any council of governments in the United States. The following provides a list of OCCOG's member agencies.

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Agencies:

Costa Mesa Sanitary District
East Orange County Water District
El Toro Water District

Emerald Bay Service District

Foothill/Eastern Transportation Corridor
Agency

Irvine Ranch Water District

Mesa Consolidated Water District
Moulton Niguel Water District
Orange County Sanitation District
Orange County Transportation Authority

Orange County Water District
Placentia Library District
Rossmoor/Los Alamitos Area Sewer
District

San Joaquin Transportation Corridor
Agency

Serrano Water District

Silverado-Modjeska Parks and Recreation
District

South Coast Water District
Trabuco Canyon Water District
University of California, Irvine

Cities/County:

City of Aliso Viejo
City of Anaheim
City of Brea
City of Buena Park
City of Costa Mesa
City of Cypress
City of Dana Point
City of Fountain Valley
City of Fullerton
City of Garden Grove
City of Huntington Beach
City of Irvine
City of La Habra
City of La Palma
City of Laguna Beach
City of Laguna Hills
City of Laguna Niguel
City of Laguna Woods

City of Lake Forest
City of Los Alamitos
City of Mission Viejo
City of Newport Beach
City of Orange
City of Placentia
City of Rancho Santa Margarita
City of San Clemente
City of San Juan Capistrano
City of Santa Ana
City of Seal Beach
City of Stanton
City of Tustin
City of Villa Park
City of Westminster
City of Yorba Linda
County of Orange

B. Customer Eligibility

Program participants must be small- to medium-sized SCE customers and must have loads between 20 kW and 500 kW. We're contacting the hard-to-reach customer by leveraging the well-respected and strongly-established relationships of OCCOG.

C. Customer Complaint Resolution

All customers will have access to the Global Program Manager's phone number, email address and fax number to contact Global with any questions or concerns. Global will do its best to resolve any disputes. If there is a situation that Global is having difficulty resolving, we will contact our assigned SCE contract manager to discuss alternatives.

D. Geographic Area

The proposed program will be targeted toward the member agencies of OCCOG in SCE's service territory.

Section IV. Measure and Activity Descriptions

Global's experience is that the measures listed below are very effective in increasing the energy efficiency of commercial and industrial facilities. It is also Global's experience that facilities feel comfortable with the market acceptance and results of these measures. Global will also consider additional retrofits on a case-by-case basis.

- HVAC system controls
- Lighting controls
- Motor controls
- High efficiency motor replacement

An additional benefit of these control retrofits is that they will equip the customer with the ability and flexibility to potentially participate in demand response activities in the future.

A. Energy Savings Assumptions

Global's experience with the CEC Demand Response Program and the CPUC Energy Efficiency Program for Oil Producers has provided actual cost and demand and energy savings data to be utilized as our energy savings assumptions. The consumption and savings numbers for the HVAC Controls measure is based on a field application at a 5,000-square-foot commercial building. This provides the scenario for a typical small-to medium-sized building with HVAC control opportunity. The consumption and savings numbers for the lighting control system are taken from a project involving a 121,000 square-foot warehouse. This application provides a

picture for a typical lighting control application for small- to medium-sized customers. The motor controls measure reflects the application of a variable-speed drive for a 60 kW direct drive motor that varies down to 52 kW. The example of the installation of a premium efficiency motor is from the replacement of a 50 HP standard motor with a 50 HP Premium Efficiency Motor. The following table provides the measures and associated conservative demand and energy reduction amounts.

Measures and Savings

Measure	End Use Energy Baseline Consumption (kWh)	Energy Savings (kWh)	Demand Savings (kW)	% Energy Reduction	Estimated Number of Units Installed
HVAC Controls	400,000	40,000	9	10%	200
Lighting Controls	500,000	50,000	10	10%	60
Motor Controls	374,000	50,000	8	13%	25
Premium Efficiency Motor	367,133	19,000	2	5%	30

The combination of actual practice and analytical research provides a conservative, reliable estimate of the measure impacts. The hours of operation will vary depending on whether we are dealing with a commercial or industrial facility. For the purposes of estimating energy savings, Global is using a conservative estimate of 400 hours per month of operation or 50% of the available hours for commercial facilities and 520 hours per month of operation or 77% of available hours for industrial facilities.

B. Deviations in Standard Cost-effectiveness Values

Net to Gross Ratio

Global is using a net-to-gross ratio of 0.83 for this program, as indicated in the Energy Efficiency Policy Manual, for HVAC, lighting and motor controls and high efficiency motors.

Effective Useful Life

The Effective Useful Life (EUL) is 15 years for high efficiency motors, variable frequency drives, and HVAC and lighting system controls. For this proposed program, Global is using a EUL of 15 years to maintain a conservative estimate.

Incremental Measure Cost

The measures implemented at each facility will vary on a case-by-case basis. Global's experience is that producers usually bundle projects together that may include the replacement of equipment and measures that may be eligible for an incentive. In order to be conservative Global is using the full estimated cost of the measure for the incremental measure cost.

C. Rebate Amounts

Global proposes to provide rebate amounts based on the annual energy savings of the project. Global will provide incentives for qualifying projects for participants on a first-come-first-served basis. Our experience has been that 50/50 cost sharing programs for energy conservation measures have worked very well. Global will not provide incentive payments that exceed a participant's project cost under any circumstances. Global will provide incentives based on actual savings of \$0.05 to \$0.08 per kWh up to 50% of the project cost for equipment and installation.

D. Activities Descriptions

The proposed program implementation plan includes activities that are not directly expected to produce measurable energy savings. The activities include customer recruitment, energy audits, customer outreach and training, installation certification, and EM&V activities. While these activities do not directly result in energy savings, the proposed program will not achieve the proposed goals without these activities.

Section V. Goals

Goal	2004	2005
Customer Recruitment (number of facilities)	4,000	2,000
Workshops	4	4
Survey/Qualification (number of facilities)	400	200
Energy Audits (number of facilities)	210	105
Certify Installations (number of facilities)	210	105
Demand Savings (kW)	720	1,450
Energy Savings (kWh)	3,000,000	7,640,600

The numbers used to determine the performance goals are estimated based on Global's engineering and actual field experience. The number of facilities affected and the savings per facility will vary depending on the exact retrofit implemented. It should also be noted that one agency will have a number of different facilities that will contribute towards the overall total of customer recruitment. We estimate that only a portion will reach the survey/qualification phase and a percent of those facilities will participate in the audits and implementation. Global has used conservative numbers for the purpose of the determining the performance goals and the evaluation of the program cost effectiveness.

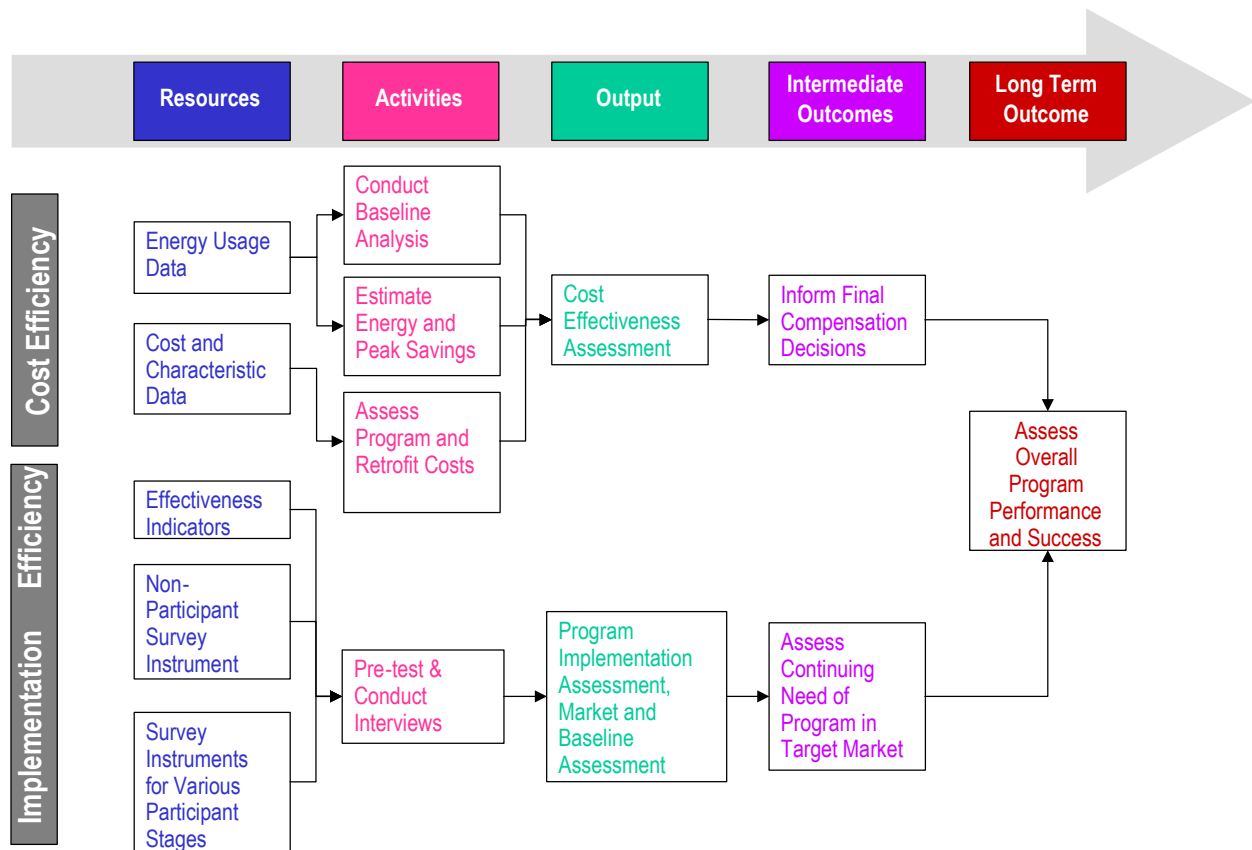
Section VI. Program Evaluation, Measurement and Verification (EM&V)

This Program's evaluation, measurement and verification (EM&V) activities will be undertaken by an independent contractor that has demonstrated experience in performing objective, defensible evaluation of EE programs in California. The Final EM&V Plan for this Program will be developed by the selected contractor, and will be based on the Energy Efficiency Policy Manual Version 2 and consistent with the guidelines in the International Performance Measurement and Verification Protocol (IPMVP). We provide below a summary of our suggested approach for evaluating this Program.

Energy Efficiency Program for Orange County's Hard-to-Reach Agencies

The Energy Efficiency Program for Orange County Hard-to-Reach Agencies will be a prescriptive hardware/incentive program targeting hard-to-reach small- to medium-sized non-residential customers.

The primary goal of this EM&V effort is to provide an objective assessment of the level of performance and success of the Program. Performance will be achieved through two activity areas: cost efficiency and implementation efficiency. Global's proposed methodology is based on satisfying the EM&V requirements specified by the CPUC. The diagram shown below describes the relationships among program evaluation elements and shows how the various pieces – resources, activities, output, intermediate outcomes, and long-term outcomes – fit together. The actual scope of the selected EM&V contractor's activities will also depend on the available schedule and budget for the Program EM&V activities.



For the cost efficiency analysis, the EM&V contractor will conduct tasks such as the following:

Energy Efficiency Program for Orange County's Hard-to-Reach Agencies

- Evaluate Methodology of Calculating Energy Savings. Conduct an initial review, or audit, of Global's energy savings estimation methodology.
- Provide Interim Energy Savings Estimates for Participants. Once a critical mass of participant's data has been collected, the EM&V contractor will review Global's energy savings calculations, according to Option B of the IPMVP Manual. Global anticipates that data from five to ten participants will be a sufficient to conduct this review.
- Conduct Cost-Effectiveness Analysis. At the end of the Program, the EM&V contractor will determine the Program's cost effectiveness using the relevant tests referenced in the CPUC's August 2003 Energy Efficiency Policy Manual, Version 2.
- Progress Documentation. On a monthly and quarterly basis, coordinated with Global's reporting schedule, the EM&V contractor will provide memos documenting our progress and findings to date. The EM&V contractor will report overall findings in a final report delivered at the end of the evaluation.

To complete these tasks, the EM&V contractor will use the following resources:

- Energy Usage Data. Energy usage data will be provided by Global and will include pre- and post-implementation energy, and demand usage for each participating facility.
- Cost Data. Global will provide the following cost data:
 - o Costs associated with measures
 - o Program administration costs
 - o Any costs paid by the facility
- Utility Avoided Cost Data. To conduct the cost-effectiveness analysis, the EM&V contractor will obtain avoided costs for SCE. If this information is not readily available, the EM&V contractor will use general avoided costs from the workbook.

To complete these tasks, the EM&V contractor will conduct the following activities:

- Conduct Baseline Analysis. The market baseline for the program participants will be created for all participants, using the pre-implementation operating conditions, demand, and energy usage for each measure type. Global will assist in providing some of these data.
- Estimate Level of Energy and Peak Demand Savings Achieved. One of the primary goals of this evaluation is to assess the energy and demand impacts of the Program. The EM&V contractor will review Global's calculation methodologies and relevant data. The EM&V contractor will also review the appropriateness of the methodologies. This review can commence prior to the estimation of the first set of participants' savings, if feasible. Based on the data provided by Global, the EM&V contractor will estimate the energy savings and peak demand impact of the Program in accordance with CPUC mandates. Utilizing the baseline and post-installation data collected, the EM&V contractor will estimate the energy savings achieved by the installation of energy-efficiency measures. Depending on the degree of data manipulation, it may be necessary for the EM&V contractor to use a sampling approach to determine energy impacts.

For the implementation efficiency analysis, the EM&V contractor will conduct tasks such as the following:

- Design Surveys. During the fourth quarter of 2004 (assuming a January 2003 start for the Program), the EM&V contractor will survey an agreed-upon number of participants.
- Conduct First Half of Surveys. During the second quarter of 2004, the EM&V contractor will survey half of the sample. Given the hard-to-reach nature of these customers, the EM&V contractor may interview several key industry stakeholders such as vendors and agency representatives.
- Write Memorandum of Findings. After conducting the first half of the interviews, the EM&V contractor will write a memorandum on the preliminary findings. This memo will contain preliminary recommendations for implementation improvement.

- Conduct Remaining Surveys. During the fourth quarter of 2004, the EM&V contractor will survey the second half of the sample, and, if useful, other stakeholders.
- Report on Findings. On a monthly and quarterly basis, coordinated with Global's reporting schedule, the EM&V contractor will provide memos documenting the implementation efficiency progress and findings to date. The EM&V contractor will report overall findings in a final report delivered at the end of the evaluation.

To complete these tasks, the EM&V contractor will develop the following tools:

- Effectiveness Indicators. Before designing survey instruments, the EM&V contractor will create indicators of effectiveness that can be utilized in both participant and non-participant surveys, including satisfaction with marketing materials, recruiting process, and rebate levels. Specifically, the EM&V contractor will design the surveys so that they indicate whether the target market will participate in the Program in the future and which incentives were the primary motivators for participation.
- Non-Participant Survey Instrument. The EM&V contractor will work with Global to design a survey instrument for potential participants who were informed about the Program, but who either have not yet chosen to participate or have decided to not participate. The EM&V contractor will obtain a list from Global of organizations that were targeted in the customer recruitment process. The survey instrument will include topics such as:
 - o How they heard about the Program
 - o What were the more and less effective areas of the recruiting process
 - o How they assessed the initial and final workshops (if attended)
 - o Which Program features interested them
 - o Whether they have chosen to not participate or are still undecided and why
 - o What level and type of incentive would have led them to participate or would be likely to lead them to future participation

Energy Efficiency Program for Orange County's Hard-to-Reach Agencies

- o What energy efficiency measures they have implemented since hearing about the Program and, if any, whether the decision to do so was influenced by the Program
- o What equipment they had prior to hearing about the Program
- o Any suggestions they may have for Program improvement
- Participant Survey Instrument. The EM&V contractor will design a survey instrument for Program participants to understand their satisfaction with both the process and the installed energy-efficiency products. Questions to be asked will include:
 - o How they heard about the Program
 - o What were the more and less effective areas of the recruiting process
 - o How they assessed the initial and final workshops (if attended)
 - o Which Program features interested them
 - o What ultimately made them decide to participate
 - o Whether they have implemented any other energy efficiency measures since hearing about the Program
 - o What energy efficiency measures they had before installing the equipment
 - o How satisfied they are with the installed equipment
 - o Any suggestions they may have for Program improvement
- Confirmation of Installed Measures. As part of the participant interviews, the EM&V contractor will ask what measures were installed under the Program and confirm that those stated are the same as in the documentation provided by Global.

To complete these tasks, the EM&V contractor will conduct a series of interviews. Interviewees will be selected from lists provided by Global and other industry sources. The EM&V contractor will select a random sample of non-participants for these interviews. The EM&V contractor will conduct interviews via phone whenever possible, but email submission will be accepted if that is their preference. The number of surveys conducted by the EM&V contractor will be consistent with the California and International Performance Measurement and Verification Protocols.

Potential EM&V Contractors

Quantec Consulting

6229 SE Milwaukie Avenue

Portland, Oregon 97202

Quantec is the approved EM&V subcontractor for Global's current CPUC non-utility program.

Nexant, Inc.

101 Second Street, 11th Floor

San Francisco, California 94105-3672

Nexant provided EM&V services to the California Energy Commission (CEC) Peak Load Reduction Program. Nexant also performed EM&V work on many of the CEC program elements funded under AB970, SB5X and AB29X.

Section VII. Qualifications

A. Primary Implementer

Headquartered in Lafayette, California, with affiliate offices nationwide, Global combines the forces of two of the nation's leading energy and architectural organizations—the Electric Power Research Institute (EPRI) and DMJM H+N. Known throughout the world as cutting-edge science and technology consortia, EPRI has partnered with DMJM H+N to play a major role in the commercial building energy industry. In addition, Global recently acquired the NEOS Corporation, a California-based consulting firm with over 17 years' experience and a recognized leader in the development and application of energy-related strategies and technologies.

EPRI brings world-class expertise in energy efficiency technology research and development, utility system operations, technology applications analysis, cost benefit/economic analyses, and market transformation studies. DMJM H+N, one of the world's premier engineering management and construction companies, adds critical expertise in managing major public and private energy-related programs. Global provides in-depth project management, program design, development, administration, and performance assessment experience. Combining these exceptional capabilities with experience related to large energy-efficiency projects and in the

commercialization of energy technology, results in an integrated team of unparalleled capabilities.

Over the past 17 years the Global team has attained an international reputation for its work in the energy efficiency, renewable energy and distributed generation fields. Global employs professionals trained in engineering, economics, planning, environmental science, computer science, business administration, marketing, and physical and social sciences.

A thorough understanding of both public and private sector operations enables Global to focus on workable solutions and implementation. This means not merely studying a client's problems, but offering innovative and technically sound solutions, and assistance in implementing those solutions. Global brings a fresh approach to the restructured energy industry – an approach that focuses on overcoming market barriers and making efficient technology attractive to energy users. Global has extensive expertise in the following areas:

- Managing and administrating programs
- Developing strategic and tactical marketing and management plans
- Transforming the energy marketplace
- Performing quality engineering and economic analyses
- Solving large energy consumers' challenges
- Minimizing environmental impacts of energy use
- Supporting energy education and training
- Providing technical regulatory assistance

Global has a proven, long-term track record of successful management, implementation and administration of large energy related programs. The following is a brief synopsis of the most relevant projects for this proposal.

GLOBAL ENERGY PARTNERS, LLC – PROJECT SUMMARIES

Energy Efficiency Study Category	Client Name Name of Study Timeframe	Project Description
Program Management and Implementation	California Public Utilities Commission Energy Efficiency Program for Oil Producers in Southern California (2002 - present)	<p>Global was selected by the California Public Utilities Commission to manage a rebate program targeted toward small to medium size onshore producers who are willing to optimize their pumping equipment and reduce electric consumption. The incentive program covers up to half of the investment required to make corrective actions. Global's team of field specialists is helping interested producers reduce their electricity consumption and lower their operation expenses. Global is estimating that at least 100 wells may qualify for this rebate program. The program is targeting energy efficiency measures including:</p> <ul style="list-style-type: none"> • Well pumping optimization through pump-off controllers • Load balancing on rod pumps • Proper sizing of water injection pumps • Variable frequency prime movers <p>Global's program is designed to achieve a minimum of 1.76 MW in electric peak demand savings through the implementation of these energy efficiency measures</p>

GLOBAL ENERGY PARTNERS, LLC – PROJECT SUMMARIES

Energy Efficiency Study Category	Client Name Name of Study Timeframe	Project Description
Demand Response Program and Evaluation Assessment	California Energy Commission Peak Load Reduction Program (2001 - 2002)	Global implemented and evaluated a program throughout the state of California that delivered demand curtailments in response to curtailment calls initiated by the state's electrical grid authority. Global developed the program around its Power-pact brand name and associated website www.power-pact.com . The program addressed strategies that reduce power demand attributable to air conditioners, lights, motors and other electrical loads from commercial, manufacturing and state/local government facilities. Measurement and verification of savings was accomplished through the assessment of online utility meter data, and engineering simulation models were run to validate the demand-response impacts. An automated notification platform was developed using web-based applications and telecommunication devices that activated both voluntary and automatic curtailments during peak demand periods. Global's system also provided pricing signals to customers in support of the State's pilot real-time pricing program. The program was funded through a grant from the California Energy Commission per Assembly Bill 970 and Senate Bill 5X.
Project Administration and Operation	San Diego Regional Energy Office (SDREO) Demand Reduction Program (2002 - 2003)	Under subcontract, global supported the implementation of SDREO's 2002 energy management program for the California energy commission. In support of SDREO's 8 mw demand reduction goal, Global's responsibilities included marketing and customer recruitment, engineering analysis, it infrastructure development, customer hardware and software, equipment design and installation, customer training, testing and verification, and ongoing support.

GLOBAL ENERGY PARTNERS, LLC – PROJECT SUMMARIES

Energy Efficiency Study Category	Client Name Name of Study Timeframe	Project Description
Project Administration and Operation	California Independent System Operator (ISO) Demand Reduction Initiative (2001)	Global served as a load reduction aggregator for the California ISO in their Demand Relief Program (DRP) for Summer 2001. Global reserved 15 MW of demand relief for the DRP, relying on three major customer bases in the commercial, industrial, and institutional sectors. Global established itself as a load aggregator under the auspices of the CEC demand response program. Since many of the customers participating in the CEC program were also interested in receiving financial incentives in exchange for their voluntary curtailments, their inclusion in the ISO DRP program was a natural extension of the overall demand relief initiatives in California during 2001.
Energy Auditing	Department of Energy (DOE) Federal Energy Management Program (FEMP) (2000 – present)	Global was selected by the Department of Energy (DOE) to work with Federal Agencies to identify cost-effective energy efficiency, water conservation, and renewable energy measures that could be undertaken and developed into projects. Global provides SAVEnergy survey services in four of the six DOE regions and has provided these services to a variety of different federal agencies. Under the SAVEnergy program, Global provides comprehensive building energy surveys, water conservation surveys, renewable energy screening, and analyses of other specific energy consuming systems such as HVAC, lighting, heat pumps, motors, and boilers. Global also provides energy engineering and economic analysis, identification of energy conservation measures (ECM's), life cycle cost analysis, and project cost estimating of recommended ECM's.

GLOBAL ENERGY PARTNERS, LLC – PROJECT SUMMARIES

Energy Efficiency Study Category	Client Name Name of Study Timeframe	Project Description
Potential Assessment	Alliant Energy/Interstate Power & Light (IPL) IPL Energy Efficiency Plan Filing (2002 - present)	Global prepared a long-range energy efficiency plan for the IPL subsidiary of Alliant Energy as part of their regulatory requirements for the Iowa Utilities Board (IUB). The project involved developing estimates of long-term energy efficiency program savings for all customer segments, including residential, commercial, industrial and agricultural. Savings potential forecasts included technical, economic and achievable for these customer segments. Included in the assessment was a detailed specification of the program designs, a comprehensive cost-effectiveness analysis, and generation of savings goals and programmatic budgets. Project support currently entails regulatory tasks related to completion of data requests from the IUB and the various intervenor groups, as well as expert testimony by principal Global staff.
Integrated Resource Plan	Great River Energy Assessment of Energy and Capacity Savings Potential (2003 - present)	Global is conducting a comprehensive assessment of energy efficiency potential for this generation and transmission cooperative utility serving most of rural Minnesota. In addition, Global's economic analysis will provide direct input to Great River's integrated resource plan that it is filing with the Minnesota Department of Commerce. The assessment also includes development of avoided capacity and energy costs, using various production costing models.

GLOBAL ENERGY PARTNERS, LLC – PROJECT SUMMARIES

Energy Efficiency Study Category	Client Name Name of Study Timeframe	Project Description
Program Review and Benchmarking	Alliant Energy/ Wisconsin Power & Light Company (WPL) WPL Shared Savings Program Review (2002 - present)	Global conducted a review of Alliant Energy's Wisconsin Shared Savings program. The program provided commercial, industrial and agricultural customers with a turnkey performance contracting service. Customers enjoyed the benefits of energy saving investments with the proceeds of the savings used to pay back the capital cost of the investments. In the review, Global conducted a benchmarking assessment, comparing Alliant's program efforts to similar offerings from utilities around the country. In addition, Global conducted an economic analysis of the program using cost-effectiveness software tools. The project culminated in the development and delivery of expert testimony by Global principal staff during the November 2002 rate hearings before the Wisconsin Public Service Commission.
Energy Efficiency Potential	Hawaiian Electric Company (representing the 3 investor-owned utilities in Hawaii) Assessment of Energy Efficiency Potential (2003 - present)	Global is conducting an assessment of energy efficiency and demand response resource potential for Hawaii. The assessment is a prelude for integrated resource plans (IRP) that will be developed by each of the utilities per regulatory requirements.

GLOBAL ENERGY PARTNERS, LLC – PROJECT SUMMARIES

Energy Efficiency Study Category	Client Name Name of Study Timeframe	Project Description
Program Assessment	CALMAC Summary Study of California 2001 Energy Efficiency Programs (2002 - 2003)	Global conducted an assessment of the program impacts, budgets, cost effectiveness and savings persistence across all programs offered by various entities within California during the program year 2001. The Summary Study was funded by the California Measurement Advisory Council (CALMAC). Broad-based and comprehensive, it covers all programs funded by various sources during the 2001 program year, including the public goods charge, AB 970 and SB 1 5X.
Technology Assessment and Screening	Iowa's Investor-Owned Utilities (Alliant, UtiliCorp, MidAmerican, United Cities Gas) Assessment of Energy and Capacity Savings Potential in Iowa (2001 - 2002)	Global conducted this collaborative study in order to enable each of the four sponsoring utilities to have the necessary foundation that would allow for them to develop individual energy efficiency plans, consistent with each company's goals and objectives. The assessment involved analysis of over 400 energy efficiency measures, spanning the residential, commercial and industrial sectors. The assessment had three primary objectives: <ul style="list-style-type: none"> • Development of base case assessments and end-use characteristics for a variety of market segments, drawing upon a combination of data provided by the utilities and high-quality secondary data sources. • Assessments of energy-efficient technologies including measure identification, screening and impact development, drawing from the vast pool of secondary public information. • Assessments of selected energy-efficient technologies that replace the primary energy source (either from gas to electric or from electric to gas).

GLOBAL ENERGY PARTNERS, LLC – PROJECT SUMMARIES

Energy Efficiency Study Category	Client Name Name of Study Timeframe	Project Description
Potential Assessment	State of Illinois Benefits and Implications of Residential Energy Efficiency Programs (2001)	Global identified potential energy efficiency improvements that can reduce electricity consumption for Illinois residential customers and estimated the potential benefits and costs of implementing state programs to bring about such improvements. This work was in preparation for the expected public benefits programs that will be implemented in Illinois as a result of electricity deregulation in that state. The project involved a benchmark assessment of prior experiences, an economic analysis of the potential benefits resulting from the programs, and suggested program designs that will result in the most efficient delivery to the consumer markets.
Program Marketing and Management	Electric Power Research Institute Technology Application Centers (2001 - present)	Global manages, operates and provides technical direction for seven key EPRI end-use technology application centers throughout the United States. They are: <ol style="list-style-type: none"> 1) Healthcare 2) Manufacturing Industries 3) Agriculture and Food Technology Alliance 4) Municipal and Industrial Water & Wastewater 5) Process Industries 6) Commercial and Residential Markets 7) Market-Driven Demand Response

GLOBAL ENERGY PARTNERS, LLC – PROJECT SUMMARIES

Energy Efficiency Study Category	Client Name Name of Study Timeframe	Project Description
Assessment of Program Delivery	Sempra Energy Solutions Segmentation Studies and Market Planning (1997-98)	Global supported Sempra on various market transformation studies that helped shape the marketing strategies for this new energy service company. The studies focused on assessing market and customer-specific data on energy consumption, customer needs and issues, and decision-making processes. Work also involved the development of pricing and risk management strategies. Global also developed a software tool for Sempra that simplified the application of the DOE-2 engineering simulation model. The tool is being used to assess the cost-feasibility of various energy efficiency products and services.
Potential Study	State of Hawaii DSM Resource Assessment (1995)	Global completed a project for the Department of Business, Economic Development and Tourism (DBEDT) to develop a DSM resource assessment model for each of the islands in Hawaii. The DSM resource model was linked to the State of Hawaii's energy forecasting mode, ENERGY 2020. As part of the model development work, Global staff performed DOE-2 building simulation modeling to determine typical building energy use and DSM measure impacts in the residential and commercial sectors of the State. This information, along with DSM impact information developed outside of DOE-2 modeling, was part of the DSM database that is accessed by the DSM resource assessment model.

B. Subcontractors

Orange County Council of Governments. While OCCOG is technically a subcontractor, they will be a major Team participant in the success of this Program. OCCOG is the largest single-county council of governments in California, is a voluntary advisory association representing member local governments and agencies throughout Orange County seeking cooperative sub-

Energy Efficiency Program for Orange County's Hard-to-Reach Agencies

regional and regional planning, coordination and technical assistance on issues of mutual concern. With 52 member agencies, OCCOG is the largest single-county council of governments in the State of California.

OCCOG's membership is unique among other council of governments in the nation. Its member agencies include 34 cities, the County of Orange and representation from transportation agencies, sanitation districts, water districts, as well as the local air district. OCCOG also includes on its Board of Directors university and private sector representatives. OCCOG unifies Orange County so that it can speak with a collective voice on important sub-regional and regional issues, such as energy, air quality, transportation and demographics. OCCOG works efficiently by utilizing existing resources, collaboratively finding new ways to perform needed activities for less, while eliminating duplication of effort.

OCCOG is involved in a number of successful community-based programs. The following provides a brief overview of a sample of the types of programs OCCOG has been involved with. OCCOG has developed and implemented an aggressive Alternative Fuel Vehicle and Infrastructure Strategy Program, designed to provide information and support to Orange County fleets considering the deployment of alternative fuel vehicles and related infrastructure. The Program began in September 2000 and continues to offer OCCOG member agencies with valuable assistance at no charge.

Assistance to Orange County Fleets

Orange County fleets are provided individual assistance upon request. Assistance includes: evaluating a specific fleet and making recommendations for fuel and vehicle type; help with understanding and reviewing funding applications; matching projects to funding sources and arranging vehicle loans.

Alternative Fuel Vehicle and Infrastructure Workshops

Alternative Fuel Vehicle and Infrastructure Workshops are generally conducted twice a year for all Orange County cities, special districts and identified public fleets. The workshops cover topics such as: rule and regulation requirements; survey results;

funding sources for alternative fuel vehicle and infrastructure; available alternative fuel vehicles; and infrastructure developers.

Alternative Fuel Vehicle Loan Program

Under the Alternative Fuel Vehicle Loan Program, local governments and other fleets in Orange County can utilize alternative fuel vehicles in their fleets for specific periods of time to demonstrate and test the technology. Vehicles include light-, medium- and heavy-duty alternative fuel vehicles. All delivery and pick-up arrangements, insurance information and refueling training are provided to the fleets by OCCOG.

Fleet Surveys

Orange County fleets, both public and private, have been surveyed regarding current fleet composition and alternative fuel procurement plans for the next five fiscal years. Survey results are used to: create a baseline of current alternative fuel vehicle use; understand current infrastructure and plan future infrastructure; provide individual city assistance; develop partnerships between jurisdictions; and assist fleets with funding opportunities.

Clean Cities Coalition Designation

OCCOG is in the process of seeking designation from the U.S. Department of Energy as a Clean Cities Coalition. Clean Cities is a voluntary, locally-based partnership of stakeholders who wish to expand the use of alternative fuel vehicles and related infrastructure.

This brief overview provides a snapshot of OCCOG's existing capabilities and demonstrates their strength as a partner for this program.

C. Resumes or Description of Experience

Patricia Hurtado. Ms. Hurtado is Vice President at Global Energy Partners, where she manages the firm's technical staff. She manages and conducts program design, implementation, and performance assessment; strategic planning; market evaluation; energy efficiency measure

Energy Efficiency Program for Orange County's Hard-to-Reach Agencies

analysis; building analysis and engineering modeling; distribution and retail sector analysis; and privatization evaluation studies for the firm's utility clients.

Prior to joining Global and NEOS, Ms. Hurtado was an independent consultant in South America for three years where she was project manager for studies to restructure the energy distribution sectors of several public utilities, evaluate the technical and economic potential of privatization, and design privatization procedures for electric utilities. Ms. Hurtado was an associate with Barakat & Chamberlin for four years where she provided demand-side management analysis, utility resource and strategic planning, forecasting, and rate design and analysis for the firm's utility clients.

Ms. Hurtado earned an M.S. in Mechanical Engineering from Stanford University and a B.S. in Mechanical Engineering from the University of Los Andes in Bogotá, Colombia. She is a registered Professional Engineer (P.E.) in California.

Ingrid Bran. A Senior Associate with Global Energy Partners, Ms. Bran has over fourteen years of experience in the energy sector and manages analyses that focus on technical and economic aspects of the industry. She brings expertise in the areas of load research, end-use data analysis, sampling and surveys, economic analysis, and market research. She has recently been involved in the management of projects to provide an assessment of the role of demand-side management (DSM) on greenhouse gas emissions, to implement load reduction programs in California, and to create a five-year R&D plan for the California electronics industry.

Prior to joining Global, Ms. Bran worked for over eight years at the Electric Power Research Institute (EPRI) in several management capacities. Her most recent responsibilities involved managing client relations, technology transfer and customer service in Spain, the Caribbean, and Latin America. At EPRI she also was Manager of R&D Planning and Analysis for the Customer Systems Group, preparing and presenting strategic R&D forecasts for short-, medium-, and long-term horizons in consultation with client utility advisors.

Energy Efficiency Program for Orange County's Hard-to-Reach Agencies

Ingrid worked during four years at Southern California Edison (SCE) developing, analyzing, and reporting load research data in support of rate, regulatory, conservation/load management, system planning, and regulatory requirement activities. She created computer programs to access, validate, and statistically analyze electricity data and authored analytical reports on various electricity customer groups and programs including real-time pricing. Ms. Bran was also a Senior Analyst in economic consulting at Micronomics, Inc., and Market Planning and Research Analyst, and International Economist at Union Bank.

Ms. Bran holds a Bachelor's degree in Economics from California State University, Fullerton, and a Master's degree in Economics from the University of California, Berkeley.

Mark Reedy. Mr. Reedy is a Senior Associate with Global and has over 23 years of electric utility experience in areas such as planning, customer service, rates, marketing, and energy efficiency programs. He provides experienced project management for assignments involving site surveys, program implementation, rate analysis, rate design, program design, distributed generation, energy conservation measure analysis, building analysis and engineering modeling, and privatization studies.

Mr. Reedy is currently Global's project manager for the California Public Utilities Commission's energy efficiency program targeted toward small hard-to-reach oil producers in southern California. In addition, Mr. Reedy is the project manager for DOE's Federal Energy Management Program (FEMP) SAVEnergy energy audit program and was the operations manager for Global's demand response program for the California Energy Commission. Prior to joining Global, Mr. Reedy was the Manager of rates and regulatory affairs for Plains Electric Generation and Transmission Cooperative where he supervised a multi-functional team to develop revenue requirements, cost-of-service studies, rate designs, and testimony associated with rate case filings. For fifteen years, Mr. Reedy held positions of increasing responsibility at Wisconsin Electric Power Company where he implemented a \$60 million per year energy efficiency program utilizing 350 utility and contractor staff, developed innovative business plans, designed electric rates, and prepared economic analyses.

Energy Efficiency Program for Orange County's Hard-to-Reach Agencies

Mr. Reedy earned a B.S. in electrical engineering from the University of Colorado and is a registered Professional Engineer (P.E.) in Wisconsin.

Bettina Foster. Ms. Foster is a Senior Associate with Global Energy Partners. Her focus is on strategic planning, program marketing, administration and implementation. Bettina has over eighteen years of experience in commercial, industrial and healthcare energy projects. She has been involved in all phases of project implementation from initial analysis and concept design to marketing, construction, metering and monitoring.

Currently, Ms. Foster is the project coordinator for the California Public Utilities Commission's Energy Efficiency Services for Electricity Consumption and Demand Reduction in Oil Production in the State of California. Responsibilities include overseeing the development of program materials, customer recruitment, site audits, reporting, commissioning and verification of the retrofit installations. Bettina is also coordinating the efforts of numerous subcontractors to reach program goals. Previously, Ms. Foster worked on demand response programs for the California Energy Commission and the San Diego Regional Energy Office. She was responsible for development of program marketing materials, customer recruitment, and coordination of the many aspects of these programs.

Before joining Global, Bettina worked as the Director of Business Development of the West Coast for TXU Energy Services and before that as a National Account Manager for ServiceMaster Energy Services. Other projects include project management and engineering services for oil refineries and high tech industries including construction management, titanium refining and ultrasound applications. She has also performed technical support work, including cost estimating and materials procurement for cogeneration, rail, and other heavy industry construction projects.

Ms. Foster holds a B.S. in Mechanical Engineering from the University of Colorado in Boulder.

Russell Goold. Mr. Goold is an Analyst with Global Energy Partners. Mr. Goold's current projects include managing customer relations for the California Public Utilities Commission's energy efficiency services program for California oil producers. Working closely to recruit

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customers and initiate participation, Mr. Goold collaborates with participants to identify energy efficiency improvement projects and determine eligibility for rebates. For this project, his duties include initial site assessments, contract preparation, resolution of metering and other technical requirements, and maintenance of the customer database.

Mr. Goold's past project experience includes managing customer relations for demand response programs, conducting project research on green power in deregulated states, analyzing energy quality needs in wastewater treatment and air cargo carriers, and tracking state and federal legislation pertaining to distributed generation.

Prior to joining Global, Mr. Goold worked as an analyst with the California Integrated Waste Management Board in its Targeted Implementation Assistance group. Working directly with jurisdictions under Board-mandated compliance, Mr. Goold negotiated and managed work plans designed to improve jurisdiction performance, incorporate new solid waste prevention programs, and educate the public on solid waste reduction efforts.

Mr. Goold holds a B.S. in Environmental Policy Analysis and Planning, with an emphasis in Energy, from the University of California at Davis.

Richard Milward. Mr. Milward is a senior associate at Global Energy Partners, where he provides project management and analysis for energy-related technical assistance efforts conducted for public and private entities. With twelve years of experience in the field of economic research and analysis, his expertise addresses such contemporary industry topics as integrated resource planning, market and technical analyses, load forecasting, demand- and supply-side resource benefit/cost analyses, and the application of electrotechnologies in the healthcare field.

Mr. Milward is currently managing the EPRI/Global Healthcare Program. Member electric utilities fund this program, which develops product and service bundles to help utility account managers and marketing professionals add value to their healthcare accounts. The Healthcare Program recently published the *Simplified Guide to Energy Efficiency in Hospitals*, which is

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gaining recognition as a valuable and essential tool for all hospital O&M staff. Mr. Milward also edits the quarterly "Power Prescription for Healthcare" and "Commercial & Residential Power Tools" newsletters.

For the past three years, Mr. Milward has also taught statistics, algebra, and quantitative research methods for the Northern California Campus of the University of Phoenix.

Prior to working for Global, Mr. Milward worked for PG&E Energy Services as a Load Modeling and Forecasting analyst, where he analyzed the characteristics and patterns of electricity demand and consumption of commercial and industrial customers to implement and maintain Energy Services' electric load forecasting system.

Mr. Milward worked for NEOS Corporation as a staff analyst for seven years before his tenure at Energy Services. With NEOS Mr. Milward examined the economic and technical feasibility of renewable and alternative energy resources including wind energy, biomass, and hydropower.

He holds a B.A. in Economics from San Diego State University and an M.S. in Agricultural Economics with emphasis in Quantitative Analysis from the University of California, Davis.

Omar Siddiqui Omar Siddiqui is a Senior Associate at Global with experience in financial analysis, technology assessment and marketing, and management consulting. Among his recent projects is an impact evaluation study for the California Measurement Advisory Council on energy efficiency programs administered in California in 2001, to develop best practices for program documentation and savings methodologies. Mr. Siddiqui has assessed new product and service opportunities for electric utilities such as Arkansas Electric Cooperative Corporation and WE Energies to increase revenues and/or enhance customer value through electro-technologies. He has designed energy efficiency programs for the Tennessee Valley Authority and conducted nationwide benchmarking assessments of energy efficiency programs for Interstate Power & Light and Wisconsin Power & Light. He also co-authored a marketing kit to assist utilities in promoting alternative medical waste treatment technologies to their healthcare customer base.

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Prior to joining Global, Mr. Siddiqui worked as an investment banker at J.P. Morgan, where he conducted due diligence on technology companies and earned Series 7 and Series 63 certifications from the National Association of Securities Dealers. Previously, he was an Associate at the management consulting firm A.T. Kearney, where he managed supply chain initiatives for Fortune 500 clients that resulted in over \$20 million in combined annualized savings. He also co-authored a Resource and Marketing Guide for EPRI on promoting electro-technologies to the multi-family residential market. He completed an internship at Dell Computer while attending graduate school. Mr. Siddiqui began his career as an Analyst at Barakat & Chamberlin, where he provided analytical support for demand-side management (DSM) planning, program design and electro-technology assessment services.

Mr. Siddiqui holds a B.S. in Chemical Engineering from Stanford University and an M.B.A. from the Anderson School at U.C.L.A.

Neil Podkowsky. Mr. Podkowsky is an Analyst with Global Energy Partners, providing quantitative support and research assistance on energy privatization studies, demand relief programs, utility market restructuring, and building energy use simulation. In addition, he is experienced with conducting commercial and industrial building energy audits and assessing energy conservation measures for audited sites.

At Global, Mr. Podkowsky has provided technical, engineering, and analytical support for the California Energy Commission's Demand Response Program implementation. The project involved extensive DOE-2 building simulations, meter data analysis, rate schedule analysis, and demand relief calculation. He has performed rate schedule and demand response impact analyses for EPRI's Real-Time Pricing Study. This included simulation of demand reduction strategies under different pricing schemes for a variety of commercial facilities throughout California. He assisted in the quantitative evaluation of Alliant Energy's Demand Side Management Programs including determinations of program impact, feasibility, and potential. Mr. Podkowsky has also led audit teams, analyzed energy conservation measures, and composed energy audit reports for various federal government facilities for the Federal Energy Management Program (FEMP).

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Prior to joining GEP, Mr. Podkowsky was a project analyst for Cannondale Associates, providing quantitative and qualitative marketing support to a variety of Fortune 100 clients.

Mr. Podkowsky holds a B.A. in Economics from Washington University in St. Louis.

Section VIII. Budget

**Budget Summary for the Energy Efficiency Program for
Orange County's Hard-to-Reach Agencies**

Budget Category	Total	Percentage of Total Budget
Administrative		
Managerial and Clerical Labor	\$220,000	7.40%
Human Resource Support and Development	\$0	0.00%
Travel and Conference Fees	\$107,800	3.62%
Overhead (General and Administrative) - Labor and Materials	\$63,336	2.13%
<i>Total Administrative Costs</i>	\$391,136	13.15%
Marketing/Advertising/Outreach		
	\$144,550	4.86%
Direct Implementation		
Financial Incentives to Customers	\$1,700,000	57.14%
Activity - Labor	\$460,000	15.46%
Installation and Service - Labor	\$10,000	0.34%
Hardware and Materials - Installation and Other DI Activity	\$30,000	1.01%
Rebate Processing and Inspection - Labor and Materials	\$70,000	2.35%
<i>Total Direct Implementation</i>	\$2,270,000	76.31%
Evaluation, Measurement and Verification		
	\$117,440	3.95%
Financing Costs		
	\$51,768	1.74%
Total Budget	\$2,974,894	