

PGE2042 Heavy Industry Energy Efficiency—Lockheed Martin Aspen Systems Corporation

2006 - 2008

1. Projected Budget*	\$ 8,000,000
2. Projected Net Impacts	
MWh	16,800
MW (Summer Peak)	4
Therms	1,760,000
3. Cost Effectiveness*	
TRC	1.77
PAC	2.98

*Does not include PG&E contract administration costs, which are estimated at 5 percent of expected contract value and included at the portfolio level.

4. Descriptors

Market Sector: Nonresidential/Industrial/Process/Fabrication

Classification: Third Party

Status: New

Main Elements

Lockheed Martin Aspen Systems Corporation,* serving as the Program Manager, will deploy Project Champions to identify and facilitate implementation of major process-oriented and other energy-efficiency upgrades for PG&E's very large (>500 kW) heavy industry and water/waste-water customers. The Project Champions are industry experts who will lead our team's efforts and provide design assistance, engineering support, and financing guidance. These activities will enable customers to reduce power demand, save energy and water, improve productivity, reduce emissions and waste materials, and become more competitive. The Program Manager will complete 60 projects over 33 months, reducing demand by a total of at least 5,000 kW and saving annually at least 16,800 MWh and 1.76 million therms of natural gas.

The benefits mirror PG&E's 2006–08 objectives:

- ◆ Rapid startup based on a proven program design that has achieved significant energy savings, demand reductions, and process/productivity efficiencies for our west coast heavy industry clients.
- ◆ Bottom-line enhancement—along with increased competitiveness and decreased environmental impact—for PG&E's large customers.

* Aspen Systems Corporation was acquired by Lockheed Martin Corporation on January 26, 2006, and is now a wholly owned subsidiary of that corporate organization.

- ◆ Increased customer acceptance, satisfaction, and cost savings through integration of energy options from PG&E and its trade allies and national, state, and private sector energy conservation programs.
- ◆ Cross-selling of PG&E and California Public Utilities Commission (Commission)/California Energy Commission (CEC) programs through press releases, case studies, best practices articles, and Web links.
- ◆ Training of customers in new and emerging energy-saving technologies as a key element of our marketing strategy.

Targeted Industry Types and Sizes

Lockheed Martin/Aspen proposes to target large (greater than 500 kW demand) Fabrication, Process, and Heavy Industrial Manufacturing customers for process-oriented projects that will increase productivity and energy efficiency.

Interventions and Strategies To Be Used

Lockheed Martin Aspen will use a combination of design assistance and financial incentives to recruit participants and facilitate the completion of projects that reduce energy use and achieve other goals (e.g., customer satisfaction, improved plant productivity, and economic viability).

Expected Timeframe When Energy Savings Will Be Delivered

Because most projects will be large, they will require at least six months to complete once a customer commits funding. For this reason, we expect energy savings will occur during 2007 and 2008.

5. Statement

The design addresses the need of California's industrial plant managers to satisfy corporate goals for reducing energy and water expenditures and greenhouse gas emissions. In addition, this offering will provide them with the following:

- ◆ A comprehensive solution with productivity enhancement, ability to respond to Critical Peak Pricing (CPP) and other demand-response events, and opportunities to take advantage of all financial incentives offered by PG&E, the State, and the Federal Government (e.g., incentives associated with renewable energy and Combined Heat and Power (CHP) systems, including tax-reducing incentives such as exemptions, credits, and accelerated depreciation).
- ◆ Assistance in applying to participate in all programs for which the firm is eligible.
- ◆ Technical assistance in prioritizing opportunities, documenting the benefits that justify corporate investments in plant upgrades, selecting technologies and vendors, and commissioning completed installations.

6. Rationale

Lockheed Martin Aspen's proposed approach for PG&E is modeled after a similar heavy industry program we have implemented in Oregon for the past three years and will continue to work on during 2006–08. In addition, SCE has selected Lockheed Martin Aspen to conduct a similar but larger program in SCE's service area over the same period that PG&E's program is scheduled to operate. We expect several synergies among the three programs that will help to make the two California programs successful.

In addition, we will focus on identifying and addressing *the specific barriers* that exist for each customer, which may include the following:

- ◆ The customer's staff may be too busy with ongoing duties to investigate opportunities for reducing energy costs and improving productivity. For these customers, we will perform a detailed inspection and audit of the facility and prepare a master list of opportunities, complete with estimated cost savings and time and cost to complete.
- ◆ The customer may already have had a study and an action plan prepared, but has not proceeded with any upgrades because staff have not had time to investigate suppliers and contractors and prepare purchase specifications. We will perform these services for the customer.
- ◆ The customer may face financial barriers. We will provide financial incentives to reduce the payback period.
- ◆ The customer may not know about the various programs that provide financial incentives or how to participate in them. We will make this information available and handle all the paperwork for the customer.

7. Outcomes

The major objective of the program is to meet the energy savings target set for the program. In addition to the kW, kWh, and therm savings targets, the following non-energy outcomes will be targeted:

8. Strategy

The program design assesses and promotes all savings and productivity-enhancing opportunities for which customers may be eligible, including demand-response, CHP, and renewable-energy technologies that extend beyond those for which this program can provide incentives. We will provide free services, such as an inspection of plant processes and equipment by industry-specific experts, and prepare plant-specific recommendations—based on engineering calculations—for reducing energy expenditures and improving productivity. All staff will be thoroughly trained to investigate demand-response, CHP, and renewable-energy opportunities, in addition to opportunities focused on energy efficiency and productivity improvements.

9. Objectives

Industrial process projects tend to have long development periods. Understandably, manufacturing managers approach process changes cautiously. It takes time to prove that quality and productivity will increase or remain unaffected, and often there is an additional lag time as managers work through their capital budget cycles to fund major non-crisis-driven upgrades that the program advocates.

Lockheed Martin Aspen's milestone schedule assumes that 80 percent of the project commitments will not be implemented until the subsequent program year. That means our marketing efforts are going to be heavily loaded in Program Years 1 and 2. We do not expect any new commitments will be required after the second quarter of 2008. Furthermore, we have assumed that 10 percent of committed projects will not be completed during the 33-month program period. As Program Manager, we will track all contacts, commitments, installations, and other intermediate progress points in our tracking system, and will use these to measure compliance with program objectives. In addition to the annual energy savings objectives identified in Item 2, the other objectives are:

- ◆ Number of initial presentations to prospective participants during each calendar quarter.
- ◆ Number of commitments from prospective participants to proceed with preparing a site-specific Energy Cost Savings Master Plan during each calendar quarter.
- ◆ Number of completed specific Energy Cost Savings Master Plans during each calendar quarter.
- ◆ Number of committed energy savings projects during each calendar quarter.
- ◆ Annualized energy savings represented by projects completed during each calendar quarter.

10. Implementation

Overview

A critical element of this approach relates to project selection. After careful analysis of PG&E's service area and customer base, we have determined that we will best meet PG&E's objectives by targeting its large industrial customers in the following industries:

- ◆ Manufacturing.
- ◆ Oil and Gas Extraction.
- ◆ Water Supply, Water Treatment, and Waste Treatment.

With these industries targeted for energy-efficiency upgrades, Lockheed Martin Aspen will, in collaboration with the AS Account Managers, select specific companies to target and determine who will call to set up a meeting. At the meeting, we will describe the program's purpose and scope, emphasizing the technical services. This will include:

- ◆ Identifying all opportunities and assessing their economic feasibility.
- ◆ Assisting the customer in applying for incentives, and suggesting equipment vendors to be considered.
- ◆ Monitoring installation to help ensure quality and conformance with specifications.
- ◆ Participating in commissioning and training plant personnel to be "energy champions."
- ◆ Determining whether an "opportunities audit" has already been performed.
- ◆ Asking whether there is a corporate mandate to reduce operating costs and what the corporation's economic criterion is for investing in upgrades that reduce operating costs and increase productivity.
- ◆ Advising the customer that M&V is required to determine actual savings.

Following the initial meeting, the Project Champions will perform the following tasks:

- ◆ Identify energy-efficiency and other opportunities (e.g., demand-response, CHP, renewable energy systems) at the customer's facility and then assess the economics of these opportunities—considering Federal and State tax benefits and financial incentives provided via other programs.
- ◆ Offer financial incentives, if needed to meet the company's investment criterion, that reduce the payback period of implementing opportunities that reduce energy (electricity and gas) use.
- ◆ Assist the customer in applying for incentives via other programs.
- ◆ Execute agreements with customers that itemize the measures they will install and the financial incentives to be provided after installation.
- ◆ Assist customers in selecting competent vendors and contractors and then monitor the installation of equipment and participate in its commissioning.
- ◆ Send or present incentive check(s) to the customer. (PG&E will also be invited to participate in the presentation ceremony when unusually large checks are involved.)

The financial incentives will be proportional to expected energy savings (i.e., \$/MWh and \$/therm saved) and capped based on a percentage of implementation costs to avoid overpayment. We will focus on improving productivity while also improving efficiency. We will emphasize process upgrades (e.g., piping system optimization, new process technologies) instead of isolated equipment upgrades.

In keeping with PG&E's intention to maximize customer satisfaction, Lockheed Martin Aspen will, with AS Account Managers, serve as a single point-of-contact with customers for technical matters, making them aware of all programs that provide opportunities to reduce the energy-related production costs for which they are eligible. We will assess opportunities for the customers to install (1) renewable-energy systems, (2) demand-response enabling technologies, and (3) all other CEC- and PG&E-sponsored programs. However, only opportunities that reduce electricity and natural gas usage will be eligible for financial incentives. When PG&E customers express interest in pursuing opportunities outside the scope of the proposed program, we will assist them in applying for financial incentives offered by the other programs. We will be committed to minimizing lost opportunities and improving customer productivity and efficiency.

Detailed Scope of Work

Lockheed Martin Aspen's Scope of Work describes the activities to be performed on each task during the Development and Implementation phases.

Development Tasks

Task 1: Establishing the Project Infrastructure

Task 1a: Develop Project Management Plan

Description: The Project Management Plan will provide the roadmap for how Lockheed Martin Aspen will manage the project and meet all the requirements set forth by PG&E. The plan will identify the project organization, including subcontractors, and delineate roles and responsibilities, lines of authority, and measures of accountability. It will specify the methodologies for financial management, reporting, quality assurance, subcontractor management, contingency planning and risk mitigation, and security procedures. Finally, the Project Management Plan will include a Work Breakdown Structure (WBS) identifying all deliverables (for the Development as well as Implementation stages), lead person(s) responsible, and due dates.

Task 1b: Establish Communications Mechanisms with PG&E and its Customers

Description: To strengthen program performance and problem solving as well as to provide a clear understanding of client expectations, Lockheed Martin Aspen will establish several methods for communicating with PG&E and its customers. These methods will include:

Meetings with PG&E. An initial kickoff meeting will be held with Lockheed Martin Aspen, PG&E program management, and all available PG&E AS Account Managers. The purpose of this meeting will be for key PG&E and Lockheed Martin Aspen program staff to meet each other, determine how program management and program delivery communications will be coordinated (e.g., with the PG&E Program Manager, AS Account Managers, and Project Champions), and to define critical program startup tasks and deliverables, requirements, and schedules. Regular meetings will also be held with appropriate PG&E staff to review program status, discuss and resolve issues of concern, etc.

Project Management Web Site. Lockheed Martin Aspen will produce a Web site to facilitate communications and information sharing among and between Lockheed Martin Aspen staff, subcontractors, and PG&E staff. The Web site will serve as a central repository for all information associated with this program, including online versions of program forms, detailed explanations of each step of program participation, contact numbers of all key program personnel, an explanation of program incentives and other project financing resources, case studies, promotional material, and a list of qualified vendors that have been pre-screened by Project Champions, PG&E, and Lockheed Martin Aspen to work on various types of industrial projects.

Task 1c: Develop Procedures Manual

Description: Lockheed Martin Aspen Energy and Environmental Business Practice is an ISO-9001 certified organization, which requires each program we manage to develop and maintain, through strict version-control procedures, a complete Procedures Manual, which describes in detail each program process and procedure for program delivery, management, and administration. During Program Development, process flow diagrams will be developed for program delivery and incentive and forms processing. These diagrams will detail each step of the process, which will correspond to specific written procedures. If and when changes to program requirements are identified, all affected program processes will be changed accordingly, updates will be made, and version-controlled written (electronic and hardcopy) documents that comprise the manual will be amended as necessary.

The manual will be compiled as soon as the individual version-one copies of each process are completed during Program Development. The processes (for which multiple processes will in some cases be written) include:

- ◆ Contact Coordination with PG&E AS Account Managers.
- ◆ Incentive and Forms Management and Processing.
- ◆ Program Delivery Operations.
- ◆ Walk-Through Inspections, Short Studies, and Detailed Technical Studies.

Task 1d: Design Project Tracking System

Description: Lockheed Martin Aspen has developed a Project Tracking System (PTS) to support energy efficiency programs similar in scope to what we are proposing for PG&E. The PTS is designed to track all data relating to a project, from the time the data are identified at a customer site through each milestone. Information documented in the PTS includes:

- ◆ Customer profile information.
- ◆ Studies performed.
- ◆ Study report delivered.
- ◆ Project application made.
- ◆ Project application approved.
- ◆ Project completed.
- ◆ Post-installation inspection performed.
- ◆ Post-installation inspection performed.

By carefully tracking the date of each milestone, Lockheed Martin Aspen will generate aggregated reports to determine the progress of the program relative to program production goals, such as projects identified, projects committed, (number, total energy savings, incentive

dollars), projects installed (number, total energy savings, incentive dollars), and the aggregate time required to move from one project milestone to another. These reports will enable Lockheed Martin Aspen to manage program activities and identify areas that can be approved to improve production and ensure meeting program goals. Lockheed Martin Aspen management and administrative staff will maintain the PTS and update contents daily.

Task 1e: Secure Commitments from Project Champions

Description: Leads will be generated by Project Champions, who will be specialists in a customer's industry and processes and will possess the expertise needed to support every step of a process modification at an industrial customer's facility. Project Champions will include Lockheed Martin Aspen employees, contingent hires, and subcontractor staff.

The program's delivery strategy will rely on targeting specific industries and focusing the majority of the program's technical and monetary resources to generate high-yield projects within these industries. Specific sales goals will be assigned (e.g., number of sales contacts, number of committed projects, number of installed projects, amount of energy savings (kWh, kW, and therms), and incentive dollars) to each Project Champion for each targeted industry. These goals will form the basis for evaluating and managing the activities of each Project Champion throughout the program.

Task 2: Establishing the Marketing/Outreach Approach

Task 2a: Develop Marketing Strategy

Description: The proposed program delivery strategy relies heavily on targeting specific high-use customers for process-oriented projects that yield maximum energy savings potential. This strategy will enable PG&E to meet the energy savings goals for this program with a minimum number of projects.

Complementing this program delivery strategy will be a marketing strategy that focuses on the role of the Project Champions. These industry experts will be at each targeted customer site for every step of each project—including the initial program presentation, project identification and study, project management support, project installation inspection, and project application support. They will use the marketing materials (described below) to educate and inform customers of program elements and potential for success. We anticipate that, given the limited number of targeted customers, success will depend on a significant percentage of targeted customers committing to projects.

Task 2b: Develop Program Materials

Description: Program materials to be developed include forms and marketing materials. Program forms will address:

- ◆ Site study approval.

- ◆ Energy bill access authorization.
- ◆ Incentive application.
- ◆ Inspection report.
- ◆ Project completion.

Lockheed Martin Aspen will also design, develop, produce, and distribute the following marketing materials, each containing a common design and color scheme to facilitate brand identity:

- ◆ **PowerPoint Template**, which will be developed for initial program presentation by Project Champions and easily customizable by for specialized industries.
- ◆ **Program Brochure**, which will explain the program, incentive levels, eligibility requirements, application process, and project installation deadlines.
- ◆ **Project Financing Cut Sheet**, which will describe all project financing options available to program participants. In addition to program incentives, the cut sheet will include incentives available through other PG&E programs, financial institutions specializing in energy-efficiency financing, as well as State-, Federal-, and privately funded incentive and financial support offerings.
- ◆ **All Programs Cut Sheet**, which will provide a detailed description of all energy efficiency and demand response programs offered by PG&E.
- ◆ **Program Packet Folders**, which will be used to hold all program written materials for easy distribution to customers and vendors.

Program Implementation Tasks

Task 1: Conduct Marketing

Description: Lockheed Martin Aspen will perform the following steps to market the Heavy Industry program:

- ◆ **Deliver Initial Program Presentations.** The program will be presented to each targeted customer, usually by a Project Champion in conjunction with the customer's PG&E AS Account Manager. Each presentation will include a PowerPoint presentation and a packet containing program materials (described in Program Development Task 2b above). The purpose of each presentation will be to generate enough interest with key customer decision makers to begin identifying potential projects at the customer site.
- ◆ **Deliver Study Reports to Customer.** To identify worthwhile projects to the customer, we will assign and manage the performance of studies of various potential projects (see Program Implementation Task 2, Conduct Studies and Identify Projects, below). Following approval of the report produced from these studies, the report will be presented to the customer by the Project Champion and (as desired) by the PG&E AS Account Manager. During these presentations, Lockheed Martin Aspen will attempt to solicit a commitment on the part of the customer to install the proposed project.
- ◆ **Provide Marketing Strategy Updates.** As noted previously, the marketing strategy relies heavily on Project Champions delivering the program to targeted industrial customers

through face-to-face meetings with potential eligible customers. In conjunction with reviews of Project Champions' performance and achievement of project objectives, Lockheed Martin Aspen will regularly examine this marketing strategy with PG&E and the Project Champions to identify tactical changes to meeting marketing goals.

- ◆ **Monitor Project Champion Performance.** Each Project Champion will be required to provide a detailed list of their existing contacts within their specialized industry. Additional contact information will be provided via communication with PG&E AS Account Managers. Project Champion performance will be monitored on a weekly basis based on these lists of eligible potential customers and each Project Champion's established sales goals.
- ◆ **Provide Program Materials Updates.** Lockheed Martin Aspen will update materials at the halfway point of the program, if necessary, to improve communication with targeted customers based on our experience up to that point. Changes will not be made if the program has already generated enough committed projects to meet program goals and/or exhaust the program incentive budget. If changes are made, new materials will be produced in quantities sufficient to accommodate program marketing requirements.
- ◆ **Produce Case Studies.** At least four case studies will be developed and produced during the program to assist in program marketing. These case studies will be written by a Lockheed Martin Aspen staff writer and include one or more professional photographs and/or graphics. PG&E will receive a draft copy of each case study for review before production. Lockheed Martin Aspen will, at PG&E's direction, work with PG&E AS Account Managers to identify case study sites, material, and customer representatives to be featured in the study. Approved case studies will be included in literature delivered to customers and third-party vendors and also posted on the program Web site and any other site specified by PG&E.

Task 2: Conduct Studies and Identify Projects

Description: Lockheed Martin Aspen will conduct onsite inspections and/or technical studies of varying degrees of complexity and thoroughness for assessment participants to identify and specify potential energy-saving projects. These studies will be defined as:

- ◆ **Walk-Through Inspections.** The inspection is usually performed during the initial site visit when the customer is introduced to the program. The walk-through audit is cursory in nature and intended to identify in a general manner potential energy savings projects that may exist at a customer facility.
- ◆ **Existing Customer Project Review.** Many customers will have identified process-improvement projects prior to being contacted, through previous energy audit studies and internal studies. As part of the initial program presentation visit, the Project Champion will solicit project ideas from the customer. Existing projects will be given strong consideration for implementation since they have already been studied (often eliminating the need for additional costly technical studies) and typically have strong customer support (eliminating the need to "sell" customer on implementing the project).
- ◆ **Short Studies.** These studies identify energy savings projects by the Project Champion or the customer that require some technical analysis to determine feasibility but not an in-depth examination associated with detailed project specifications. The purpose of the short study is to provide estimates for energy savings and project costs, without monitoring existing

equipment or developing detailed design specifications. A short study will include a report detailing the study findings and presented to the customer in hardcopy and via oral presentation.

- ◆ **Detailed Technical Study.** This study identifies energy savings projects by the Project Champion or the customer that require detailed technical examination to determine feasibility, including monitoring existing equipment, developing detailed project specifications, and developing more robust equipment cost and energy savings estimates than typically associated with a short study. This study's report will detail study findings and be presented to the customer in hardcopy and via oral presentation.

Each study (except walk-through inspections) will entail the following steps:

1. **Study Request Review.** Each study proposed by a Project Champion will be reviewed by the Program Manager. He will determine if a study should be performed and, if so, which type of study it will be (e.g., Short or Detailed Technical Study).
2. **Work Order.** Before a study can be performed, a not-to-exceed time and materials work order must be generated and sent to the individual assigned to perform it (frequently but not always, the individual performing the study will be the Project Champion who proposed it). Lockheed Martin Aspen will carefully track all work orders.
3. **Perform Study.** The individual assigned to the study will perform the study according to procedures developed during Program Development.
4. **Review Study Report.** Each study will include a report that adheres to the format developed during Program Development. The report will first be delivered to the Program Manager who will review the report for completeness, accuracy, and adherence to the standard format. The report will also be screened for cost-effectiveness and incentive amounts. The individual performing the study will be required to modify the report per the Program Manager's instructions until it is approved for delivery to the customer.

Task 3: Provide Implementation Assistance and Inspection

Description: In Task 3, Lockheed Martin Aspen will provide implementation assistance and inspections and manage the pipeline to ensure the program achieves its energy savings goals.

Achieve Program Energy Savings Goals. Lockheed Martin Aspen plans to achieve the following program project goals:

- ◆ 20.0 percent Percentage of Projects Installed in Same Year as Committed (Years 1 and 2 only).
- ◆ 70.0 percent Percentage of Projects Installed Year After Committed (Years 1 and 2 only).
- ◆ 10.0 percent Percentage of Committed Projects Never Installed.
- ◆ Net-to-Gross Ratio: 0.80.
- ◆ Energy savings of 350,000 Average kWh Per Project.

- ◆ Energy savings of 83 Average kW Per Project.

The turnaround time for industrial process increases often takes many months from consult to completion. Therefore, committed projects in one program year comprise a significant number of the projects installed in the next program year. For this reason, committed projects are as important to track in gauging program performance relative to goals as are installations.

Lockheed Martin Aspen will carefully track program performance for energy savings and number of projects toward PG&E's goals for the program.

Execute Program Plan. During the implementation period, Lockheed Martin Aspen will perform and track the activities listed in the Work Breakdown Schedule, ensuring that completion dates for targeted milestones and for deliverables are met. We will also review and update the following elements of our program:

Provide Project Implementation Support. Once a project application is approved, the customer can begin project installation. Lockheed Martin Aspen will support the customer through the entire project installation process. This support will include:

- ◆ **Project Supplier Support.** Customers will require varying degrees of support in selecting equipment suppliers and installation contractors. As necessary, we will assist customers in:
 1. Identifying potential suppliers and contractors.
 2. Developing bid requests.
 3. Evaluating bids.
 4. Selecting successful bids.
 5. Writing project supply contracts.
- ◆ **Installation Oversight.** As a project is being installed, we will provide periodic oversight at the customer facility to ensure all equipment being installed meets the design specification and other installation criteria are being met.
- ◆ **Post-Installation Review.** All program projects must undergo and pass a post-installation inspection to ensure program quality for both PG&E and its customers. A qualified engineer will be assigned to perform each inspection. The inspection results will be reviewed by the Program Manager. A project inspector will be required to return to a customer facility to collect any additional information identified by the Program Manager during the review process. Any failed inspections will be delivered to the customer with specific instructions on the steps necessary to correct the deficiencies. Lockheed Martin Aspen will help facilitate these requirements when possible.
- ◆ **Project Completion Support.** Lockheed Martin Aspen will collate and reconcile all project invoices and ensure the project completion documentation is in order before it is submitted for processing. All completed projects will be processed in the shortest possible time to ensure prompt delivery of the incentive check to the customer. Lockheed Martin Aspen will carefully monitor and seek to minimize the time between Project completion documentation delivery and the delivery of the incentive check.

Provide Pipeline Management. To ensure that program performance goals are attained, Lockheed Martin Aspen will carefully track the number of program presentations, studies, and committed and installed projects as well as the average and total energy savings for committed and installed projects. These data will also be collected for each Project Champion.

This process is known as program “Pipeline Management.” Lockheed Martin Aspen will assign an initial value to each ratio listed below. These values will be used to derive a target number for each phase of program delivery, enabling us to quickly identify areas of program delivery that are deviating from goals. Managing each part of the “pipeline” ensures that the output of the pipeline (i.e., installed projects) will meet program goals.

1. Presentation-to-Study Ratio.
2. Presentation-to-Commitment Ratio.
3. Presentation-to-Installation Ratio.
4. Study-to-Commitment Ratio.
5. Study-to-Installation Ratio.
6. Commitment-to-Installation Ratio.
7. Average Energy Savings per Project.
8. Average Incentive Per Unit Energy Savings Commitment/Installed.

Task 4: Process and Track Incentive Applications

Description: This task includes the processing of forms and incentive payments and tracking and reporting project data.

Provide Forms and Incentive Payment Processing. All forms and incentive payment requests associated with a project will be processed and tracked according to procedures developed in conjunction with PG&E during Program Development. Dates for when each form was received, approved, and (for incentive payments) delivered will be tracked and the time between each milestone tracked by Lockheed Martin Aspen. Where the processing and/or delivery time is deemed in need of improvement by Lockheed Martin Aspen and/or PG&E, adaptive management strategies will be developed and implemented.

Maintain Project Tracking Data and Reporting. Each project will be tracked in the PTS. The project data elements to be tracked will be mutually agreed on during Program Development. These data elements will include specific project milestones, which will include a date the milestone was reached and when it was completed. Thus, various aspects of project performance can be identified. These milestones will most likely include:

- ◆ Program Presentation Date.
- ◆ Project Study Performance Date.
- ◆ Study Completion Date.
- ◆ Study Report Approval Date.
- ◆ Study Presentation Date.

- ◆ Project Application Submittal Date.
- ◆ Project Application Approval Date.
- ◆ Project Completion Documentation Submitted.
- ◆ Project Completion Approval Date.
- ◆ Post-installation Inspection assigned Date.
- ◆ Post-installation Approval Date.
- ◆ Incentive Check Approval Date.
- ◆ Incentive Check Release Date.

Task 5: Task Implementation Management

Description: Lockheed Martin Aspen will perform and track the activities in the Work Breakdown Schedule, ensuring that completion dates for targeted milestones and for deliverables are met. We will also review and update the following elements of the program:

Conduct Regular Program Meetings and Provide Program Communication..

Update Procedures Manual.

Update Project Tracking System:

11. Customer Description

Describe the customers targeted by the program.

[Provide a detailed description of the targeted customer/market segments, any customer size requirements, and/or rate schedule requirements.]

Lockheed Martin Aspen proposes to target large (i.e., greater than 500 kW demand) “Fabrication, Process, and Heavy Industrial Manufacturing” customers for process-oriented projects that will increase productivity and energy efficiency.

PG&E has defined the “Fabrication, Process, and Heavy Industrial Manufacturing” segment to consist of the following important submarkets:

- ◆ Manufacturing Industries NAICS 31–33 except:
 - 311, Food.
 - 312, Beverages/Tobacco.
 - 3254, Medicines.
 - 334, Computers and Electronic Products.
 - 3364, Aerospace.
- ◆ Oil and Gas Extraction (NAICS 211).
- ◆ Water Supply, Water Treatment, and Wastewater Treatment (NAICS 2213).¹

The segment also includes other mining, utility, and construction industries.

In consultation with PG&E AS Account Managers, we will select specific plants to target based on the AS Account Managers’ familiarity with their customers’ operations. Based on our current analyses of available information concerning PG&E’s “Heavy Industrial” market segment, we expect our primary targets are likely to be facilities that:

- ◆ Produce paper and paper products.
- ◆ Produce chemicals and compressed gases.
- ◆ Produce plastic and rubber products.
- ◆ Refine petroleum and produce asphalt paving.
- ◆ Produce cement, concrete, and glass.
- ◆ Manufacture metal products and machinery.
- ◆ Pump and treat domestic water supplies.
- ◆ Pump and treat sewage.
- ◆ Extract oil and gas from the earth.

¹ As described in RFP Exhibit 10 and PG&E’s July 15, 2005, filing, “Additional Program Details.”

12. Customer Interface

Describe how the program will be presented to the customers to ensure that the EE programs are easy for customers to use. Describe process for customer enrollment and participation.

[Describe the delivery channels through which the program will be presented (e.g., customer representatives, contractors, energy service companies, partnerships, and consultants).]

This section describes how Lockheed Martin Aspen will tailor our existing approach to screen, identify, and recruit PG&E customers in the proposed segments. All customer interface activities will be coordinated with PG&E's AS Account Managers.

Customer Screening

Customer Eligibility Criteria. To participate in PG&E's program and receive incentives for the implementation of energy-efficiency measures, prospective customers must meet the following criteria:

- ◆ Payment of the Public Goods Charge (PGC) through their electric rates or the Gas Surcharge (GS) through their natural gas rates.
- ◆ Peak demand of at least 200 kW in large manufacturing facilities and wastewater treatment centers.
- ◆ No incentives or services received for the same measures from another utility, State, or local program.

Lead Generation. Leads will be generated through two avenues: PG&E's AS Account Managers and the Project Champions, who are specialists in a customer's industry and therefore know—and are known by—the customers to be targeted.

As a specialist in a customer's processes, the Project Champion can gain a customer's confidence, whereas those with lesser credentials cannot. Only someone with topnotch credentials can quickly capture the trust of all levels of a customer's decision making team by displaying an intimate understanding of the technical, operational, and business impacts (including benefits) of a process modification.

The success of the program hinges on selecting the right Project Champion for each targeted industry. The Project Champion must succeed not only in winning the customer's confidence initially (to identify projects and elicit a commitment to implement them) but also in supporting each project selected and implemented, because a majority of the program's new business in future years will come from satisfied customers whose experiences with the program exceeded expectations.

Because the Project Champions are critical to program success, the support they receive will be comprehensive. Lockheed Martin Aspen will ensure that they:

- ◆ Understand the program's objectives and benefits.
- ◆ Have the resources necessary to analyze opportunities and communicate the value of actions throughout the customer's company.

Lockheed Martin Aspen will enhance the Project Champions' effectiveness by providing them with all the information, marketing, management, and administrative support necessary to create a customer program experience that is truly exceptional.

Customer Enrollment

The customer will first be enrolled as an Assessment Participant. At this stage, the customer will allow our technical experts to obtain data and information and subsequently identify and assess opportunities to increase productivity and reduce energy use at the customer's facility. We expect that Assessment Participants will already be aware of many opportunities but did not pursue them because of two barriers: (1) staff did not have time to thoroughly develop and assess an idea or obtain quotes for implementation and (2) the expected payback period (or return on investment or other financial benchmark) did not meet the organization's investment criterion. Our program is designed to overcome both barriers.

After opportunities are identified and assessed, they will be reviewed with the customer and prioritized. Lockheed Martin Aspen will indicate the incentives that can be provided, from this program as well as others. When capital availability is an issue, we will assist in arranging a loan. Customers will be asked to commit to a "Five-Year Plan" for implementing improvements. The customer and Lockheed Martin Aspen will sign an agreement whereby the customer commits to proceeding with the first set of efficiency/productivity upgrades and Lockheed Martin Aspen commits to paying incentives on completion of installation and commissioning of the new systems/equipment.² At this point, the customer becomes an Implementation Participant.

After an Implementation Participant Agreement is signed, Lockheed Martin Aspen will prepare an Initial Assessment of Energy Savings for the set of measures to be installed and will assist the customer, as necessary, in completing the installation promptly and properly. Assistance may include helping customers identify (1) firms that prepare specifications and construction drawings, (2) equipment vendors, and (3) competent contractors. We will monitor the specification-writing, design, and installation activities to ensure the terms of the agreement are fulfilled and the recommended efficiency measures operate properly. We will also participate in or witness the final step of measure commissioning. We will then make a Final Assessment of Energy Savings based on "as-built" conditions and any performance tests conducted as part of commissioning. This final assessment will be the basis for determining (1) the incentive to be paid to the customer and (2) the final claim of savings to be entered into the Project Tracking System and used to prepare the associated invoice to PG&E.

² Lockheed Martin Aspen will provide the customer with the information and data needed to apply for available incentives from other programs. In other words, Lockheed Martin Aspen will help other programs to meet their goals while we work to meet PG&E's program goals. Customer satisfaction will always be paramount.

Program outreach will be conducted through direct contacts with customer decision makers. In addition to keeping PG&E's AS Account Managers fully informed of our planned contacts, we will ask them to (1) participate in outreach by attending meetings and (2) provide contact information for, and other information about, promising program candidates.

Program outreach efforts will be led by the Project Champions (senior engineers) previously described. Some of these Project Champions will be on Lockheed Martin Aspen's staff, and others will be subcontractors. The group of industry specialists committed to our project team who live in PG&E's service area will be primarily specialists in the industries that are most prevalent (in terms of number of facilities) among PG&E's large industrial customers. When different specialties are needed to serve the less prevalent industries (e.g., lumber and paper mills, petroleum refineries), we will call on experts working on a similar industrial energy-efficiency program that we manage for the Energy Trust of Oregon and one that we anticipate managing at Southern California Edison. (This synergy is one concrete advantage of selecting Lockheed Martin Aspen to manage the Heavy Industry Program.)

Program outreach will primarily consist of face-to-face meetings with prospective participants at the customers' offices, because busy executives and production managers are unlikely to attend seminars or meetings attended by multiple candidates. In addition, we will work with PG&E to develop a suitable program brochure and Web site. We also request that a link be provided to the program's Web site from PG&E's Web page that lists nonresidential programs.

We are able to implement a rapid startup by virtue of already having done this for a similar program in Oregon. We already have written procedures and flowcharts for administrative and sales processes, easy-to-use forms, and a comprehensive tracking system.

As a final point, it has been our experience that ensuring customer satisfaction pays dividends over the long term. When the customer has confidence that a firm is pursuing the customer's best interests, the customer is likely to follow the firm's recommendations concerning the measures being promoted. Most large customers will continue to be Implementation Participants in subsequent years as they execute their Five-Year Plans. Thus, the first agreement to install efficiency measures will likely not be the last.

Project Application Process. When a customer's project has been fully identified and the financing arrangements agreed upon, a Project Application Form will be completed. Although the final design of the form will be determined during project design, it will contain all terms and conditions for participation and include the following information:

- ◆ Customer profile information.
- ◆ Project description summary.
- ◆ Project cost, energy savings, and incentive summary.
- ◆ Project technical support documents (may include any or all of the following): short study report, detailed technical study report, customer-supplied project study.
- ◆ Project financing plan.

The Project Champion will submit the completed Project Application Form to the Program Manager, who will review it for completeness and accuracy. If additional information or documentation is needed before the application can be processed, the Program Manager will obtain it through the Project Champion. The Program Manager will review and approve the final Project Application Form and forward it to both the PG&E AS Account Manager and the PG&E Project Manager. Once the application is approved by PG&E, the customer will be notified via e-mail to proceed with project implementation. The application data will be entered into the Project Tracking System, and hard copies will be placed in a project file.

All proposed forms and processes have been successfully implemented for the Energy Trust of Oregon's Production Efficiency program. These forms and processes will serve as the basis for developing a tailored approach for PG&E's heavy industry customers.

Coordination With PG&E

Given the size of the customers we intend to target, we understand that PG&E staff may have well-established relationships with these customers and will need to be apprised of proposed energy-efficiency projects, implementation status, achievements, and any other items of concern.

Before contacting customers, our Program Manager will provide a list of potential customers to PG&E's Project Manager and AS Account Managers. On a weekly basis, we will inform the AS Account Managers and PG&E's Project Manager of upcoming customer visits, installations, and follow-ups. If the AS Account Manager wants to be part of any of the face-to-face customer meetings, we will coordinate scheduling with him or her.

13. Energy Measures and Program Activities

13.1 Prescriptive measures

Lockheed Martin Aspen's program has no prescriptive measures.

13.2 kWh Level Data.

The measures installed under the program will be site-specific, custom measures.

13.3 Non-energy Activities

13.3.1 End-use Load (not applicable).

13.3.2 Targeted Sector (Heavy Industry).

13.3.3 Activity Description

Lockheed Martin Aspen's activities include performing site-specific studies ("audits") to identify actions that will save energy and improve the facilities productivity, reduce emissions and scrap, and meet corporate goals related to process energy use.

13.3.4 Quantitative Activity Goals (not applicable).

13.3.5 Assigned Attributes of the Activity (not applicable).

13.4 Subcontractor Activities

Lockheed Martin Aspen will use six to eight subcontractors to fulfill Project Champion duties. We anticipate that two of these subcontractors will be BacGen and Intergy, firms that specialize in improving the energy-use efficiency of water/waste-water plants (see below). The other subcontractors are likely to include some of the Project Champions we will use on SCE's similar program. In addition, we will use some additional local firms.

BacGen Technologies

Intergy Corporation

13.5 Quality Assurance and Evaluation Activities

Quality Assurance Activities

An important part of Lockheed Martin Aspen's Energy and Environmental Services Business Practice's operations and procedures are certified under ISO 9001:2000, an internationally accepted standard for quality. For the proposed PG&E Heavy Industry Program, Lockheed Martin Aspen will follow procedures described in the *Program Operating Manual*. These procedures will include explicit requirements for items such as:

- ◆ Maintaining proper dress and conduct when visiting customer facilities.
- ◆ Collecting data at customer facilities.
- ◆ Reviewing and approving work products, such as the analyses that support recommended upgrades to customer facilities, before they are presented to customer representatives.
- ◆ Reviewing and approving (1) all proposed financial incentives to customers and (2) the actual payment of incentives after upgrades have been completed and commissioned.
- ◆ Monitoring equipment installation activities and other inspections.
- ◆ Conducting M&V activities (see below).
- ◆ Conducting customer-satisfaction interviews after each project is completed. Two interviews will be conducted with key decision makers at each participating facility:
 - The first, shortly after a project is completed, which focuses on satisfaction with the interactions between the customer and members of the Lockheed Martin Aspen team.
 - The second, six months later, which focuses on satisfaction with the performance of equipment that was installed.

The results from these interviews will be submitted to PG&E.

- ◆ Reporting and tracking customer complaints and their resolution.
- ◆ Reporting progress to PG&E.

Lockheed Martin Aspen is not purchasing or installing measures, but we will take steps to ensure that measures purchased and installed by customers meet or exceed PG&E's product and

installation standards or other appropriate standards for similar measures, where such standards exist.

Exclusion of Free Riders

Lockheed Martin Aspen understands that the Commission is especially interested in methods used to establish the Net-to-Gross (NTG) ratio to be used to calculate program savings.³ To ensure that the program's actual performance shows high benefit/cost ratios, Lockheed Martin Aspen will strive to identify and exclude the undertaking of projects that are "free riders" (i.e., likely to be done even if the program did not offer assistance). During the initial meeting with the customer's key decision makers and staff, we will ask whether previous studies have been performed to identify efficiency-upgrade opportunities. If previous studies have been performed, we will obtain detailed information concerning the customer's plans for pursuing each opportunity. (Each opportunity corresponds to a specific upgrade or set of program measures.) We will document the specific reasons that customers have not already implemented each measure. If the customer indicates that a measure had not been approved by higher management, we will probe to obtain the reason(s) approval was withheld and the likelihood that the measure would be implemented during the 2006–08 time period. A measure will not be eligible for assistance under the program if there is a greater than 50 percent probability of its moving forward without the program's assistance.

We will make all information obtained available to PG&E and also to whichever firm is eventually selected to perform an independent Impact Evaluation of the program.

Measure-Verification Activities

As a selected third-party contractor, Lockheed Martin Aspen will be committed to complying with all QA and EM&V requirements that are specified in Sections 3.3 and 3.4 of the *Specific Conditions* contract document, including post-award preparation, submission, and adherence to a *Quality Assurances and Measure-Verification Plan*.

Because our program design involves custom measures, Lockheed Martin Aspen will carefully document pre-installation conditions and performance (i.e., electricity and natural-gas use by all existing equipment and processes that will be replaced by more efficient equipment and processes under the program). We will also inspect and participate in the commissioning of 100 percent of the measures installed under the program. Commissioning will include tests to verify actual performance of the upgraded equipment and processes as well as the calculation of demonstrated savings.

We recognize, however, that because we are focused primarily on comprehensive process improvements and upgrades, an important parameter will be the decrease in energy use per "widget" or per pound of product manufactured.

³ Interim Order, California Public Utility Commission, September 22, 2005.

All M&V activities will be carefully and accurately documented and submitted to PG&E to support our request for payments.

13.6 Marketing Activities

The essence of Lockheed Martin Aspen's approach to marketing the Heavy Industry offering is to target specific customers in specific industries. We will select customers we think are most likely to implement process-oriented improvement projects that will yield large energy savings.

To deliver this program, we will choose Project Champions, who have expertise in identifying and implementing process-oriented improvement projects within a specific industry and have established contacts with key decision makers at corresponding companies in PG&E's service area. Thus, Project Champions will be overseeing all process-oriented projects, from their identification to installation and commissioning with customers familiar and satisfied with their work.

We will design the program to overcome any financial or time constraints that targeted industrial customers might face in implementing energy-saving projects.

Factors in Delivery Strategy

Lockheed Martin Aspen's delivery strategy addresses three factors:

The Primary Delivery Mechanism Will Be Face-to-Face Presentations at Customer Facilities

To deliver this program most effectively, the Project Champions must quickly convince key customer decision makers that they can help bring about process-improvement projects at customer facilities. This can only be accomplished in face-to-face meetings, where Project Champions can discuss the customer's specific needs.

Once the Project Champions have established their credibility and shown how the program's full-service offering will help overcome customers' financial and time constraints, a significant number of customers will want to explore process-improvement opportunities. Lockheed Martin Aspen believes mass-marketing techniques, although helpful in familiarizing customers with the program, will not generate significant program participation.

Large Custom Projects Are Critical to Achieving Goals

Lockheed Martin Aspen knows from experience that a large percentage of the energy savings and demand reduction that the program generates will be concentrated in a handful of extremely large projects from customers with demand above 500 kW; therefore, the marketing plan will focus program resources on these projects. Although smaller customers or smaller projects at large customer sites will not be ignored, large projects represent the most efficient use of marketing resources for achieving program goals.

Repeat Business Is a Major Source of Projects

Customers who implement their first project successfully generate a significant portion of additional projects as the program moves forward. Consequently, a critical part of program marketing actually occurs during the project identification phase, when the Project Champion and customer find and prioritize opportunities. Although not all of these projects will be implemented right away, assuming that a customer's initial project implementation goes smoothly, other projects will be implemented in the future without the need for additional program marketing.

Because customer satisfaction is so important to future projects, it is critical to understand that the greatest marketing impact Project Champions offer is their support to project implementation. Thus the basic program marketing plan is simple. Initially, Lockheed Martin Aspen will concentrate all program resources on presentations, then identify multiple projects at targeted customer sites to accumulate a pipeline of projects. Once the pipeline is full, Lockheed Martin Aspen will shift program resources to implementation support. New marketing will require far fewer resources in subsequent program years because most new projects will come from repeat customers *as long as the customer's project implementation experience is consistently positive.*

Sales Cycle

Outlined below are the sales cycle steps and how Lockheed Martin Aspen plans to maximize effectiveness.

Lead Generation Through Existing Contacts

Because effective delivery depends on getting all key decision makers involved as early in the sales cycle as possible, highly qualified customer leads become the cornerstone of marketing success. Lockheed Martin Aspen's approach for generating leads will concentrate on existing leads among PG&E AS Account Managers and Project Champions.

One significant criterion for selecting Project Champions is the number of existing contacts they have at key customer accounts within their areas of specialization. Project Champions and PG&E AS Account Managers will review these contacts at the beginning of the program to develop lists of target customers. It is important that the Project Champions and PG&E AS Account Managers freely exchange contact information.

Key decision makers at a customer facility should be familiar with the program from the outset. Excellent project opportunities are often lost when project engineers are forced to present a project to senior management. It is much better to have all decision makers together at one time so that they develop a mutual commitment. This can best occur when contact resources are shared. Sometimes Project Champions will be familiar with key contacts that a PG&E AS Account Manager is not; at other times, the opposite will be true.

Once the Project Champions and PG&E AS Account Managers generate the target customer lists, they will coordinate customer contacts. Each AS Account Manager will be able to decide what types of customer meetings he or she will attend. For example, an Account Manager may always want to attend initial program and project presentations, but not project implementation meetings. In either case, the Project Champion will always endeavor to coordinate customer contacts with the PG&E AS Account Manager.

The target customer lists are the single most important source of projects in the program. Potential customer projects at facilities where the key decision makers are not known by the Project Champion or PG&E AS Account Manager will be more time consuming to identify.

Initial Sales Presentations

As previously emphasized, conducting meetings at a customer facility with the Project Champion and key decision makers is the most important program delivery mechanism. The main goal of an initial sales presentation is to move the customer forward in the sales cycle by beginning to identify potential projects.

The initial presentation will not be highly structured but will generally follow a basic agenda: the Project Champion will distribute our program information packets and then make a brief PowerPoint presentation on the basics of the program, tailored to the customer's specific industry.

Four main points will be emphasized at these presentations:

- ◆ The Project Champion is truly qualified to discuss process-oriented improvements at that customer's facility.
- ◆ The Project Champion will support every step of a project from its identification through implementation and operation.
- ◆ The program offers full-service capability designed to overcome every objection a customer may have concerning implementation of a process-oriented project.
- ◆ Process-oriented projects should be evaluated on the basis of *all* benefits that they create—not merely on the basis of energy-cost reductions.

These meetings will be kept short—key decision makers are extremely busy and not interested in long meetings. The Project Champion will therefore quickly establish credibility among the decision makers, describe the program, and then move immediately toward “closing the sale,” which in this case is making arrangements to begin identifying projects.

Project Identification

One of the most important steps in the sales cycle is project identification. If this step is performed well, the identified projects will become a source of work in both the short and long term. Projects can be identified through the customer (who often will have already thought of one or more process-oriented projects) and through Project Champions engaged in a series of

facility studies, including simple walk-through inspections, short overviews, and highly detailed technical studies.

Projects that the customer is interested in implementing in the short term will become the primary focus of the project identification process. Once we generate a complete (though not necessarily exhaustive) list of potential projects, we will prioritize it. We will study in detail only the projects likely to be implemented in the short term. Realizing short-term project goals will require quickly filling the project pipeline with as many committed projects as possible; therefore, the project identification process has two sales goals:

- ◆ To identify a list of projects to consider in both the short and long term.
- ◆ To obtain an immediate customer commitment to implementing at least one project.

Project Implementation Support

Project implementation support is critical to the long-term marketing of this program. If customers have a positive experience with the first project they implement, they will be highly disposed to implement additional identified projects. This strategy for generating repeat business allows Project Champions to concentrate their efforts on helping customers implement projects after the initial sales push and minimizes or eliminates new program marketing costs.

Marketing Materials

Lockheed Martin Aspen will work with PG&E to design and produce marketing materials. We will draw on the resources offered through our full-service, award-winning Communication Services unit, which produces approximately 1,000 publications, multimedia products, Web sites, and marketing materials annually. Services that the Communication Services unit performs include design, development, and production of print products such as logos, banners, and presentation materials; research, writing, substantive editing, copyediting, and proofreading of publications ranging from fact sheets and brochures to reports and monographs; concept creation, scripting, design, and production of Web sites, videos, and other multimedia products; and development and implementation of comprehensive marketing plans.

By relying on in-house resources to produce presentation materials for PG&E, Lockheed Martin Aspen will have better control over production schedules and costs, thereby ensuring that final materials are prepared on time, as directed, and within budget.

Below we describe the marketing materials we propose to create. To provide brand identity and recognition, we will develop a design and color scheme for incorporation into all marketing materials. We will have PG&E approve the design and color scheme before implementation. Marketing materials will also require PG&E approval before printing and distribution. We will update all materials once during the 33-month contract period.

PowerPoint Presentation Template. We will develop a standard PowerPoint presentation template for use by Project Champions when meeting with customers. The template will reference basic program elements such as eligibility requirements, the application process, and

incentives and other project financing options and services and will provide an overview of all program offerings, including other PG&E programs such as the Business Incentive Program, gas company incentives, and incentives offered through State, Federal, and private organizations.

The template will also enable Project Champions to customize their presentations based on the customer and the particular industry. In keeping with the program's focus on energy savings as part of a complete process-oriented approach, the Project Champions will present a sample project that demonstrates the economic benefits of making process improvements, not just reductions in energy costs. Project Champions will also estimate increases to productivity and discuss potential new products and their markets, improved raw material yields, and reduced operating and maintenance expenses to focus customer attention on how process-oriented projects create far more improvements to their bottom line than simple equipment-efficiency upgrades.

Brochure. Lockheed Martin Aspen will produce a simple brochure that presents a clear, concise overview of the program. Because Project Champions will present the program in meetings with key customer decision makers, the brochure will be designed to provide the basic program information, not to generate customer project interest.

The brochure will be sent to various third-party service providers for distribution to their customers, so the brochure will also emphasize the broad, full-service "start-to-finish" capabilities offered through the program.

Financing Cut Sheet. Project incentives and other financing options are a vital part of the program service. Lockheed Martin Aspen proposes that incentives in this program be distributed not on a flat-rate basis (i.e., cents per kilowatt-hour, dollars per kilowatt, percent of project cost) but as part of a tailored overall project financing plan that seeks to overcome the unique financial barriers to undertaking a specific project. Lockheed Martin Aspen will therefore provide a one-page cut sheet that describes in detail all financing options available to customers. The cut sheet will also emphasize that program participants will have access to a project financing expert familiar with all available incentives (not just those offered by this program), as well as various financial institutions that specialize in energy-related projects.

Lockheed Martin Aspen understands that customers can be constrained not merely by capital costs but by the time needed to make a project happen. These time constraints primarily involve technical resources but also include managerial and administrative resources. The time needed to complete a loan application can be considerable, and the program is design to help customers with this process if they need it.

All-Programs Cut Sheet. In keeping with PG&E's program objective of ensuring that potential participants are exposed to all PG&E programs (including demand response, the Business Initiative Program, Comprehensive HVAC) as well as any special programs offered by other organizations, Lockheed Martin Aspen will develop a one-page cut sheet that describes every program available to industrial customers. Project Champions will also make sure that customers

understand all of the energy-related programs and tax incentives available to them during initial presentations and subsequent project identification meetings to minimize lost opportunities.

Information Packet Folders. A two-pocket folder will be produced to hold all program collateral material in a single information packet. Project Champions will distribute these packets at presentations and topical seminars.

Case Studies. Lockheed Martin Aspen will produce at least four case studies during the program. The Program Manager will be familiar with the various projects in progress and will identify the best ones for case studies. The case studies, typically one-page (front and back), four-color documents, will not only emphasize technological innovation but also seek to illustrate the holistic approach of the program (process versus equipment upgrades), the economic case for process improvements beyond energy-cost reductions, and the full-service capabilities of the program—factors that can eliminate all barriers to participation.

14. Conclusion

As described in the preceding sections, the proposed Heavy Industry offering for PG&E has the following features:

- ◆ **Industry experts.** Project Champions will work hand-in-hand with industrial customers to design and implement process changes that are optimized to meet both PG&E's and the customer's needs.
- ◆ **Optimal savings.** A focus on large accounts (greater than 500 kW) because they offer the best opportunities for projects that can generate the largest, most cost-efficient energy savings.
- ◆ **Rapid startup.** Adaptation of material and systems that are already deployed for organizations such as Silicon Valley Power and the Energy Trust of Oregon.
- ◆ **Initial leads.** We have already developed a list of 43 target companies.
- ◆ **Project pipeline.** A goal of delivering 16.8 million kWh/year in electric energy savings and 1.76 million therms/year in gas energy savings, achieved by completing upgrade projects at approximately 60 facilities.
- ◆ **Cross-promotion.** A comprehensive solution that will promote other PG&E initiatives such as the Business Incentive Program and CPP tariff.

The program also offers PG&E the following benefits:

- ◆ **Enhanced cost efficiencies.** A solution that is highly cost-effective.
- ◆ **Multiple selling points.** The savings offered, although substantial, represent only one benefit. We have found that process improvements not only reduce energy use but also generate other important benefits. Most important, process-improvement projects make the industrial customer more competitive by reducing production costs. In addition, these projects often have significant environmental benefits, for they reduce waste and pollution.
- ◆ **Enhanced customer satisfaction.** Because the program provides multiple benefits to the customer it will, therefore, maximize PG&E customer satisfaction.