BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

Application of Southern California Edison Company (U 338-E) for Approval of Program Year 2000 and 2001 Energy Efficiency Program Plans, Budgets, and Performance Award Mechanism.	**A.99-09-049**
Application of Pacific Gas and Electric Company for Approval of Program Years 2000 and 2001 Energy Efficiency Programs (U 39M)	**A.99-09-050**
Compliance Application of San Diego Gas & Electric Company (U 902-M) for Approval of 2000 and 2001 Energy Efficiency Programs, Budgets, Performance Incentive Structure.	**A.99-09-057**
Compliance Application of Southern California Gas Company (U 904-G) for Approval of 2000 and 2001 Energy Efficiency Programs, Budgets, Performance Incentive Mechanism.	**A.99-09-058**

PROPOSAL FOR LOAD MANAGEMENT INFRASTRUCTURE SOLUTIONS BY SILICON ENERGY CORP.

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EXECUTIVE AND PROGRAM SUMMARY

Background

In decision 00-07-017 dated July 6, 2000, the California Public Utilities Commission (CPUC) established an expedited process to select and immediately implement delivery of demand and energy usage reductions necessary to alleviate the current critical imbalance between electricity supply and demand in California. The CPUC directed parties to provide program options that will bring about the largest reductions in electric demand and/or electric usage reductions in the shortest period of time. The present demand response system in California has proved inadequate. Ineffective communication mechanisms, program designs and standards, a lack of scalability in the management infrastructure, and the structure of commercial offers make participation difficult and do not speak to the needs of the typical electricity customer. In this proposal, Silicon Energy offers an internet based software and program management infrastructure that addresses all the limitations of present programs, and will facilitate rapid integration of the full range of customer demand response options into power delivery markets. As the leading national provider of energy management software solutions, Silicon Energy is ideally suited to provide the solutions needed to rapidly address this critical need.

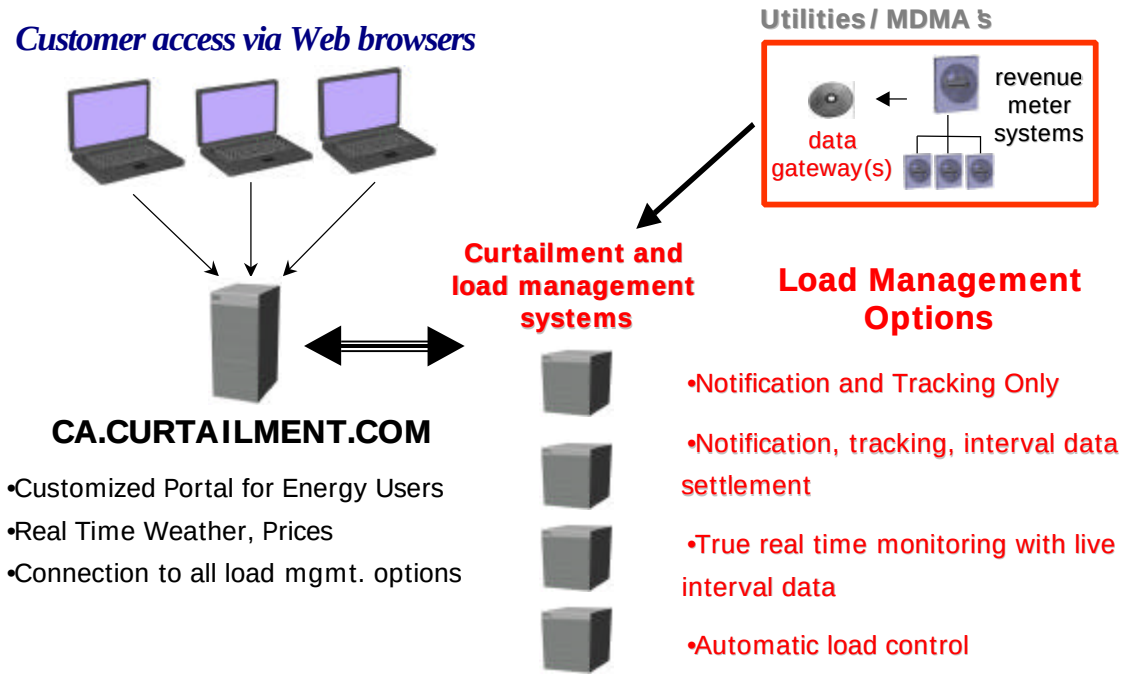
Purpose

Silicon Energy proposes a series of cost-effective infrastructure solutions that will form the backbone of a rapidly expanded demand response capability in California. The solutions proposed will simplify the recruitment, implementation, and billing for all types of demand response programs. This proposal, in combination with others submitted in partnership with the Carrier Corp. and with Anderson Consulting, offers the capability to establish and manage demand response programs for the full range of California energy consumers and program types. Supported options include direct load control based on real time price signals for residential and mid size commercial, voluntary market price based load curtailment systems for large commercial and industrial customers, and an internet portal that integrates the full range of demand options to simplify marketing and implementation for all energy consumers and suppliers. These proposals can be implemented in a variety of means that do not pre-judge whether the coordinating institution is the utility, energy service provider, ISO, PX, Silicon Energy, or other party.

The capabilities proposed by Silicon Energy will establish all the necessary infrastructure to achieve **peak load reductions on the order of 2,000 to 6,000 MW** at an up front cost **of $1/KW to $40/KW** and a continuing cost of approximately **$10/MWh of energy reduction**. This infrastructure will also facilitate year-round energy efficiency improvements that will further enhance the cost-effectiveness.

Silicon Energy proposes to establish a centralized business to business internet hub to implement price based load management activities between the full range of energy users and suppliers. CA.CURTAILMENT.COM will serve as the central entry point and provide the infrastructure for all load management activities, and provide a statewide interface to all curtailment management systems, whether or not provided by Silicon Energy. Curtailment Manager, one program within the CA.CURTAILMENT.COM hub, provides a load response program for commercial and industrial customers with interval data. The Direct Load Control program allows for direct control of energy management systems or thermostats in residential and commercial buildings.

CA.CURTAILMENT.COM System Overview



The CA.CURTAILMENT.COM system will support the following capabilities for commercial and industrial energy users and energy service providers as part of the Curtailment Manager program:

- Provide a common and trusted place for consumers to get customized current energy price, weather information, local grid status, power emergency announcements, and learn about load management program options
- A platform to communicate real-time price indicators simply and affordably to thousands of customers
- Notify End-Users of load management opportunities in real time
- Immediately track and monitor customer acceptance and committed participation levels
- Track and display verifiable demand and usage reductions for users and providers, through real-time or delayed feedback
- Provide a platform for customers to establish automatic responses to real time price signals
- A Common infrastructure for demand response implementation to simplify program administration and increase supplier and customer participation

Silicon Energy looks forward to rapidly and cost-effectively resolve this critical near term problem with its state of the art Internet based solutions.

SILICON ENERGY COMPANY OVERVIEW

Silicon Energy Corporation is the premier provider of web based energy management solutions to utilities, unregulated energy services providers, and end-use customers. Silicon Energy's customers include Puget Sound Energy, LADWP, Portland General Electric, Northern States Power, MidAmerican Energy, Northeast Utilities, Pennsylvania Power and Light, DTE Energy, APS Energy Services, Conectiv, Enron, ConEd Solutions, PEPCO Energy Services, Wal-Mart, USC, San Jose State, and many more.

Silicon Energy delivers unparalleled energy management capabilities by specializing in the following three areas:

- real-time acquisition, analysis and presentation of energy and facility control data,
- user-tailored content delivery via a Web browser,
- strategic, directed actions and control response capabilities.

With a modular software suite of market leading applications, Silicon Energy's e-business platform uses the Internet for collection and management of energy related data. The various application modules utilize sophisticated yet easily navigated graphical tools for monitoring, analysis, and response functionality. Silicon Energy's products enable users to optimize their energy management efforts through a comprehensive understanding of where, when, and how efficiently their business enterprise uses energy.

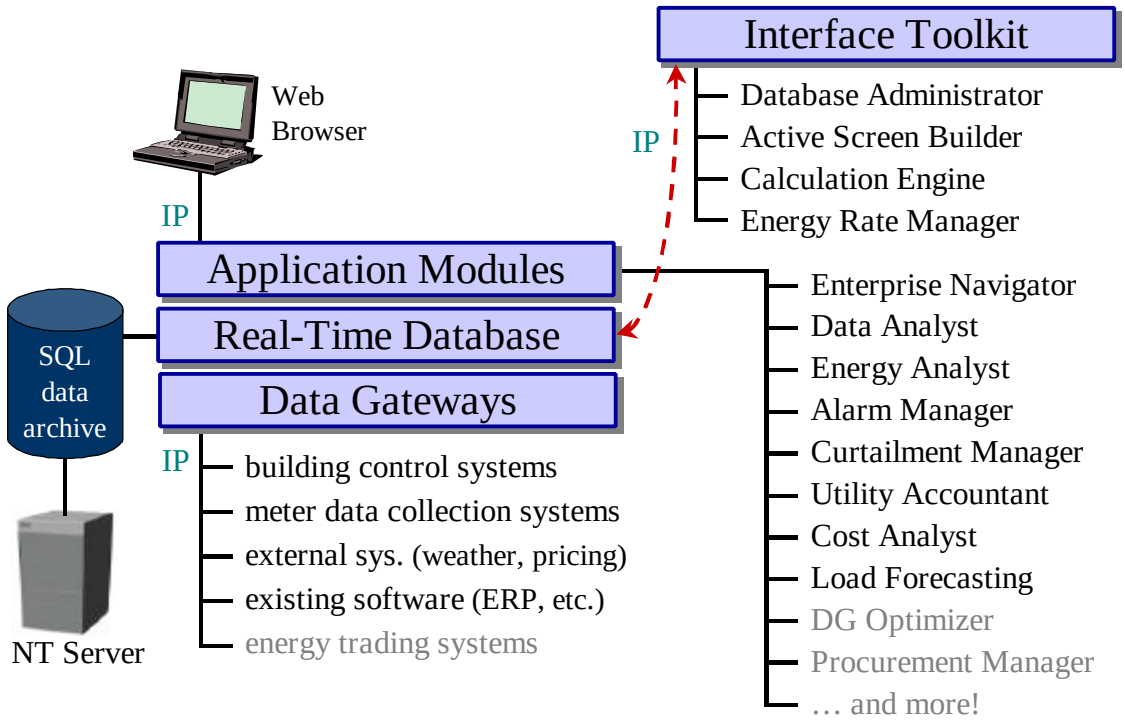
Silicon Energy's Curtailment Manager application has become the national leader in load management software. The Curtailment Manager solution is currently managing price based and legacy curtailment programs for multiple utilities in regions across the nation to meet their 2000 summer peak loads. These utilities include companies with the largest curtailment programs in the nation.

A privately held company incorporated in 1997, Silicon Energy now has over 150 employees and is the fastest growing company in the energy information industry. Silicon Energy headquarters are located on the island of Alameda, California, at the heart of the San Francisco Bay area. To date, Silicon Energy has raised over $40 million in financing to develop and implement its software solutions.

Technology Overview

At the heart of all Silicon Energy systems is the real-time database server, which comes complete with all the productivity tools necessary to configure and administer the software. The Silicon Energy server supports all Silicon Energy and 3rd party application modules, provides a high sustained transaction rate (hundreds/second), uses local queuing layer for burst traffic and is highly scalable. The Silicon Energy server can be distributed across multiple CPUs and employs a unique 'push' technology to deliver targeted information immediately using high security.

Silicon Energy Technology Overview



PROJECT SPECIFICATIONS AND PROGRAM ECONOMICS

The three elements of this proposal, CA.CURTAILMENT.COM, Curtailment Manager and Direct Load Control, complement each other and allow for the roll-out of a comprehensive program. CA.CURTAILMENT.COM provides the central hub and infrastructure for the program. Curtailment Manager allows large energy customers with interval metering in place to easily manage responses to a wide variety of demand-response programs. Direct Load Control allows end-users without interval data to take advantage of demand-response programs by creating automatic responses to price signals.

CA.CURTAILMENT.COM

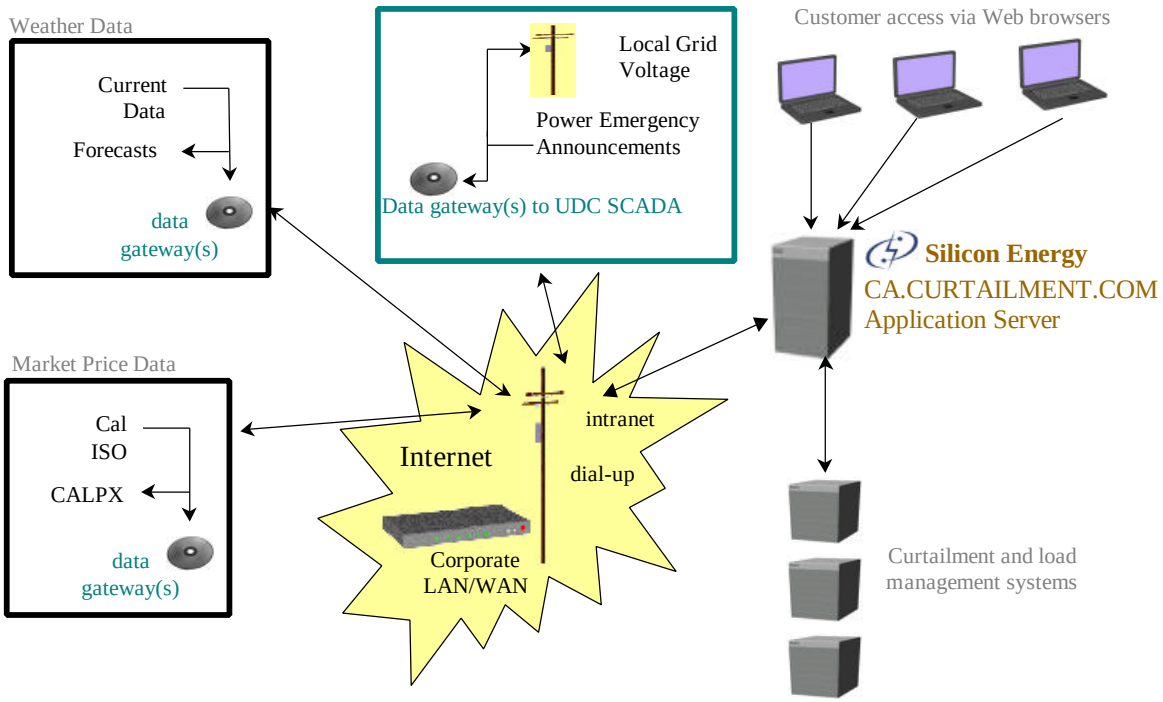
CA.CURTAILMENT.COM is proposed as a central hub for energy suppliers and users to create, implement and monitor load management activities in California. CA.CURTAILMENT.COM provides a comprehensive infrastructure solution for the implementation of a price-based demand response program. End-users will be able to access customized information on load management participation opportunities as well as weather and energy price information, and even real time local grid status to help them make smart decisions. Multi-site commercial and industrial end users are given support for centralizing their load management activities.

The centralized portal will significantly increase the quantity and cost effectiveness of load management resources in California. Benefits of the single infrastructure include:

- Single point of contact to reduce customer confusion, leverage marketing dollars, and simplify participation in multiple programs
- Standard participation mechanism for customers regardless of their energy provider
- Flexible, yet comprehensive infrastructure speeds program implementation

Access to a functional demonstration of the site is available upon request.

CA.CURTAILMENT.COM Architecture



Software Set-up

Silicon Energy will first set up the structure necessary to allow multiple users and suppliers to interface through a common site. Users self register and self configure the site to match their needs. Weather, pricing, and local grid status content is customized based on the location of the facility names entered.

Economics

CA.CURTAILMENT.COM is a very low cost means of improving participation in all programs. The first year implementation costs are about $400,000, or only about $0.50/kW, an insignificant figure compared to the cost of participation in even a single load reduction event. See FEES and COSTS for specific pricing.

CURTAILMENT.COM Program Economics

	Year 1	Year 2	Year 3	Year 4
New Facilities	4,000	11,000	15,000	20,000
New Facility Size [kW of load reduction]	200	100	70	40
Total Facilities	**4,000**	**15,000**	**30,000**	**50,000**
MW subcribed	**800**	**1,900**	**2,950**	**3,750**
Average Facility Size [kW]	200	127	98	75
Setup & Maintenance Fees [$]	160,000	85,000	85,000	85,000
License Fee [$]	173,850	173,850	173,850	173,850
Per Customer Fee [$]	57,600	216,000	432,000	720,000
Total	**$ 391,450**	**$ 474,850**	**$ 690,850**	**$ 978,850**
$/KW	0.49	0.25	0.23	0.26
$/Customer	97.86	31.66	23.03	19.58
Annual $/KW	**$ 0.29**	**$ 0.21**	**$ 0.21**	**$ 0.24**

Curtailment Manager

Silicon Energy proposes to configure its web-based Curtailment Manager software to give utilities and Energy Service Providers the infrastructure necessary for creating, monitoring, and settling curtailment events. The functions listed above are features of a comprehensive product that enables commercial and industrial customers to respond to and benefit from requests for load reduction.

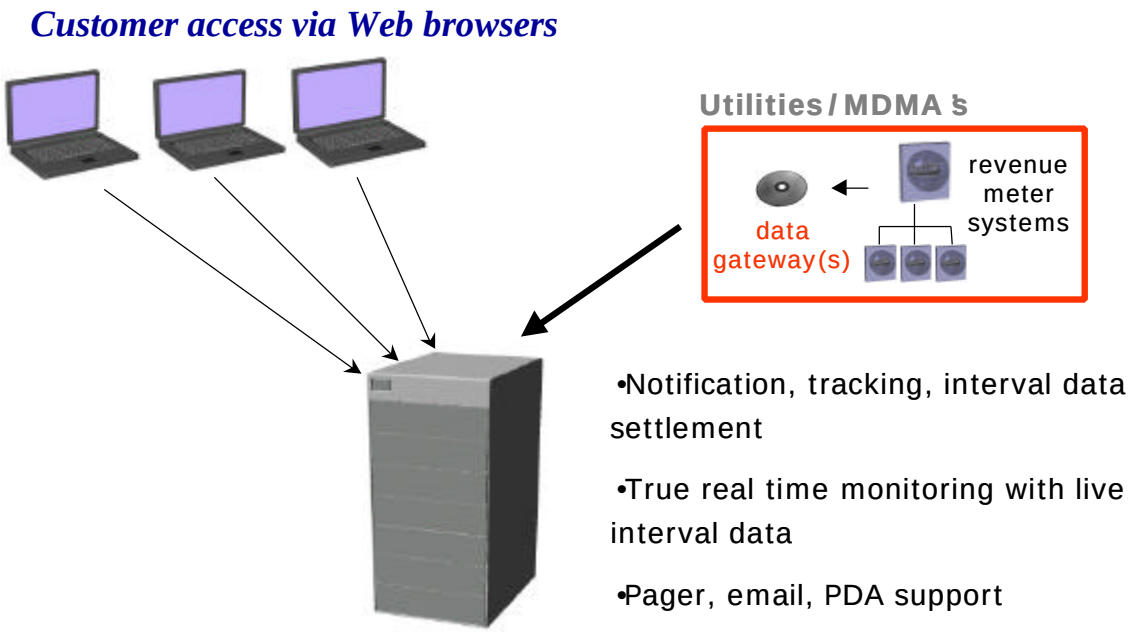
Because of the flexibility built into the Curtailment Manager product, curtailment events can be issued in aggregate, or customized for each customer according to the design of the program and the customer type and location. Curtailment manager supports both market price based programs as well as legacy interruptible load programs. Data gathering and the display of customers' event participation patterns can also be customized. End-user participation is logged and can be presented in a variety of forms to both the customers and the service providers.

Technology Summary

Silicon Energy gathers load data for customers by installing gateways to each utility's and MDMA's existing meter data collection system. The data resolution available will depend on the data collection rate of the utility and MDMA for that customer. Energy providers and utilities will have secure access to view their customers and to send notices or publish price signals. Security provisions assure that service providers can only see their own customer's data. Load management systems can be hosted by Silicon Energy, linked to a Silicon Energy system maintained by a service provider, or linked to a system not provided by Silicon Energy. Silicon Energy will provide administrator web data and reporting interfaces, and consumer web interfaces. Program results will be exported to the utility or service provider billing system via standard database exchange protocols.

Access to a fully functional demonstration is available upon request.

Curtailment Architecture Overview



Customer Configuration

Because customers have varying frequencies of meter data collection, real time interval data, or delayed data that is available daily, weekly, or monthly, two levels of participation are possible:

When real time interval data collection is available, the full functionality of the Silicon Energy Curtailment Manager can be utilized. These features include:

- Notification of events by e-mail or pager
- Customized customer web page showing facility-specific baseline and event data
- Real time monitoring of actual performance relative to baseline by customer and service provider
- Immediate quantification of event results and payments earned

In cases where interval data is available on a delayed basis, the customer response cannot be viewed in real time, but the majority of the functionality can still be used, including:

- Notification of events by e-mail or pager
- Customized customer web page showing facility-specific baseline and event data
- Real time customer response to service provider
- Visibility of event results and payments earned as interval data is posted

Silicon Energy will provide all customer setup, server configuration, and system operations, or these functions can be managed by individual service providers at their option.

Economics

Centralizing the curtailment management system yields economies of scale that create extremely compelling economics. A state of the art load curtailment system can be set up for as little as $1/kW of capacity, and operated for as little as $10/MWh of energy reduction when used as little as 75 hours per year. These economics are possible because the system utilizes existing data collection infrastructure and low cost communications made possible by the Internet. These economics do not include costs for marketing, billing, or the payments to customers for the value of the energy reduction.

As is evident below, the infrastructure costs are insignificant compared with the value of the resource created. See FEES and COSTS for specific pricing.

Curtailment Manager System Economics

	Year 1	Year 2	Year 3	Year 4
New Facilities	980	1,000	2,000	3,000
New Facility Size [kW of load reduction]	1,200	800	500	300
Total Facilities	**980**	**1,980**	**3,980**	**6,980**
Total MW of load reduction	**1,176**	**1,976**	**2,976**	**3,876**
Setup Fees [$]	612,000	420,000	610,000	935,000
Annual ASP fees [$]	185,820	212,820	243,600	281,400
Usage Fees [$]	882,000	1,482,000	2,232,000	2,907,000
Total	**$ 1,679,820**	**$ 2,114,820**	**$ 3,085,600**	**$ 4,123,400**
First Year $/KW	**$ 1.43**	**$ 1.07**	**$ 1.04**	**$ 1.06**
First Year $/MWh	19.05	14.27	13.82	14.18
Annual $/MWh	**$ 14.09**	**$ 12.28**	**$ 11.83**	**$ 11.64**

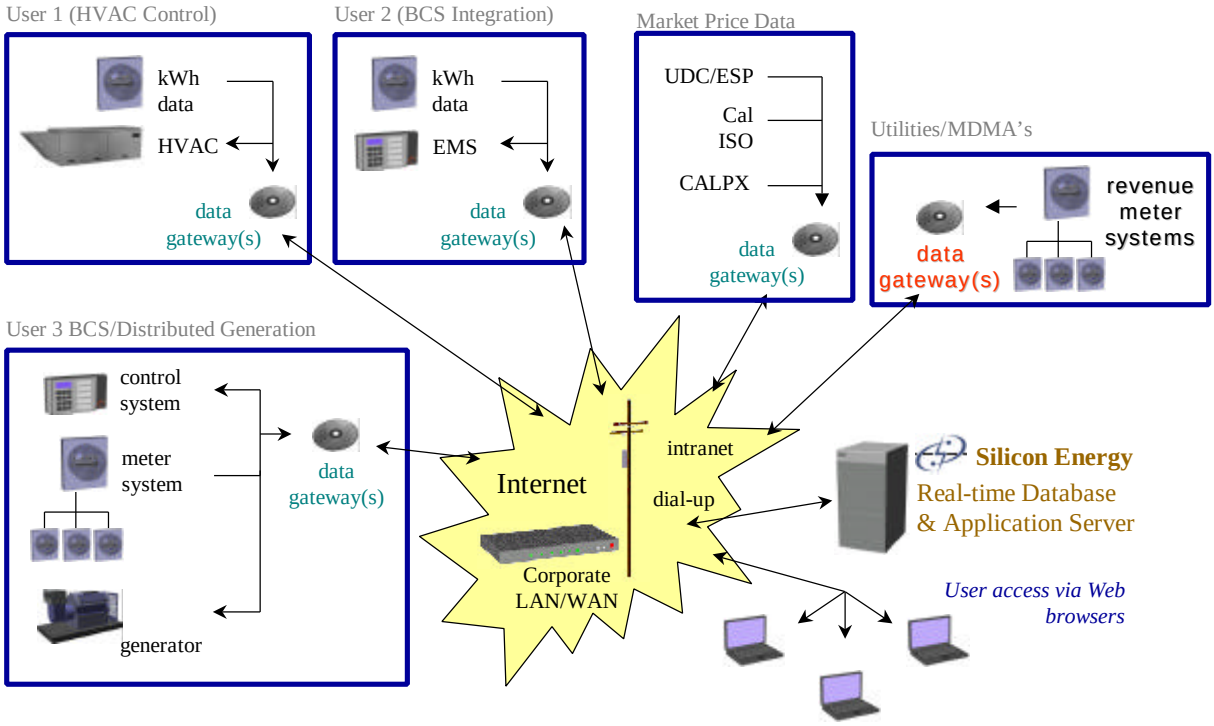
Direct Load Control

The direct load control system operates like the curtailment management system, except that when a price threshold is reached, the system automatically generates a load reduction action at the customer site. The system requires additional hardware and software implement the load control, and additional customer specific configuration. The advantage, however, is that the response is automatic and often transparent to the user, and so it is possible for the system to operate many more hours and at lower market prices than a standard curtailment system.

Technology Summary

The direct load control system requires two way real time connections to energy management systems or thermostats at the customer location. As the hardware and software in customer sites vary widely, large scale deployment of this system is only possible with an open architecture system that has the capability of interacting with multiple systems. Silicon Energy has developed an architecture specifically suited to this challenge, and has already developed gateways to control systems comprising over 80% of the building controls market. Silicon Energy is uniquely positioned to deploy this technology into a customer base with widely varying existing infrastructure.

Direct Load Control System Overview



Customer Configuration

The two-way communication and control requirements of a direct load control effort drive additional field assessment and hardware/software installation tasks. This will make a large scale rollout of this technology somewhat more complex. Silicon Energy proposes a phased rollout of the direct load control system to provide an opportunity to learn from early installations and standardize software interfaces and installation methods. In addition, Silicon Energy will team with one or several implementation partners for this effort, including Anderson Consulting.

Economics

Despite the significantly increased implementation costs of installing customer specific gateways, the long term economics are consistent with the standard curtailment approach. This occurs because the automatic system can be utilized for many more hours per year, thus spreading the higher costs over a larger energy reduction. When utilized approximately 250 hours per year, installation costs are about $11/kW, still extremely cost effective, and long term costs are about $10/MWh. These economics do not include costs for marketing, billing, or the payments to customers for the value of the energy reduction. As is evident below, the infrastructure costs are quite low when compared with the value of the resource created. See FEES and COSTS for specific pricing.

Direct Load Control System Economics

	Year 1	Year 2	Year 3	Year 4
New Facilities	500	1,800	2,200	2,500
New Facility Size [kW of load reduction]	600	300	125	90
Total Facilities	**500**	**2,300**	**4,500**	**7,000**
Total MW of load reduction	**300**	**840**	**1,115**	**1,340**
Setup Fees [$]	2,615,000	7,830,000	9,550,000	10,985,000
Annual License Fees [$]	173,940	229,020	281,940	332,700
Usage Fees [$]	1,200,000	3,360,000	4,460,000	5,360,000
Communication Fees [$]	102,000	469,200	918,000	1,428,000
Total	**$ 4,090,940**	**$ 11,888,220**	**$ 15,209,940**	**$ 18,105,700**
First Year $/KW	**$ 13.64**	**$ 14.15**	**$ 13.64**	**$ 13.51**
First Year $/MWh	27.27	28.31	27.28	27.02
Annual $/MWh	**$ 11.34**	**$ 9.96**	**$ 10.45**	**$ 10.92**

PROJECT SCHEDULE

Silicon Energy suggests the following general schedule to implement the program. The actual schedule will depend on contract execution date and coordination of overall program goals.

CA.CURTAILMENT.COM

Program Phase	Implementation Schedule
Finalize Agreements and Scope	September 2000
Software Set-up	October 2000
Go live	October 2000

Curtailment Manager

Program Phase	Implementation Schedule
Finalize Agreements and Scope	September 2000
Develop Project Plan	October 2000
Software Set-up	November 2000
Begin customer setup and configuration, test with live customers during winter peaks	November 2000
Full scale rollout	250 customers/month commencing December 2000 through March 2001
Deliver summer 2001 capacity	April 2001

Direct Load Control

Program Phase	Implementation Schedule
Finalize Agreements and Scope	September 2000
Develop Project Plan	October 2000
Software Set-up, identify pilot customers	November 2000
Phase 1 implementation of 50-100 customers to validate installation/ configuration issues, test with live customers during winter peaks	November 2000
Full scale rollout	100 customers/month commencing December 2000 through March 2001
Deliver summer 2001 capacity	April 2001

FEES & COSTS

CA.CURTAILMENT.COM

Pricing Terms:

	Annual Software license	Software set-up fee	Facility Fee ($/facility/month)
Software, Setup, Hardware, Hosting, and Maintenance of portal site	$ 128,400	$ 165,000	$ 1.20

Curtailment System

Pricing Terms:

	Annual Software license	Software set-up fee (Est.)	Service Provider Setup (Per Provider)	Customer Setup Fee (Per Facility)	Usage Fee ($/MWh of load reduction)
Up to 1000 Customers	$ 186,000	$ 175,000	$ 145,000	$ 150	$ 10/MWh
Up to 2500 Customers	$ 210,000	$ 175,000	$ 145,000	$ 150	$ 10/MWh
Up to 5000 Customers	$ 244,000	$ 175,000	$ 145,000	$ 150	$ 10/MWh
Up to 10000 Customers	$ 281,000	$ 175,000	$ 145,000	$ 150	$ 10/MWh

Load Management System

Pricing Terms:

	Annual Software license	Software set-up fee (Est.)	Service Provider Setup (Per Provider)	Est. Communi-cations $/Cust/Yr)	Customer Setup Fee (Est., Per Facility)	Usage Fee ($/MWh of load reduction)
Up to 1000 Customers	$ 174,000	$ 225,000	$ 145,000	$204	$ 4,200	$ 8/MWh
Up to 2500 Customers	$ 230,000	$ 225,000	$ 145,000	$204	$ 4,200	$ 8/MWh
Up to 5000 Customers	$ 282,000	$ 225,000	$ 145,000	$204	$ 4,200	$ 8/MWh
Up to 10000 Customers	$ 332,000	$ 225,000	$ 145,000	$204	$ 4,200	$ 8/MWh

The cost schedules included in this proposal are indicative only. Final pricing may vary depending on the specific configuration, scale, timing, and customer requested modifications to the system. All software license fees are based on a 2 year contract. Other configurations and program volumes will be quoted upon request. Sales Tax will be charged on any applicable services or materials based upon the California State Board of Equalization guidelines.

ASP HOSTING SERVICES

Silicon Energy provides a state of the art hosted system environment that reflects the mission critical nature of our customer's applications. Silicon Energy's ASP services meet the needs of demanding business to business real time Internet solutions.

Below are the services provided as part of the Silicon Energy ASP hosting Service:

- 24 x 7 x 365 network support
- Secure Facility
- Server Monitoring
- Reboot of machine
- Tape backups[1]
- Off-site storage of tapes
- Restores
- DNS pointers
- Redundant connectivity
- Load Balancing
- MS SQL Support
- Microsoft IIS Support
- Hardware[2]
- Operating System
- Site Statistics
- Application Support

[1] At a Hosting Company, the customer must provide the backup device (tape drive or storage medium). This backup device is included with Silicon Energy's DAE Service.

[2] As part of the monthly fee, Silicon Energy ASP clients have all hardware provided, including all upgrades, included in the monthly service fee.

Note that very few of these items are included in the standard service offered by hosting facilities. The purpose for offering our clients the ASP Environment is to allow them to focus on their core business. It is not only the basics we cover, from a first-class hosting facility and monitoring, but the management of the hardware and software by Silicon Energy engineers. Engineers who have a high degree of training on our hardware, MS SQL, MS IIS, Windows NT, TCP\IP, and our own software.

PROPOSAL EXPIRATION

This offer is valid through September 15, 2000. Silicon Energy welcomes the opportunity to meet with CPUC staff and more fully explore the best means to meet the needs of the California market.

CONFIDENTIALITY

Key elements of Silicon Energy's technology, architecture, implementation methods, and pricing are considered proprietary and confidential by Silicon Energy. Silicon Energy reserves the right to request the execution of a confidentiality agreement prior to disclosure of additional information.

CONTACT INFORMATION

Questions regarding this proposal or requests for more information should be directed to:

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APPENDIX A – SILICON ENERGY ENTERPRISE PRODUCT SUITE

The Silicon Energy Enterprise Suite v2.0 include the Data Analyst, Energy Analyst, Cost Analyst, Alarm Manager, Universal Calculation Engine, Enterprise Navigator, Load Forecasting, and Curtailment Manager application modules. To give the CPUC a greater understanding of the capability of our software, short descriptions of each of the modules is given below.

Data Analyst – included as a fundamental component of all Silicon Energy installations, provides comprehensive and flexible reporting and trending. Capabilities include: standard and custom reports, custom charts, graphs and plots, summary reports of multiple points over user-defined periods, summary reports of point values over two different periods, saved user-defined reports as template for future retrieval, custom report libraries for individual users and groups.

Energy Analyst – allows customers to conduct complex analysis of meter data using custom, predefined or saved reports to gain more meaningful insight into cost, usage and demand drivers. Capabilities include: monitoring real-time energy demand for all commodities, trending historical energy usage and demand across flexible time periods, comparing real-time values with a baseline, calculating load factors, monitoring power factors & any value captured by measurement devices, trending multiple points over flexible time periods, load aggregation, benchmarking, and more.

Alarm Manager – collects and prioritizes alarm information based on user-defined logic rules and criteria, and works to develop response strategies for each alarm. Alarm criteria can be set for any data point, including energy usage, energy demand, cost, temperature, pressure, etc. The Alarm Manager can notify appropriate parties of the need for alarm response via pager, cellular phone, e-mail, etc.

Universal Calculation Engine – allows users to perform complex calculations on real-time data acquired through the Silicon Energy database server. These calculations can involve complex algorithms as well as decision analysis scenarios, and can be custom designed to handle almost any customer specific requirement. The Universal Calculation Engine (UCE) can create calculated points that are derived from one or more system points, generate summary and conditional alarms based on the combination of events and values, or trigger control commands based on the combination of events and/or calculated values. For example, the UCE may be used to calculate chiller efficiency and cost of operation. Unlike other Silicon Energy application modules, the UCE is not visible to the end user other than the results it produces, rather the module runs in the background much like a data gateway.

Enterprise Navigator –provides a customizable graphical view of the enterprise(s) and its constituent parts. By visually aggregating energy and facility related information and events in a consistent, intuitive interface, it lets users assimilate large amounts of data quickly, and respond to cost-saving events as they occur. By integrating multiple control systems—regardless of manufacturer or location—onto one common platform, the Enterprise Navigator also increases the scope and intelligence of existing installations. The user is insulated from having to know a variety of vendor-specific software, yet allowed secure remote access to facilities for diagnostics and control.

Load Forecasting –Silicon Energy is in the final stages of testing and validating an original next-day end-user demand forecasting tool. The software tool has a learning feature, which minimizes reliance on historical data. The model estimates the next day's total energy consumption based on neural network mapping or multi-linear regression, and takes into account a maximum of available driving parameters.

Curtailment Manager – enables utilities to administer curtailment offerings over the Internet utilizing a bid / ask transaction dynamic. By directing curtailments to customized groups of customers, and varying prices by customer response time and commitment levels, utilities can buy the exact load reduction needed, when it is needed. Prices for load curtailments can be published to thousands of customers with a single button, or individual customers can be immediately notified by page, email, or other means. Curtailment Manager utilizes the web for immediate automated customer response of committed energy reductions, tracking actual energy reductions by customer's real-time load, and real-time estimations of the value the participation created for the customer and the utility.

Cost Analyst – Allows users to enter and store an unlimited number of rates of any complexity for electricity, gas, water, or other commodities. Rates can be edited and modified online to analyze alternative bids, or verify that each meter is on the lowest cost rate schedule available. Pre-defined rate schedule data can be downloaded from an on-line national rate library. The application calculates energy costs for any meter in the system, and can automatically calculate and summarize costs for hundreds, or thousands of points with a single action. Energy costs can be summarized and allocated on the basis of cost per square foot, production metrics, or other factors. Pro-active alarms of upcoming peak energy costs can be generated when used with Alarm Manager. Contributors to aggregate peak energy costs can be identified and hourly energy costs, including the effects of demand charges, ratchets, and other complex utility rate formulations can be estimated.

APPENDIX B – PROJECT MANAGEMENT STAFF

The following individuals will have primary implementation responsibility for project implementation and management:

Dale Fong, Chief Technology Officer
Dale brings over 14 years of experience in the design and development of Supervisory Control and Data Acquisition (SCADA) systems. The majority of the PG&E grid in Northern California is currently managed with SCADA software developed by Dale. As Software Development Manager with PG&E, Dale was responsible for the development of the Energy Information Services (EIS) system, an interactive web-based system co-developed with Microsoft for use in the real-time monitoring, control and automation of residential homes and commercial premises. At PG&E Energy Services, Dale lead development of an on-line commercial energy information service using state-of-the-art web technologies targeted at commercial energy customers. Dale has a BS in Electrical Engineering from Cornell University.

Allan Schurr, Vice President, Marketing and Business Development
Allan is a 15-year veteran of the energy industry, having previously led marketing, sales, and strategy efforts for various units of PG&E Corporation in San Francisco. As General Manager, Consumer Markets for PG&E Energy Services, Allan was responsible for building a first-of-its kind outsourced customer relationship management platform with IBM Global Services, and he launched the award-winning green energy product Clean Choice in the beginning of California's deregulated energy markets. Other responsibilities have included competitive natural gas marketing, energy-efficiency program management, new market development, and corporate planning. Allan holds a degree in mechanical engineering from the University of California, Davis and an MBA from St. Mary's College of California. He is a registered mechanical engineer in California.

Eric L. Miller, Vice President, Product Strategy
Eric Miller has over 15 years experience in wholesale energy trading, retail electricity marketing, energy project development and finance, and public advocacy. In his role as Vice President of Product Strategy, Silicon Energy Corp., he is responsible for researching, analyzing, and defining the future direction of products, product/business models, and pricing for the company. Prior to joining Silicon Energy, Mr. Miller was co-founder, President and CEO of Foresight Energy Company. Foresight was a leader in opening the California electricity market to competition, and served as exclusive green energy marketing representative for Enron Capital and Trade in the Western US. Prior to founding Foresight, Mr. Miller developed over $450 million in renewable and conventional energy projects including cogeneration, wind energy, and landfill methane projects while at Kenetech Windpower and the AES Corp. Mr. Miller is Secretary-Treasurer of the Center for Energy Efficiency and Renewable Technologies, and a member of the board of Sage Systems, Inc. Mr. Miller holds a Bachelor's Degree in Physics from Colorado College and a Master of Science in Resource Systems from Dartmouth College, Thayer School of Engineering.

Robert Sonderegger, Ph.D., Director, Modeling & Simulation
Robert has 27 years of experience in building energy efficiency, having focued on developing software for energy conservation, energy auditing, and measurement and verification. His most recent products are Metrix, a M&V software package , and Market Manager, an energy simulation and energy savings estimation program. Both are used by ESCO's worldwide, including Johnson Controls, Honeywell, and

Siemens. Robert has been active within ASHRAE for 23 years, most recently as Chair of TC 4.7, Energy Calculations. Prior to joining Silicon Energy, Robert held successive positions as staff scientist, Group Leader, and Deputy Program Leader at Lawrence Berkeley National Laboratory 1977-1984. He then founded Morgan Systems Corp., an energy efficiency software firm, which later merged with part of Synergic Resources Corporation to form SRC Systems Inc., which was recently acquired by Silicon Energy. Robert holds an MS equivalent degree in Physics from the Federal Institute of Technology in Zurich, Switzerland, and a Ph.D. in Mechanical Engineering from Princeton University.

Mark A. Breitbart, Project Manager
Mark has over 11 years of software engineering experience in the design, development, implementation and management of complex data systems. As Software Manager, Product Development Engineering, for Enron Energy Services, Mark managed a development team working on AMR Value Added Solutions which led to the development of the Interactive Metering System. Mark led Enron's successful MDMA certification team, along with integration efforts involving Ardis and Skytel wireless technology and the California ISO. Mark spent over 5 years with Sacramento Municipal Utility District (SMUD), as a Senior Operations Management System Specialist he designed, implemented, managed and maintained their system for energy forecasting and planning using real-time databases and networks. At SMUD he was also responsible for directing communications among utilities for the transfer of energy information.

Taj Ait-Laoussine, Project Manager
Taj Ait-Laoussine has over five years' experience in the energy services and utility industry. As an Associate with Hagler Bailly Consulting, Taj managed and directed the design, implementation and evaluation of several energy efficiency projects for both domestic and international utilities. Taj also participated in the development of numerous new products and services for U.S. utilities. As a Project Manager for Reef Inc., Taj directed the development of a web-based energy information management product for PG&E Energy Services. At Silicon Energy, Taj performs a business analysis and project implementation function where he collaborates with customers to define the appropriate product deployment strategy, identify the financial and strategic benefits of using Silicon Energy technology, and oversees the implementation to ensure that the customer's goals are met. Taj Ait-Laoussine holds a BA in Physics and MS in Energy and Resources, both from the University of California at Berkeley.

Background information on additional staff is available upon request.

CERTIFICATE OF SERVICE

I, ERIC L. MILLER**,** CERTIFY THAT I HAVE, ON THIS DATE, CAUSED THE FOREGOING **PROPOSAL FOR LOAD MANAGEMENT INFRASTRUCTURE SOLUTIONS BY SILICON ENERGY CORP.**

to be served by electronic mail and U. S. Mail, on the parties listed on the Service List for the proceeding in ***California Public Utilities Commission Docket No's A.99-09-049, A.99-09-050, A.99-09-057, A.99-09-058.***

I declare under penalty of perjury, pursuant to the laws of the State of California, that the foregoing is true and correct.

Executed on July 21, 2000 in Oakland, California.

Eric L. Miller