CASE STUDY

OF Energy Performance Contracting

at THE UNIVERSITY OF HAWAII AT HILO and HAWAII COMMUNITY COLLEGE

STATE OF HAWAII

DEPARTMENT OF BUSINESS, ECONOMIC DEVELOPMENT & TOURISM

ENERGY, RESOURCES, AND TECHNOLOGY DIVISION

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Rebuild America

CASE STUDY OF ENERGY PERFORMANCE CONTRACTING

AT

THE UNIVERSITY OF HAWAII AT HILO AND HAWAII COMMUNITY COLLEGE

State of Hawaii
Department of Business, Economic Development, & Tourism
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Case Study of Energy Performance Contracting

at

The University of Hawaii at Hilo and Hawaii Community College

Executive Summary

In the public sector, financing energy efficiency retrofits of facilities is especially problematic because education, health, and safety are top priorities for capital improvement expenditures. The Hawaii Department of Business, Economic Development, & Tourism (DBEDT) encourages government facilities to install energy efficiency improvements, using performance contracting as a method of financing. Performance contracting is an arrangement in which a private company finances and installs building improvements and then relies on future energy savings for payment. Since the contractor guarantees energy savings, the risk of energy savings performance is transferred from the public sector facility to the private company. All project costs -- the energy audit, up-front engineering, and construction -- are financed, which removes funding as a barrier to government agencies. Shortages of technical and managerial resources are also mitigated, since performance contracting services include design, installation, project management, measurement and verification of savings, and long-term maintenance.

In response to declining maintenance budgets, increasing utility bills, and the substantial capital investment needed to retrofit University of Hawaii at Hilo and Hawaii Community College (UHH), in July 1994, UHH issued a Request for Proposals for energy performance contracting services. Through this competitive process, Johnson Controls, Inc. (JCI) was selected to provide a comprehensive energy study, acquire and install equipment, and maintain and repair energy saving measures and related equipment. The goal was to maximize all possible energy savings in order to upgrade facilities while meeting its needs for maintenance services.

Under its contract, JCI provided UHH with $2.9 million in capital improvements for the retrofit of 50 buildings. In addition, UHH received an on-going comprehensive maintenance plan that upgrades and returns existing equipment to maintainable condition along with an ongoing preventative and predictive maintenance program valued at $200,000 per year. The project's projected energy and other cost savings will exceed $6.6 million over the 10-year contract term. In order to repay the up-front capital investment provided by JCI, UHH makes regular payments based on the energy savings guaranteed by JCI. During the period from the project start through June 30, 1999, the University realized more than $1.4 million in savings on utility bills, approximately $80,000 over the amount guaranteed. The project also enabled Hawaiian Electric Light Company, Inc., under its Demand-Side Management Incentives program, to provide more than $122,400 in rebates to the University.

In February 2000, DBEDT conducted an opinion survey on performance contracting. The survey had a 61% response rate. Results clearly demonstrate that performance contracting is of public economic benefit, and indicate a high level of satisfaction with the process, equipment performance and maintenance service. Lessons learned include the need for an on-site project champion, teamwork, and communications at all levels throughout the project.

DBEDT met its project goals, demonstrating the value of performance contracting and developing guidelines and pro-forma documents that could be used by other facilities which duplicate the process.

A fact sheet on the project follows.

ENERGY SAVINGS PERFORMANCE CONTRACT
UNIVERSITY OF HAWAII AT HILO AND HAWAII COMMUNITY COLLEGE

FACT SHEET

Project Benefits

- 2.8 million kWh savings annually
- $6.6 million energy and other cost savings over the 10 year period (1997-2007)
- $577,000 annual energy and other cost savings
- $450,000 annual energy cost savings
- $2.9 million up-front capital investment in energy savings equipment by Johnson Controls, Inc.
- $122,400 in rebates from Hawaii Electric Light Co., Inc.
- $1.7 million in income to the State's economy from construction activities
- Improved facility and improved employee comfort

Project Scope

- Lighting system replaced or upgraded with energy efficient units
- Main chiller replaced with new high efficiency chiller
- Air-cooled chiller at Campus Center relocated to Komohana Agriculture Complex
- Chilled Water Loop expanded to include Student Services building and Campus Center; variable speed chilled water pumping provided
- Building Automation System installed to control major air-conditioning units
- Cooling tower replaced with new cooling tower
- Chiller at College of Agriculture Building replaced with new chiller
- Virtually all ventilation and air-conditioning systems on Campus maintained, repaired and replaced during the 10-year contract period

Public/Private Sector Partners

- University of Hawaii
- University of Hawaii at Hilo
- Hawaii Community College
- Department of Business, Economic Development, and Tourism
- Johnson Controls, Inc.
- Hawaii Electric Light Co., Inc.

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Overview

In response to the 1972 "energy crisis" created by the Arab Oil Embargo, the Hawaii State Legislature established the position of Energy Resources Coordinator. The Director of the Department of Business, Economic Development & Tourism (DBEDT) was designated as the Coordinator and charged with the responsibility for carrying out the state's statutory energy objectives. These objectives include the provision of: (l) dependable, efficient, and economical statewide energy systems capable of supporting the people's needs; (2) increased energy self-sufficiency where the ratio of indigenous energy use to imported energy use is increased; (3) greater energy security in the face of threats to Hawaii's energy supplies and system; and (4) reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use. DBEDT's Division of Energy, Resources, and Technology (ERTD) carries out the State's energy objectives by supporting and implementing programs that: (l) ensure the reliability, security, and economy of energy supply; (2) promote energy efficiency and renewable energy; and (3) are environmentally responsible. ERTD's Energy Branch has the broad goal of stimulating the economy through encouragement of energy efficiency technologies.

In the face of increasing energy costs and energy equipment that had exhausted its useful life, the Energy Branch (hereafter referred to as DBEDT) selected performance contracting as one program to encourage State agencies to

upgrade their facilities. Many Hawaii State agencies lack the funds to pay for these facility improvements. Performance contracting allows them to use the money saved from the installation of energy-efficient equipment to pay for the retrofits. Energy performance contracts are desirable not only because they can reduce energy consumption by 20-25 percent, but also because the up-front capital costs of the retrofits are financed by a private sector or energy service company (ESCO), and are paid back from energy savings.

Once DBEDT determined that performance contracting was a viable option, existing state procurement and contracting regulations/legislation were examined to determine if they allowed performance contracting. As a result of this analysis, DBEDT recommended legislation, adopted by the Hawaii State Legislature in 1989, to provide a definition of energy performance contracting and authorizing state agencies to pursue this type of procurement. The original legislation has since been amended to allow for a fifteen-year term, as it was found that capital intensive technologies such as chillers require a longer payback period and could not be financed from project savings within a ten-year term even when bundled with lighting retrofits. An important provision of the law is that the cost of the energy performance contract may not exceed the total savings from the project. A copy of the current law, Hawaii Revised Statutes 36-41, as amended, may be found in Appendix 1.

With the selection of energy performance contracting as a means to finance and implement energy efficiency projects in State buildings, DBEDT

surveyed twelve potential hospital and university sites in 1993 and 1994 to determine which had the greatest potential for energy savings and the full support of management, and then selected one site as a demonstration project. Data collected during the site visits included lists of buildings, square footage of buildings, utility bills (including usage in dollars and units of energy), operating schedules, and typical construction characteristics. The data collection methods and forms were later included in DBEDT's *Guide to Energy Performance Contracting,* available on the internet <www.hawaii.gov/dbedt/ert>.

In June 1994, DBEDT completed its initial 12-site survey and by 1998 had surveyed an additional 17 state facilities for potential for energy performance contracting. Table 1 shows the results of the surveys conducted in 1993 and 1994. Table 2 shows results of surveys performed after 1994. Of the initial 12 sites surveyed, the University of Hawaii at Hilo and Hawaii Community College (UHH), located on a joint campus, showed the most potential.

Table 1. Results of Surveys of Potential Sites for Energy Performance Contracting Performed in 1993 and 1994

Facility	Date surveyed	Potential 10-year $ savings	Potential for DBEDT project
Kauai Veterans Memorial Hospital, Kauai	4/20/93	NA	Not recommended; concern with stable energy use baseline
Leahi Hospital, Oahu	4/21/93	NA	Not recommended; savings probably too small for cost-effective project
Maluhia Hospital, Oahu	4/21/93	NA	Not recommended; projected management changes could impact support of project
University of Hawaii Tower at Queen's Hospital	4/21/93	NA	Not recommended; uncertainties regarding lease agreement
University of Hawaii at Manoa	6/21/93	NA	Not recommended, management opposition
University of Hawaii at Hilo and Hawaii Community College	9/21/93	$1,261,000	Recommended; strong management support and significant savings
Leeward Community College, Oahu	5/18/93	$995,000	Recommended
Kauai Community College, Kauai	2/7/94	$839,100	Recommended
Honolulu Community College, Oahu	1994	$614,000	Recommended
Kapiolani Community College, Oahu	7/25/94	$989,100	Recommended; lighting measures only
Maui Community College, Maui	7/27/94	$573,500	Recommended
Windward Community College, Oahu	7/27/94	$185,700	Recommended

Table 2. Results of Surveys of Potential Sites for Energy Performance Contracting Performed after 1994

Facility	Date surveyed	Potential 10-year $ savings	Potential for DBEDT project
Judiciary (6 facilities)	NA	$4,480,000	Recommended
State Public Libraries (49 facilities)	1997	$2,000,000	Recommended
Hawaii Army National Guard (11 facilities)	1997-98	$1,800,000	Recommended
Public Schools (240 Facilities)	1997	$8,000,000	Recommended

The Selection of UHH

Surveyed on September 16, 1993, UHH was found to have significant potential for energy savings. Benefits included:

- Savings of 1.44 million kilowatt-hours of electricity annually;
- Ten-year net energy cost savings of $1,201,000 with no initial capital investment;
- Ten-year material cost savings of $68,000; and
- Financing of $604,000 in project costs without the need for State funds, and possibly qualifying for an estimated $93,000 in utility rebates.

Edgar Torigoe, then Vice Chancellor of UHH, expressed strong interest in immediately beginning the performance contracting process at the campus.

UHH's decision was based on the appeal of energy performance contracting as an alternate procurement method to construction design and bid contracts. They were pleased that no down payment or capital budget allocation was needed and that the ESCO would provide the up-front costs. They also liked the idea that this was a turnkey project, providing multiple services in one purchase and single-source responsibility and accountability. Other features that were attractive were that this was a fixed-fee contract, in which payments were to be performance-based and a guaranteed savings provision ensured that UHH would have a positive cash flow.

Based on favorable findings of the energy survey and Torigoe's support, DBEDT selected UHH as its demonstration energy performance-contracting project. DBEDT's goal in the UHH project was focused on demonstrating the value of performance contracting through a performance contract and developing guidelines for the process that could be used by other state agencies to implement performance contracting.

The Project

The University of Hawaii at Hilo and Hawaii Community College are located in Hilo on the island of Hawaii. Following the decision to select UHH as DBEDT's demonstration project for performance contracting, the UH Procurement, Property, and Risk Management Office (UHPPRMO) contracts officer and DBEDT's consultant spent six months drafting a Request for Proposals (RFP) and contract for the project. The procurement was

distinguished from a construction project and a more streamlined alternative to the construction procurement process developed. The final version of the RFP and contract was a single-step, combined "construction/services" procurement.

The Procurement

In July 1994, the UH Procurement, Property, and Risk Management Office (UHPPRMO) issued the Request for Proposals (RFP) for performance contracting services to improve energy efficiency at the University of Hawaii at Hilo and Hawaii Community College (UHH). The purpose of the RFP was to select a contractor to implement energy-saving measures in approximately 50 buildings at the campus. The contractor was to provide a comprehensive Energy Study, acquire and install equipment, and maintain and repair energy-saving measures and related equipment. Payments for these services were contingent upon measured energy savings resulting from the improvements. The project goals included reducing energy costs, improving system performance, and meeting the lighting efficiency standards of the Environmental Protection Agency's Green Lights program. Long-term maintenance and trouble-free operation of all equipment installed was a high priority. In September 1994, an Evaluation Committee for the procurement was appointed. It was comprised of UHH representatives including the Vice Chancellor, a planner, a facilities maintenance member, an economics faculty member, an electrical faculty member, a representative of the Hawaii Community College system, and representatives of

DBEDT. The UHPPRMO representative chaired the committee. DBEDT's consultant served as an advisor.

On July 26, 1994, in accordance with the schedule outlined in the RFP, a preproposal meeting attended by members of the UHH evaluation committee and 11 ESCOs was held. Following the meeting, UHH issued answers to a series of questions that had been posed by the ESCOs either directly to the UHPPRMO or at the preproposal meetings. The questions covered three broad areas of interest: (1) energy and maintenance savings; (2) risk; and (3) financing.

On September 26, 1994, five proposals were submitted to UHH in response to the RFP, then two finalists were selected to make oral presentations of their best and final offers to the Evaluation Committee. Following further evaluation of the two companies, Johnson Controls, Inc. (JCI) was notified of its selection on April 18, 1995, and given a notice to proceed with its Energy Study. The decision to select was based primarily on JCI representations of the amount of equipment improvements it could make to the facilities and its ability to self-finance the project.

Following completion and approval of its Energy Study, JCI provided UHH with $2.9 million in capital improvements to retrofit 50 buildings including administrative offices, campus center, classrooms, dormitories, library, theater, shops, and cafeteria. In addition, UHH receives a comprehensive maintenance program to upgrade and return existing equipment to maintainable condition and an ongoing preventative and predictive maintenance program with an

average value of $200,000 per year, $113,000 of which is funded from operational savings. The project will have a cumulative cash flow exceeding $100,000 over its 10-year term. It is financed by JCI under a commercial loan at 8.6% interest.

Retrofits included lighting, cooling, ventilation, air conditioning, controls, pumping, variable speed drives for motors, and power factor correction. A summary list follows:

- Lighting system replaced or upgraded with energy-efficient units;
- Main chiller replaced with new high efficiency chiller;
- Campus Center air-cooled chiller relocated to Komohana Agriculture Complex;
- Chilled Water Loop expanded to include Student Services building and Campus Center; variable speed chilled water pumping provided;
- Building Automation System installed to control major air-conditioning units;
- Cooling tower replaced with new tower;
- College of Agriculture Building chiller replaced with new chiller; and
- Virtually all ventilation and air-conditioning systems on Campus maintained, repaired and replaced during the 10-year contract period.

A key element of the retrofit was the maintenance program and the assignment of a full-time in-house JCI employee to the project; UHH provides office space. With this hands-on comprehensive approach, JCI was able to guarantee an energy cost savings of $450,000 per year before inflation.

Energy and Maintenance Savings

The energy performance contract between the UHH and JCI required that the ESCO perform a detailed energy audit of the facilities and furnish a written report, or Energy Study, of its findings. After review and approval by UHH, this written report was incorporated into the contract in order to provide a detailed description of the energy efficiency measures and the baseline for energy savings. The Energy Study required consideration of eight general categories of information, as follows:

1. Existing conditions
2. Energy conservation measures
3. Standards of service and comfort
4. Energy Savings
5. Facility support required
6. ECM installation schedule
7. Energy baseline and savings measurement
8. Price formula.

As part of the detailed analysis required to complete its Energy Study of UHH, JCI investigated over 30 different energy conservation measures and strategies. The existing conditions of the campus were audited, as were the operating schedules and practices of University staff and personnel. Special

requirements for unusual operating conditions, temperature ranges, and humidity controls were investigated and noted. JCI also used a computerized building simulation model to understand how the operational parameters of the campus actually impact energy consumption. According to JCI, the model was accurate within 7% in predicting historical energy costs compared to actual. After the model was calibrated, various energy savings scenarios comprised of different combinations of the 30 energy conservation measures (ECM) were fed into the model and their collective impact studied. The most economically viable package of ECMs was adopted and is shown in Table 3.

Table 3. Energy Efficiency Measures and Predicted Savings

Measure ID	Measure Description	Annual Savings			Measure Cost
		KWh	KW	$	$
ECM-1	Energy Efficient Lighting	1,325,097	404	218,579	999,600
ECM-2	New Chiller	364,037	84	49,145	353,024
ECM2-1	Relocate Campus Center AC to Komohana	52,622	11	7,104	49,000
ECM-3	Chilled Water Loop Expansion	287,562	52	38,821	351,007
ECM-4	Building Automation System	354,229	NA	47,821	432,898
ECM-5	Occupancy controls for Window AC units	89,300	NA	11,000	49,356
ECM-6	Variable volume Chilled Water Pumping	208,207	NA	28,108	112,716
ECM-7	LRC VAV conversion to Variable Speed Drive	24,150	NA	2,995	19,818
ECM-8	New Cooling Tower	110,969	NA	14,944	126,225
ECM-11	Power Factor Improvement	0	NA	3,900	23,505
ECM-15	Chiller Replacement, College of Ag Bldg.319	41,930	9	6,350	65,673
	TOTAL	2,858,103	560	$428,767	$2,582,822
	Savings (from Contract Table 6-3)				

The Calendar Year 1995 was chosen as the baseline year for the project. JCI calculates cost savings using two methods:

1. The savings for each of the 28 meters that are included in this project are evaluated separately and added together. Energy savings for the 21 meters that show lighting savings only are stipulated in the contract. No actual meter data is entered in JCI's proprietary model (METRIX™), only the stipulated kWh (energy) and kW (demand) savings. A blended rate is used to calculate dollar savings.
2. Utility Bill Analysis is used for the other seven meters. For each of these meters, the kWh and KW usage is entered. (Only one of the meters is using Weather Regression to adjust for the weather; the other meters did not have a good enough weather correlation.) In calculating savings under this method, an historical billing year (1995) is stipulated as the baseline. The report period and the baseline are compared in the model using agreed upon utility rates. The difference is the savings.

The rate structure to be used for calculating dollar savings was agreed upon in the contract by both parties. This structure was that energy dollar savings should be calculated by using either: (1) the greater of the electric rate in effect during the base year inflated by a factor of 5% each calendar year; or (2) current utility rates. At first glance, this arrangement appears unfair to UHH, however, since the guaranteed savings rate is also inflated at 5% per year, there appears to be no net effect. JCI has commented "this scheme, while effective and

equitable, will produce dollar savings values which have little or no relationship to the real world. They only have meaning in the context of the contract."

The annual reconciliation of savings is based on the utility rates for the period under review adjusted for inflation. During the first period of reconciliation from November 1996 to June 1998, the project generated $804,081 in cost savings, exceeding guaranteed savings by $83,339. The second year reconciliation of savings for the period July 1, 1998, to June 30, 1999, shows that the project saved the university $587,092 but was short of the guaranteed savings by $2,350. Adjustments to savings approved at the reconciliation took into account the increased use of the chiller, a water leak that occurred in March 1999, and a calculated amount for leakage in the chilled water loop system over the baseline. JCI paid the UHH the $2,350 difference. Utility rebates aggregating $122,419 ($95,809 in the first reconciliation period and $26,610 in the second) are included in the calculation of dollar savings, playing a key role in JCI's achievement of its guaranteed savings objectives.

Table 4 shows the baseline and the savings for the period from the completion of construction to June 30, 1999.

Table 4. Energy Cost Savings from UHH project

Report Period (a)	Projected Savings ($) (b)	Stipulated Operating Savings ($) (c)	Total Guaranteed Savings (d)	Actual Savings from Metrix (e)	Other Savings (f)	Total Savings Achieved (g) = (c)+(e)+(f)	Variance (g) - (d)
Baseline[a]	415,924	113,325	529,250				
11/15/96-6/30/98[b]	536,587	184,155	720,742	524,114	95,809[c]	804,081	83,339
7/1/98-6/30/99	472,716	116,726	589,442	427,144	43,222	587,092	(2,350)

a. The energy baseline in the contract is not clearly stated. These numbers were extracted from Contract Table 7-1.

b. It was agreed that the first reconciliation period would run from the start of construction to 6/30/98 so that second year savings could be reconciled starting from 7/1/98.

c. Other savings include utility rebates, power factor savings.

Maintenance Savings

In conducting its Energy Study of UHH, JCI found that there had been a planned cessation of basic maintenance and preventative maintenance due to budget cuts throughout the University of Hawaii system. JCI proposed a comprehensive overhaul of the air conditioning system, with replacement of window units where necessary. Following the completion of construction, a planned work order system was implemented to provide continuous maintenance in addition to any parts or replacement needed. Funding for this maintenance program came from the existing operations budget and savings

were estimated at $113,000 per year with an escalation rate of 3% per year. A maintenance schedule for new and existing equipment was provided and is found in Appendix 2.

During negotiations, questions were raised as to whether procurement law limited the scope of maintenance services that could be purchased under a performance contract. DBEDT's boilerplate RFP for performance contracting allows the contractor to offer maintenance services for existing State-owned equipment in addition to improvements installed by the contractor. The question was whether such maintenance services might be required to be selected by sealed competitive bids rather than allowed by the existing RFP. It was determined that extended maintenance services for existing equipment could be procured as part of the performance contract.

One of the key factors, which led to UHH's decision to select performance contracting, was the option for maintenance of campus equipment during the term of the contract. Since energy savings were guaranteed by the ESCO, UHH was assured that the contractor would operate equipment at maximum efficiency. Following completion of construction, a JCI Building Environments Specialist was stationed on campus in facilities provided by UHH to maintain the retrofits, manage the building automation system, and provide technical assistance to UHH on the project.

Major Issues

Since performance contracting was a novel method of securing energy efficiency improvements in State buildings, DBEDT and UHH needed to resolve many issues, which had not been encountered in previous public works or repair and maintenance projects. Significant changes in State procurement law also raised issues during the first performance contracting RFP that was issued for UHH.

Including Non-Energy Savings in Cash Flow and Project Evaluation

The goal of State facilities in performance contracting is to derive a positive cash flow from projects. In marginal projects, it is difficult for reviewers to determine whether cash flows have been manipulated to provide positive energy cost savings. Especially problematic is the inclusion of avoided costs in cash flows. Limiting payments to the contractor to actual cash energy savings guarantees a positive cash flow to the State and places an arbitrary limit on the amount of work that can be financed. DBEDT advises proposers to include the following in cash flow presentations in their energy studies:

> Guaranteed Annual Energy Cost Savings *(avoided costs should not be included as savings as facilities are interested only in dollar savings)*
>
> Minus annual payments to the ESCO *(payments should be broken down between Loan/Finance payment and Service payment. Pursuant to the Hawaii Revised Statutes, total annual payments to the ESCO shall not exceed total annual savings)*
>
> Equals Net Annual Cost Savings to Facility.

UHH was interested in performance contracting as a means to provide for continuing maintenance needs. HRS 36-41, "Energy performance contracting for public facilities," does not limit consideration of other benefits (such as savings in repair and maintenance costs). In some cases, savings in repair and maintenance costs may be greater than savings in utility costs (e.g. by avoiding the future need to replace obsolete equipment). In the UHH project, maintenance savings were included in the overall calculation of savings for the project, while inclusion of avoided costs for equipment replacement or labor was not permitted.

While current legislation allows for inclusion of avoided equipment replacement as energy savings, State agencies have continued to take a more conservative approach and required that there be a positive annual cash flow from their projects.

Proposal Evaluation

Appendix 3 contains the proposal evaluation guidelines used in the UHH project, provides detail on how to evaluate each evaluation criteria, and score sheets. Appendix 4 provides a sample summary evaluation form.

Financial Evaluation of Proposals

State facilities for which DBEDT provides technical assistance in performance contracting may request DBEDT to perform an independent evaluation of proposals, including calculation of financial benefits. Scoring performance contracting proposals requires an evaluation of proposer experience

and qualifications, management approach, technical approach, and financial benefits. Evaluation of experience and qualifications, management approaches, and technical approaches are largely subjective, while evaluation of financial benefits is objective and should be performed in a consistent manner.

For the UHH project, the UHPPRMO used a simple liquidity analysis, or current ratio, to compare proposals with industry averages. Auditor's notes to corporate financial statements were also reviewed as well as proposers' capability to obtain performance and payment bonds. Proposers were required to state that they were not involved in any financial default, modification of terms and conditions of financing to avoid default or litigation and that there were no pending lawsuits, judgments, or consent decrees which would restrict the carrying out of their proposals.

Evaluation of Cost – Open Book Pricing

Hawaii Administrative Rules (HAR 3-122-52) require that "when applicable, cost shall be an evaluation factor." Unlike competitive sealed bids, which are based on a fixed, clearly defined scope of work, the costs of performance contracting proposals are difficult to compare directly and, therefore, a method was needed to improve the ability to evaluate cost in the selection process. Generally, the proposers offer different packages of improvements and use different discount rates and rate escalation factors. Proposals also offer different levels of savings, so that a higher cost proposal, by offering greater savings, may actually offer a greater net benefit to the State.

Identifying specific improvements is the contractor's first task after contract award, so the exact scope and nature of the improvements to be constructed must be shown in the energy study. At the proposal stage, costs are estimates only and may change as a result of the detailed energy study. One of the problems that arose in the UHH project was that, the contractor's energy study showed lower net savings than the original proposal and there was no easy way to evaluate the reasonableness of the contractor's price. This raised questions as to whether the reduction in net benefit was caused, in part, by the contractor raising his profit margin or contingency. After evaluation, UHH determined that it was actually caused by a change in interest rates.

To facilitate evaluation of the cost element of proposals, DBEDT created a price formula response form. This form establishes the exact formula by which the total cost to the contractor is calculated. The price formula consists of four parts: a fixed price for the preparation of the detailed energy study by the contractor; a percentage of construction cost for design, project management, general contractor overhead and profit, and commissioning services; bond fees, and other fees and permits; interest rates for construction and term financing; and overhead and profit percentages to be applied to maintenance costs of the project. Using a sample (e.g. average) project construction cost, the costs of different proposals can be directly compared, and points awarded accordingly. This approach of specifying a price formula based on actual contractor costs is often known as "open book pricing."

Baseline Development and Measurement Plan

Baseline and savings measurement methods for the contractor's guarantee of energy savings for UHH proved problematic. DBEDT's consultant reviewed the contractor's proposed baseline and measurement plan and recommended changes, as the original proposed baseline and measurement plan were overly complex and vague. In addition, the proposed energy accounting software was still under development by the contractor. The negotiated measurement plan used three methods to determine savings. For certain buildings, utility billing data for a baseline year (a specified year before the retrofit) is compared to post-retrofit billing data. For other buildings, lighting wattage was directly metered before and after the retrofit and the operating hours logged with recording elapsed time meters. Since facility managers did not have any experience with measurement and verification, the ESCO agreed to train facility staff on their energy accounting system (METRIX™). Due to UHH staff workload this has not been accomplished.

Annual reconciliation meetings between the facility managers and the ESCO are used to evaluate savings and performance. These meetings serve to determine actual savings by the agreed upon measurement method and to adjust the baseline or savings to include occurrences during the reconciliation period that were caused by factors outside the control of the facility or the ESCO. The amount of payment for the reconciliation period is "trued-up" and agreement is reached on the amount of payment by the contractor to the facility under the

guaranteed savings clause of the contract, if savings fall below the guaranteed amount.

In reviewing the contract, Energy Study and reconciliation report for the first reconciliation meeting in 1998, DBEDT's consultant discovered some shortcomings in the contract. According to the consultant, the JCI energy study states that both energy savings in kWh and dollars will be guaranteed for each conservation measure (ECM) installed. However, neither the contract nor the energy study describe what recourse UHH has in the event there is a shortfall in kWh savings. The contract only states that UHH may charge JCI in the event of a dollar shortfall. In addition, the contract was not clear as to what dollar amount was being guaranteed. Due to the many changes that were made to the original energy study, there were several conflicting amounts of dollar savings. In future contracts, it is imperative that the baseline be clearly established, that kWh savings (as opposed to only dollar savings) are guaranteed in the contract, that the cost/kWh for calculating cost savings is established, and that the facility's recourse in the event of an energy (kWh) savings shortfall is clearly identified.

Also adding to the issue of reconciling savings was the fact that staff turnover resulted in only DBEDT and UHH staff remaining and that the JCI staff did not have a full understanding of the "project history." This resulted in confusion regarding assumed responsibilities, verbal agreements, intent of certain actions, etc. JCI responded that in the present corporate environment there was continual shifting of responsibilities. However, the turnover in staff

did not impact open discussion of the issues, their resolution, and acceptance of the reconciliation report by UHH.

The reconciliation of savings was problematic because when the RFP for the UHH project was issued, there was no substantive agreement on measurement and verification protocols in the ESCO industry. There was a patchwork of inconsistent and possibly unreliable efficiency installation and measurement practices that were used by individual ESCOs to measure and verify savings. In early 1996, the North American Energy Measurement and Verification Protocol was adopted by ESCOs, the federal government, several state governments, and the private sector as a broad industry standard. The protocol was updated in December 1997 as the International Performance Measurement and Verification Protocol (IPMVP). This latter version contains a section on procedures and guidelines for quantifying savings resulting from installing Energy Conservation Measures under energy performance contracts. DBEDT has conducted workshops and technical seminars on measurement and verification), but has found that M&V remains the least understood part of performance contracting. A supplement on measurement and verification has been developed for DBEDT's *Guide to Energy Performance Contracting* and is available on the internet.

Financing

At the time of the preproposal meeting, UHH did not have a preference on whether financing would be provided directly by the ESCO or arranged with a third party. If the ESCO proposed to finance the project directly, the evaluation would be of the ESCO's financial status. If it were to be financed through a third party, UHH would consider a commitment letter, prior experience of ESCO with financier, or completion security to document the availability of funds sufficient to complete the project. Many performance contracts for public agencies are financed as municipal (tax-exempt) leases through third party financing companies or investment banks. In Hawaii, the counties of Hawaii and Kauai are utilizing this type of arrangement with the advantage of this approach being a significantly lower interest rate due to the tax-exempt status of the Counties as the borrowers.

JCI completed its Energy Study of UHH in February 1996 and submitted it to UHH for review and approval. At the same time, in order to obtain the most favorable interest rate to finance the project, JCI submitted documents to enable municipal lease financing for execution by UHH. The lower interest rate (approximately 2 points) would have allowed UHH to realize greater energy savings and install additional energy conservation measures. This approach required that the University agree to an assignment of the contract rights (i.e. the contract revenues) to the third party financing company. The University

objected to certain provisions of the assignment document proposed by the contractor, particularly terms which the University felt might limit their rights to withhold payment as a remedy for non-performance or in the event funds were not appropriated for the contract payments.

Negotiations on financing took place from February 1996 through July 1996 during which it was discovered that JCI financing documents showed a term that exceeded the 10-year statutory limit. JCI subsequently revised its Energy Study Report and cash flow to reflect the 10-year term. UHPPRMO and DBEDT finally met with a representative of the Attorney General's Office regarding the issue of allowing tax exempt financing for the project and it was determined that tax exempt (municipal lease) financing was unacceptable to the State. JCI was asked to explore other types of financing arrangements that would not place UHH in any form of third-party indebtedness. The result was that JCI contracted directly with the University and obtained financing for the project at commercial rates.

The UHH project has shown that long delays in project implementation can be caused when contractors and third party financing companies submit unfamiliar and/or non-standard forms to secure project financing. DBEDT's revised RFP requires that proposers submit this documentation, including interest rate information, with their proposals. Each contract, however, is treated on a case-by-case basis and there are no standard financing documents issued by the State. The University and contractor were unable to reach an agreement on

an appropriate method of assigning risk through a third party agreement, and the project was financed with a conventional commercial lease, representing a higher interest payment, but a less risky project to the State.

Risk

There are many types of risks in pursuing energy performance contracting, including performance, construction, and financing. UHH concentrated on insurance requirements to manage the level of risk of the project. Performance and payment bonds in the amount of 100% of the total construction cost of proposed energy conservation measures were required; the ESCO was to maintain insurance coverage on all contractor-owned and installed equipment until title passed to UHH upon expiration of the contract term; and errors and omissions coverage was not required. A hazardous waste disposal plan was to be included in the Energy Study. Table 5 contains a recommended list of coverage and limits of insurance that can be required of a contractor. The Table was taken from the Rebuild America Model Agreement for Guaranteed Energy Savings, available on the Rebuild America website <http://www.eren.doe.gov/buildings/rebuild>.

Table 5. Recommended Insurance Requirements

Type of Insurance		Occurrence	Suggested Coverage
Builder's Risk			Extended, for the value of work equal to construction cost
Worker's Compensation Insurance		As required by state law	As required by state law
Employer's Liability Insurance			$2,000,000
Comprehensive General Liability Insurance, Including			
	Bodily Injury Liability	Each occurrence	$1,000,000
	Broad Form Property Damage	Each occurrence	$1,000,000
	Personal Injury	Each occurrence	$1,000,000
	Product Liability	Each occurrence	$1,000,000
	Completed Operations	Each occurrence	$1,000,000
	Contractual Liability	Each occurrence	$1,000,000
Automobile Liability Insurance (owned, hired, and non-owned)			
	Bodily Injury	Per Accident	$1,000,000
	Property Damage	Per Accident	$1,000,000

Other Issues

Other issues arose as a result of the State's procurement and licensing rules and regulations.

Compliance with Hawaii Administrative Rules

Any Request for Proposals (RFP) for Energy Performance Contracting Services is procurement by competitive sealed proposal and needs to comply

with the Hawaii Administrative Rules (HAR) Subchapter 6, 3-122-41 to 3-122-60. While the RFP and boilerplate contract for the UHH project were being developed, a model procurement law was adopted by the legislature and subsequently, the Hawaii Administrative Rules substantially amended. The boilerplate RFP was revised to comply with the new HAR (April 1995).

Contractor Licensing

The RFP required the selected contractor to be properly licensed and that the proposer (not subcontractors) must hold a valid general contractor's license before any contract could be awarded. Licenses were not required at the time of proposal submission, but contractors were given notice that no contract could be awarded to a proposer without a valid contractor license. The Contractor's Licensing Board made special arrangements to allow contractors to qualify as proposers for the UHH project.

Prevailing Wages

Prevailing wages listed for construction work show few classifications relating to electrical work, such as low voltage wiring for energy management control systems. The contractors explained that prevailing wage rates listed in the RFP were significantly higher than the union scale they paid their workers. The Department of Labor determined that the wage rates (Davis-Bacon) published by the Department applied to all installation or construction work. State government wage rates applied to all maintenance work. A wage

certification form was created and added to the UHH RFP to verify proposers' understanding of the wage requirements.

Indemnification and Hold Harmless Clauses

The State had concerns regarding indemnification and hold harmless provisions in favor of a third party, which may appear in agreements between State agencies and outside entities. DBEDT was advised that it should not agree to any clauses indemnifying or holding harmless a third party from liability claims. In addition, UHH does not accept contractual language stating that the ESCO "shall not be responsible for any indirect, incidental, or consequential damages arising from the work."

Maximum Allowable Contract Term

Up until the 1997 legislative session, allowable contract term was limited to 10 years. Based on experience with the UHH project, DBEDT found that limiting the contract term significantly impacts the range of energy efficiency projects that can be financed under a performance contract. Typically, under a ten-year term, lighting upgrades and limited air-conditioning improvements are the only measures that will produce a positive net cash flow. Some State agencies wanted to use energy performance contracting to finance improvements in obsolete and unreliable air-conditioning equipment. The ten-year term limitation presented a major obstacle to this goal. Since the more expensive equipment being financed has a normal lifetime of 30 to 40 years, a longer financing term is reasonable and customary business practice. In June 1997, an

amendment to the performance contracting law extended the term of the contract to 15 years.

Request for Proposals (RFP) and Contract Requirements

As the solicitation documents are not included in this report and are available on DBEDT's website, key elements of the RFP and contract are summarized below.

Key Elements of DBEDT's Request for Proposals

- A scope of work and specifications for goods and services to be provided;
- Contractual terms and conditions that will apply to the project;
- Instructions for proposal submission and information for Proposers (including a description of the facilities to be considered; a description of the evaluation criteria that will be used as the basis for selection); and
- Facility information.

Key Elements of DBEDT's Energy Performance Contracts

Mandatory Provisions

The Hawaii Revised Statutes (HRS) Section 36-41, "Energy performance contracting for public facilities," permits state and county government agencies to enter into energy performance contracts "for the purpose of undertaking or implementing energy conservation or alternative energy measures in a facility." All energy performance contracts are subject to certain limitations as follows:

- The term of energy performance contracts is limited to fifteen years;

- All contracts must include an annual allocation dependency clause making the continuation of the contract contingent on the appropriation of funds;

- The agency shall receive title to the energy system being financed under the contract;

- The level of payments to the contractor is made contingent upon the measured energy cost savings, energy production, avoided maintenance, avoided energy equipment replacement, or any combination of the foregoing basis; and

- Total costs shall not exceed total savings.

Scope of Services

In any contract, the scope of work that the contractor is responsible to complete must be described fully and completely. In an energy performance contract, the contractor may be performing services in several different areas. Common services include:

- A detailed energy study to identify existing conditions and propose improvements;

- Engineering and design services;

- Construction services;

- Operations and maintenance services;

- Measurement and verification of savings; and

- Training.

Facility Responsibilities. Facility management must understand its commitment to the contract in order to prevent the contractor from unreasonably

claiming that savings were not achieved due to actions or omissions by the facility. Facility responsibilities may include operating or maintaining existing equipment in a way that helps the contractor's improvements achieve or maintain savings. Facility managers must also closely monitor savings reports to ensure that savings levels are being maintained.

Compensation. The contract must establish what price will be paid for the contractor's services, the timing of payments, how payments will be calculated, and termination value. In performance contracting, the contract is awarded before the energy study is completed and cost of improvements may not be known. The payment schedule and guarantee of savings becomes an important part of negotiations.

Term. The contract must state the term of the agreement and under what circumstances the contract may be terminated. In Hawaii, maximum term for energy performance contracts is 15 years, including the period of construction.

Ownership of Equipment. The contract should make clear who owns the equipment installed by the contractor at all times during the contract. Equipment ownership may be important to the contractor for purposes of securing financing. Hawaii's boilerplate contract establishes that all equipment installed by the contractor remains the property of the contractor during the term and ownership transfers to the facility at the expiration of the contract.

Standards of Service and Comfort. One way a contractor might increase savings is to lower the amount of cooling or lighting below the levels customarily

provided in the facility. The contract should establish what levels of cooling and lighting are considered acceptable and require the contractor to design, install and maintain equipment to provide these levels of service and comfort.

Savings Measurement. Savings measurement is a vital part of a performance contract. The Hawaii contract requires the contractor to provide a detailed savings measurement plan, including the method for establishing the energy baseline. It is imperative that the contract also contain specific language specifying the kWh and KW savings that will be guaranteed as well as the rate used to calculate dollar savings for reconciliation purposes.

Opinion Survey

Following implementation of successful performance contracts at the University of Hawaii at Hilo, Hawaii County Building and Kauai County Buildings; and decisions by the Department of Education and Community Colleges system not to pursue financing energy retrofits through performance contracting, DBEDT decided to conduct an opinion survey of government representatives who had been directly involved in these performance contracting projects. A 25-question opinion survey that asked for responses on the most important public benefit of performance contracting, satisfaction with the results, satisfaction with the process, risk avoidance, financing, and lessons learned was developed and mailed to a group of 23 employees of State agencies and local governments. Thirteen responses were received, a response rate of

61%. Results of the survey are summarized below. When the respondents were asked what role they played in their project, nine people indicated that they were implementers, administrators or managers of performance contracts; and four indicated that they were advisors.

The most important public benefit of performance contracting

When asked whether economic, environmental, energy security, or other options were the most important public benefit of performance contracting, respondents overwhelmingly, 12 out of 13, selected economic benefits (lower operating costs of buildings, increased productivity of building occupants, new jobs, more capital investment) as the most important public benefit of performance contracting. One respondent selected environmental benefits as the most important. The respondents did not select the third option, energy security, as a public benefit.

Single consideration that encouraged energy performance contracting

Another question asked respondents to determine the one, single consideration that encouraged them to pursue performance contracting. Options given included: the need to replace old equipment; the need to cut back costs; improved comfort for building occupants; lack of funds for repairs and maintenance; and working with one contractor throughout the entire project. Out of the 12 people who answered the question, 80% (ten respondents) selected economic reasons for their decision to pursue performance contracting;

of these ten, half selected lack of funds as the primary reason. Only one respondent selected ease of working with one contractor.

Level of satisfaction with performance contracting

Results of the survey showed that nine out of eleven respondents (81.8%) were satisfied with equipment performance, one was dissatisfied, one did not know and two did not answer. Six respondents described dissatisfaction with equipment performance, including:

- Occasional failures in Chiller/AC system shortly after installation;
- High rate of ballast failure;
- Noise from a cooling tower;
- Complicated central control system; and
- Delays in replacing variable speed drive motors.

The survey also asked for opinions on overall satisfaction with the performance contracting process; with which part of the process there was dissatisfaction, and what was the biggest cause of delay in the project.

Only five of the eleven respondents (45.5%) who answered the question about overall satisfaction with the performance contracting process said they were satisfied. These respondents were all administrators, managers, or implementers. Three of the eleven responses indicated dissatisfaction. Respondents were asked to select with which of eight elements of the process they were dissatisfied. While only three respondents had indicated they were not satisfied with the process, six answered the question about dissatisfaction

with the process. Most respondents were dissatisfied with the Request for Proposals process. One respondent was dissatisfied with the energy study process, one with the financing process. The other two indicated that there were problems with comparing initial and life cycle costs and difficulty moving the process along in their organization.

Biggest cause of delay to the project

Six respondents indicated that the procurement process was the biggest cause of delay. Two respondents selected management inactivity, while two selected the financing process.

Most desirable way to finance performance contracts

Eleven of the thirteen respondents replied to the question, "What is the most desirable way to finance performance contracts?" Six respondents selected self-financing from budgeted funds. Four selected tax-exempt financing.

When asked to indicate which type of financing they had used for their projects, nine out of ten respondents had either used tax-exempt or ESCO financing. There is no correlation between respondents' desired type of financing--government funds--and the type of financing used for performance contracts--private funds.

An open-ended question on what aspect of financing was the greatest source of dissatisfaction elicited responses indicating two areas. One was the complexity of documentation and agreements for municipal leases. The other was that the State ultimately would pay the interest.

Energy savings or energy cost savings determine success of project

Another interesting result of the survey was that 8 of 12 respondents considered a performance contracting project a success, if it produced guaranteed energy cost savings, but did not produce guaranteed energy savings. Of the four respondents who thought a successful project should produce guaranteed energy savings, one respondent noted that savings must be measured in kWh to show real savings, as cost savings may only be a function of rate increases. Another said that utility bill could decline because of a drop in oil prices, producing energy cost savings without any energy-efficient equipment being installed.

Satisfaction with maintenance services

The survey showed that 8 out of 10 respondents were satisfied with the overall maintenance services provided by the performance contractor.

Importance of rebates for financing projects

Of the 10 respondents who answered the question about the availability of rebates playing a major part in their decision to proceed with performance contracting, only three respondents said yes. Six said no, and one did not know.

Perception of risk before and after implementation of project

Seven elements of risk were identified from DBEDT's experience with performance contracting. Respondents were asked to identify their perception of risk before they implemented the project and the most important risk now. Results show a relatively even distribution of perception of risk among the

seven categories before the project. Following the project, two elements of risk were considered the most important. Maintenance risk had the highest ranking followed by performance risk. Table 6 shows responses to this question.

Table 6. Distribution of Opinions on Importance of Risk Before and After Implementing Performance Contracts

Risk Category	Level of Importance					
N = 13	Slightly, somewhat	Very or extremely	Total important before	% total important before	Total most impor-tant now	Percent most import-ant now
Construction risk (normally mitigated by insurance and bonds, liquidated damages)	4	7	11	14.5		
Performance risk (normally mitigated by guaranteed savings clauses)	1	11	12	15.7	4	30.8
Financial risk including interest rates, Government debt limitation (such as bond rates)	7	5	12	15.7		
Bankruptcy of Contractor after completion of construction (normally mitigated by selecting a contractor with "deep pockets," contract default and termination clauses)	7	4	11	14.5		
Maintenance services and repair of contractor-installed and/or facility-owned equipment after completion of construction		10	10	13.2	5	38.5
Continuity of service (loss of key personnel by either the facility or ESCO during the term of the contract)		10	10	13.2	3	23.1
Measurement and Verification Risk (including establishing procedure for payment by contractor in case projected energy cost savings are not achieved)		10	10	13.2	1	7.6
TOTAL	19	57	76	100	13	100

Note: Seven responses indicating "none" or "don't know" were omitted.

Lessons Learned

According to respondents, the most important lessons learned include an emphasis on teamwork and the need to keep all parties involved, aware, and informed, so that the project can be kept on line and on schedule. Also, there is a need for an on-site "project champion," a person at the facility who believes in and commits to making the project work. The project manager should have a clear idea of how the baseline is established, when it can be modified, and how to monitor and verify the baseline if it is changed. In addition, the manager needs to be aware that there is a high cost of modifying the baseline to include new loads. Another important factor is that the facility management/owner should understand measurement and verification and the cost of measurement and verification to the project.

The respondents indicated several areas of change if another project were to be implemented. These included not implementing a demonstration project in one facility, but instead aggregating a number of facilities so as to get more benefits from staff time that had to be devoted to the project. One respondent would conduct an informal energy use survey prior to soliciting proposals so that a realistic result could be expected from proposers. One respondent felt that the payback period should be stretched as long as possible to get maximum project benefits. Another said that technology used in the project should be simple to operate and maintain and dependable to minimize breakdowns and keep customers happy, even though there might be loss of additional

incremental savings. The energy audit prepared by the contractor should be thoroughly examined for assumptions and input data used.

Communication is high priority to keep everyone informed and involved throughout the project. An energy awareness program should be included as a contract provision to inform users, stakeholders and counterparts from other agencies of the benefits of the project. The project team and facility management should be actively involved throughout the project. Discussions should be held to help overcome any structural hurdles to implementation.

Finally, respondents were asked what they considered their biggest personal challenge in the project. Some of the challenges were:

- Continuing need to educate all involved in the project including public works, finance and procurement, legal counsel, accounting, and upper management throughout the project.
- The need to be aware of internal management differences where subsequent needs override the initial direction of the project and the "big picture" is lost.
- Continuing efforts to complete and monitor the project with personnel changes in top administrators and contractor personnel and, sometimes, lack of support from new people.
- Being one of the first state/county agencies to utilize the RFP process instituted under the 1994 procurement code.
- Being the first agency to institute a large-scale performance contract.

Conclusion

DBEDT's goals in the UHH project were to demonstrate the value of performance contracting and to develop guidelines and pro-forma documents that could be used by other facilities to duplicate the process. Both goals have been accomplished. The UHH project has demonstrated that DBEDT's team approach of getting support, understanding, and input both before and during the project, from upper management to maintenance technicians, is a successful way to implement energy performance contracting in state facilities.

UHH got what it wanted—cost savings on utility bills that paid for replacing old equipment, guaranteed savings for the ten-year term of the contract, and guaranteed maintenance of equipment for the ten-year term. It even got more than it expected as the contractor stationed a full-time maintenance person on campus, and if something broke down, a replacement was flown in immediately, cutting normal procurement time from weeks and months to a few days.

Performance contracting offered UHH a value-added retrofit. The ESCO performed an investment grade energy audit, provided design and engineering services, found financing, procured equipment, and managed the construction, provided maintenance services, and measured and verified savings. The ESCO also located a leak in the chilled water loop and provided other no cost diagnostic services to the UHH.

DBEDT has found that State agencies evaluated to date have shown potential for significant energy savings (30% to 50% of current usage) with economic returns sufficient to attract private financing for the improvements with guaranteed performance. Nevertheless, many State agencies are still largely unaware of what is involved in a performance contracting procurement and reluctant to proceed with one. As a result, unnecessarily high utility bills are diverting tax dollars from higher priority services. There is a continuing need to educate State personnel about innovative approaches to financing energy-saving improvements and encourage them to participate in DBEDT's performance contracting program.

ACT 158

HOUSE OF REPRESENTATIVES
TWENTIETH LEGISLATURE, 2000
STATE OF HAWAII

H.B. NO. 1946 H.D. 2 S.D. 1

A BILL FOR AN ACT

RELATING TO ENERGY CONSERVATION.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

SECTION 1. Section 36-41, Hawaii Revised Statutes, is amended to read as follows:

"**§36-41 Energy retrofit and performance contracting for public facilities.** (a) All agencies shall evaluate and identify for implementation energy efficiency retrofitting through performance contracting. Agencies that perform energy efficiency retrofitting may continue to receive budget appropriations for energy expenditures at an amount that will not fall below the pre-retrofitting energy budget but will rise in proportion to any increase in the agency's overall budget for the duration of the performance contract or project payment term.

[(a)] (b) Any agency may enter into a multi-year energy performance contract for the purpose of undertaking or implementing energy conservation or alternate energy measures in a facility or facilities. An energy performance contract may include[,] but shall not be limited to[,] options such as leasing, joint ventures, shared-savings plans, or energy service contracts, or any combination thereof; provided that in due course the agency may receive title to the energy system being

1 financed. Except as otherwise provided by law, the agency that
2 is responsible for a particular facility shall review and approve
3 energy performance contract arrangements for the facility.
4 [(b)] (c) Notwithstanding any law to the contrary relating
5 to the award of public contracts, any agency desiring to enter
6 into an energy performance contract shall do so in accordance
7 with the following provisions:
8 (1) The agency shall issue a public request for proposals,
9 advertised in the same manner as provided in chapter
10 103D, concerning the provision of energy efficiency
11 services or the design, installation, operation, and
12 maintenance of energy equipment or both. The request
13 for proposals shall contain terms and conditions
14 relating to submission of proposals, evaluation and
15 selection of proposals, financial terms, legal
16 responsibilities, and other matters as may be required
17 by law and as the agency determines appropriate;
18 (2) Upon receiving responses to the request for proposals,
19 the agency may select the most qualified proposal or
20 proposals on the basis of the experience and
21 qualifications of the proposers, the technical
22 approach, the financial arrangements, the overall
23 benefits to the agency, and other factors determined by

1 the agency to be relevant and appropriate;
2 (3) The agency thereafter may negotiate and enter into an
3 energy performance contract with the person or company
4 whose proposal is selected as the most qualified based
5 on the criteria established by the agency;
6 (4) The term of any energy performance contract entered
7 into pursuant to this section shall not exceed fifteen
8 years;
9 (5) Any contract entered into shall contain the following
10 annual allocation dependency clause:
11 "The continuation of this contract is contingent
12 upon the appropriation of funds to fulfill the
13 requirements of the contract by the applicable
14 funding authority. If that authority fails to
15 appropriate sufficient funds to provide for the
16 continuation of the contract, the contract shall
17 terminate on the last day of the fiscal year for
18 which allocations were made";
19 (6) Any energy performance contract may provide that the
20 agency ultimately shall receive title to the energy
21 system being financed under the contract; and
22 (7) Any energy performance contract shall provide that
23 total payments shall not exceed total savings.

New Equipment

Equipment	Qty	Preventative Maintenance		Manufacturers Warranty			Repair Scope				
		Parts	Labor	Parts	Labor	Duration	Parts	Labor	Duration	Maint. Frequ.	
ECM #1 Lighting & Lighting Controls											
Sensors		N/A	N/A	Y	Y	1	Y	Y	9	Adjust as needed	
Lamps		N/A	N/A	Y	Y	1	Y	Y	9	Relamp Schedule	
Ballasts		N/A	N/A	Y/ 1 yr	Y	5	Y	Y	5	Relamp Schedule	
ECM #2, 2-1, 6, 3 & 8 Central Plant Upgrade, Variable Sped Pumping, CHW Loop Expansion and Komohana AC											
New Chiller	5	Y	Y	Y	Y	1	Y	Y	9	M, A	
New Cooling Tower	1	Y	Y	Y	Y	1	Y	Y	9	M, A	
New Pumps	6	Y	Y	Y	Y	1	Y	Y	9	A	
New Pipework	1 lot	Y	Y	Y	Y	1	Y	Y	9	A	
New VFD	1	Y	Y	Y	Y	1	Y	Y	9	Q	
Controls	1 lot	Y	Y	Y	Y	1	Y	Y	9	M, A	
Ext. Pump Valve	1	Y	Y	Y	Y	1	Y	Y	9	A	
Balancing valve	1	N/A	N/A	Y	Y	1	Y	Y	9	A	
ECM #4 Metasys™ Energy Management System											
Field Sensors	1 lot	Y	Y	Y	Y	1	Y	Y	9	Q	
Field panels	1 lot	Y	Y	Y	Y	1	Y	Y	9	Q	3 year Parts Warranty
Computer	1	Y	Y	Y	Y	1	Y	Y	9	Q	3 year Parts Warranty
Comm. equipment.	1 lot	Y	Y	Y	Y	1	Y	Y	9	Q	
ECM #5 Window A/C Unit Twist Timers											
Controls	200	N/A	N/A	Y	Y	1	Y	Y	10	Adjust as needed	
ECM #7 A/C MODIFICATIONS - LRC											
VFD	2	Y	Y	Y	Y	2	Y	Y	9	A	
ECM #11 POWER FACTOR											
Cap. banks	6	N/A	N/A	Y	Y	1	Y	Y	9	M	Thermot rended
ECM #15 REPLACE AIR CONDITIONING UNIT											
A/C Chiller College of Ag.	1	Y	Y	Y	Y	1	Y	Y	9	M,A	

APPENDIX 7

Existing Equipment

Equipment	Qty	Preventative Maintenance		Manufacturers Warranty			Repair Scope				
		Parts	Labor	Parts	Duration	Labor	Parts	Labor	Duration	Maint. Frequ.	
Existing Equip.											
Exist. DX AHU	1	Y	Y	N/A	N/A	N/A	Y	Y	10	Q	
Chl Wtr Pmp	2	Y	Y	N/A	N/A	N/A	Y	Y	10	Q	
Cond Wtr Pmp	1	Y	Y	N/A	N/A	N/A	Y	Y	10	Q	
Wtr Cool Chl	1	Y	Y	N/A	N/A	N/A	Y	Y	10	M,A	
Air Comp	4	Y	Y	N/A	N/A	N/A	Y	Y	10	Q	
Air Cool Chlr	8	Y	Y	N/A	N/A	N/A	Y	Y	10	M,A	
Air Cool Con	2	Y	Y	N/A	N/A	N/A	Y	Y	10	M,A	
CW AHU	28	Y	Y	N/A	N/A	N/A	Y	Y	10	Q	
CW FCU	115	Y	Y	N/A	N/A	N/A	Y	Y	10	Q	
CW OA AHU	1	Y	Y	N/A	N/A	N/A	Y	Y	10	Q	
DX AHU	2	Y	Y	N/A	N/A	N/A	Y	Y	10	Q	
DX FCU	2	Y	Y	N/A	N/A	N/A	Y	Y	10	Q	
Exhaust Fan	7	Y	Y	N/A	N/A	N/A	Y	Y	10	Q	
Gas Wtr Htr	12	Y	Y	N/A	N/A	N/A	Y	Y	10	Q,A	
Hot Wtr Pump	3	Y	Y	N/A	N/A	N/A	Y	Y	10	Q	
Pwr Roof Vent	4	Y	Y	N/A	N/A	N/A	Y	Y	10	Q,A	
PTAC	228	Y	Y	N/A	N/A	N/A	Y	Y	10	A	
Split System	30	Y	Y	N/A	N/A	N/A	Y	Y	10	A	
Supply Fan	1	Y	Y	N/A	N/A	N/A	Y	Y	10	Q,	
Above ground AC related pipes	1 lot						Y	Y		M,A	

Notes:

M = Monthly
Q = Quarterly
A = Annual

Proposal Evaluation Guidelines

University of Hawaii at Hilo – RFP 94-003

Overview of the Evaluation Process

The procedure for proposal evaluation and contractor selection follows these steps:

1. Proposals received by the deadline are publicly opened by the Contracting Office on the date due. Names of the proposers may be made public.

2. Each proposal is screened for compliance with minimum thresholds and submittal requirements to determine whether it is a responsive proposal.

3. Copies of responsive proposals are distributed to an Evaluation Committee. The Evaluation Committee may include representatives of the participating facility and other individuals responsible for planning, budgeting, or having desired expertise.

4. Individual Committee members independently score the proposals. If any evaluator has questions about how to score a given proposal or attribute, he or she may send questions to the Contracting Office. The Contracting Office will review questions, decide whether outside assistance is needed, and respond to the evaluator either by telephone or in a written response. If the response is written, a copy of the question and response will be sent to all evaluators. This provides a mechanism to help all evaluators interpret criteria consistently. Evaluators will be free to seek information outside of the evaluation committee if they desire (with due care for proposal confidentiality).

5. Each evaluator determines the rank order of the proposers from his/her own scores (first, second, third, etc.) and provides his or her ranking to the Contracting Office. The Contracting Office determines the overall rank of each Responsive Proposer and the Short List for Interviews (the three highest-ranked proposers).

6. The Contracting Office (or designee) will check references by telephone for the three top-ranked proposers. Based on these reference calls, the Contracting Office will determine a score for each of the proposers. This score will be added to the oral interview scores determined by the evaluation committee for final selection.

7. Once final ranks are determined, the top three proposers are invited to make presentations and be interviewed. A one-day meeting is scheduled for the Evaluation Committee to interview the short-listed proposers. Each proposer has 40 minutes for an oral presentation and another 40 minutes for questions and answers. Each Committee member independently scores each proposer's oral presentation. At the end of the interviews, each member determines from his/her own scores (including the reference score described in paragraph 6 above) the rank order (first, second, or third) of each proposer.

8. The rank orders determined by each Committee member are added (see sample on page __) and the proposer with the lowest total (i.e. the highest rank) is selected for negotiations.

Clarification Questions

Proposer-supplied information may be incomplete or unclear. The RFP provides that additional information may be requested from proposers. Information requests should conform with the following guidelines:

- The number of requests should be as small as possible. Clarification requests from committee members should be coordinated so that duplicate or overlapping questions are avoided.

- All proposers should be given an equal amount of time to respond to a clarification request.

Clarification requests are likely to occur at two steps in the evaluation process. Additional information may be needed to establish that a proposer meets minimum qualifications and is a Responsive Proposer. After proposal review has begun, additional information may be needed to answer questions of individual evaluators.

Once Responsive Proposals have been distributed to individual evaluators, a deadline should be set for evaluators to submit clarification requests to the Contracting Office. These questions should be screened for duplicates. Once a final set of questions is prepared, they should all be sent at one time. We recommend ten business days as an appropriate response time to require for these information requests. As soon as proposer clarification responses are received the Contracting Office should distribute copies to all evaluators.

Written Proposal Scoring

After Responsive Proposals have been identified, the Contracting Office will distribute copies to the evaluators for scoring. The attached forms are provided to help members of the committee evaluate and score all proposals fairly and completely and document the basis for all scores. The forms are written to match the selection criteria described in the Request for Proposals. Each form references the Proposer Response Forms most likely to contain applicable information.

The forms are designed for either a subjective evaluation or determination of a score by formula. For each subjective criterion, read the statements describing the most preferred and least preferred characteristics. Then enter a score on a scale from zero to ten, with ten being highest and zero lowest, based on the documentation in each Proposal.

Scores based on a formula (objectively-scored criteria) will be calculated by the Contracting Office (or another designate) and provided to all evaluators.

The selection criteria listed in the RFP include Developer Qualifications, Technical Approach, Management Plan, and Financial Benefits, as shown in Table 1. Forms to evaluate and score Proposers in each of these areas follow.

Table 1

Evaluation Section	Subjectively-Scored Criteria (Judgement)	Objectively-Scored Criteria (Formula)
Developer's Qualifications		
Completed Contracts for Public Agencies	√	
Documented Actual vs. Projected Savings	√	
Fully Identified Project Team	√	
Completed Projects with Same Team	√	
Completed Projects in Hawaii	√	
Adequate Staff and Resources	√	
Documented Ability to Finance Project		√
Technical Approach		
Experience in Proposed Technologies	√	
Technologies Implemented Previously	√	
Commercial Availability	√	
Detailed Description	√	
Quality and Durability	√	
Savings Verification Methodology	√	
Management Plan		
Clear and Complete Plan	√	
Realistic Milestone Schedule	√	
Financial Benefits		
Gross Energy Savings		√
NPV of University's Net Savings		√

After completing these forms, each evaluator determines the rank of each proposer from his/her scores. Evaluators should furnish a summary of their proposer ranking to the Contracting Office. The Contracting Office then calculates total points based on the evaluators' ranks as follows. First, second, or third-place ranks receive a number of points equal to the rank (i.e. a first is one point, a second is two points, etc.). Any rank below third receives four points. Points for each proposer are totaled and the proposers with the three lowest total values are the three top-ranked proposers.

General Notes on Subjective Scoring

Evaluation committee members may have questions regarding how to evaluate certain attributes. In particular, questions may arise regarding what is an appropriate benchmark against which to compare a proposal. For example, if an evaluator is trying to score a proposal's management plan, to what should it be compared in order to determine whether it is complete, realistic, and addressed to the specific needs of the proposed project?

The most useful comparison is among the competing proposals. Any proposer meeting the minimum thresholds for experience and completed projects is presumed to be able to complete the project successfully. The goal of the evaluation is to find the most advantageous proposal among those submitted. So the most appropriate benchmark for comparison is the other proposals themselves.

In the case mentioned above – scoring the proposals' management plans – the evaluator should review and review each of the plans. For each plan, the evaluator will ask: Is the plan clear? Is it plain what the proposer intends? Does the plan make sense from the evaluator's point of view? Is the plan specific to this project or is it simply a generic description without any attempt to identify and respond to the project's unique situation?

The evaluator should identify the management plan that is, in his or her judgement, the best. The best plan should be assigned the highest score and the other proposed plans should be assigned points based on how they compare. The full range (from zero to ten) does not have to be used. If all the plans are strong the best might receive a ten and the weakest a six or seven. Similarly, all plans could receive low scores. However, evaluators should make an effort to identify meaningful differences between the proposals and assign scores across the widest reasonable range.

If an independent basis for comparison to the proposals exists evaluators should use it as appropriate. For example, if a previously completed energy study of the facility provides an estimate of potential savings and construction costs, proposers' submittals may be compared to the study findings. If an evaluator cannot find any basis to score a certain attribute, a clarification request may be helpful. For example, if an evaluator doesn't know whether a technology has been implemented in Hawai, ask the proposer to document other installations and show that a proposed measure is "commercially available."

Determination of Overall Rank

After scoring all responsive proposals, each evaluator determines the rank (first, second, third, etc.) of each proposer, based on the evaluator's independent scores. The rank values of committee members are provided to the Contracting Office. The Contracting Office will determine an overall total for each proposer as shown in the sample scoring below. The three proposers with the lowest total values (i.e. the highest overall ranks) are short-listed for interviews.[1]

	Proposer A Rank	Proposer B Rank	Proposer C Rank
Evaluator 1	1st	2nd	3rd
Evaluator 2	1st	3rd	2nd
Evaluator 3	2nd	3rd	1st
Evaluator 4	3rd	1st	2nd
Total	7	9	8

In this case, Proposer A, with two firsts, a second, and a third has the lowest total value (1 + 1 + 2 + 3 = 7) and the best overall score.

Evaluation Forms

Forms and worksheets are attached for use by the Contracting Office and evaluators.

[1] Tie breakers work as follows. If two proposers have the same total, the one with the most "firsts" is selected. If they have equal "firsts", the one with the most "seconds" is selected.

Completed Contracts for Public Agencies

"The University will look for Proposers that have successfully developed performance contracts for public agencies." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 3 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The Proposer has documented the successful completion (through construction) of six or more performance contracts for public agencies. The completed projects are recent and include facilities very similar to the Hilo campus (i.e. college or university campuses). The project construction costs are equal to or greater than the proposed project construction cost. The projects are comprehensive, including improvements in lighting and air conditioning systems.

Least Preferred (Lowest Score)

The Proposer has not documented successful completion of performance contracts for public agencies or can document only one or two. The completed projects do not include college or university campuses. The projects listed are much smaller than the proposed project or do not include as comprehensive a set of efficiency improvements.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Documented Actual versus Projected Savings

"The University will look for Proposers that can document actual versus projected energy savings in completed performance contracts." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 3 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The Proposer has documented that actual savings equal or exceed projected energy savings in completed performance contracts. The documentation is clear, specific, and can be verified through references supplied by the Proposer.

Least Preferred (Lowest Score)

The Proposer has not documented actual savings in completed performance contracts or the documentation is unclear or cannot be verified through the project references provided.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Fully Identified Project Team

"The University will look for Proposers that have fully identified their project team." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 2 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The Proposer has identified all members of the project team, including the project manager and individuals who will perform the energy study, engineering design, construction, maintenance, and financing.

Least Preferred (Lowest Score)

The Proposer has not identified most members of the project team.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Completed Projects with Same Team

"The University will look for Proposers that have completed projects of a similar scope and type with the same project team before." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 2,3, and 4 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The Proposer has previously completed performance contracts of size and scope similar to this proposed project with the same project team members (engineering, construction, maintenance, and financing) proposed for this project.

Least Preferred (Lowest Score)

The Proposer has not previously worked with the project team members proposed for this project.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Completed Projects in Hawaii

"The University will look for Proposers that have designed and constructed energy efficiency projects in Hawaii or in similar climates." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 3 and 4 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The Proposer has designed and built large energy efficiency projects (construction cost of $250,000 or more) in Hawaii.

Least Preferred (Lowest Score)

The Proposer is working in Hawaii for the first time.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Adequate Staff and Resources

"The University will look for Proposers who can demonstrate adequate staff and resources to complete the project on schedule." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 2 and 4 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The Proposer has documented that key staff and subcontractors are fully qualified and experienced in the proposed technologies and performance contracting methods and adequate hours of key staff time are committed to this project.

Least Preferred (Lowest Score)

The Proposer has not clearly documented the qualifications or availability of key staff or the staff effort committed is small compared to other Proposers.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Ability to Finance Project

"The University strongly prefers proposals which conclusively document the proposer's ability to finance the project as proposed and the source and cost of funds." [RFP 94-003, Page 9]

All Responsive Proposers must be able to provide guaranty for the full and faithful performance of the contract in an amount equal to 100% of their proposed project cost. This form gives additional points to proposers who document their ability to finance a larger than average project size or offer lower than average interest cost.

The Contracting Officer (or designate) will calculate points for each Proposer for this attribute and provide them to other Evaluation Committee members. The attached "Ability to Finance Project Scoring Worksheet" provides a method to calculate points for this attribute.

(Refer to Response Form 7)

$$\text{Points} = \frac{\text{Proposer's Total Construction Cost}}{\text{Average Total Construction Cost}} \times 4.0 \text{ points}$$

plus

$$\frac{\text{Average Cost of Financing}}{\text{Proposer's Cost of Financing}} \times 3.0 \text{ points}$$

_____ **Enter score in space at left (10 point maximum) and in designated space on summary score worksheet.**

Experience in Proposed Technologies

"The University strongly prefers a technical approach that demonstrates thorough knowledge and experience in design, intallation, and operation of energy efficient technologies in Hawaii's climate and building systems similar to those of the participating facilities." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 6 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The Proposer has documented thorough knowledge of and experience with the proposed technologies. The experience of the project team includes experience designing, installing and operating the proposed technologies in Hawaii and in building systems similar to the project's.

Least Preferred (lowest score)

The Proposer has not clearly documented the project team's experience and qualifications with the proposed technologies. The project team is designing, installing, and operating the proposed technologies for the first time.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Technologies Implemented Previously

"The University prefers technologies that have been successfully implemented before by the Proposer." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Forms 3 and 6 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The Proposer has documented that it has implemented the proposed technologies many times before and in buildings and climates similar to the proposed project.

Least Preferred (lowest score)

The project team is designing, installing, or operating the proposed technologies for the first time.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Commercial Availability

"The University prefers technologies that are commercially available." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 6 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The proposed technologies are commonly implemented and commercially available in Hawaii.

Least Preferred (lowest score)

The proposed technologies are being implemented in Hawaii for the first time.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Detailed Description

"The University prefers technologies that are described in sufficient detail to evaluate their feasibility from the standpoint of construction and operation." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 6 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The Proposer has described the proposed efficiency improvements in sufficient detail to evaluate their feasibility for both construction and operation. In addition to a general description of the proposed improvements, building-specific details have been provided.

Least Preferred (lowest score)

The Proposer has provided only a generic description of the proposed efficiency improvements..

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Quality and Durability

"Because the University will acquire the installed equipment, high standards of quality and durability are strongly preferred." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 6 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The Proposer has provided clear and specific information describing how the quality and durability of the materials and workmanship will be ensured. (For example: a facility specific quality assurance plan with identification of specific equipment to be used.)

Least Preferred (lowest score)

The Proposer addresses methods to ensure quality and durability only generally or not at all.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Savings Verification Methodology

"The University prefers savings measurement methods using established and proven techniques for which the Proposer can provide samples and project references." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 6 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The proposed measurement plan is clear, complete, and tailored to the proposed project for all proposed efficiency improvements. The plan uses proven techniques and the proposer has provided a sample and project references including facilities similar to the proposed project. The plan verifies savings and performance for the term of the agreement.

Least Preferred (lowest score)

The proposed measurement plan is unclear, generic, or does not address all proposed improvements. The plan uses techniques which are not transparent or which cannot be verified and reproduced. The proposer has not provided a sample or any project references for its experience with theproposed methods.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Clear and Complete Plan

"The University prefers a proposal which includes a clear and complete plan for the project...this plan should demonstrate the proposer's understanding of performance contracting and energy efficiency construction projects in general and the constraints of the particpating agencies and facilities in particular." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 4 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The proposed management plan is complete, detailed, realistic, and tailored to the specific needs and constraints of this project. The plan demonstrates the Proposer has considered opportunities and constraints specific to the proposed project.

Least Preferred (lowest score)

The proposed management plan is unclear, incomplete, or generic.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Realistic Milestone Schedule

"The University prefers a proposal which includes ... a realistic milestone schedule." [RFP 94-003, Page 9]

Compare the information provided by each Proposer in Response Form 4 (and any relevant attachments). Score each Proposer according to the most preferred and least preferred criteria below. Assign a score from 0 to 10 (with 10 being the highest and 0 the lowest score).

Most Preferred (highest score):

The Proposer has provided a clear and detailed milestone schedule which considers the unique constraints of the proposed project.

Least Preferred (lowest score)

The proposed milestone schedule is unclear, incomplete, or generic.

Enter score (0 to 10) here and on summary score worksheet

Score: _____ **Proposer:** _____

Notes: _____

_____

_____

Gross Energy Savings

This form gives additional points to proposers who document their ability to provide larger than average gross energy savings according to a formula. **The Contracting Office (or designate) will calculate points for each Proposer for this attribute and provide them to other Evaluation Committee members.** The attached "Energy Savings and NPV Scoring Worksheet" provides a method to calculate points for this attribute.

(Refer to Response Form 6 and 7)

$$\text{Points} = \frac{\text{Proposer's Gross Energy Savings}}{\text{Average Gross Energy Savings}} \times 7.0 \text{ points (up to 10 points maximum)}$$

_____ **Enter score in space at left and in designated space on summary score worksheet.**

Notes: _____

_____

_____

NPV of University's Net Savings

This form gives additional points to proposers who document their ability to provide greater than average net cost savings according to a formula. The Finance Advisor should calculate points for each proposer for this attribute and provide them to other Evaluation Committee members.

(Refer to Response Form 7)

$$\text{Points} = \frac{\text{Proposer's NPV}}{\text{Average NPV}} \times 7 \text{ points (up to 10points maximum)}$$

_____ **Enter score in space at left and in designated space on summary score worksheet.**

Notes: _____

_____

_____

Summary Score Worksheet

Proposer: _____

Evaluation Section	(1) Possible Score	(2) Unscaled Score ÷ 10	(3) Actual Score =(1) x (2)
Developer's Qualifications			
Completed Contracts for Public Agencies	7.0		
Documented Actual vs. Projected Savings	3.5		
Fully Identified Project Team	3.5		
Completed Projects with Same Team	1.8		
Completed Projects in Hawaii	3.5		
Adequate Staff and Resources	5.2		
Documented Ability to Finance Project	10.5		
Developer's Qualifications Subtotal	35.0		
Technical Approach			
Experience in Proposed Technologies	3.0		
Technologies Implemented Previously	3.0		
Commercial Availability	3.0		
Detailed Description	3.0		
Quality and Durability	3.0		
Savings Verification Methodology	15.0		
Technical Approach Subtotal	30.0		
Management Plan			
Clear and Complete Plan	6.0		
Realistic Milestone Schedule	4.0		
Management Plan Subtotal	10.0		
Financial Benefits			
Gross Energy Savings	17.5		
NPV of University's Net Savings	7.5		
Financial Benefits Subtotal	25.0		
GRAND TOTAL	100.0		

Summary Evaluation Form

Proposer: _____

Evaluation Section	Possible Score	Actual Score	Passing Score
Developer's Qualifications			
Completed Contracts for Public Agencies	7.0		
Documented Actual vs. Projected Savings	3.5		
Fully Identified Project Team	3.5		
Completed Projects with Same Team	1.8		
Completed Projects in Hawaii	3.5		
Adequate Staff and Resources	5.2		
Documented Ability to Finance Project	10.5		
Developer's Qualifications Subtotal	35.0		24.5
Technical Approach			
Experience in Proposed Technologies	3.0		
Technologies Implemented Previously	3.0		
Commercial Availability	3.0		
Detailed Description	3.0		
Quality and Durability	3.0		
Savings Verification Methodology	15.0		
Technical Approach Subtotal	30.0		21.0
Management Plan			
Clear and Complete Plan	6.0		
Realistic Milestone Schedule	4.0		
Management Plan Subtotal	10.0		7.0
Financial Benefits			
Gross Energy Savings	17.5		
NPV of University's Net Savings	7.5		
Financial Benefits Subtotal	25.0		17.5
GRAND TOTAL	100.0		70.0

STATE OF HAWAII - HIARNG

ENERGY SERVICE COMPANY SELECTION SCORING SHEET

This Scoresheet Becomes Public Record

Project Description	
Date of Evaluation	Project Number
Name of Committee Member	

Rate each firm below using a (0-100) numerical rating for the raw score: (100) represents the highest score possible and (0) represents the lowest score.

CRITERIA	Proposal completeness, clarity, conciseness and responsiveness to RFP requirements		Project Team/ management plan		Experience and range of services		Monitoring and verification plan		Energy Savings and cost guarantees		Building audit technical approach. Competitiveness and reasonableness of price		Project financing capability		TOTAL WTD SCORE	RANK ORDER
WEIGHTS	(5%)		(20%)		(20%)		(15%)		(15%)		(10%)		(15%)			
SCORE TYPE	RAW	WTD	RAW	WTD	RAW	WTD	RAW	WTD	RAW	WTD	RAW	WTD	RAW	WTD*		
1.																
2.																
3.																
4.																
5.																
6.																
7.																
8.																
9.																
10.																
COMMENTS																

*NOTE: WTD (Weighted Score) = Raw (1 to 100%) times Weight (1 to 100%)

PAGE 1 of 1

Committee Member's Signature Date