



OVERVIEW OF APPROACH TO ENERGY PERFORMANCE CONTRACTING

Provide a stand-alone overview. For ESCOs selected for the as-needed list, this section will be posted on the SPO website www.spo.hawaii.gov as critical reading for participants to identify potential ESCOs to consider. Maximum of 5 pages, using any order or format to present your company as you wish.

Include highlights from the below responses including company background, market sectors served, Also include your company's strengths, areas of expertise, and your general approach to performance contracting: typical phases for a project and ability to support each phase (project Development, Energy Auditing, Performance/Savings Guarantee, Financing, Construction, Commissioning, Measurement and Verification, Client Staff/Occupant Training, Post-construction Maintenance Support),

Chevron Energy Solutions (Chevron ES), a division of Chevron U.S.A., is the energy services unit of Chevron, a \$214 billion global energy enterprise employing more than 58,000 energy professionals in 180 countries. Chevron ES is one of the largest Energy Services Companies, and we have completed more than \$700-Million of energy efficiency upgrades and renewable power solutions for our customers over the last three years.

Chevron has 22 offices across the U.S. Chevron ES is headquartered in San Francisco, CA. Our markets served include state and municipal governments, K-12 Schools, Higher Education, Hospitals, Correctional Facilities, and large private industry.

Chevron embraces issues of climate change and the need for sustainable use of global resources. Energy efficiency and conservation are the most immediate and cost-effective sources of "new" energy with no Greenhouse Gas emissions. Government programs to promote energy efficiency and conservation must continue and should be enhanced. That is why Chevron ES has become a major part of Chevron's business around the globe. Chevron ES is a leader in energy conservation, renewable energy, geothermal, green building, and sustainable alternative fuels initiatives.

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Chevron ES is highly qualified and uniquely positioned to develop a successful Energy Savings Performance Contract (ESPC) that will meet the needs and goals of State of Hawaii EPC Program participants. Chevron ES' operational structure and depth of resources makes our organization well suited to deliver solutions for community colleges, university campuses, public schools, healthcare facilities, and city, county, and state facilities. Chevron ES' approach includes energy analysis services, comprehensive energy and water management solutions, renewable power generation, training of faculty and staff, capital improvements, and integration of renewable and alternative energy technologies. We believe that the technical and financial solutions offered by Chevron ES, makes us an excellent ESCO of choice for Hawaii.

Our ESPC program will reduce the consumption of energy, save utility costs, upgrade facilities across the state and will improve indoor environments. This effort will not only significantly improve the physical working and learning environments for employees, students, staff and patrons, but it will also improve the effectiveness of participant's maintenance and operations.





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The EPC program with Chevron ES will go a long way toward resolving the facilities' deferred maintenance needs.

We believe that a comprehensive Technical Energy Audit (TEA) of all participant facilities will lead to a set of Energy Conservation Measures (ECMs) that will provide energy-saving strategies. Implemented ECMs will improve facility environments and indoor-climate, will update or replace obsolete HVAC equipment, will improve lighting and water systems, overall building envelopes, will reduce greenhouse gas emissions, and will help promote a culture of energy conservation in the workplace.

Chevron ES has a proven step-by-step process that will ensure the success of the performance contract. This process encompasses a comprehensive scope of services. Included in the process are the following:

Chevron Energy Solutions 7-Step Process		
Chevron Energy Solutions has developed a proven, step-by-step process that will ensure a successful project for our customers. This time-proven process will enable this project to capture savings, come in on time and on budget.		
1	Feasibility Energy Analysis (FEA)	The FEA is a preliminary engineering assessment of project feasibility yielding potential savings and cost analysis. It is an early, no-cost overview of your facility's energy-saving potential.
2	RFP Process & Technical Energy Analysis (TEA)	Upon selection as your energy partner, CES will perform an Investment-grade, computer-modeled audit yielding quantified energy savings and scope of work. This comprehensive facility audit will uncover savings in lighting, mechanical and control equipment, water and sewage, utility and fuel switching. The audit report is a thorough and detailed accounting of your energy-consuming infrastructure.
3	Engineering and Design	The engineering and design will include the preparation of world-class design and construction documents. Sound, unbiased strategies from experienced professional energy engineers will provide the customer with a roadmap that is engineered in-house to ensure all customer requirements are met.
4	Construction Management	On-site construction management of your project, using pre-qualified local contractors keep project dollars in your community. CES' approach to construction implementation uses an organized and time-tested process that minimizes disruption to the customer's operation and staff. Complete as-built drawings are prepared for the customer at the conclusion of the construction phase.
5	Commissioning	This is the customer's quality assurance process. An experienced Chevron ES team conducts point-to-point examinations of all installed equipment and systems affected to ensure 100% of all performance standards are met.
6	Training	Chevron ES and manufacturer training ensures an ongoing successful program that maximizes savings and minimizes operations and maintenance costs. On-site classroom and one on one personal training from our energy experts ensures that new equipment is operated properly and systems stay optimized.
7	Monitoring, Measurement and Verification	Customized monitoring, measurement and verification designed to sustain energy savings over the long term, completes the cycle of exceeding customer expectations. Our dedicated monitoring staff is experienced in tracking, forecasting and alarm notification of energy use and equipment functionality. Our M&V methodology employs the International Performance Measurement and Verification Protocol (IPMVP). The National Association of Energy Service Companies (NAESCO) recognizes this protocol as the standard guideline of how savings resulting from energy conservation projects should be measured.





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Auditing — The TEA will be an investment-grade, computer-modeled audit, including an in-depth review of all significant energy consuming systems and recommendations for improving systems that are inadequate, yielding the guaranteed energy savings for the project and the scope of work.

The resulting TEA Report includes a list of all viable energy savings measures with predicted annual savings, cost of implementation, and financial payback (including impact of the Hawaii utilities' energy efficiency rebate programs as applicable). Working with your participant's facilities staff, we will assemble the most cost-effective group of energy savings measures possible – those that provide the greatest savings for the least investment.

Engineering and design — Our greatest asset is the intellectual capacity of our engineering staff. Dedicated primarily to ESPC, **our engineers are our core resource and their entire focus is on the customer's desire to reduce energy and improve facility performance.** The intellectual capacity of our staff is unsurpassed in the industry and has been developed over 30 years of energy services work in all areas of the country for a variety of facility types.

You will receive world-class specifications, including all design and construction documents. Our engineers have worked in the industry in a wide variety of capacities and they bring broad experience and expertise in all areas of energy and water conservation. This includes computer modeling, design and analysis, HVAC, energy management controls, contracting, test and balancing, monitoring and verification, facility operations and maintenance, web-based metering and much more. The energy savings and facility improvement solutions proposed by Chevron ES are the result of an intellectual capacity that has been developed over many years, longer than any other company engaged in ESPC.

This phase of the project starts after the energy conservation measures have been reviewed and selected by you, the client. The work involves creating design drawings and specifications for the project. With over eighty registered professional engineers on staff, we have the knowledge and experience to design even the most challenging projects. Our extensive design and construction work in public facilities has provided our staff a background in the relevant codes and standards that regulate this work. Chevron ES, when appropriate, utilizes the services of local engineering offices for design consultation, preparation of construction documents and/or building codes review.



Construction management — Chevron ES manages all construction activities with staff Construction Managers. Depending upon the project size and complexity, a full time, on-site Construction Manager (CM) will be assigned to the project. While the CM is primarily responsible for the construction phase of the project, he/she also supports the engineering, scheduling and coordination issues. Our CMs have strong backgrounds in the operation of HVAC and energy management systems.

They often have worked as service technicians in either the HVAC or EMS industry. Their hands-on background is valuable in helping resolve the problems that inevitably occur during HVAC and EMS construction. The CM also focuses on job safety, hazardous materials issues and coordinating construction activities to ensure minimal disruption at the customer's facilities. Our on-site construction management, using pre-qualified local contractors, will keep project dollars in the local community. When beneficial to the customer, we will engage local CM firms that work for Chevron ES' CM.

Monitoring, measurement and verification — Our approach is custom-designed to sustain energy savings over the long term. We have the ability to monitor and manage the control systems and HVAC equipment of every major manufacturer.





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The heart of any performance contract is the guarantees with which it is associated. Not only does Chevron ES guarantee the price of the installation, but the savings generated from the installed energy conservation measures. While the installation guarantee is easy to track and verify, the savings guarantee is more complex, can be done in different ways, and can be left open to interpretation. When done correctly the customer can achieve many additional benefits from the equipment installed. Chevron ES will provide training to facility staff in all of the industry accepted methods of monitoring, measuring and verifying savings so that the method that will achieve the best Return On Investment can be selected.

Operations and maintenance — A full set of O&M manuals, which will include all warranty information, recommended maintenance practices, submittal data, and supplier contact information for all equipment installed as part of the project, will be prepared. We warrant the work for a one-year period following beneficial use of substantial completion of the project.



Further, we will provide as-built drawings and specifications for each energy conservation measure. Our CAD technicians using the latest version of AutoCAD will provide as-built drawings in electronic format. Specifications for all applicable facility upgrades and conforming to construction guidelines will be assembled into a specification book.

As an optional service we will assist in developing and procuring the most beneficial maintenance contracts for some or all of the new equipment, depending on preference. For instance, a customer may opt for a maintenance contract for a chiller but not for lighting and energy management control systems.

Training — We fully understand that appropriate staff training ensures the long-lasting success of a project. Our programs are flexible and customized, and always include a combination of classroom and hands-on training activities.

Financing — Energy savings performance contracts provide an innovative financial solution to the challenge of maintaining facilities in the face of shrinking budgets. By using utility savings to pay for new high-efficiency equipment and then following up to ensure proper maintenance, the project pays for itself.

With interest rates still very low, this is a very opportune time to make facility improvements from the energy savings guaranteed by us; i.e., more equipment can be installed at today's prices than in the future. Equipment and labor costs typically escalate from 3-5 percent a year.

We are committed to structuring the most favorable financing plan possible by bidding the program to qualified financial institutions. With extensive experience in public financing, our Project Finance Office will work to develop the best financial solution possible. Facilitating the procurement of project financing is a service provided as a part of our turnkey approach to project development. **Chevron ES does not markup financing.**

Chevron ES Project Approach Summary

Chevron ES' philosophy behind the delivery of Energy Conservation, Demand Side Management and Renewable Power Generation services is complete commitment and full responsibility to our customers. Chevron ES is committed to customer satisfaction, total quality, and environmental responsibility. Striving to exceed the expectations of our customers, rather than merely meeting requirements, is consistent with our corporate objectives and allows us to be a market leader in the delivery of customized energy solutions. Our approach is to develop, in conjunction with the customer's personnel, efficiency projects that will identify and implement





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capital improvements to reduce energy and related costs in facilities such that annual cost savings are applied to annual payments for improvements.

The complexity surrounding the implementation of a successful Energy Performance Contracting Program requires a highly skilled team to understand and be experienced at satisfying the customer. Our energy professionals have a comprehensive knowledge and understanding of customer's requirements as well as competency in developing and executing effective programs for energy conservation, energy management, maintenance and preventative maintenance, and monitoring of the energy savings. **Each Program is developed to meet the specific needs and goals of each customer.**

The membership of the team will remain consistent throughout all phases of the project. Our teams serving the Hawaiian Islands and Pacific Rim are comprised of seasoned professionals with the requisite experience, training and education to be classified as experts in their assigned functions.

Included in the Appendix is a three page brochure created for the State of Hawaii. In a PDF format it is easily downloadable and designed for at-a-glance viewing. This brochure was created for ease of use on the web.

Market segments served

Chevron ES serves all of the markets listed in Section 2.2.1 of the RFQ. In addition, Chevron ES also serves the water and wastewater and landfill markets.

