Integrity Energy Services

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Resumes

**Integrity Energy Services**

a. Mike Dean  
b. Brian Hanson  
c. Mark Foster

**CDI**

a. Company profile and resumes for key individuals

**Sparling**

a. Company profile and resumes for key individuals

**EEI**

a. Company profile and resumes for key individuals

**BCE**

a. Company profile and resumes for key individuals

**Completed and signed Federal Form**

**330 Key Bank letter of commitment**

**Organizational Chart**
EXPERIENCE

1. The ESCO’s experience in auditing and identifying energy efficiency projects. Provide a list of all energy performance contracting projects completed in the past two years (if the ESCO has completed more than 15 projects within Washington State in the past 2 years, the ESCO may list just the Washington State projects, in either case the list should be no longer than the most recent 30 projects), including contract value, client contact and client phone number.

Integrity Energy Services principals have been directly involved in the auditing of over 85 million square feet of K-12, Higher Education, Municipal, Healthcare and Data Centers in the pacific northwest. Our successful auditing methodology produced over $140 million in construction projects with $7.5 million in (annual) energy savings, $12.3 million in energy rebates and $28.75 million in state energy grants.

Our approach to identifying energy efficiency projects is both “collaborative” as we work closely with our clients and DES and “holistic” to seek out the harder to find energy savings opportunities. We have been successful in revisiting a recently implemented energy project performed by other firms and still developed a deeper energy saving project that is cost effective.

Based upon the project criteria, we work to develop the right combination of Energy Efficiency Measures (EEMs) that provide an optimum return on investment. We use a direct measurement and monitoring approach whenever possible which provides for the greatest level of accuracy in our analysis. We apply standard proven engineering principals and calculations to qualify individual measures. We work with local utilities to determine the appropriate rate and have been successful in switching rate schedules to further maximize savings.

Integrity Energy incorporates the field data into a life cycle cost analysis and a project financial pro forma which provides the foundation for sound financial decision making.

We are flexible and will scale our audit scope to meet the specific needs of a facility and will inform an owner of all opportunities that may arise for potential incorporation into future
energy projects, renovations or master plans. With our direct hands on experience, our clients are confident that our audits are comprehensive and extremely accurate and will result in successful projects with real savings.

The following projects were developed by the Principals during employment at other local ESCO companies.

<table>
<thead>
<tr>
<th>Project</th>
<th>Client</th>
<th>Project Value</th>
<th>Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rooftop AHU piping reconfiguration and controls upgrade</td>
<td>King County</td>
<td>$1.7M</td>
<td>Maureen Thomas (206) 296-0238</td>
</tr>
<tr>
<td>Steam to hot water boiler conversion</td>
<td>King County</td>
<td>$5.5M</td>
<td>Stephen Swinburne (206) 296-0624</td>
</tr>
<tr>
<td>Pressure Independent Control Valve (PICV)</td>
<td>University of Washington</td>
<td>$4.08M</td>
<td>Norm Menter (206) 221-4269</td>
</tr>
<tr>
<td>Campus DDC &amp; Lighting Upgrade</td>
<td>Conway School District</td>
<td>$431K</td>
<td>Ken Axleson (360) 445-5785</td>
</tr>
<tr>
<td>Middle School Envelope &amp; HVAC Upgrades</td>
<td>Hoquiam School District</td>
<td>$3.5M</td>
<td>Mike Parker (360) 538-8200</td>
</tr>
<tr>
<td>Employment Security Chiller Upgrade</td>
<td>Department of Enterprise Services</td>
<td>$300K</td>
<td>Jim Hayes (360) 902-7281</td>
</tr>
<tr>
<td>Mukilteo SD ESPC Phase 2</td>
<td>Mukilteo School District</td>
<td>$2.7M</td>
<td>Debra Fulton (425) 356-1330</td>
</tr>
<tr>
<td>Elections Building mechanical system replacement and controls upgrade</td>
<td>King County</td>
<td>$3.7M</td>
<td>Maureen Thomas (206) 296-0238</td>
</tr>
<tr>
<td>Smart Grid Implementation</td>
<td>University of Washington</td>
<td>$5.3M</td>
<td>Norm Menter (206) 221-4269</td>
</tr>
<tr>
<td>UW Tacoma Grant</td>
<td>University of Washington</td>
<td>$1.7M</td>
<td>Milt Tremblay (253) 692-4754</td>
</tr>
<tr>
<td>Campus Energy Efficiency Upgrades Phase 2</td>
<td>The Evergreen State College</td>
<td>$846K</td>
<td>Rich Davis (360) 867-8136</td>
</tr>
<tr>
<td>Surgery Supply Fan - Fan Wall</td>
<td>Harborview Medical Center</td>
<td>$2M</td>
<td>Pam Jorgenson (206) 744-3496</td>
</tr>
<tr>
<td>Stanwood MS Efficiency Upgrades</td>
<td>Stanwood Camano School District</td>
<td>$1.5M</td>
<td>Gary Platt (360) 629-1215</td>
</tr>
<tr>
<td>NTPS ESPC Phase 1</td>
<td>North Thurston School District</td>
<td>$1.1M</td>
<td>Dean Martinolich (360) 412-4500</td>
</tr>
<tr>
<td>Campus Energy Efficiency Improvements</td>
<td>Western Washington University</td>
<td>$2.6M</td>
<td>Greg Hough (360) 650-3311</td>
</tr>
<tr>
<td>Project</td>
<td>Client</td>
<td>Project Value</td>
<td>Contacts</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-----------------------------------------</td>
<td>----------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>Energy Efficiency Upgrades</td>
<td>University Place School District</td>
<td>$2.7M</td>
<td>Mike Patterson (253) 566-5700</td>
</tr>
<tr>
<td>City Wide Energy Improvements</td>
<td>City of Des Moines</td>
<td>$300K</td>
<td>Grant Fredricks (206) 870-6568</td>
</tr>
<tr>
<td>Energy Efficiency Upgrades Phase 2</td>
<td>North Seattle Community College</td>
<td>$623K</td>
<td>Orestes Monterecy (206) 934-4595</td>
</tr>
<tr>
<td>Rooftop AHU replacement and controls upgrade</td>
<td>City of Aberdeen</td>
<td>$930K</td>
<td>Wayne Schmidt (360) 538-4427</td>
</tr>
<tr>
<td>Controls Upgrade</td>
<td>Satsop Development Park</td>
<td>$106K</td>
<td>Joel Rett (360) 482-1626</td>
</tr>
<tr>
<td>Data Center Cooling</td>
<td>Lake Washington School District</td>
<td>$280K</td>
<td>Forrest Miller (425) 936-1108</td>
</tr>
<tr>
<td>ATS Metering</td>
<td>University of Washington</td>
<td>$117K</td>
<td>Norm Menter (206) 221-4269</td>
</tr>
<tr>
<td>East chiller replacement and control optimize</td>
<td>Harborview Medical Center</td>
<td>$810K</td>
<td>Pam Jorgenson (206) 744-3496</td>
</tr>
</tbody>
</table>

The following projects were developed solely by Integrity Energy Services, Co.

<table>
<thead>
<tr>
<th>Project</th>
<th>Client</th>
<th>Project Value</th>
<th>Contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tacoma Rhodes HVAC system replacement, controls and lighting upgrade, water conservation, security improvements.</td>
<td>Department of Enterprise Services</td>
<td>$622K</td>
<td>Roger Wigfield</td>
</tr>
<tr>
<td>Capitol Campus Central Plant Chilled Water system improvements</td>
<td>Department of Enterprise Services</td>
<td>$132K</td>
<td>Roger Wigfield</td>
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<tr>
<td>John O'Brien Building Controls Upgrade</td>
<td>Department of Enterprise Services</td>
<td>$76K</td>
<td>Roger Wigfield</td>
</tr>
<tr>
<td>Archives Building Lighting Upgrade</td>
<td>Department of Enterprise Services</td>
<td>$104K</td>
<td>Roger Wigfield</td>
</tr>
<tr>
<td>Office Building II AHU VFD Upgrade</td>
<td>Department of Enterprise Services</td>
<td>$71K</td>
<td>Roger Wigfield</td>
</tr>
<tr>
<td>Cherberg Building AHU Controls Upgrade</td>
<td>Department of Enterprise Services</td>
<td>$67K</td>
<td>Roger Wigfield</td>
</tr>
<tr>
<td>Capitol Campus Central Plant Chilled Water system improvements Phase 2.</td>
<td>Department of Enterprise Services</td>
<td>$51K</td>
<td>Roger Wigfield</td>
</tr>
</tbody>
</table>
2. Provide a matrix of the range of energy and utility management services provided by the ESCO, including the ESCO’s capability to provide the following services: energy auditing, financing, design, general contracting, construction management/administration, testing and balancing, commissioning, warranty services, measurement and verification of savings, energy savings guarantees and facilitating utility participation to maximize utility rebates and incentives.

Integrity Energy Services is a full-service ESCO that delivers turnkey energy efficiency projects that meet all requirements of the Department of Enterprise Services Energy Program and RCW 39.35A. We utilize partnerships with local consultants and contractors to apply all necessary disciplines to each project while keeping overhead costs low. Integrity Energy works in collaboration with our partners, infusing our experience and expertise, and maintains accountability for all project outcomes. Although sub-consultants and subcontractors may be involved with a project, Integrity Energy takes complete responsibility for every aspect of the job. The table below describes the division of various tasks.

<table>
<thead>
<tr>
<th>Capability</th>
<th>Integrity Energy</th>
<th>Consultant/Contractor Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Energy Auditing</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Financing</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Design</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>General Contracting</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Construction Management/Administration</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Testing/Balancing</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Commissioning</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Warranty Services</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Measurement &amp; Verification of Energy Savings</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Energy Savings Guarantees</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Facilitating Utility Participation to Maximize Utility Rebates &amp; Incentives</td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>
3. The ESCO’s experience with measurement and verification (M&V) processes. The ESCO should describe its familiarity with M&V protocols and when each is most appropriately applied.

Integrity Energy adheres to the International Performance Measurement and Verification Protocol (IPMVP) in developing and performing the measurement and verification procedures for the project. Each of the IPMVP options provides varying degrees of accuracy and cost. Integrity Energy will work with the Owner and the WA-DES to develop a measurement and verification plan that will meet both the energy verification criteria and the financial criteria for the project.

The IPMVP provides 4 options to address the potential site conditions and savings verification requirements of an owner.

- Option A “Retrofit isolation key parameter measurement” involves field measurements of key performance parameters.
- Option B “Retrofit isolation all parameter measurement” involves field measurement of energy use.
- Option C “Whole Facility” involves analysis of utility meter data.
- Option D “Calibrated simulation” involves a simulation of whole building energy use which is calibrated to measured energy data.

Integrity Energy will meet with the Owner and WA-DES early in the development phase of the project to define the client’s financial, savings, and verification criteria needed to provide a successful project. Once the criteria and energy efficiency measures have been defined, the measurement and verification option (A, B, C or D) will be selected and a
measurement and verification plan will be developed for each measure that includes the following:

- Identify the measurement boundary and the Key Performance Indicators (KPI) that define what factors contribute to the energy efficiency measures utility usage and savings within the measurement boundary.

- Pre-project measurements that will define the Baseline utility usage. Each KPI will describe the proposed measurement/data that will be gathered as well as the length of time the measurements will take place. Integrity Energy will install measurement and logging equipment directly on the equipment to document the baseline energy usage. This same equipment will be used to document the post-project equipment energy usage.

- Post-project measurements and/or data that will be gathered to verify energy usage after the project has been completed.

- Stipulated items. Stipulated items define KPIs that define items that may change over time but both the Owner and Integrity Energy agree are the basis of the savings calculations. Typical stipulated items include weather data and hours of operation.

- Reporting period for the M&V plan. The reporting period should encompass at least one normal operating cycle of the equipment or facility in order to fully characterize the energy efficiency measures effectiveness in normal operating modes. A two week period is relatively typical for the reporting period.

- Ongoing measurement and verification activities. These activities will vary depending on the Owners desired frequency of verification that may range from daily to annually. At a minimum, Integrity Energy will conduct a measurement and verification report at the end of the first year of operation. At the request of the customer, Integrity Energy will contract to continue measurement and verification for an extended time frame, up to the finance period.

- Define baseline adjustments: Document known Routine and Non-Routine adjustments that will be made to the savings calculations. Routine adjustments include factors that regular change and affect the energy usage of the equipment such as weather. Non-Routine adjustments include factors that are not expected to change during the reporting period such as facility size, or change in occupancy.

Integrity Energy believes that all energy calculations and M&V plans should adhere to the following principles:

- Accurate: Utilize calibrated measurement device to obtain data used in the calculations.
• Complete: Account for all effects of the energy efficiency measure. Quantify the significant effects and estimate the others.

• Conservative: When judgments are made about uncertain quantities, utilize conservative judgments to under-estimate savings.

• Transparency: Calculations and guarantees should be transparent to both the Owner and WA-DES.

Each project measurement and verification plan will include actions and calculations that will be performed to prove that the guaranteed savings have been and will continue to be achieved. Savings are defined by the following equation:

\[ \text{Savings} = (\text{Baseline Energy} - \text{Reporting Period Energy}) +/- \text{Routine Adjustments} +/- \text{Non Routine Adjustments}. \]

The above equation can be applied to IMVP Options A, B and C. Option D generally includes the adjustments within the simulation software.

4. The ESCO's experience with designing, costing and managing the construction of heating system upgrades (including steam), chilled water system upgrades, heating, ventilation and air conditioning systems, heat recovery, energy management and control systems, lighting and lighting control systems, water efficiency, and other utility system improvements including renewable.

**Designing**

The Integrity Energy principals pride themselves with over 48 years of design experience. Completed designs and building modeling range from a diverse type of air handling unit systems, chilled water central plant and distribution systems, heating hot water central plant and distribution systems, district steam, central steam plant, steam distribution and condensate return systems, ventilation make-up air systems, multi-platform energy management control systems, interior and exterior lighting, modeling and renderings, plumbing and landscape water efficiency designs, solar PV, smart grid design, data center HVAC design, waste heat recovery (air to air, water to water, air to water) and solid waste management system design.
Whenever appropriate, an advantage that we offer is our ability and willingness to partner up with an outside consulting firm who either has inherent experience with the facility or is a resident expert in a particular unique system or technology. This allows us to be more efficient in our design and more successful in the implementation of new and/or emerging technologies. This approach also results in lower design fees due to the elimination of a learning curve and potential shortfalls due to lack of experience with a newly emerging technology.

Our design experience includes the following facility types: K-12, Higher Education, Municipal buildings, Healthcare Facilities, Data Centers, Natatoriums, Detention Facilities, labs, laundries, sport facilities, hotel, banks, convention centers, libraries and dormitories, to highlight a few.

**Costing**

We utilize three independent costing methods or a combination of each to provide reliable guaranteed maximum pricing. The methods include a database of past project pricing, MEANS estimating standards adjusted for local construction conditions, and local vendors and contractor estimators. Integrity Energy Services is completely independent of all vendors and contractors and as such can obtain competitive pricing upon request as all vendors and contractors competitively bid each project. With the volume of construction accomplished, we are able to obtain the lowest possible pricing on equipment purchases.

**Managing Construction**

With 60 years of combined experience, we manage our construction projects based upon the following practices.

- First and foremost, we are the single point of accountability throughout the process. This includes accountability for all aspects including consultant, vendor and subcontractors actions.

- Scope Management: It is critical that we clearly understand the entire scope of work to facilitate accurate planning and schedule management. A key to our success is obtaining owner input and approval of the scope of work prior to implementation and managing the team to properly execute the agreed upon scope of work.

- Schedule Management: We develop a detailed MS project schedule with updated short interval schedules during construction that optimizes the construction phase of the project. The schedule includes all of the details of project close out including start-up timing, commissioning, close out documentation delivery (i.e. as-builts, O&M; s, TAB reports, punch list, issue log, warranty, etc.) and M&V.

- Budget Management: Maintaining an up-to-date detailed budget is vital to the financial success of a project. We meet with the owner on a monthly basis (more
frequently on short duration projects) to review project financial status. This approach keeps an owner informed throughout the project which eliminates the “surprises” at the conclusion of a project. We typically deliver projects under the GMAX budget. We do not subscribe to shared savings concepts, 100% of the construction savings revert to the owner.

- **Safety:** Developing a detailed site specific safety plan prior to construction followed with weekly meetings and training are keys to an incident free work site.

- **Risk Assessment:** This is a process to identify, assess and manage risk up front. The project team evaluates risk exposure and potential project impact to provide focus for mitigation strategies. These strategies are then incorporated into the project work plan minimizing and managing the risk.

- **Quality Control:** This includes all activities conducted to improve the efficiency and effectiveness of procurement, construction, startup and commissioning elements of the construction project. We’ve concluded that implementing a quality control plan reduces or eliminates rework and provides for a more successful start-up and close out process which reduces overall project cost.

- **Constructability Review:** This involves the use of our years of construction knowledge and experience in assuring that the energy efficiency measures can be successfully constructed given site conditions, site requirements, time of year, project duration, along with numerous other factors. Performed early on, this review allows us to address potential impediments to the construction process and adjust our plans accordingly, eliminating the concern.

- **Partnering:** Collaboration is one of our core principals. We work closely aligned with Department of Enterprise Services, the owner and management team to ensure that their needs and expectations are met which results in a truly successful project. We work as if the facility were ours and take pride in the project outcome as a cornerstone to our reputation.

5. **The ESCO’s experience securing utility incentives for its customers. Discuss successful strategies implemented for maximizing utility incentives.**

There are several strategies that Integrity Energy Services implements to secure, and more importantly, maximize utility incentives. As with many other aspects of the ESPC process, it begins with developing good working relationships with the people who coordinate the incentives for the utility companies. Because we have been working with these entities for a long time, Integrity Energy has established these connections with key individuals at many of the utilities including Puget Sound Energy (Jason Hyatt), Seattle City Light (Lori Moen), Snohomish PUD (Art Arneson), Tacoma Power (Roger Peery) and Cascade Natural Gas.
In addition to building relationships, Integrity Energy works to involve utility personnel early in the audit process so they can add their expertise to the project and provide them with a better understanding and confidence in the level of funding.

We use the various methods available (i.e., prescriptive or customized) to maximize the potential incentive. Because we work with new technologies or modified applications, a particular EEM may not fit the prescriptive program. We have been successful in developing a customized application and securing incentives for “non-standard” energy efficiency measures.

Finally, we endeavor to provide all the required calculations and supporting documentation to make the case for the maximum incentive. By providing this information and a straightforward justification of the savings, we make it easy for the utility companies to fund the largest available custom incentive.

6. A description of the experience key staff have, who are responsible for administration of any potential work awarded thru this project. This is to include any sub-consultants routinely used for execution of performance contracting work. This is not to be the resumes or curriculum vitaes (CVs) of personnel. Resumes or CVs may be attached as an appendix. Please indicate if the experience was obtained at other than this ESCO. Please identify the responsible licensed P.E.

Integrity Energy Services key staff who are directly responsible for the administration of any work awarded thru this RFQ include:

- **Mike Dean (Owner) – President:** Mike’s ESCO experience dates back to the early 90’s and building system design experience to the late 80’s. He has hands on audit, design and construction experience with generally every type of mechanical and electrical system found in Pacific Northwest commercial buildings. Over the years, Mike has developed projects in K-12 facilities, Higher Education campuses and facilities, healthcare facilities, government buildings including City, County and State owned facilities, commercial office buildings and industrial facilities. As it relates to projects we undertake, Mike’s primary responsibilities include all aspects of quality control (development, design and construction), timely issue management, financial management and safety. Experience was obtained through the ownership of Integrity Energy Services and the projects that were successfully completed by this company, as an owner of Quantum Engineering & Development, as a Director at another local ESCO, as a Principal at a local engineering firm and as a control contractor. (See resume for additional experience).
Mark Foster (Owner) – Vice President responsible for business development and marketing: Mark has over 10 years of experience with the development and implementation of ESCO projects. Mark is the local leader for ESCO project development in K-12 and Higher Education facilities. The type of projects he developed range from simple lighting or control system upgrades to complete and complex mechanical and electrical system replacements. Mark’s experience extends beyond the Education market to municipal and commercial building project development. Mark’s primary responsibilities include Owner relation management, new client acquisition, grant and alternative financing arrangements and project management. Mark gained his experience as an account executive at another local ESCO and as an account executive for a local controls contractor. (See resume for additional experience)

Brian Hanson, PE (Owner) – Vice President responsible for Engineering Services: Brian is responsible for project development, energy engineering calculations, project design, engineering quality control and securing utility rebates. With over 22 years of performance contracting and mechanical design experience allows Brian to excel in this role. His performance contracting experience includes data centers, hospitals, laboratory buildings, pools, higher education, K-12 school districts, low rise and high rise office buildings. His mechanical design and code knowledge has been invaluable when performing energy audits and reviewing mechanical and electrical systems. Brian gained his experience as a Sr. Project Director at another local ESCO and as a mechanical design engineer at a local engineering firm. (See resume for additional experience)

All three owners are empowered to make any and all decisions on a project which allows for effective management of any issue that may arise

One of Integrity Energy’s key strengths is our ability to partner with local engineering firms (sub-consultants) who provide inherent system knowledge due to their involvement with prior system design in a facility or their knowledge and design capability of new emerging technologies. What we found over the years is that a single design firm is not capable of understanding all of the diverse system types or all of the new technologies that are emerging. We have the ability to align ourselves with any firm that provides the greatest value and expertise to set the project up for success. This avoids the mistakes that are common for a firm that experiments with concepts they are not familiar with.

We are proud to have long standing working relationships with most of the successful local engineering firms. These firms range from small one or two person firms to the largest engineering firms in the area. An example of firms that we have partnered with either at an owner’s request or because of their expertise with a specific system include (see resumes and company profiles in the appendix):
• CDI Engineers located in Lynnwood, WA. The largest mechanical design firm in the Pacific Northwest focused on sustainable design, mechanical consulting, and energy engineering. CDI is an engineering firm with a singular discipline and a focus on sustainability. Experts in their field.

• Sparling located in Lynwood, WA. The largest electrical, technology, audiovisual, acoustics and lighting design and consulting firm in the United States and a leader in integrated design.

• Engineering Economics, Inc. (EEI) located in Seattle, WA. Since 1984, EEI has provided engineering consulting services for building owners and managers focused on quality assurance, sustainability and energy efficiency. EEI also specializes in building commissioning and has become one of the nation’s leading Commissioning Authorities.

• BCE Engineers (BCE) located in Fife, WA. Established in 1991, mechanical design services include HVAC, plumbing and piping, Life Cycle Cost Analysis, temperature controls and energy management and control systems. BCE’s designs of mechanical systems are on the leading edge of energy efficiency. Electrical and systems design services include power distribution, lighting, Photometric analysis, emergency power generation, power quality analysis, Photovoltaic systems, CCTV/video, fire alarm systems, mass notification systems, VoIP, intercom and public address and exterior site and street lighting.

7. A description of the ESCO’s familiarity with EPA’s Energy Star Portfolio Manager and other benchmarking tools.

Integrity Energy Services is quite familiar with the EPA’s Energy Star Portfolio Manager as well as the Target Finder offered by the EPA. If the facility participates in the Energy Star Portfolio Manager program, Integrity Energy will utilize that data to initially target specific buildings to identify potential energy efficiency measures. If the facility does not participate, Integrity Energy Services will utilize the EPA Target Finder to identify facilities that are exceeding the target usage. We will encourage the facility operators to participate in the program in order for them to benchmark their facilities pre and post project with weather normalized reports. If an Owner does not utilize the Energy Star Portfolio Manager, we will educate them on the advantages of using the program and if they are interested, assist them with its implementation.
Due to the inherent risk of designing and implementing energy efficiency projects, there are many issues that can arise over the course of the work. A large part of this response details our proactive approach to minimize the possibility of problems taking place. When issues do occur, it is absolutely critical to identify them as early as possible, communicate with all stakeholders to determine a solution, and act quickly to implement the resolution or corrective action.

We’ll provide a couple of examples of issues that Integrity Energy staff members experienced while employed at other firms that they took personal responsibility to resolve.

At a local school district in Skagit County, one of the energy efficiency measures upgraded DDC controls on existing unit ventilators. Because the UVs were not functioning properly prior to the upgrade, the post installation performance resulted in higher than expected demand charges. Although the demand was not part of the energy guarantee for that measure, we worked through a very complex programming challenge to remedy the issue at no cost to the owner.

At a King County owned facility, following the upgrade of their central system, issues with their distribution system were identified as a result of the added monitoring that was installed as part of the project. The deficiencies were investigated and a design document was created to instruct the owner as to the recommended piping modifications that were needed to correct the situation. This was done at no cost to the owner.

9. What is the makeup of a typical project team with regards to local (WA, ID, OR) vs. outside the region staffing.
Integrity Energy Services is a locally owned and operated company. All staff members currently work and live in Washington. We also work with sub-consultants and subcontractors that have a local presence. Integrity Energy prefers to work with contractors that are in close proximity to a project to promote local jobs, provided their cost and quality of work meets expectations. One scenario that we would consider working with outside region partners would be at the request of an owner.

A typical project team may consist of the following: Mark Foster seeks out and develops an initial relationship with an owner. Importantly, Mark reaches out to DES to create the linkage between the Owner and an assigned program representative. Following initial project discussions, Brian Hanson meets with all parties
to begin the audit phase of the project. As the project progresses, Brian will work with the Owner and DES to select the appropriate “local” consultant team which best matches the specific need of the project which he then manages. As the project moves into the construction phase, Mike Dean works with the Owner and DES to select/bid the “local” construction team and takes responsibility for the construction and close out phase of the project. This arrangement directly involves the Owners of Integrity Energy Services throughout the entire process.

**MANAGEMENT APPROACH**

10. The ESCO’s organizational structure and management approach to the project. Clearly describe the roles and responsibilities of typical ESCO staff who will be assigned to any project obtained under this selection and of any sub-consultants included on the ESCO's team. For sub-consultants, describe the ESCO's prior experience working with the sub-consultant.

Integrity Energy Services’ management approach is a highly collaborative effort to determine our customer’s needs and then provide the most cost effective solution. To achieve this, we emphasize thorough early discussions and frequent, consistent communication throughout the project. We believe the more information we have about our client and their facilities, the better we can help resolve issues and improve system performance. This knowledge coupled with our technical expertise and decades of experience developing efficiency measures is key to delivering successful projects.

Along with communication, it is critically important for customer trust and confidence that we clearly define roles and responsibilities. We believe in a hands-on presence where our team works with the customer and the Department of Enterprise Services from start to finish. This facilitates a very efficient project delivery by eliminating multiple transitions and loss of customer direction and objectives. The Owners of Integrity Energy Services are directly involved with each project and have the authority to make any and all decisions as it relates to the specific project. This agility provides for efficient and responsible decision making which can shorten the overall project direction. Integrity Energy’s organizational structure is as follows:

<table>
<thead>
<tr>
<th>Role</th>
<th>Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Ultimately responsible for all project phases from development to implementation to verification of savings. Provides quality assurance to confirm customer expectations are being met. Manages contracts and the</td>
</tr>
</tbody>
</table>
construction of measures including financial management and subcontractor coordination and oversight.

**Vice President of Business Development**
Responsible for client acquisition and management. Explains ESCO program guidelines, describes how the ESCO process may apply to specific client needs. Assists client in acquiring alternate funding including grants, rebates and third party financing. Introduces new clients to the DES ESCO program.

**Vice President of Operations**
Responsible for scoping and pricing energy efficiency measures. Provides energy calculations and manages sub-consultants as part of project development. Responsible for measurement and verification of system performance and savings.

**Design Engineer**
Sub-consultant(s) develops detailed mechanical, electrical, plumbing, structural and architectural drawings and specifications as appropriate to meet the specific project requirements. Designs systems based upon existing field conditions, overlaying new and more efficient systems or technologies and Code requirements as they apply.

Integrity Energy has excellent relationships with experienced sub-consultants that will become an integral part of our team if approved by the Owner. If the Owner has a preferred firm that is not listed below, most likely, we have worked with them in the past and would solicit their involvement in the project.

11. *The ESCO’s policies and procedures for managing and delivering its committed work products in a timely fashion within contractual obligations, including project development, construction, and post implementation verification.*

Integrity Energy Services is committed to taking great care of our customers and meeting their expectations, along with those of the Department of Enterprise Services. With that charter, Integrity Energy will not take on projects that result in a shortage of resources. Our customers and reputation are too important to jeopardize. At the early stages of an opportunity, we will review our current projects and backlog with the owner and DES to confirm that we have the capability to deliver a highly successful project within the owner’s anticipated timeline.

Integrity Energy has in place policies and procedures that have stood the test of time and resulted in quality projects and a high level of customer satisfaction. We manage every
project time line by not only using but managing each task in a detailed Microsoft Project Gantt chart. This approach allows us to deliver our projects and close them out in a timely manner. Once again, consistent and purposeful communication is the foundation for successful project delivery. Our procedures for managing and delivering work are outlined as follows (Note: Integrity Energy takes full responsibility for all phases of work).

**Initial Customer Meetings**
When Integrity Energy first meets with a prospective customer, we work to qualify the prospective opportunity for energy efficiency measures. We discuss their critical needs as well as issues with utility expenditures. If the potential for an energy conservation project exists either now or in the future, we would immediately contact DES to team with them. DES then provides an overview of the ESPC process and the Department of Enterprise Services Energy Program and the project progresses from there. It is company policy at this point to establish the owner’s project criteria at this time. Understanding the target facilities and systems, willingness to finance, available capital and simple payback targets (to list a few key parameters) is important to the success of the project. Once we’ve determined the owner’s objectives, Integrity Energy can conduct a preliminary audit and then present an Investment Grade Audit proposal (with DES prior approval).

**Investment Grade Audit**
The basis for the audit has been established leading up to the IGA. During the audit we utilize a standard checklist to ensure all applicable efficiency measures are evaluated, both needs based and innovative. We create an energy baseline, using data logging and metering as needed. Our goal is to develop a project that meets the owner’s criteria, solves their critical needs and reduces their utility and operational costs to the greatest extent.

**Critical Project Review Meeting**
Integrity Energy performs a critical project review meeting before submitting an Energy Services Proposal. The entire project is scrutinized by multiple personnel to ensure that all possible sources of risk have been identified and addressed. We look to determine that design, constructability and system performance have been evaluated thoroughly so there will not be any surprises, with associated cost impacts, during the implementation of the measures. In our experience, this is an absolutely critical step in the ESPC process that also helps differentiate Integrity Energy from most other firms.

**Design**
Integrity Energy works to make certain that the scope of work and project objectives are addressed during the design. We’ve already performed schematic design during the audit. It
is now critical to verify the equipment criteria and performance standards that drive the energy savings so that the final design delivers the guaranteed energy savings. We also verify Owner preferred equipment, systems and design standards to incorporate all of those into the design documents.

**Construction**

As we have emphasized throughout this response, communication is of utmost importance to successful project delivery. During the construction phase our policy is to schedule regular progress meetings to discuss progress, financials and resolve any issues. Direct supervision and coordination of subcontractors is also standard practice. We perform hands-on training before the systems are turned over to the owner staff so they can become familiar with the equipment prior to being responsible for operation. Once the project is complete, Integrity Energy conducts a closeout meeting review commissioning, O&M’s, warranty and system operation requirements.

**Measurement & Verification**

Integrity Energy emphasizes the importance of measurement and verification of energy savings. Our policy is the deliver an initial M&V report within 2 months after commencement of energy savings and the annual report 1 year and 1 month after the commencement of energy savings (the owner has options for additional years as well). We work hard at the onset of a project to confirm that the customer understands the savings guarantees. Integrity Energy strives to be best in class in delivering timely, accurate M&V reports that are well understood by our clients.

12. The ESCO’s approach to marketing the DES Energy Program to potential client agencies in conjunction with DES personnel.

Integrity Energy team members have worked closely with the Department of Enterprise Services on a substantial number of projects in the last 20 years. We consistently make it a top priority to promote the DES Energy Program to all of our public clients.

A sample of clients where we have introduced DES includes Federal Way Public Schools, City of Des Moines, Stanwood-Camano SD, North Seattle Community College, Hoquiam SD, Anacortes SD, and Tukwila SD.

Integrity Energy personnel have executed in over $100M in energy efficiency projects utilizing the DES Energy Services Program. We firmly believe in the value the DES delivers to the eligible public clients, providing an alternative contracting mechanism to help address immediate facility infrastructure needs while providing for more energy efficient and sustainable operations.

We’ve experienced success in actively promoting the program and involving the DES Energy Program team early on during the business development process as a means to assist in the
education of clients with the program. This proactive marketing approach and effort has proven very effective in promotion of the program.

Our team members are proficient in directing public sector customers to the DES Energy Services program as a streamlined and proven procurement method to assist with addressing building infrastructure needs. Integrity Energy actively promotes the DES Energy Services Program from an integrated turnkey contracting approach with guaranteed performance requirements as well as the financial benefits of the program, especially when available capital dollars are limited, the facility needs are great and alternate funding & financing is the only path to address their immediate needs.

13. What is the minimum size project your firm would consider viable.

Integrity Energy Services strives to support our customers in any way that we are able. With that goal in mind, we are willing to take on opportunities that other firms may consider too small ($40K to $999K). As part of our initial qualifying process, we assess potential measures to verify that performing facility upgrades through a performance contract will be cost effective for the client, Department of Enterprise Services and Integrity Energy.

14. The ESCO’s approach to effectively communicate project information with the DES Energy Program prior to sharing with client agency.

Effective communication, both internal and external, is a core principle at Integrity Energy. The success of the DES Energy Program hinges on all project stakeholders’ ability to work well together as a team. Integrity Energy understands that Department of Enterprise Services manages the process and must be given ample opportunity to review and comment on project information being gathered and presented to the Owner by the ESCO. We clearly understand that vetting the deliverables through DES prior to delivery to an Owner allows for a very constructive and collaborative discussion, and with DES’s input, results in a much higher quality product.

Integrity Energy values the insight of DES personnel so we compile a schedule that accounts for their time to review necessary information and documentation. We find that this also allows for collaboration to ensure that we are on the same page when presenting to a customer and maintaining the credibility of the program.
15. The ESCO’s approach to project development from marketing to delivering the ESP.

Integrity Energy employs a systematic approach to marketing, while remaining flexible. In order to maintain efficient use of time and resources, we focus first on existing customer relationships. Because we have experience with a significant number of clients, this represents ample opportunity. It also streamlines the development process due to our qualified knowledge of customer facilities and their understanding of the ESPC process. Secondly, we market to potential clients through referrals and industry associations. Again, we qualify an opportunity based on a number of factors including facility condition and need, utility savings opportunities and willingness of the customer to utilize the ESPC procurement method. At this stage, we work to coordinate involvement of a Department of Enterprise Services Energy Program representative to oversee an RFQ (if necessary) and initiation of an Interagency Agreement.

Once the client agency has selected Integrity Energy, we work diligently to determine their project criteria including willingness to finance, available capital, facility needs and target payback. A thorough understanding of their objectives helps us identify what types of systems and energy efficiency measures to audit. We then collaborate with the owner and DES to compile the necessary data, including equipment logging, to provide guaranteed costs and energy savings for the selected measures.

16. The method for contracting the installation of the measures, maintaining cost competitive pricing, and whether the ESCO uses open book pricing.

**Contracting Method**

The ultimate goal for the installation of measures is to provide the most experienced and qualified contractor(s) with the highest quality workmanship at the lowest available cost. Integrity Energy has developed very good relationships with sub-contractors throughout Washington across the many trades needed to implement energy efficiency projects. Knowing the competence of these subs allows us to recommend the right companies for qualified bids, depending on the location, size and complexity of work. We are also very flexible and experienced in working with owner preferred contractors. Integrity Energy strives to work with local contractors to the greatest extent possible given they meet the project bid requirements. Integrity Energy does not self-perform any of the construction related activities which eliminates the possibility of internal double mark-ups and provides the most competitive pricing available.

Whenever possible, Integrity Energy involves subcontractors early in the project.
development process. This collaboration results in more accurate and efficient scope definition and pricing. It also significantly reduces risk to the owner with a thorough constructability review.

Once the contractors have been selected, Integrity Energy works very closely to coordinate their activities and verify their work is meeting or exceeding the expected level of quality. Because Integrity Energy is responsible for the outcome of the project, we focus on managing our subcontractors well, knowing their current progress and facilitating communication in a timely manner. This significantly differentiates us from many other ESCO’s that essentially rely on contractors to manage themselves.

Safe implementation of our projects is our highest priority. We plan and implement procedures to protect all individuals involved in a project from engineers and subcontractors to facility operators and tenants. Our safety program documents and ensures that a high level of project safety practices and procedures are followed on every project.

Cost Competitiveness
As a small, local company, Integrity Energy has the ability to keep overhead low and pass those savings to our clients. We are also able to keep our fees low with competitive pricing from sub-consultants and contractors. It is our goal to be the low-cost, high value provider of ESCO services in the state of Washington.

There are numerous factors that impact project costs. As stated above, Integrity Energy has the lowest overhead and profit margins in the industry. That is just the beginning of our ability to provide very competitive pricing. Because fees, taxes and other soft costs are based on construction costs, accurately estimating those costs is a critical component of cost competitiveness that is often overlooked. Keeping construction costs low impacts all other financial aspects of a job. Integrity Energy is not tied to specific contractors or equipment vendors, so we’re able to obtain competitive pricing during the estimating phase rather than when the price has already been set.

Integrity Energy employs a similar approach working with consultants. We are consultant neutral which allows us to acquire competitive pricing from design firms. We’re also able to ensure that the consultants are qualified for the scope of the project and have the specific experience and resources to complete the design on schedule. Because we can seek out the design firm with expertise with a new or emerging technology, we do not have to carry the overhead and burden the project with a “learning curve”. Our design fees are flexible and based on the specific scope of the project.

Supervision and coordination of sub-contractors is another key aspect of reducing risk and keeping costs low. Unlike many other firms that pass these tasks onto the subs, Integrity Energy believes in taking full responsibility for managing our contractors on site. We find
that this allows us to verify they are on time and under budget while resolving any site issues that may arise as quickly as possible, once again mitigating costs that may result from lingering issues.

In addition to our efforts to keep costs low, maintaining our focus on communication is vitally important to make certain Integrity Energy, the owner and DES are on the same page. This will ensure the entire project team has the same consistent goals and objectives, facilitating efficient project delivery and reducing overall and unnecessary expenditures. Many additional aspects of the project have an impact on cost competitiveness. Integrity Energy’s approach to each of these elements is described below.

- Integrity Energy works to expedite equipment procurement and the overall construction process to minimize resources and reduce costs. Efficient project delivery ultimately leads to savings for the customer.

- Competitive pricing by consultants, contractors and equipment providers help keep construction costs AND fees low. Detailed scope development is key to tightening contractor bids and establishing economical pricing early in the project. Integrity Energy does not request change orders on the original scope of work.

- Open book pricing provides complete transparency to the owner and the Department of Enterprise Services. With visibility to project financials, the entire project team can strategize on additional cost saving measures. Integrity Energy takes this one step further and not only provides open book pricing but additionally provides open book accounting of constructions costs throughout the construction phase of the project.

- Maximizing utility grants and rebates is another very important yet often overlooked component of reducing overall project cost to the owner. Integrity Energy is adept at working with utility companies to ensure that our clients are receiving the largest available incentives for their project. One of the keys to this is providing all the necessary information to the utilities and essentially making a case for the maximum incentives. Integrity Energy’s close relationships with the utility companies are an advantage in this process as well.

- In addition to utility incentives, Integrity Energy endeavors to facilitate all available funding sources together to create the most viable funding package for each project. This can include applicable local, state and federal grants; bonds (e.g., Qualified Energy Conservation Bonds (QECB), Clean Renewable Energy Bonds (CREB), Build America Bonds (BAB) to name a few); loans (municipal leases, state LOCAL) and third party financing to secure the best possible rates.
Open Book Pricing

Integrity Energy strives to establish long-term partnerships with our customers. We also believe in honest business practices and complete transparency. With that, we are pleased to provide open book pricing on all of our jobs. We work hard to deliver the lowest total cost on every one of our projects. As mentioned above, Integrity Energy takes this one step further and not only provides open book pricing but additionally provides open book accounting of constructions costs throughout the construction phase of the project. Integrity Energy believes in collaborating with our customers and DES to find all cost saving tactics without reducing the quality of work.

17. The ESCO’s procedures for timely closeout of construction projects delivery of O&M manuals, commissioning reports and other pertinent paperwork to the DES Energy Program and the client agency.

Integrity Energy Services endeavors to meet all milestones and deliver every aspect of our energy efficiency projects in a timely manner. It is important for us to meet the expectations of our client and the DES as well as avoid expending additional funds and resources beyond the completion date of a project. With those goals in mind, Integrity Energy compiles a detailed project schedule at the start of a project to outline when each task will be complete. In many cases, we also provide a 3-week look ahead schedule that is updated as needed. Additionally, we track action items and deliverables in meeting minutes. This process allows us to accurately track project progress against the agreed upon timeline and positions us for a timely and efficient close out.

Provision of O&M manuals, commissioning reports and other project closeout tasks are tracked in the schedule and the meeting minutes to ensure timely completion. We understand the significance of completing project closeout on time. It ensures that project stakeholders are not continuing to spend time and money on a job after it should be finished. Also, it allows the Owner to begin realizing the guaranteed energy savings. Finally, a well-executed closeout phase is an opportunity for us to demonstrate that we provide high quality projects.

We utilize the DES project close out checklist as our guide which, when completed, results in a thorough and complete close out process. We understand the typical pitfalls which delay project close out (i.e., incomplete O&M manuals, missing as-built drawings, improper project accounting and invoicing and missing affidavit of wages paid documentation, to
mention a few). Because we want to develop partnerships and work with legacy clients, it is critical that we provide best in class project closeout to leave a lasting impression with customers and Department of Enterprise Services.

18. The ESCO’s procedures for timely submittal of required documentation to Departments of Revenue, Employment Security, and Labor and Industries.

The Integrity Energy construction manager is responsible for ensuring that documents required by the Departments of Revenue, Employment Security and Labor & Industries are submitted on time in order to keep the project on schedule. Our decades of experience in managing energy efficiency projects in Washington state lends to our familiarity and understanding of what documents are needed and their associated submittal process.

We maintain an internal document control program which tracks the necessary submissions to the various State agencies as well as the Federal Government and City, County and State Agencies for permitting.

For the Department of Revenue, we maintain accurate project financial records and accounting for all taxes as required for accurate reporting at project completion. We file the Combined Excise Tax Return form any other required documentation on a quarterly basis.

For the Department of Employment Security, we keep accurate records related to all employees, their status and the hours worked. We report (i.e. Form 5208 A) and pay all required taxes on a quarterly basis.

For the Department of Labor and Industries, we file the “State Fund” quarterly reports and pay the related premiums at that time. As it relates to Intents and Affidavits, we ensure all subcontractors file their Intent to Pay Prevailing Wages immediately after the contractor has been selected and the contract is awarded. The Affidavit Of Wages Paid is filled out and submitted at the completion of the project.

19. The ESCO’s approach to mitigate risks associated with guaranteed cost, savings, and performance.

The nature of Energy Savings Performance Contracting dictates that the ESCO take on a majority of the risk with the guarantees. This risk cannot be mitigated by merely adding costs because the project needs to be cost effective to provide value to the owner and remain financially viable. Therefore, it is critical to the success of a project and the longevity of an ESCO to legitimately, strategically reduce as much risk as possible.
One of our keys to years of successful projects is mandatory reviews for each of the specific areas identified (Cost, Savings & Performance). We utilize three separate estimating methods to cross check project pricing. The methods include an internal database of completed project costs, estimating standards such as MEANS and subcontractor estimates or bids. This cross check mitigates risks associated with project cost and assures the Owner receives the best value for their investment without paying a premium.

To provide guaranteed construction costs with minimum risk, Integrity Energy works to conduct a very thorough investment grade audit. A comprehensive understanding of each measure’s detailed scope enables us to determine viable measure constructability. Our considerable depth and breadth of experience allows Integrity Energy to avoid typical pitfalls specific to a wide variety of energy efficiency measures. This thorough vetting process significantly reduces the possibility of unforeseen conditions on a project, along with the associated risks and costs. The internal mandatory Critical Project Review meeting, prior to submission of the ESP, is a final opportunity for multiple Integrity Energy personnel to identify and eliminate or control risk.

Mitigating risk in guaranteed performance and associated energy savings is achieved with a similar approach. A detailed understanding of system performance and thoughtful application of the proper energy calculations provide performance and savings with a high level of accuracy and minimal unknowns. Risks associated with our savings guarantee are mitigated in two ways. An Owner of the company that is not involved with the savings calculations performs a separate review of each and every calculation and approves the savings guarantee. The guarantee is then incorporated into the final proposal at a 90% level to provide a 10% margin of error.

20. The ESCO’s approach to sharing EPACT tax credits with client agencies.

EPACT tax credits represent another excellent opportunity for Integrity Energy to secure alternative funding to offset some of a customer’s required capital costs. Our experience is that lighting is generally the most feasible and cost effective type of measure on which to pursue EPACT dollars. Mechanical measures are more restrictive but potentially still viable. The process of gathering the necessary data and preparing the tax documents is fairly involved and requires some up front labor and costs. Integrity Energy’s policy is to deduct these expenditures from the overall tax benefit and then allocate 80% of the remaining benefit to the client. We work with the owner to determine how they want to receive their portion of the tax credit.
21. The ESCO’s experience and approach to meeting the public works requirements for apprenticeship training programs as directed by Chapter 39.04.320 RCW.

Integrity Energy understands that skilled union trades workers are vital to implementing quality energy efficiency projects. We work with our sub-contractors to support trades apprenticeship programs and are intent on promoting local efforts to foster development of qualified tradespeople. Integrity Energy is committed to meet the requirements outlined in RCW 39.04.320. Integrity Energy communicates the apprenticeship level required by the assorted trades during the sub-contractor selection process. Our Requests for Proposal define the requisite percentages of apprenticeship along with the necessary reporting procedures.

The apprenticeship requirement varies by the type of facility (Owner). For the majority of public projects, a project with a cost of $1M or more, no less than 15% of the labor must be performed by apprentices. School Districts, Four Year and Higher Education Institutions are separately identified but have the same requirements - projects of $1M or greater, no less than 15% of the labor must be performed by apprentices. Four year and higher education institutions have the same requirement. Department of transportation projects have a $2M 15% requirement.

We support this requirement by accurately reporting apprentice participation. For each apprentice, we provide their name and registration number, the name of the project, the dollar value of the project, the date of the contractor’s Notice to Proceed the number of hours work by them (categorized by trade).

22. How Minority and Women Owned Business (MWBE) enterprises will be utilized on the project.

Integrity Energy believes in supporting Minority and Women-Owned business as part of our standard business practices. Our team members have participated in many public projects where labor qualifications have been in place to encourage the inclusion and development of small, disadvantaged, and minority or women owned enterprises. We have successfully met these labor requirements by partnering with pre-qualified subcontracting partners as well as providing mentoring and training to under-utilized businesses that were unfamiliar with the installation and/or application of specific products or services. We make a good faith effort to seek out qualified vendors and contractors that other larger firms might overlook.

The performance-based contracting approach allows an Energy Services company to work with any qualified subcontractors and trades people based upon best value to the project and the owner. Integrity Energy’s vendor and contractor neutral approach means we remain objective when selecting vendors and contractors provided they have the ability to perform the identified work.
Integrity Energy builds and maintains relationships with numerous of MWBE contractors. Over the years, we have built up a vendor database that we can draw from that includes qualified MWBE firms. A typical procedure is to use this vendor database to seek out accredited firms to participate in the bidding process based on their capabilities and experience for the applicable area of the project.

We will identify work or bid packages that are attractive, i.e. right size, common or standard materials that do not require any specialty equipment or tools for installation. Additionally, scopes of work that have clean scope breaks, i.e., a particular system (Domestic Solar Hot Water System), work within a designated area, i.e., mechanical room, scope per floor, etc. Clean scopes of work are easier to bid, create less confusion, are easier to manage and therefore more attractive to MWBE contractors.

23. The ESCO’s policies and procedures for recycling materials such as lamps, ballasts, fixtures, ceiling tiles, and other recyclable material.

ESPC projects typically involve the replacement of building infrastructure components including lamps, ballasts, fixtures, ceiling tiles and other materials that may be recyclable. Integrity Energy works to identify material that needs to be removed from the site. We complete a plan outlining how each type of material will be disposed of and/or recycled, if possible. Cleaning and refurbishing equipment and reusing it dramatically reduce the amount of waste removed from a site. We have been successful in recycling materials such as light fixtures and ceiling tiles and reinstalling them on the same project.

Integrity Energy partners with companies such as Total Reclaim to maximize the materials we recycle and ensure that the materials are properly managed. When applicable, we will utilize procedures to recycle standard materials such as paper and glass at our office on site.

If any material removed from the site is identified as hazardous material, we ensure that all of the proper containment, shipping and handling procedures are followed and the required documentation and manifests are filed and reported to the owner for their records.
24. How potential hazardous materials encountered in the installation of energy efficiency measures will be managed; and whether the ESCO has been cited by the Washington Department of Ecology, Federal Environmental Protection Agency, or any other regulatory agency for inappropriate handling, transportation or disposal of hazardous materials. If cited what was the ESCO’s remedy. Being cited does not automatically constitute disqualification as an ESCO.

Integrity Energy Services strives to maintain a safe working environment on all of our projects. One key aspect of this effort is to ensure proper identification and handling of any hazardous materials that may be present in existing facilities where we are implementing energy efficiency measures. As a standard operating procedure, Integrity Energy obtains a good faith survey from the building owner prior to the investment grade audit. This allows us to understand the risk before conducting detailed site walks that may expose Integrity, DES or owner personnel to hazardous material. If hazardous materials are found during the implementation phase, without a plan in place, all affected work will be stopped until the materials are properly removed.

Once hazardous material location and type have been identified, Integrity Energy composes a plan for abatement of those materials. In many cases, our customers have preferred abatement contractors that are familiar with their sites. Otherwise, we can recommend several quality contractors, and work with the owner and DES to select one. Because hazardous material removal is required to complete a turnkey ESPC project, Integrity Energy takes full responsibility to do so while meeting all applicable regulations. Integrity Energy Services has never been cited for inappropriate handling, transportation or disposal of hazardous materials.

**COMPUTATION OF ENERGY BASELINE AND POST-INSTALLATION ENERGY USE**

25. Describe the methodology used to calculate baseline energy use and savings of different types of EEMs. This should include a description of various software tools that are utilized in the calculation process. Include the methodology used for campus settings that are master metered.

Integrity Energy believes that a thorough understanding of building mechanical and electrical systems, controls automation systems and energy generation is critical to the development of successful energy efficiency projects. All of Integrity Energy’s personnel have engineering degrees and have over 60 years of combined experience in the industry. Integrity Energy also has a registered Professional Engineer and Certified Measurement and
Verification Professional performing energy calculations and developing measurement and verification plans. Integrity Energy personnel have also been in the consulting profession and have a thorough understanding of local and state codes and standards. As such, the energy efficiency projects will not only save energy but also address health and comfort concerns.

In defining the Baseline energy usage of an energy efficiency measure it is critical to determine the measurement boundary. This boundary encompasses the proposed measure and documents the Key Performance Indicators (KPI) that will be factors in the energy usage. Our approach is to be as comprehensive as possible in our measurement as this not only provides information for the selected measures but provides additional information for measures that may be implemented in future projects. Once these KPIs have been identified, it is critical to place calibrated measuring devices on them. Although many of the defined KPIs may already have building controls measuring the required KPI, it is important to verify the accuracy of the installed sensor. In most cases Integrity Energy will install temporary calibrated equipment to measure and log the desired KPI.

Integrity Energy has numerous years of experience selecting and installing logging equipment. Our experience is utilizing a wide variety of measuring equipment to document operating conditions include temperature loggers and humidity loggers (HOBO), Watt meters, true RMS power meters (FLUKE), Smart Readers, strap on flow and BTU meters, light loggers (HOBO, Leviton & Sensor Switch) and motor on/off loggers (DENT & HOBO). This allows us to utilize the correct equipment for the application. It is critical that the monitoring equipment has been certified and calibrated for accuracy when taking the measurements. The M&V plan will help guide the placement of the monitoring equipment such that the post construction measurements are obtained in the same manner as the preliminary measurements to the greatest extent possible. This will allow placement of the equipment in a similar manner and location to provide an accurate documentation of energy usage and savings. Once the measurement boundary has been defined and agreed upon, Integrity Energy will place logging equipment on the required equipment to establish and document the baseline energy usage.

Note: Integrity Energy adheres to the International Performance Measurement and Verification Protocol (IPMVP) in developing and performing the measurement and verification procedures. We follow these standards to ensure that the energy efficiency measures have a documented baseline usage, transparent energy savings calculations and documented post project measurements to ensure savings are achieved.

Integrity Energy utilizes industry standard programs and custom excel spreadsheets to
calculate energy savings. We utilize industry accepted engineering calculations and conservative estimates when performing the energy savings calculations. All variables are agreed upon with the Owner in order to ensure the savings will be achieved. Integrity Energy believes all calculations should be as transparent as possible so any third party reviewer is able to follow the calculations and assumptions. In addition to the custom excel spreadsheets, Integrity Energy uses the following industry standard programs for calculating savings:

- **eQUEST:** Integrity Energy will utilize this tool when the IMVP option D is proposed. This tool utilizes industry standard DOE-2 engine for simulating building energy usage. eQUEST is supported as a part of the Energy Design Resource program which allows for continuous simulation improvements and the use of the latest version of DOE-2.

  eQUEST will be utilized as the energy modeling tool were measures are being developed that are not easily modeled with excel models. Examples of these measures would include upgrading windows to reduce solar gain or accounting for building additions that will occur during the project.

- **PVWatts:** Site Specific Data calculator allows users to select a photovoltaic (PV) system location from a defined list of areas in the United States. The PVWatts Site Specific Data calculator uses hourly typical meteorological year (TMY) weather data and a PV performance model to estimate annual energy production and cost savings for a crystalline silicon PV system.

- **Watergy:** This program was developed by the National Renewable Energy Laboratory. It is the industry standard for water conservation savings calculations.

- **Motor Master+:** MotorMaster+ is published by the National Electrical Manufacturers Association (NEMA). This tool allows users to calculate savings by replacing older motors with premium efficiency motors. The tool includes a catalog of more than 20,000 low-voltage induction motors, and features motor inventory management tools, maintenance log tracking, efficiency analysis, savings evaluation, energy accounting, and environmental reporting capabilities.

Once the conservation project has been constructed and commissioned, the agreed upon post project M&V measurements will begin. The logging equipment will be placed upon the specific utilities and recorded for a specified period of time. This actual post project energy usage will be compared to the baseline model to calculate the actual energy savings.

Campus settings that are master-metered are very similar to any other measure that is developed in traditionally metered buildings. Because the Owner may not see the energy reduction at the “master meter”, Integrity Energy performs detailed monitoring of the identified systems at the system or component level. The main difference is that performing the IPMVP option C is not available as a verification option. As with all developed measures, a proposed M&V plan would be developed to isolate the measures energy usage.
and measure this usage, pre and post project. Integrity Energy highly recommends to the owner that, as part of the conservation project, permanent sub-meters should be installed and monitored on the applicable utilities. Although the installation of meters on the buildings utilities does not conserve energy initially, it will allow the Owner monitor the building and identify future conservation projects.

26. Describe potential scenarios where a modified baseline may be proposed.
Integrity Energy Services utilizes the International Performance Measurement and Verification Protocol (IPMVP). The IPMVP defines two types of modified baseline adjustments, routine and non-routine.

Integrity Energy will develop an M&V plan that identifies routine adjustments that can be performed to modify the baseline, such a weather or operating hours. These routine adjustments are easily defined in the M&V plan with the associated calculation to describe the baseline modification. Examples of measures where routine baseline adjustments are made are lighting efficiency improvements where the operating hours are adjusted or in boiler retrofits were the number of heating degree days are adjusted.

Non-routine baseline adjustments are utilized when factors that are not usually expected to change during the M&V period. Examples of projects that would require non-routine baseline adjustment include an expansion of a facility size that is currently heated by a boiler. Another example is a baseline adjustment for code required ventilation of a classroom where the dampers are not operational and fixed in the closed position.

27. Describe the ESCO’s utilization of M&V processes in the establishment of baseline energy use and the post installation energy use.

Integrity Energy Services utilizes the methods outlined in the International Performance Measurement and Verification Protocol (IPMVP) to establish baseline energy usage and post installation energy usage. Integrity Energy typically proposes utilizing the “Reporting-Period Basis or Avoided Energy Use” calculation when calculating the Energy Efficiency Measures savings. This calculation is:

Avoided Energy Use (Or Savings) = Baseline Energy +/- Routine Adjustments to reporting-period conditions +/- Non-Routine Adjustments to reporting period conditions) – Reporting-Period Energy

Prior to development of the baseline energy usage, Integrity Energy will develop an M&V plan that describes the proposed IPMVP plan. Depending on the IPMVP option selected,
Integrity Energy Services will identify the Key Parameters that dictate energy usage for the proposed Energy Efficiency Measure and document usage of these parameters. If an IPMVP option is selected that requires field measurement of energy usage, Integrity Energy will install calibrated measurement devices on the system and document the usage for the time identified in the M&V plan. The M&V plan will describe how the measured data was utilized in the baseline energy calculations as well as the result of the calculation. All measured data will be available for all parties to review.

The post installation energy usage is calculated very similarly to the baseline usage. The Key Parameters that define the energy usage of the measure is once again measured with calibrated devices. The data collected is then used to recalculate the energy usage of the measure. Per the above energy savings equation, routine and non-routine adjustments are made to the baseline and then the savings are reported.

**SAVINGS AND EQUIPMENT PERFORMANCE GUARANTEES**

28. *The ESCO’s project cost guarantee policies and procedures; including remedies when project costs exceed ESCO estimates.*

Integrity Energy guarantees a maximum project cost for all performance contracts. The maximum project cost includes all soft and hard costs required to perform the energy efficiency measures. These costs include all subcontractor, material and equipment costs; permit fees; bonds; design; construction management; overhead and profit; as well as warranty and measurement & verification costs required to perform the defined scopes of work. In addition, Integrity Energy includes an Owner directed contingency for unforeseen conditions as well as estimated costs for taxes and WA-DES fees. Integrity Energy understands that the Owner is making financial decisions that include a return on the investment. We provide all financial analysis based on the total estimated project costs. Items beyond Integrity Energy’s control, which fall outside the guarantee include taxes, DES fees, grants and utility incentives.

Integrity Energy guarantees that the project cost incurred by the owner will not exceed the guaranteed maximum project cost to perform the specified scopes of work defined in the energy services proposal. If costs surpass the guaranteed maximum cost, Integrity Energy will assume the additional costs to perform the work at no additional cost to the Owner. In the event that unforeseen conditions cause the project to exceed the guaranteed maximum price, we will request the use of contingency to cover these costs. If contingency is depleted and the cost of the overage is related to unforeseen conditions, Integrity Energy
will work with the Owner to provide the lowest cost / cost effective solution. Integrity Energy Services assumes the risk of the guaranteed construction price, not the Owner. We will always deliver a project that meets all guaranteed savings and performance requirements whether the project costs are above or below the guaranteed maximum costs.

Integrity Energy will provide an ongoing construction balance sheet that will be updated monthly, at a minimum. The intent of the balance sheet is to communicate the status of the project costs, both guaranteed costs and contingency balance. Integrity Energy will reconcile all construction labor and material costs at the end of the project. The open book pricing will include actual invoices from subcontractors and vendors. All construction cost savings that have been realized will be turned over to the Owner.

29. The ESCO's energy savings guarantee policies and procedures, including remedies when actual savings are lower than the ESCO's estimates and guarantees, and the length of the savings guarantees.

Integrity Energy adheres to the International Performance Measurement and Verification Protocol (IPMVP) in developing and performing the measurement and verification procedures. We follow these standards to ensure that the energy efficiency measures have a documented baseline usage, transparent energy savings calculations and documented post project measurements to ensure savings are achieved.

Integrity Energy utilizes industry standard programs and custom excel spreadsheets to calculate energy savings. We utilize recognized engineering calculations and conservative engineering assumptions when performing the energy calculations. All variables are agreed upon with the Owner in order to ensure the savings will be achieved. The energy savings are conservative in nature and a 90% factor is used to determine the proposed savings. If the Owner is financing the project, Integrity Energy will guarantee an agreed upon fraction of the calculated value to protect the Owner against possible shortfalls in paying back the loan. Integrity Energy will work with the Owner to assess the risks associated with each measure and determine the proper fraction of savings that should be utilized in the financial calculations. Typical fractions of savings range from 85%-95% of the calculated values. Integrity Energy utilizes the 100% savings calculations when negotiating rebates with the utilities in order to maximize utility rebates for the Owner. These utility rebate negotiations provide an additional third party review to ensure that industry standard calculations and conservative assumptions have been utilized.
Integrity Energy Services is confident that a project’s actual energy savings will exceed the guaranteed savings due to the conservative nature of the calculations and assumptions. Integrity Energy will submit monthly, quarterly or annual savings reports, depending on the Owner’s needs, that document the actual and forecasted savings for that period. When energy savings exceed the guaranteed savings all monetary savings are realized by the Owner. There are no shared savings.

If the project appears to not be falling short of the guaranteed savings during the guarantee period, Integrity Energy will identify the reason behind the shortfall. Once the cause has been determined, Integrity Energy will provide corrective action to modify or the system to ensure savings will be achieved. In no cases will the corrective action reduce the occupant health or comfort. If corrective actions are not successful at achieving the guaranteed savings, Integrity Energy will pay the difference between the actual savings and the guaranteed savings. In all cases, the Owner is protected from savings shortfalls throughout the length of the guarantee period.

Integrity Energy will guarantee the savings for any period that the Owner requires, although a three year guarantee is preferred. Periodic energy savings reports as specified will be published throughout the guarantee period to document that savings are being achieved.

30. The ESCO’s equipment performance guarantee policies and procedures, including remedies when performance of equipment is not met.

Integrity Energy guarantees that the installed equipment and systems will meet or exceed the performance requirements defined in the energy savings proposal. It is important that we discuss Owner expectations and Owner equipment preferences early on in the development of the project. Selecting equipment and systems that meet these requirements early in the project allows Integrity Energy to budget and qualify this equipment. If Integrity Energy has concerns about Owner requested equipment or systems, Integrity Energy will make these concerns known and suggest other equipment or systems that would be an equal. Integrity Energy will always install systems that will operate to provide a safe, healthy and comfortable environment that are also energy efficient.

During the design process we will verify that equipment maintenance clearances are addressed and manufacturer’s recommendations are adhered to which are conditions necessary for proper system performance. During the construction we will verify that the equipment is installed per the design documents. In order to guarantee equipment performance, a detailed commissioning plan will be developed and executed with help from all required subcontractor and vendors. The project will proceed to close out only after the equipment is proven to perform. If the equipment or systems do not meet the performance guarantee, Integrity Energy will take the necessary steps to correct the performance. If the equipment fails within the warranty period, Integrity Energy will repair or replace the failed equipment.
It is vitally important that the Owner is properly trained on how to operate and maintain the installed equipment to ensure its continued optimum performance. Integrity Energy and their vendors will provide onsite training and guidance on the installed equipment and systems. Throughout the warranty period we will work with the Owner to address concerns or questions on how the system should operate and be maintained.

31. Provide information on the ESCO's warranty enforcement role and the ESCO's responsibility, if any, when there is an equipment failure beyond the warranty period when the client agency has financed the project and assumed ownership of the installed equipment,

Integrity Energy begins the warranty period upon substantial completion. The warranty period is typically for a minimum of one year but can be extended to a length of time, up to the manufacturer’s maximum, per the Owner’s requirements. If desired, Integrity Energy will negotiate extended warranties on specific pieces of equipment. We will be the single point of contact for warranty issues and will coordinate with the equipment suppliers and installation contractors to address all warranty issues.

Integrity Energy Services works with contractors and equipment suppliers that have a proven track record. These contractors are selected based on best value to the Owner. As such, we have confidence that the contractors and suppliers will work with us to install a quality product at a fair market value. Integrity Energy also commissions the project to confirm that the installed products work as intended and meet all guaranteed performance requirements. It is equally important that the Owner maintains and operates the systems per the manufacturer’s recommendations. Integrity Energy includes factory start-up and customer training by certified factory representatives and on all installed systems to verify that the Owner has a thorough understanding of the maintenance and operational requirements.

If the equipment or systems fail after the warranty has expired, Integrity Energy would still act as a single point of contact for assessing the failure and determining what caused it. Integrity Energy will work with the equipment manufacturer or install contractor to determine the most cost effective way to repair the equipment. We work in the interest of the Owner during this extended period to ensure project savings will be realized over the life of the loan such that loan payments can be made.

Integrity Energy will honor the warranty of all equipment purchased through the ESCO contract even when financed by the owner and where the client has assumed ownership of the installed equipment as long as there is no evidence of equipment misuse or abuse.
FINANCING ABILITY

32. The ESCO’s project financing ability. Describe capability for carrying costs until completion of the installation of energy efficiency measures. Describe capability and willingness to fully finance project over a financing term including how the interest rate the ESCO would use is determined. Provide letters of commitment from funding sources or from ESCO's Chief Financial Officer if self-funded. **Tax-exempt municipal lease financing does not qualify for ESCO financing ability.**

Integrity Energy Services, Co. is privately owned and not influenced by shareholders which affords us the ability to provide financing at the lowest possible cost. We are proud of our 10-plus year relationship with Key Bank. Key Bank provides us with a per project line of credit which enables us to carry the construction cost until completion of the installation of the energy efficiency measures (reference Key Bank letter of commitment in the appendix)

For projects requiring longer term financing, Integrity Energy Services works with local and regional financing institutions to secure the required funding at the lowest possible rates. We will support the owner throughout the process to secure the necessary funds. Financing rates and fees will be direct from the lending institution to the owner without any additional mark up by Integrity Energy Services.

Beyond the traditional financing institutions, Integrity Energy Services has experience with alternative funding programs including Qualified Energy Conservation Bonds (QECB), Clean Renewable Energy Bonds (CREB), Build America Bonds (BAB), General Obligation Bonds (GO), Tax-Exempt Municipal Lease Purchase Agreements, Capital Lease, Revenue Bonds, Qualified Zone Academy Bonds (QZAB), Energy Policy Act (EPACT) and Recovery Zone Economic Development Bonds (RZEDB). If any of these funding sources apply to the type of project that is developed, we will work with the owner to help secure the funds and reduce the overall project cost.
Notice

To request pages 40 through 229 of the original document, please contact:

publicdisclosure@des.wa.gov

or

Public Records Officer
Department of Enterprise Services
1500 Jefferson Ave.
P.O. Box 42445
Olympia, WA 98504-2445
MIKE DEAN - PRESIDENT & CEO

Mike Dean holds the position of President and CEO at Integrity Energy Services. Mike is responsible for business development, engineering, operations, contract negotiations, quality control and project management. Mike’s experience in these areas makes him capable of making critical decisions across disciplines.

His expertise has supported many schools, colleges, universities, municipalities, hospitals, commercial and industrial customers by utilizing his extensive knowledge of mechanical and HVAC systems. His experience with project development including audits, energy analysis, estimating, project financials, engineering and construction management contributed to the successful completion of some of the most innovative conservation projects in the Pacific Northwest. Mike is motivated to provide clients with innovative solutions focused on reducing their utility and operational costs and improving their operations.

Mike’s experience and relationships with local utilities has resulted in significant utility incentive contributions to each project.

KEY EXPERIENCE

Constructed the first and largest solar array located on a State owned building (Washington State Legislative Building, Olympia WA.

Recovered enough heat from a local data center to heat a 500,000 sqft office building.

KING COUNTY
Harborview Hospital – Critical Environment
Developed an energy saving fan wall replacement project for Harborview’s primary surgery center. Work was accomplished without interruption to surgery operations.

King County Courthouse & Jail
Added boiler plant to separate from district steam heating system. Included optimization of existing building systems.

FEDERAL WAY SCHOOL DISTRICT
Developed HVAC replacement project is 12 of the district facilities including Decatur High School, Thomas Jefferson High School, Illahee Junior High School, Totem Junior High School, Olympic View Elementary School and Sunnycrest Elementary School.

WASHINGTON STATE DEPARTMENT OF ENTERPRISE SERVICES
Developed energy conservation projects in all of the buildings located on the Capitol Campus resulting in a 22% reduction in energy campus wide.

UNIVERSITY OF WASHINGTON
Analyzed the campus chilled water system and implemented conservation strategies reducing the load by over 2000 tons.

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<tr>
<th>Education</th>
<th>Accreditations OR Affiliations</th>
<th>References</th>
<th>Qualifications</th>
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</thead>
<tbody>
<tr>
<td>University of Washington - B.S. in Mechanical Engineering</td>
<td>Steam Engineers License—City of Seattle WAMOA</td>
<td>John Chapman University of Washington 206.543.3860</td>
<td>Project Development Project Financing</td>
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<tr>
<td>North Seattle Community College - A.A.S. in Electrical Power &amp; Controls/A.A.S. in Digital Electronics</td>
<td></td>
<td>Dave Preugschat King County 206.296.1873</td>
<td>Performance-Based Contracting</td>
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<td></td>
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<td>Roger Wigfield WA State DES 360.407.937</td>
<td>Energy and Resource Conservation</td>
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<td>Large Campus Systems Analysis</td>
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<td>EMCS System Evaluation &amp; Optimization</td>
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<td>Energy Analysis</td>
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BRIAN HANSON – VICE-PRESIDENT

Brian Hanson holds the position of Vice President of Engineering at Integrity Energy Services. Brian is responsible for project development, energy engineering calculations, securing utility rebates and engineering quality control. With over 22 years of performance contracting and mechanical design expertise allows Brian to excel in this roll. His performance contracting experience includes data centers, hospitals, laboratory buildings, pools, higher education, K-12 school districts, low rise and high rise office buildings. After graduating from the University of Idaho in 1991, Brian gained mechanical design experience working as a consulting engineer. Mechanical design and code knowledge has been invaluable when performing energy audits and reviewing mechanical and electrical systems. In 1998 he became a Professional Engineer in the state of Washington.

KEY EXPERIENCE

Higher Education Projects
University of Washington
Smart Grid
Chilled Water Pressure Independent Control Valves Phase I & II
Power Factor Correction
Harborview Research & Training
Tower Lighting Upgrades
Medical Center – Data Center & Chilled Water Upgrades
Tacoma Campus – Electrical & Chiller Upgrades
Chemistry Building
Physics Astronomy Building
Friday Harbor Laboratories
Edmonds Community College

Municipal Projects
King County – Court House and Jail Boiler Installation, Elections Building HVAC Replacement, and Malang Regional Justice Center upgrades
Oregon State - Employment Security Building
Seattle Center – Steam Line Replacement
Seattle City Light – Lighting Upgrades
Seattle Justice Center – Data Center Upgrades
Seattle Municipal Tower – Data Center Tower replacement & lighting upgrades
Woodland Park Zoo – Feline House HVAC and Electrical Upgrades

Healthcare Projects
Harborview Medical Center – Operating Room Upgrades & Energy Upgrades
Kittitas Valley Community Hospital (Ellensburg)
Odessa Memorial Community Hospital (Odessa)
Providence St. Peter Hospital (Olympia)
Seattle Southeast Health Center – Mechanical Upgrades

K-12 Projects
Highline School District

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<th>References</th>
<th>Qualifications</th>
</tr>
</thead>
</table>
| University of Idaho - B.S. in Mechanical Engineering | Professional Mechanical Engineer—Washington (1998)  
American Society of Energy Engineers | John Chapman  
University of Washington  
206.543.3860  
Dave Preugschat  
King County  
206.296.1873 | Performance-Based Contracting  
Project Development  
Energy and Resource Conservation  
EMCS System Evaluation  
Mechanical Design  
Securing Utility Rebates  
Directed Engineering Studies  
Facility Auditing |
MARK FOSTER – VICE-PRESIDENT

Mark holds the position of Vice President at Integrity Energy Services. Mark is responsible for business development, marketing, new client acquisition, account management and contract negotiation. Since entering the industry over ten years ago, he has been a vital asset to his clients, helping them address their facility needs. He collaborates with customers to optimize building systems performance and reduce energy consumption.

Mark is passionate about creating safe, efficient and comfortable learning and working environments. His goal is to assist building owners and operators to upgrade facility infrastructure while reducing operational costs. He is fully dedicated to educational facilities and is an active member of CEFPI and WAMOA. Utilizing performance-based contracting, or a combination of other energy and facility solutions, Mark’s objective is to provide the best total solution at the lowest cost.

KEY EXPERIENCE

Western Washington University
City of Kent
City of Everett
Enumclaw School District
Federal Way Public Schools
Lake Washington School District
Marysville School District
Monroe Public Schools
Mukilteo School District
North Seattle Community College
Hoquiam School District
North Thurston Public Schools
Anacortes School District
Snoqualmie Valley School District
Highline School District
Peninsula College
Saint Joseph Medical Center
The Evergreen State College
Kent School District
Edmonds School District
University Place School District
Whatcom Community College
Tahoma School District
Tukwila School District
Seattle Public Schools

Education

University of Washington - B.S. in Mechanical Engineering

Accreditations OR Affiliations

Western Washington MCA - Certified Mechanical Project Manager
LEED Accredited Professional
CEFPI

References

Rod Leland
Federal Way Public Schools
Paul Smith
The Evergreen State College
Stuart Simpson
WA State DES

Qualifications

Performance-Based Contracting
Project Development
EMCS System Evaluation & Optimization
Energy and Resource Conservation
Facility Assessment
Project Financing
Utility Rebate Negotiation
FIRM PROFILE

Working with clients locally, nationally, and internationally since 1988, CDi Engineers (CDi) provides mechanical consulting services relating to heating, ventilating, air conditioning, fire protection, plumbing, and piping system design. Located in the Puget Sound area, and with a single-disciplined staff of over 30, CDi Engineers is one of the largest mechanical consulting engineering firms based in the Pacific Northwest.

Consulting Services

CDi designs energy efficient and cost-effective sustainable mechanical building systems that are flexible in operation, maintained easily, and provide comfort for building occupants. Providing consulting services for new construction, remodels, upgrades, and historic renovations, CDi offers a full-range of services including:

- Master planning, project design, and design review
- Facility assessments and programming
- Energy modeling and life cycle cost analyses
- Computational fluid dynamics analysis and indoor air quality
- Fire protection engineering
- Central plant design
- Sustainable design expertise for LEED®
- Construction administration

Sustainable Practices

Building for sustainability is key in the design of CDi’s projects. Our designers focus on the triple bottom-line; our projects are cost-effective, provide for occupant health and comfort, and are energy efficient. Actively seeking opportunities to improve operational efficiency, minimize energy usage, and employ environmentally clean sources, CDi projects often meet or exceed requirements for LEED certification.

Careful coordination with other team members on all aspects of building systems makes CDi a valuable partner in any design team. We take pride in the fact that we are known for engineering workable projects that are successful not only for our clients, but for building owners and users, and the entire community. With 16 LEED Accredited Professionals and a Certified Sustainable Building Advisor on staff, sustainable design is standard practice for CDi.

CDi Engineers is a member of the U.S. Green Building Council and an ENERGY STAR Partner.
Dick Moeller, P.E., has 38 years of experience in project management and design of various projects including higher educational, commercial, hospitality, military, governmental, institutional, healthcare, and industrial facilities. His expertise includes HVAC and plumbing system design; piping, steam, and utility systems; central heating and cooling plants; distribution systems; automated building control systems; energy studies; systems investigations, surveys, and investigations; testing and balancing; specialized systems for healthcare, laboratories, and mission-critical DoD facilities; master planning and programming of mechanical systems including life cycle cost analysis. Dick is a member of the FGI Guideline for Hospital and Healthcare Construction Revisions, Committee Member; ASHRAE Std 170 Ventilation for Healthcare Facilities Committee Member; ASHRAE Std 189.2P Design, Construction and Operation of Sustainable Healthcare Facilities Committee Member; American Hospital Association; American Society of Healthcare Engineers; American Society of Heating, Refrigerating, and Air Conditioning Engineers; Healthcare Construction Certificate Program, Faculty Member; Washington State Society for Healthcare Engineering; National Fire Protection Association; and U.S. Green Building Council. He is an ASHRAE certified Healthcare Facility Design Professional, an ASHE Certified Healthcare Constructor, as well as a LEED Accredited Professional.

Selected Project Experience

**MultiCare Good Samaritan Hospital Patient Care Tower, Puyallup, Washington** Project principal for mechanical engineering services for design of a new $400 million, 9-story, 353,500 SF patient care tower that included 80 private patient rooms, floors for 80 additional rooms, a new entrance lobby and drop off area, and emergency, imaging, and surgery departments. Sustainable features included: building orientation that minimizes heat gain; sunshades on the south face that reduce glare during summer but still allow light during dark winters; light shelves on patient room windows that bounce light into the spaces; green roofs to slow stormwater runoff; and stormwater treatment ponds that are designed to slow stormwater flows, increase absorption, and filter pollutants. The design team created a checklist integrating potential LEED credits with the Green Guide for Health Care credits to help guide the design and the project was designed to obtain LEED Silver Certification. The project was designed using Revit/BIM.

**Central Washington Hospital New Surgery Expansion, Wenatchee, Washington** Design of a 21,500 SF addition consisting of: relocation of Central Processing to space on the basement level; surgery area and additional prep rooms for admitting on the first floor; clinic area on the second floor, and connecting links between the new addition and the existing hospital on all levels. Project included a renovation of the existing hospital for pre-op and support areas for the increased capacity, and four new operating rooms in the surgery suite, two of which are heart rooms. Renovated area scope also included the transfer of service from existing mechanical systems to the new systems, allowing existing system capacities to be used for future renovation of the existing imaging department. Project challenges included phasing the HVAC and medical gas piping so that construction could be completed without interruption to admitting or ambulatory surgery beds, and maintain necessary infection control requirements. Additional mechanical system design was provided to support relocation of the existing generators to a new structure attached to the central plant building, and to support construction of a helipad on the roof of the Emergency Wing (fire suppression and fuel/oil spill containment).
RICHARD D. MOELLER, P.E., FASHE, HFDP, CHC, LEED AP

Principal-in-Charge

Cymbaluk Medical Tower, Everett, Washington Project principal for mechanical engineering services for design of a new 730,000 SF, 384 bed critical care tower that interfaces with the existing campus and a new 40,000SF central utility plant and 800 car parking garage. The new tower includes surgeries, pre and postoperative support, plus ICU and standard patient care. Additionally, a new emergency department was added to accommodate present requirements along with anticipated growth. This building requires approximately 1,000,000 cfm of air to meet both the code and environmental requirements associated with a critical care facility. Multiple air-handling systems were utilized to increase redundancy and operating efficiency and to maximize the restrictive space requirements. Additionally, a new medical gas system for oxygen, medical air, vacuum, nitrogen, nitrous oxide, and carbon dioxide was added to the facility. Unique to this project is a pandemic supply/exhaust system to exhaust the top patient floor quickly and control its pressure relationship to be negative to all other hospital floors in the event of an epidemic breakout among its patients, while providing the AIA recommended air change rate of 12 air changes per hour. The main mechanical room portion of the project was designed using Revit/BIM. The facility design used the Green Guide for Health Care as a basis for a sustainable approach to healthcare.

Providence Regional Cancer Partnership, Everett, Washington Mechanical engineering services for design of a new five-story, 102,000 SF, $70 million comprehensive cancer center, plus an adjacent four-story, 489-car parking structure. The facility houses clinical spaces and laboratories, and cancer services such as radiation oncology, linear accelerators, medical oncology, and an educational and resource center. A conference center, administrative and medical offices, library, retail space, and support service services such as social work, behavioral health, psychology, chaplain, dietitian, nurse specialists, and massage therapy areas are located in the facility. Mechanical services included design of HVAC, plumbing, fire protection, DDC controls, and medical gas systems.

Everett Conference Center, Everett, Washington Project principal for mechanical engineering services for a new $12 million addition to the Everett Events Center. The 47,000 SF, three-story facility includes a ballroom capable of accommodating 800 guests for sit down meals and divisible into four rooms, three large executive meeting rooms, offices and administrative spaces for the Everett Chamber of Commerce and Public Facility District, a commercial catering kitchen, a museum housing the City of Everett’s collection of art masterpieces, and retail storefronts on the street level. Services provided include engineering and design of HVAC, plumbing, and piping systems, and performance specifications for seismic bracing of mechanical systems.

University of Washington Mary Gates Hall, Seattle, Washington Mechanical design and life cycle cost analysis for new mechanical systems for a $36 million renovation and expansion of an existing 1928-vintage historic physics building. The 127,000 SF of existing space was completely gutted for new classrooms, computer labs, and offices and about 58,000 SF was added to the east of the original building. Critical areas that required special consideration during the design process included: computer "drop-in" lab with 200 computers; special cooling for computer "test bed" rooms; central main frame printer room; special cooling for communications rooms; central A/U distribution room with computer room A/C unit; 23 electronic classrooms that have video, audio, and data connections to the Internet; and a classroom for televised lectures with special noise criteria of NC-24. This project used a GCCM procurement process. Mary Gates Hall received a 2001 Masonry Institute of Washington’s Excellence in Masonry Design Honor Award.
MARK W. STAVIG, P.E.
Principal-in-Charge

Mark Stavig, P.E., has 28 years experience in project management and mechanical design for multiple projects of varying scopes and sizes, including government, military, corrections, cultural, higher education, high-rise mixed-use and residential, healthcare, and K-12 education. In addition to the design of mechanical systems, Mark has managed engineering and support staff, providing team leadership, structure, marketing, contract review, financial and technical direction, and quality control services. Mark is a member of the Washington State Society for Healthcare Engineering (WSSHE) and the American Society for Healthcare Engineering (ASHE).

Selected Project Experience

Museum of History and Industry at South Lake Union, Seattle, Washington
Project principal and project manager for mechanical engineering services to renovate the existing Naval Reserve Building located on the south end of Lake Union, to house the Museum of History & Industry (MOHAI). The existing building is approximately 45,000 SF. The renovation will increase level 2 by approximately 4,000 SF to maximize available exhibit area. The building will be served by multiple air handling units, radiant cooling, and radiant heating. The majority of the building will be conditioned for temperature control, but will not be controlled for humidity. A temporary exhibit space and an artifact holding area will be conditioned to meet tight temperature and humidity control. Also provided a pre-design study. Project is being designed to achieve LEED-CI certification.

Seattle-Tacoma International Airport Alaska Airlines
Provided Mechanical System Definition and Planning services for Alaska Airlines at North Satellite and Concourse C, including Mechanical Equipment assessment report. Developed mechanical system concepts with cost model in support of Alaska Airlines expansion and modernization options.

Seattle-Tacoma International Airport Airline Realignment Tenant Improvements and Ticket Counter Design Services
Relocation of multiple airlines ticket counter, baggage service operations and ramp (below wing) services. Mechanical design includes HVAC, plumbing, fire protection and DDC controls upgrades to serve each airline programming requirements. A detailed field survey was performed to locate new piping and HVAC route with relocation and demolition shown on the construction documents. Temporary and phased construction has been incorporated to maintain operations to areas outside of project boundaries.

Western Washington University Miller Hall Renovation, Bellingham, Washington
Project principal and project manager for mechanical engineering services for the complete renovation of a 134,200 SF facility originally built in 1945 and expanded in 1967. The renovation provides general university classrooms, computer labs, instructional space, offices, and support facilities. It replaces numerous aging building systems; improves disabled access to classrooms, labs, and offices; and reprograms academic spaces. Mechanical services include design of HVAC, plumbing, and fire protection systems. Construction was in two phases, with owner occupancy during construction. The project is using a GC/CM process. It was designed using Revit/BIM. The University is targeting a LEED Silver rating for this building.
MARK W. STAVIG, P.E.
Principal-in-Charge

Seattle-Tacoma International Airport Stage 2 Mechanical Upgrades
Stage 2 Mechanical Energy Conservation project modifies existing HVAC and central plant condenser water mechanical systems for energy savings. Existing HVAC terminal units were upgraded to variable volume terminal units. Cooling tower piping modifications allow isolation of the condenser water service to the plate-frame heat exchanger from dedicated cooling towers. DDC control system provides control valves, sensors, and components to execute the operating sequence. Detailed field surveys were performed to locate equipment and piping with relocation and demolition shown on the construction documents to avoid any changes during construction. Construction sequencing was provided to maintain airport’s operational criteria and to minimize disruptions to tenant operations.

Western Washington University Chemistry Building Addition and Remodel, Bellingham, Washington
Project principal for mechanical engineering services for addition and remodel, including a two-floor addition adjacent to existing building. A second floor addition will incorporate relocation of administrative office functions and renovation of existing administrative spaces to provide biochemistry research laboratory space, which will require extension of existing 100% outside air supply and laboratory exhaust air systems, lab gases, DI water, vacuum, and acid waste. Project also includes a third floor addition of lecture space and a computer laboratory space.

Seattle University A. A. Lemieux Library Renovation, Seattle, Washington
Project principal and project manager for mechanical engineering services for design of renovations to all six levels of the existing 90,000 SF library and the construction of a 40,000 SF addition. Extensive energy modeling, life cycle cost assessment, and a holistic approach with code officials were necessary to achieve the LEED rating. Mechanical systems included displacement ventilation, chilled beams, controlled environment, and heat recovery to support program spaces including stacks, digital commons, media production, and several focused reading rooms. The project’s energy use index exceeds the 2030 challenge goal for 2010, and it is on track to obtain a LEED-NC Gold rating.

VA Seattle Medical Center Building 34 Expansion, Seattle, Washington
Project principal and project manager for mechanical engineering services for the addition of a new second floor addition of 11,000 SF and first floor addition of 1,000 SF. The design use for the new and renovated space is for medical laboratory research. Design work included two exit stairwells and the installation of an elevator in an existing designated space. The project scope also included renovation of 1,000 SF of existing space on the first floor. Services included design of HVAC, plumbing, fire protection, and medical air/gas systems, utilities, and/or energy engineering and design of sustainable systems.

Bellevue College Health Sciences Building Pre-Design, Bellevue, Washington
Project principal for mechanical pre-design services for a new 70,000 SF building to support the health sciences educational program, including nursing, imaging/radiology, physical therapy, and drug/alcohol counseling. Project is planned to be LEED® Gold. Mechanical pre-design services consist of developing basic criteria for the project's mechanical HVAC, plumbing, and fire protection systems; determination of required building support utility services, including water, sewer, storm, and natural gas; conceptual design of HVAC systems; and estimate of mechanical equipment space requirements.
Norm Brown, P.E., has more than 32 years experience in project management and mechanical engineering design for a variety of projects, including numerous healthcare facilities. His technical expertise includes design of central heating and cooling plants, hydronic and steam distribution systems, temperature control systems, and special ventilation systems. Mr. Brown is also experienced in system selection studies, feasibility analysis and assembly and coordination of construction documents. Norm is a member of the American Society of Heating, Refrigerating, and Air Condition Engineers, International Code Council, Washington State Society of Healthcare Engineering and Society for College and University Planning. He is a LEED accredited professional.

Selected Project Experience

**Swedish Medical Center Issaquah, Issaquah, Washington** Mechanical engineering services for a new six-story, 175 bed, 340,000 SF community hospital and attached 180,000 SF Medical Office Building. Serving these facilities will be a 16,000 SF central utility plant. The combined EUI target for this project has been set at 150 (and Energy Star rating of 75) and through innovative strategies including the use of Variable Air Volume (VAV) air systems, low velocity ductwork, high efficiency air handling units (AHUs) and a low temperature heating system with heat recovery chiller and condensing boilers, the team hopes to achieve these targets. CDi has worked with Puget Sound Energy to develop a list of potential rebates for these energy strategies, backed by a robust energy model that predicts optimal operational benefits, these energy (and cost) savings should be realized.

**Providence Regional Medical Center Everett Colby Campus Central Utility Plant, Everett, Washington** Project principal and project manager for mechanical engineering design and construction services for a new central utility plant to serve the entire 1,000,000+ SF campus. Design accommodates hospital campus growth over the next 30+ years and includes new chillers based upon a variable speed chillers connected to a variable speed-primary flow distribution system. The heating expansion includes new steam boilers equipped with high-efficiency dual-fuel and linkage-less combustion control technology with exhaust gas analysis. This includes new condensate return tank, feedwater system, and deaerator equipment. A new high-pressure steam header is planned as well as new medium-pressure and low-pressure reducing stations to serve the various needs of the hospital campus. Facilities will remain fully operational throughout construction and cut-over of systems. Services included design of HVAC, plumbing, fire protection, and medical air/gas systems, utilities, and/or energy engineering and design of sustainable systems. Also provided construction phasing and administration services. Project also included layout of a new utility tunnel connecting the utility plant to the new hospital tower. It also includes design of cooling towers and emergency generators, all designed to very stringent acoustical limits because of close proximity to properly lines.

**Washington State Convention and Trade Center 800 Pike Project, Seattle, Washington** Project principal for mechanical engineering services for a $22 million renovation to convert the 800 Pike portion of the WSCTC facility that was occupied by the Museum of History and Industry (MOHAI) to convention center use. The project consisted of 138,610 GSF of partially improved shell space on five floors. Services included design of HVAC, plumbing, and fire protection systems. The project is targeting LEED-CI Silver certification.
Providence Portland Medical Center Central Utility Plant, Portland, Oregon
Mechanical engineering design and construction services for demolition, renovation, and expansion of the existing central plant and build-out of new space within an existing parking garage. Design accommodates hospital campus growth over the next 30+ years and included a new 3,600-ton chilled water plant (with provisions for expansion to 6,000 tons) and expansion of the existing boiler plant, in addition to upgrades of other mechanical systems. The variable primary flow chilled water system included two variable speed chillers. The boiler expansion included a new 800 BHP firetube steam boiler added to the existing line-up of boilers and was equipped with high-efficiency dual-fuel and linkage-less combustion control technology with exhaust gas analysis. The existing condensate return tank, feedwater system, and deaerator equipment was replaced with larger capacity equipment. A new high-pressure steam header was provided as well as new medium-pressure and low-pressure reducing stations to serve the various needs of the hospital campus. Facilities remained fully operational throughout construction and cut-over of systems. Services included design of HVAC, plumbing, fire protection, and medical air/gas systems, utilities, and/or energy engineering and design of sustainable systems. Also provided construction phasing and administration services. The project received several awards including: 2006 ASHE Vista Team Award for Infrastructure by the American Society for Healthcare Engineering, 2006 Oregon ACEC Grand Engineering Excellence Award, 2007 ASHRAE Technology Award for Health Care Facilities, ASHRAE Puget Sound Chapter, and 2007 ASHRAE Technology Award for Health Care Facilities, ASHRAE Regional.

Seattle Center Marion Oliver McCaw Hall, Seattle, Washington
Project manager for mechanical engineering services for $119 million renovation of the existing Seattle Opera House to a new world-class performance hall for the Seattle Opera and Pacific Northwest Ballet companies. Project included a major redevelopment of the existing building that included new lobbies, administrative areas, offices, and public spaces, a rebuilt stage house and performers wing, and renovated auditorium space. Mechanical work included complete upgrade of the HVAC, plumbing, and fire protection systems. This project was designed to attain LEED®, however the owner elected not to pursue certification. A major sustainable component included the underfloor displacement system for the auditorium and orchestra pit platforms, which provides energy savings as a lower cooling load is used due to stratification, also indoor air quality is improved due to increased ventilation efficiency. Automatically operated interior solar blinds, with a cavity between the solar blind and the window that is ventilated with outside air, reduced the mechanical cooling load by 27%. A variable air volume kitchen hood exhaust system was installed that monitors cooking activity through optical and thermal sensors, then modulates exhaust and make-up air volumes accordingly. Energy analysis for LEED® was provided through the Hourly Analysis Program (HAP). This project used a GCCM procurement process. The Marion Oliver McCaw Hall project received a 2005 ASHRAE Technology Award, Existing Public Assembly Category, First Place Award – Puget Sound Chapter and Regional Levels, as well as a 2006 ASHRAE Technology Award, New Public Assembly Category, Honorable Mention – Society Level.
FIRM PROFILE

With a fresh take on what makes spaces desirable, Sparling's design approach sees to it that environments have more than just a pretty face. For our clients, that means the transparent flow of light, sound, energy and information to sharply improve the experience of users.

"Work Together, Stand Apart"

With 130 professionals and a track record 66 years strong, Sparling is a leader in innovative, integrated electrical engineering, technology, audiovisual and security consulting and design, acoustical design and Candela lighting design for clients across the nation. We provide bright minds, design excellence and market leadership to fuel smart decisions in a wide variety of markets, from entertainment to corporate office, healthcare to education. Delivering future forward solutions on the pulse of everyday demands is our promise.

Energizing Spaces

Nearly seven decades after the firm first opened its doors, Sparling’s dedication to electrical engineering excellence is abundantly clear. We work in highly sensitive environments with exacting standards. Our goal is to provide cost effective, integrated systems design to each and every facility. Our expertise includes: building power systems, sustainable energy solutions, power quality/ reliability analysis, standby and emergency power, uninterruptible power systems, life safety systems, fire alarm systems, cogeneration & distributed generation, data center design/ analysis and service provider coordination.

Technology for the Future

Sparling shows its clients how the best in new technology, particularly enterprise technology, wireless systems, advanced audio/ video systems and robust security design can be leveraged to improve staff/ user satisfaction and bring peace of mind. By combining the best minds in the business with the most advanced design and analysis tools available, we've made your satisfaction our highest priority. We bring a perspective informed by assembling real-world solutions that meet your project requirements.

Acoustically Sound

Sparling offers unique services in architectural acoustics, mechanical system noise and vibration control, environmental noise and vibration and electronic sound system design. Our acoustical staff delivers collaborative design solutions that make environments enjoyable, exciting and simply irresistible.

Lighting the Way with Candela

Candela, our lighting design and consulting division, offers fresh innovative lighting systems responsive to changing environments. Our designers are skilled at working within energy code guidelines, while balancing maintenance and replacement costs with performance.
SELECTED DESIGN EXPERIENCE

UNIVERSITY OF WASHINGTON • Seattle, WA
- Foster School of Business, Phase I, PACCAR Hall—LEED Gold Certified
- Foster School of Business, Phase II, Balmer Hall
- Electrical Engineering Building
- William H. Foege Building (Genome Sciences/Bioengineering Building Complex)
- Hec Edmundson Pavilion Renovation
- Jones Playhouse Theatre Renovation—LEED Gold Certified
- Paul G. Allen Center for Computer Science and Engineering
- William H. Gates Hall School of Law

UNIVERSITY OF WASHINGTON / CASCADIA COMMUNITY COLLEGE • Bothell, WA
- Center for Global Learning for the Arts
- Co-Located Campus
- Classroom Noise

UNIVERSITY OF WASHINGTON MEDICAL CENTER • Seattle, WA
- Montlake Tower
- Surgery Pavilion
- UW/UWM C/UWHSC McCulloh Loop Survey

BELLEVUE COLLEGE • Bellevue, WA
- Building D Renovation
- Science and Technology Building
- Student Union Building

THE EVERGREEN STATE COLLEGE • Olympia, WA
- Daniel Evans Library Renovation
- Master Plan
- Seminar II Building—LEED Gold Certified

PENINSULA COLLEGE—MAIER HALL—LEED GOLD CERTIFIED • Port Angeles, WA

TACOMA COMMUNITY COLLEGE • Tacoma, WA
- Building 7—Library Resources Center Renovation
- Pamela Transue Center for Science & Engineering

HIGHLINE COMMUNITY COLLEGE • Des Moines, WA
- HCC/Central Washington University—Higher Education Center
- Campus Childcare Facility
- Student Union Center

VETERANS ADMINISTRATION—MENTAL HEALTH BUILDING • Seattle, WA

HARBORVIEW MEDICAL CENTER—BOND PROJECT • Seattle, WA

CENTRAL WASHINGTON HOSPITAL—EXPANSION • Wenatchee, WA

WASHINGTON STATE CAPITOL—EAST CAMPUS PLAZA REPAIRS • Olympia, WA
Greg L. Livengood, PE  
Principal  
Role: Electrical Engineering

Greg Livengood has more than 25 years of experience in the design of power, lighting, emergency, communication, fire alarm and security systems for higher education, healthcare, military and transportation projects. His knowledge of electrical design for complex facilities, ability to work with multiple stakeholders, skill at coordination of electrical requirements and implementation of innovative design solutions allows projects to be designed to meet or exceed client expectations.

Selected Experience

UNIVERSITY OF WASHINGTON/ CASCADIA COMMUNITY COLLEGE · Bothell, WA
- Center for Global Learning for the Arts
- Co-Located Campus*
- HVAC and Energy Upgrades*
- Motor Protection Study
- Retro-Commissioning of Access Control/Intrusion Detection System*
- South Access

UNIVERSITY OF WASHINGTON MEDICAL CENTER · Seattle, WA
- Expansion
- Montlake Tower
- Pacific Tower HVAC Upgrade
- Radiology Reception Renovation

UNIVERSITY OF WASHINGTON · Seattle, WA*
- Emergency Power Expansion Phase II Design and Construction Administration
- Meany Hall Fire Alarm
- Meany Hall Theater Lighting

UNIVERSITY OF WASHINGTON HEALTH SCIENCE CENTER · Seattle, WA
- AA010 Health Sciences Renovation
- Suite B503 Conversion

THE EVERGREEN STATE COLLEGE · Olympia, WA*
- Library and Communication Building Tenant Improvements
- Medium Voltage Service Upgrades
- College Recreation Center Fire Alarm Upgrades

CENTRAL WASHINGTON UNIVERSITY · Ellensburg, WA*
- Computer Center Power Upgrades
- Music Building Design Quality Control Peer Review
- Substation 1A Replacement
- Combined Heat/Generator Plant

* Denotes experience prior to joining Sparling.
Engineering Economics, Inc. (EEI)

Building Optimization

Firm Overview

EEI, founded in 1984, is a facility consulting firm, which specializes in building commissioning, Leadership in Energy and Environmental Design (LEED®), facility assessment and mechanical/electrical/plumbing consulting services. These services are customized to our clients’ specific needs with a focus on quality assurance and sustainability.

EEI employs 73 highly trained and experienced employees who are committed to excellence.

EEI has provided its clients with commissioning and retro-commissioning services since 1991 and has commissioned more than 170 million square feet of space in new and existing buildings over this 21-year period. The firm routinely provides commissioning services for public facilities, municipal and governmental projects, universities, museums, healthcare, laboratories and correctional facilities.

Services:

- Commissioning
- Retro-Commissioning
- LEED Commissioning
- Facility Assessment Services

Points of Interest

- Over 80% of EEI’s revenue is derived from commissioning services
- 505 LEED projects completed to date
- Founding member of the Building Commissioning Association (BCA)
- EEI technical employees average 21 years industry experience
- EEI is an approved GSA contractor for commissioning, retro-commissioning, engineering, building inspection and facility support services

Firm Staffing

- 23 registered Professional Engineers (PEs)
- 30 LEED Accredited Professionals (LEED APs)
- 14 certified commissioning professionals certified through the Building Commissioning Association (BCA); Association of Energy Engineers (AEE); AABC Commissioning Group; ASHRAE; the National Environmental Balancing Group (NEBB); and the University of Wisconsin
- 4 Certified Energy Managers (CEM) certi-
**Commissioning**

Commissioning is for new buildings, additions and major renovations. Commissioning is a systematic process of making buildings work and is based on a quality assurance program that starts with the creation of the project design criteria and continues through and beyond construction of the engineered systems.

Studies find that new building commissioning typically reduces energy usage by 13%, pays for itself in 4.2 years (excluding non-energy savings) and generates a 23% cash-on-cash return on investment.

Commissioning a building when it is new allows the owner to know it is functioning as designed. According to Amanda Potter, Director of the large commercial sector at Portland Energy Conservation, commissioning a building can save between 5 and 15 percent of energy costs in a typical commercial building. That savings increases when applied to more complex buildings such as hospitals, research laboratories, manufacturing facilities, etc.

**Commissioning Process Advantages**

- Improves indoor air quality
- Reduces the risk of “sick” building syndrome
- Decreases occupant complaints & enhances productivity
- Reduces maintenance/troubleshooting issues
- Ensures well-trained facility personnel
- Provides benchmarks for future performance evaluations
- Reduces life cycle cost of the facility

**Retro-Commissioning**

Retro-commissioning is a systematic investigation process for optimizing building performance by identifying and implementing relatively low-cost operational and maintenance improvements. The overall impact can be tremendous. The American Council for Energy Efficient Economy identified retro-commissioning as one of the top energy efficiency opportunities, of 38 new technologies and strategies evaluated from energy efficiency programs implemented throughout the 1990’s.

Retro-Commissioning services provided for approximately 12 Million SF of space on 20 VA hospital campuses throughout the country. As per the Government’s expectation, EEI’s services will achieve a minimum of 10-15% energy savings at each facility.

*Nadel, S. 2002 “Screening Market Transformation Opportunities: Lessons from the Last Decade, Promising Targets for the Next Decade.”*
Everyone benefits from retro-commissioning. For owners, retro-commissioning reduces building operating costs, which can lead to an increase in net operating income. Building managers receive fewer occupant complaints and improved ability to manage systems. Building operations and maintenance personnel receive system training and improved documentation, and building occupants are generally more comfortable and therefore more productive. With the increased application of Energy Star as a building performance metric, improved energy performance translates to a higher score and improved marketability for leased space.

A recent study of retro-commissioning revealed a wide variety of problems—those related to the overall HVAC system were the most common type.

Retro-commissioning provided both energy and non-energy benefits—the most common of these, noted in one-third of the buildings surveyed, was the extension of equipment life**:

EEI’s LEED experience is an asset to the overall integrated building design process. Our commissioning services for LEED projects focus on achieving proper facility operation at maximum energy efficiency, in addition to full compliance with LEED commissioning requirements.

EEI has performed LEED commissioning services (Certified, Silver, Gold or Platinum levels) in 505 buildings throughout the country.

**http://www.energystar.gov/ia/business/EPABUM_CH5_RetroComm.pdf

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Green buildings have a less negative environmental impact, boast lower energy consumption and offer healthier indoor environments than “standard” buildings.

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**Langdon, D. 2007 “Cost of Green Revisited: Reexamining the Feasibility and Cost Impact of Sustainable Design in Light of Increased Market Adoption”
Facility Assessment Services

Overlake Hospital Medical Center, Facility Assessment & Building Energy Optimization Program For This 640,000 SF Medical Campus in Bellevue, WA

EEI has 20+ years experience conducting facility assessments. These assessments usually precede additions, renovations and replacements or may provide owners with information to solve specific operating problems.

Each assessment is customized to the owner’s specific goals/objectives but may include the following:

- Predesign/preconstruction planning
- Energy audits & conservation measures
- Facility engineering management improvements
- Troubleshooting/performance problem resolution
- Indoor air quality investigations, improvements and problem solving
- Integrated life safety performance
- System trending and seasonal performance evaluations

Arizona
12835 West Cabrillo Court
Sun City, AZ 85375
310.568.0807

New Mexico
11930 Menaul NE, #224C
Albuquerque, New Mexico 87112
505.830.6069

Arizona
120 S. Houghton Rd Suite 138-255
Tucson, AZ 85748
520.780.6263

North Carolina
2501 Blue Ridge Road, Suite 250
Raleigh, NC 27607
919.608.7547

Northern California
152 Oakmont Way
Los Gatos, CA 95032
408.438.0355

Ohio
5195 Hampsted Village Ctr. Way, PMB 220
New Albany, Ohio 43054
740.501.7651

Southern California
5721 W. Slauson Avenue, Suite 160
Culver City, CA 90230
310.568.0807

Oregon
12042 SE Sunnyside Road, Suite 365
Clackamas, OR 97015
503.545.8096

Colorado
780 Simms Street, Suite 210
Golden, CO 80401
303.239.8700

Texas
85 NE Loop 410, Suite 300
San Antonio, TX 78216
210.496.3100

Kansas/Missouri
8700 Monrovia, Suite 310
Lenexa, KS 66215
913.707.4422

Virginia
5115 Bernard Drive, Suite 205
Roanoke, VA 24018
540.344.5200

Washington
509 North Sullivan Road, Suite C
Spokane Valley, WA 99037
800.606.8008

Washington
1201 Western Avenue, Suite 325
Seattle, WA 98101
206.622.1001
Jeffrey D. Nichols, PE, LEED AP, CPMP, CEM – Principal

EDUCATION
B.S., Architectural Engineering, Environmental Systems, University of Colorado, 1980

PROFESSIONAL REGISTRATION
Registered Professional Engineer in Alaska, California, Oregon and Washington

EXPERIENCE
Mr. Nichols is the managing principal of EEI’s Seattle office and project manager for special projects. Most projects personally completed by Mr. Nichols involve owner’s representative services, assisting with design criteria, M/E/P construction management and final commissioning of the mechanical and electrical systems. His technical expertise is focused on facilities engineering, with special emphasis on systems documentation and systems analysis, improving performance and efficiency of HVAC systems. Typical analysis includes connected loads and demand profiles, physical plant capacities and performance in relation to the demands, age, life cycle costing and conversion potential to more efficient modes of operation.

REPRESENTATIVE PROJECTS

- **Edmonds School District**, Edmonds, WA: Principal-in-Charge of an investment grade audit and Cx for 15 K-12 HVAC and lighting projects for OSPI Jobs Now Energy Grant. As part of audit services, Mr. Nichols provided coordination with local utilities for rebates and review of mechanical and electrical calculations and M&V plan. The effort resulted in a grant award for district.

- **Overlake Hospital Medical Center**, Bellevue, WA: Project Manager of an energy audit and assessment for this 640,000 SF medical campus as part of PSE’s Building Energy Optimization Program. EEI’s initial scoping process included a review of campus building energy use, utility consumption and an evaluation of current operations and proposed changes to the facility. Based on discussions with the operations staff and following a tour of the campus, EEI prepared a plan outlining the process to investigate energy efficient improvement opportunities, including HVAC, lighting, water and sewer systems.

- **University of Washington, 4545 Building**, Seattle, WA: Project Manager for an energy evaluation and design support for energy retrofit. This ESCO project included a new heat recovery chiller, replacement of a cooling tower, replacement of electric heat with a hot water energy recovery system, new building controls and replacement of computer room air conditioning units.

- **City of Bellevue, City Hall Expansion**, Bellevue, WA: Project Manager for peer review services, an energy evaluation and full-service commissioning of this 377,000 SF retrofit and expansion project. The mechanical, electrical, IT and telecom systems underwent substantial changes, including chiller and air handler replacements and upgrade or replacement of the building automation and fire alarm systems.

- **Kent City Hall**, Kent, WA: Project Manager for an energy audit and HVAC Retrofit including heating and cooling plant with control upgrades through the PSE Grant Program. EEI investigated the air flow and ductwork capacity, investigated equipment options and provided mechanical equipment and ductwork schematic layouts. EEI also provided heating and cooling load calculations and automatic temperature control sequence description, and reviewed submittals and provided a punch list site visit.

- **City of Olympia, Old City Hall, Centennial Library and Olympic Center**, Olympia, WA: Energy retrofit evaluation and design for this ESCO project, which involved the replacement and upgrade of the HVAC systems and building controls.

- **Snoqualmie Valley School District**, North Bend, WA: Project Manager for PSE Energy Audits and Design for 3 schools, modernization of HVAC, replace boilers, geothermal heat pumps, new building control systems, PSE Grant Program.

- **Centralia School District**, Centralia, WA: Provided energy conservation boiler replacement design for 3 schools.

- **Group Health Cooperative**, Bellevue, WA: Provided PSE energy optimization investigation of the CBTU program which identified 12 measures to reduce energy conservation by tuning up building controls.

- **United States Coast Guard, Shore Ops**, Seattle, WA: Provided retro-commissioning of 4 story emergency operations and vessel traffic center. Scope of work included control upgrades, and optimization of DDC systems.


SPECIAL QUALIFICATIONS


PROFESSIONAL AFFILIATIONS

- American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE), Building Commissioning Association (BCA), Association of Energy Engineers (AEE)
Byron D. Holmstead, PE, ACP, LEED AP, Project Engineer

**EDUCATION**

B.S., Mechanical Engineering - University of Utah, 1991

**PROFESSIONAL REGISTRATION**

Registered Professional Engineer in Utah and Washington

**EXPERIENCE**

Mr. Holmstead has over 20 years of design and project management experience related to mechanical systems for healthcare, public and educational facilities. Mr. Holmstead has expertise in HVAC/plumbing engineering and design, life cycle cost analysis, and building systems commissioning. He has served as project manager for projects in a number of sectors including correctional, medical, municipal and recreational, with particular emphasis on a broad range of projects in the educational sector. His coordination with the project team results in seamless and efficient HVAC systems including expedient resolutions to conflicts. His commissioning experience includes specification review, pre-functional test documentation, functional test writing, O&M review, total building systems and integrated systems, systems troubleshooting, control systems and conducting commissioning meetings with members of the design and construction team.

Mr. Holmstead has performed building energy simulations using Trane Trace and eQuest building modeling programs.

**REPRESENTATIVE PROJECTS**

- **City of Kent Energy Services Upgrades**, Kent, WA: Provided design services to implement energy conserving measures. The designs included converting a chilled water loop into a two pipe heating cooling system by adding boilers to the existing chilled water loops. The City Hall design included the replacement of the air cooled chillers with a single water cooled chiller and a tower.
- **Grand Forks, Travis and Scott Air Force Bases**, Emerado, ND; St. Clair County, IL; and Fairfield, CA: Energy Savings Calculation Specialist for campus-wide condition assessment and retro-commissioning services for three AFB installations totaling approximately 4 Million SF.
- **North Seattle Community College**, Seattle, WA: Performed the Cx duties including functional testing as the commissioning authority of the HVAC, domestic heating water systems and lighting control systems of various additions and remodels. The building HVAC system consisted of a central VAV AHU with fan terminal electric terminal units for the classrooms and office spaces. Retro commissioned existing air handling units.
- **Snoqualmie Valley School District – Chief Kanim Middle School**, Fall City, WA: Project Manager for this 80,000 SF middle school. Services provided were for the boiler replacement, VFD upgrade on fans and library and admin cooling system, new DDC.
- **Snoqualmie Valley School District – Mt. Si High School**, Snoqualmie, WA: ECMs include VFD applications to constant speed fans and pumps, direct drive fan coil units with VFDs to replace water source heat pumps, and high efficiency boilers and chillers to replace existing boilers and cooling towers. Utilize heat recovery chillers with well water geo-exchange as a central hot water heater system in lieu of gas-fired boilers. Replace existing DHW storage tanks with high efficiency hot water heaters. Other control strategies to save energy based on occupancy and scheduled building use.
- **Internap Data Center, Fischer Plaza – Seattle WA**, Energy Analysis Engineer, Perform energy savings calculations to simulate converting computer room units from water side economizers to airside economizers.
- **Mount Vernon High School** Mt Vernon, WA: Performed the functional testing as the commissioning authority (CA) of the HVAC and plumbing systems of a 200,000 sf classroom, administration, library and kitchen/commons building The HVAC system consisted of constant volume heating and ventilation system with terminal hot water reheat coils. Instigated and assisted with the energy incentive with the local utility to incorporated VFDs on the AHUs to conserve energy.

**SPECIAL QUALIFICATIONS**

- LEED Accredited Professional
- Building Commissioning Association (BCA), Associate Commissioning Professional (ACP)
- Certified by the State of WA to perform Building Condition Assessments for the Asset Preservation Program (APP).

**PROFESSIONAL AFFILIATIONS**

- American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE)
- American Society of Plumbing Engineers (ASPE)
- Building Commissioning Association (BCA)
Our mission is to deliver innovative, sustainable, quality engineered solutions and services.

BCE Engineers, Inc. is a mechanical, electrical, systems, energy and fire protection engineering design firm in the Pacific Northwest. With a staff of 54, including 14 licensed professional engineers, including FPE and RCDD, we can handle projects of considerable size delivering innovative, sustainable solutions to your engineering needs.

**Electrical Engineering**
- Power Distribution
- Lighting
- Lighting Photometric Analysis
- Emergency Power Generation
- Power Quality Analysis
- Photovoltaic Systems

**Mechanical Engineering**
- HVAC
- Plumbing
- Life Cycle Cost Analysis
- Energy Management & Control Systems
- Temperature Controls

**Systems Engineering (low voltage)**
- CCTV / Digital Video Recording
- Fire Alarm Systems
- Mass Notification Systems
- Central Command Centers
- Communications Infrastructure
- VoIP Systems
- Intercom / Public Address
- Personal Safety Systems

**Fire Protection Engineering**
- Building Life Safety and Code Analysis
- Fire Suppression
- Flow Testing

**Energy**
- System Analysis
- Building Automation
- Energy Modeling Analysis
- Distributed Energy
- Solar Heating
- Alternate Funding
- Retro-Commissioning
Mechanical Engineer

Name: Scott Zimbelman, PE
Title: Principal / Mechanical Engineer
BCE Experience: 19 years
Professional Experience: 19 years
Education: 1994 / BS / Mechanical Engineering
College: Washington State University

Registration

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Qualifications & Expertise

Scott Zimbelman has been involved with the design and management of numerous projects to include; low income housing, commercial, educational, institutional facilities and military projects for the past 19 years. Scott specializes in the design of efficient, cost effective HVAC and Plumbing systems of all types including, but not limited to ground source heat pumps, condensing boilers; central plant hydronic systems with boilers and chillers; commercial kitchen systems; and solar assisted ventilation and domestic water heating systems that use the latest technologies. Scott also has extensive experience as a field engineer during the construction phases of his projects. Scott has proven his ability to work within the framework of each project and create relationships that help build teamwork and provide a foundation for his projects to be completed on time with minimal changes through the construction process. Scott is licensed in several states and is also a member of the National Council of Examiners for Engineering and Survey.

Project Experience

Annie Wright Private School
Woodland SD – Woodland High School
Coupeville SD – Coupeville High School
Lake Washington SD – Lake Washington High School
Lake Washington SD – Redmond Junior High School
Bethel SD – Bethel Junior High School
Bethel SD – Thompson Elementary School
North Beach SD – Ocean Shores Elementary School
North Beach SD – Pacific Beach Elementary School
Puyallup SD – Stewart Elementary
Tacoma SD – Jefferson Elementary
Electrical Engineer

Name: Ben Hedin, PE
Title: Principal / Electrical Engineer
BCE Experience: 12 years
Professional Experience: 12 years
Education: 2002 / BS / Electrical Engineering
College: University of Washington

Registrations

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Qualifications & Expertise

Since joining BCE Engineers, Inc., Ben has been a valued asset to our electrical engineering department. He has provided electrical design for hundreds of new and renovation projects including educational, military, commercial, health care and industrial facilities. Ben is well rounded in all aspects of electrical design, and he is accomplished in providing construction administration services on projects of varying size and complexity. He approaches each project with sustainability in mind, including reducing the quantity of materials utilized in the design and the amount of energy that the design will consume.

Project Experience

Bethel SD – Bethel Middle & High School- Various Upgrades
Woodland SD – Woodland High School
Coupeville SD – Coupeville High School
Oak Harbor SD – Oak Harbor High School Grandstand
Bethel SD – Learning Center
Bethel SD – Clover Creek Elementary School
Bethel SD – Nelson Elementary School
Bethel SD- Frederickson Elementary School
Bethel SD – Spanaway Elementary School
Lakewood SD – Lakewood High School- Various Upgrades
Arlington SD- Arlington High School- Performing Arts Center
Puyallup SD – Steward Elementary School
Sumner SD – Cascadia Elementary School
Mukilteo SD- Sno-Isle Technical Skills Center
Clover Park SD- Carter Lake Elementary School
Clover Park SD- Hillside Elementary School
Mechanical Engineer

Name: Chris Caffee, PE, LEED AP  
Title: Principal / Mechanical Engineer 
Years Experience in Firm: 17  
Years Experience in Profession: 20  
Education: 1995 / BS / Mechanical Engineering  
College: California State Polytechnic University Pomona

<table>
<thead>
<tr>
<th>Registration</th>
<th>State</th>
<th>No</th>
<th>First Year</th>
<th>Current Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mechanical Engineering</td>
<td>WA</td>
<td>36534</td>
<td>2000</td>
<td>2014</td>
</tr>
</tbody>
</table>

Qualifications & Expertise

Chris Caffee is a Principal and senior mechanical engineer with BCE. His passion is modeling a system, designing it, and then monitoring the performance of his designs for the next few years. Chris is a master of computer modeling programs and Life Cycle Cost Analysis. He uses the design feedback information to adjust and fine tune computer modeling programs so that they produce accurate results from which important design decisions can be based. He has designed and managed many of our larger educational, military, commercial and institutional projects since 1996. Chris specializes in the design of HVAC and centralized hot and chilled water systems. He has received praise from his design industry peers for his sustainable designs. Chris is a LEED® Accredited Professional.

Project Experience

Bethel SD – Bethel High School  
Bethel SD – Clover Creek Elementary School  
Bethel SD – Bethel Learning Center  
Bethel SD – Spanaway Lake Elementary, Junior High & High School  
Clover Park SD – Carter Lake Elementary School  
Clover Park SD – Hillside Elementary School  
Lake Washington SD – Benjamin Rush Elementary School  
Lake Washington SD – Helen Keller Elementary School  
Lake Washington SD – Redmond High School Addition  
North Thurston SD – South Bay Elementary School  
Riverview SD – Cherry Valley Elementary School  
Riverview SD – Tolt Middle School  
Sumner SD – Bonney Lake High School  
Yelm SD – Lackamas Elementary School
ARCHITECT - ENGINEER QUALIFICATIONS

PART I - CONTRACT-SPECIFIC QUALIFICATIONS

A. CONTRACT INFORMATION

1. TITLE AND LOCATION (City and State)
Notice to Energy Services Companies - ESPC Pre-Qualification Olympia, Washington

2. PUBLIC NOTICE DATE
01/23/2013

3. SOLICITATION OR PROJECT NUMBER
2013-133

B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE
Mike Dean

5. NAME OF FIRM
Integrity Energy Services

6. TELEPHONE NUMBER
(206) 228-7229

7. FAX NUMBER
(425) 677-8522

8. E-MAIL ADDRESS
mikedean@integrity-energy.com

C. PROPOSED TEAM

(Complete this section for the prime contractor and all key subcontractors.)

<table>
<thead>
<tr>
<th>(Check)</th>
<th>9. FIRM NAME</th>
<th>10. ADDRESS</th>
<th>11. ROLE IN THIS CONTRACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>Integrity Energy Services</td>
<td>4119 257th Ct. SE Issaquah, WA 98029</td>
<td>Prime ESCO contractor</td>
</tr>
<tr>
<td>b.</td>
<td>CDI</td>
<td>19203 36th Ave. W STE 200 Lynnwood, WA 98036</td>
<td>Sub-Consultant Mechanical</td>
</tr>
<tr>
<td>c.</td>
<td>Sparling</td>
<td>4100 184th St. SW #400 Lynnwood, WA 98036</td>
<td>Sub-Consultant Electrical</td>
</tr>
<tr>
<td>d.</td>
<td>EBI</td>
<td>1201 Western Ave. Suite 325 Seattle, WA 98101</td>
<td>Sub-Consultant Mechanical</td>
</tr>
<tr>
<td>e.</td>
<td>BCE</td>
<td>6021 12th St. E Suite 200 Fife, WA 98424</td>
<td>Sub-Consultant Mechanical &amp; Electrical</td>
</tr>
</tbody>
</table>

D. ORGANIZATIONAL CHART OF PROPOSED TEAM

Authorized for Local Reproduction

STANDARD FORM 330 (6/2004) PAGE 1
**Audit Sub-Consultants** can be utilized for unique technology applications.

**3rd Party Commissioning** is optional at an owners request.

Sub-Consultants are selected for their relative experience (site and/or technology)

Sub-Contractors are competitively bid.
### E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

<table>
<thead>
<tr>
<th>12. NAME</th>
<th>Mike Dean</th>
</tr>
</thead>
<tbody>
<tr>
<td>13. ROLE IN THIS CONTRACT</td>
<td>Company President, contracts, construction management</td>
</tr>
<tr>
<td>14. YEARS EXPERIENCE</td>
<td>a. TOTAL: 25 b. WITH CURRENT FIRM: 10</td>
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</tbody>
</table>

**15. FIRM NAME AND LOCATION (City and State)**

Integrity Energy Services, Issaquah, WA

**16. EDUCATION (Degree and Specialization)**

Bachelor of Science-Mechanical Engineering

**17. CURRENT PROFESSIONAL REGISTRATION (State and Discipline)**

Steam Engineer - Grade 3

**18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)**

- [ ] Check if project performed with current firm

### 19. RELEVANT PROJECTS

<table>
<thead>
<tr>
<th>(1) TITLE AND LOCATION (City and State)</th>
<th>Tacoma Rhodes HVAC</th>
<th>Tacoma, WA</th>
<th>(2) YEAR COMPLETED</th>
<th>Professional Services</th>
<th>Construction (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE</td>
<td>Demolish 6th and 7th floor mechanical and electrical systems. Install a new high efficiency gas-fired rooftop air handling unit with a new duct distribution system and DDC controls. Install new T-8 light fixtures, ceiling grid and tiles. Install lighting occupancy control sensors. Project cost: $622,000</td>
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<thead>
<tr>
<th>(1) TITLE AND LOCATION (City and State)</th>
<th>Capital Campus Central Plant Chilled Water</th>
<th>Olympia, WA</th>
<th>(2) YEAR COMPLETED</th>
<th>Professional Services</th>
<th>Construction (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE</td>
<td>Provide a 16&quot; V-Cone Chilled water meter for the Power House chilled water main. Provide routers and current transducers to monitor select buildings electrical power consumption. Project cost: $132,000.</td>
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<thead>
<tr>
<th>(1) TITLE AND LOCATION (City and State)</th>
<th>O'Brien Building Controls Upgrade</th>
<th>Olympia, WA</th>
<th>(2) YEAR COMPLETED</th>
<th>Professional Services</th>
<th>Construction (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE</td>
<td>Replace 75 existing VAV box controls with new state of the art DDC controls. Overlay the VAV controller program with energy optimization strategies. Project cost: $76,000.</td>
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<tr>
<th>(1) TITLE AND LOCATION (City and State)</th>
<th>Archives Building Lighting Upgrade</th>
<th>Olympia, WA</th>
<th>(2) YEAR COMPLETED</th>
<th>Professional Services</th>
<th>Construction (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE</td>
<td>Replaced T-12 lamps and magnetic ballasts with T-8 lamps and electronic ballasts in the Archive and vault areas and the 1st floor office areas. Installed occupancy sensors at each end of the archives stack rows to turn off lights the specific row of lights when it is not occupied. Project cost: $103,000.</td>
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<tr>
<th>(1) TITLE AND LOCATION (City and State)</th>
<th>Office Building II AHU VFD Upgrade</th>
<th>Olympia, WA</th>
<th>(2) YEAR COMPLETED</th>
<th>Professional Services</th>
<th>Construction (if applicable)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE</td>
<td>Upgrade the large failing main air handling VFD's with new state of the art VFD's. Reprogram ramp times and fan motor staging. Project cost: $70,000.</td>
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</table>
### E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

Complete one Section E for each key person.

#### 12. NAME

**Brian Hanson**

#### 13. ROLE IN THIS CONTRACT

VP Engineering

#### 14. YEARS EXPERIENCE

<table>
<thead>
<tr>
<th>a. TOTAL</th>
<th>b. WITH CURRENT FIRM</th>
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<tbody>
<tr>
<td>22</td>
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#### 15. FIRM NAME AND LOCATION (City and State)

**Integrity Energy Services**

Issaquah, WA

#### 16. EDUCATION (DEGREE AND SPECIALIZATION)

**Bachelor of Science - Mechanical Engineering**

Mechanical P.E. - Washington

#### 17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

**Association of Energy Engineers**

#### 18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

**E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**

<table>
<thead>
<tr>
<th>(1) TITLE AND LOCATION (City and State)</th>
<th>(2) YEAR COMPLETED</th>
<th>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Harbor View Medical Surgery Supply</strong></td>
<td>2011</td>
<td>Installation of new fan walls, with associated VFDs and DDC, to replace existing supply and exhaust fans serving numerous Operating Rooms. For this $2M project, Brian managed all aspects of scope development, schematic design and cost estimating.</td>
</tr>
<tr>
<td><strong>Fan Wall</strong></td>
<td>2012</td>
<td></td>
</tr>
</tbody>
</table>

| **King County Elections Building**      | 2010               | Installation of high efficiency gas fired rooftop units, DDC controls, replacement of the roof with increased insulation and the installation of new light fixtures at the King County Elections building. Brian served as Project Director on this $3.7M project. |
| **Mechanical & Controls Upgrade**       | 2011               |                                                                                                                                 |

| **UW Tacoma Energy Efficiency**         | 2011               | Installation of a campus wide power factor correction unit, replacement of four air cooled chillers and five aging packaged rooftop units with high efficiency equipment. Brian managed the scope development through delivery of the ESP for this $1.7M job. |
| **Tacoma, WA**                          | 2012               |                                                                                                                                 |

| **University of Washington Pressure**   | 2008               | Replacement of existing chilled water control valves throughout the UW campus with pressure independent control valves. Brian was the Project Director overseeing the project development phase of this $4M job. |
| **Independent Control Valves**          | 2009               |                                                                                                                                 |

| **King County Courthouse & Jail Steam**| 2009               | Complex project involved the installation of two high efficiency boiler plants to serve the King County Correctional Facility and Courthouse building. New penthouse were constructed to house the plants. Brian was the Project Director for this $5.5M job. |
| **Seattle, WA**                         | 2010               |                                                                                                                                 |
### E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

(Complete one Section E for each key person.)

<table>
<thead>
<tr>
<th>NAME</th>
<th>ROLE IN THIS CONTRACT</th>
<th>YEARS EXPERIENCE</th>
<th>FIRM NAME AND LOCATION (City and State)</th>
<th>EDUCATION</th>
<th>OTHER PROFESSIONAL QUALIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark Foster</td>
<td>VP Business Development</td>
<td>13</td>
<td>Integrity Energy Services Issaquah, WA</td>
<td>Bachelor of Science-Mechanical Engineering</td>
<td>LEED AP, WAMOA, CEFPI, Certified Mechanical Project Manager (MCA)</td>
</tr>
</tbody>
</table>

#### 14. YEARS EXPERIENCE

<table>
<thead>
<tr>
<th>a. TOTAL</th>
<th>b. WITH CURRENT FIRM</th>
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</thead>
<tbody>
<tr>
<td>13</td>
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</table>

#### 15. FIRM NAME AND LOCATION (City and State)

Integrity Energy Services Issaquah, WA

#### 16. EDUCATION

Bachelor of Science-Mechanical Engineering

#### 17. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)

- LEED AP
- WAMOA
- CEFPI
- Certified Mechanical Project Manager (MCA)

#### 18. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

- LEED AP
- WAMOA
- CEFPI
- Certified Mechanical Project Manager (MCA)

#### 19. RELEVANT PROJECTS

<table>
<thead>
<tr>
<th>(1) TITLE AND LOCATION (City and State)</th>
<th>(2) YEAR COMPLETED</th>
<th>(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hoquiam SD Middle School Envelope</td>
<td>Hoquiam, WA</td>
<td>Replace damaged T-111 siding, windows and doors. Modernize bathrooms to improve access and meet ADA compliance. Replace roof of gym and music rooms. Replace rooftop ventilation units, classroom VAV units and DDC system. Mark served as Account Executive, overseeing the development of this $3.5M project.</td>
</tr>
<tr>
<td>The Evergreen State College ESPC</td>
<td>Olympia, WA</td>
<td>Upgrade of lighting in college gym and pool. Installed heat recovery run around system in Lab II. Library control system was upgraded and optimized. Mark was Account Exec on this $846,000 job.</td>
</tr>
<tr>
<td>Mukilteo School District ESPC</td>
<td>Mukilteo, WA</td>
<td>Boiler replacements at Discovery ES and Olympic View MS. Replace terminal unit valves at Challenger ES. Replace heating water system fittings at Explorer MS, Columbia ES and Horizon ES. Upgrade DDC system at Explorer MS, Columbia ES, Horizon ES and Challenger ES. Mark was the Account Executive for this $2.7M project.</td>
</tr>
<tr>
<td>North Seattle Community College</td>
<td>Seattle, WA</td>
<td>Convert air distribution system to VAV in library lecture halls. Campus water conservation. Controls and HVAC optimization in the College Center and Wellness Center. Mark served as Account Executive for this $623,000 job.</td>
</tr>
<tr>
<td>North Thurston Public Schools ESPC</td>
<td>Lacey, WA</td>
<td>Replace boilers in core building and serving C-D pod. Implement demand controlled ventilation in gym and auditorium. Lighting upgrades and retro-commissioning. Mark was Account Executive responsible for developing the client relationship and managing the scope development for this $1.1M project.</td>
</tr>
</tbody>
</table>

**Mark Foster**

**Integrity Energy Services Issaquah, WA**

**Bachelor of Science-Mechanical Engineering**

**LEED AP, WAMOA, CEFPI, Certified Mechanical Project Manager (MCA)**
This $2M project consisted of installation of new fan walls, with associated VFDs and DDC, to replace existing supply and exhaust fans serving numerous Operating Rooms. The project is relevant to this contract in its display of our ability to implement innovative energy efficiency measures in occupied, extremely critical environments.
F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM’S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

21. TITLE AND LOCATION (City and State)
King County Elections Building Renton, WA

22. YEAR COMPLETED
2010 2011

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)
Installation of high efficiency gas fired rooftop units, DDC controls, replacement of the roof with increased insulation and the installation of new light fixtures at the King County Elections building. This $3.7M project is relevant to this contract showcasing our ability to implement a complex, multidiscipline infrastructure upgrade in an occupied building.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

<table>
<thead>
<tr>
<th>(1) FIRM NAME</th>
<th>(2) FIRM LOCATION (City and State)</th>
<th>(3) ROLE</th>
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<tbody>
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</tbody>
</table>

STANDARD FORM 330 (6/2004) PAGE 3
F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM’S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

<table>
<thead>
<tr>
<th>20. EXAMPLE PROJECT KEY NUMBER</th>
<th>21. TITLE AND LOCATION (City and State)</th>
<th>22. YEAR COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>UW Tacoma Energy Efficiency Tacoma, WA</td>
<td>PROFESSIONAL SERVICES 2011 CONSTRUCTION (If applicable) 2012</td>
</tr>
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</table>

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Installation of a campus wide power factor correction unit, replacement of four air cooled chillers and five aging packaged rooftop units with high efficiency equipment. This $1.7M job demonstrates our ability to work with Higher Education clients and secure state energy grant funding.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

<table>
<thead>
<tr>
<th>(1) FIRM NAME</th>
<th>(2) FIRM LOCATION (City and State)</th>
<th>(3) ROLE</th>
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</thead>
<tbody>
<tr>
<td>a.</td>
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<td>b.</td>
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<td>c.</td>
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<td>e.</td>
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<tr>
<td>f.</td>
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</table>
F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM’S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

<table>
<thead>
<tr>
<th>20. EXAMPLE PROJECT KEY NUMBER</th>
<th>21. TITLE AND LOCATION (City and State)</th>
<th>22. YEAR COMPLETED</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>UW Pressure Independent Control Valves Seattle, WA</td>
<td>PROFESSIONAL SERVICES 2008 CONSTRUCTION (If applicable) 2009</td>
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</tbody>
</table>

23. PROJECT OWNER’S INFORMATION

<table>
<thead>
<tr>
<th>a. PROJECT OWNER</th>
<th>b. POINT OF CONTACT NAME</th>
<th>c. POINT OF CONTACT TELEPHONE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Washington</td>
<td>Norm Menter</td>
<td>(206) 221-4269</td>
</tr>
</tbody>
</table>

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

Replacement of existing chilled water control valves throughout the UW campus with pressure independent control valves. This $4M job exhibits our ability to implement innovative efficiency measures and manage a large, campus-wide project.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

<table>
<thead>
<tr>
<th>a. (1) FIRM NAME</th>
<th>(2) FIRM LOCATION (City and State)</th>
<th>(3) ROLE</th>
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<tbody>
<tr>
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<tr>
<td>b. (1) FIRM NAME</td>
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<td>c. (1) FIRM NAME</td>
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<td>d. (1) FIRM NAME</td>
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<td>(3) ROLE</td>
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<td>e. (1) FIRM NAME</td>
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<tr>
<td>f. (1) FIRM NAME</td>
<td>(2) FIRM LOCATION (City and State)</td>
<td>(3) ROLE</td>
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</table>
F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM’S QUALIFICATIONS FOR THIS CONTRACT

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

20. EXAMPLE PROJECT KEY NUMBER

21. TITLE AND LOCATION (City and State)

King County Courthouse & Jail Steam to Hot Water Conversion

Seattle, WA

22. YEAR COMPLETED

2009 2010

PROFESSIONAL SERVICES CONSTRUCTION (If applicable)

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

This $5.5M project involved the installation of two high efficiency boiler plants to serve the King County Correctional Facility and Courthouse building. New penthouse were constructed to house the plants. This project demonstrates our ability to design and build complex heating systems, with supporting GC components in critical, occupied facilities.

23. PROJECT OWNER’S INFORMATION

a. PROJECT OWNER

King County

b. POINT OF CONTACT NAME

Stephen Swinburne

c. POINT OF CONTACT TELEPHONE NUMBER

(206) 296-0624

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

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<tbody>
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<td>(2) FIRM LOCATION (City and State)</td>
<td>(3) ROLE</td>
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<tr>
<td>f.</td>
<td></td>
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</tr>
</tbody>
</table>

STANDARD FORM 330 (6/2004) PAGE 3
F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM’S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

21. TITLE AND LOCATION (City and State)
Hoquiam SD Middle School Envelope & HVAC Upgrades Hoquiam, WA

22. YEAR COMPLETED
2010 2011
PROFESSIONAL SERVICES CONSTRUCTION (If applicable)

23. PROJECT OWNER'S INFORMATION
Hoquiam School District
b. POINT OF CONTACT NAME Mike Parker

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)
This $3.5M project was a major renovation of the middle school. Damaged T-111 siding, windows and doors were replaced. Bathrooms were modernized to improve access and meet ADA compliance. Portions of the roof were replaced above the gym and music rooms. The rooftop ventilation units, classroom VAV units and DDC system were also replaced. This project exhibits our ability to implement a comprehensive modernization project, including extensive envelope improvements, while meeting an aggressive summer construction schedule. Department of Enterprise Services involvement was critical to the success of this project.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

<table>
<thead>
<tr>
<th>(1) FIRM NAME</th>
<th>(2) FIRM LOCATION (City and State)</th>
<th>(3) ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td></td>
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<td>c.</td>
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<td>f.</td>
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</tbody>
</table>
F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM’S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

21. TITLE AND LOCATION (City and State)
The Evergreen State College ESFC
Phase 2
Olympia, WA

22. YEAR COMPLETED
PROFESSIONAL SERVICES
CONSTRUCTION (if applicable)
2010 2012

23. PROJECT OWNER’S INFORMATION

a. PROJECT OWNER
The Evergreen State College

b. POINT OF CONTACT NAME
Rich Davis

c. POINT OF CONTACT TELEPHONE NUMBER
(360) 867-8136

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)
Upgrade of lighting in college gym and pool. Installed heat recovery run around system in Lab II. Library control system was upgraded and optimized. This $846,000 job demonstrates our ability to implement multiple phases of work with a legacy client, provide value in commissioning relatively new systems and uncover additional savings opportunities on a relatively efficient campus.

25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT

- (1) FIRM NAME
- (2) FIRM LOCATION (City and State)
- (3) ROLE

- (1) FIRM NAME
- (2) FIRM LOCATION (City and State)
- (3) ROLE

- (1) FIRM NAME
- (2) FIRM LOCATION (City and State)
- (3) ROLE

- (1) FIRM NAME
- (2) FIRM LOCATION (City and State)
- (3) ROLE

- (1) FIRM NAME
- (2) FIRM LOCATION (City and State)
- (3) ROLE

- (1) FIRM NAME
- (2) FIRM LOCATION (City and State)
- (3) ROLE

- (1) FIRM NAME
- (2) FIRM LOCATION (City and State)
- (3) ROLE
**F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM’S QUALIFICATIONS FOR THIS CONTRACT**

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

<table>
<thead>
<tr>
<th>Example Project</th>
<th>20. EXAMPLE PROJECT KEY NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>a.</strong> Mukilteo School District ESPC Phase 2</td>
<td>8</td>
</tr>
</tbody>
</table>

**Mukilteo School District ESPC**

**Mukilteo, WA**

**22. YEAR COMPLETED**

2011

**21. TITLE AND LOCATION (City and State)**

**Mukilteo School District ESPC**

**Mukilteo, WA**

**24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)**

Boiler replacements at Discovery ES and Olympic View MS. Replace terminal unit valves at Challenger ES. Replace heating water system fittings at Explorer MS, Columbia ES and Horizon ES. Upgrade DDC system at Explorer MS, Columbia ES, Horizon ES and Challenger ES. This $2.7M project is relevant to this contract showcasing our ability to address critical infrastructure needs with operational, as well as energy efficiency impacts.

<table>
<thead>
<tr>
<th>23. PROJECT OWNER'S INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Owner</td>
</tr>
<tr>
<td>Mukilteo School District</td>
</tr>
</tbody>
</table>

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

<table>
<thead>
<tr>
<th>a.</th>
<th>b.</th>
<th>c.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) FIRM NAME</td>
<td>(2) FIRM LOCATION (City and State)</td>
<td>(3) ROLE</td>
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<tr>
<td>(1) FIRM NAME</td>
<td>(2) FIRM LOCATION (City and State)</td>
<td>(3) ROLE</td>
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<td>(3) ROLE</td>
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<td>(2) FIRM LOCATION (City and State)</td>
<td>(3) ROLE</td>
</tr>
<tr>
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<td>(2) FIRM LOCATION (City and State)</td>
<td>(3) ROLE</td>
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</tbody>
</table>
### F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM’S QUALIFICATIONS FOR THIS CONTRACT
(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

<table>
<thead>
<tr>
<th>20. EXAMPLE PROJECT KEY NUMBER</th>
<th>9</th>
</tr>
</thead>
</table>

21. TITLE AND LOCATION (City and State)
North Seattle Community College Seattle, WA

22. YEAR COMPLETED
Professional Services 2011 Construction (If applicable) 2012

23. PROJECT OWNER’S INFORMATION

<table>
<thead>
<tr>
<th>a. PROJECT OWNER</th>
<th>b. POINT OF CONTACT NAME</th>
<th>c. POINT OF CONTACT TELEPHONE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Seattle CC</td>
<td>Orestes Monterecy</td>
<td>(206) 934-4595</td>
</tr>
</tbody>
</table>

24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)

A $623,000 project converted air distribution system to VAV in library lecture halls. Implemented campus water conservation. Controls and HVAC optimization in the College Center and Wellness Center. This is relevant to the current contract by demonstrating our ability to partner with DES to implement multiple phases of ESPC projects with a client agency that had not previously utilized this procurement method.

<table>
<thead>
<tr>
<th>25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
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<tr>
<td>b.</td>
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<td>c.</td>
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<td>d.</td>
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<tr>
<td>e.</td>
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<tr>
<td>f.</td>
</tr>
</tbody>
</table>
**F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM’S QUALIFICATIONS FOR THIS CONTRACT**

(Present as many projects as requested by the agency, or 10 projects, if not specified. Complete one Section F for each project.)

<table>
<thead>
<tr>
<th>EXAMPLE PROJECT KEY NUMBER</th>
<th>10</th>
</tr>
</thead>
</table>

**21. TITLE AND LOCATION (City and State)**

<table>
<thead>
<tr>
<th>North Thurston Public Schools</th>
<th>Lacey, WA</th>
</tr>
</thead>
</table>

**22. YEAR COMPLETED**

<table>
<thead>
<tr>
<th>2011</th>
<th>2012</th>
</tr>
</thead>
</table>

**23. PROJECT OWNER’S INFORMATION**

<table>
<thead>
<tr>
<th>North Thurston Public Schools</th>
<th>Dean Martinolich</th>
</tr>
</thead>
</table>

**24. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (Include scope, size, and cost)**

Boilers in the core building and serving C-D pod were replaced. Implemented demand controlled ventilation in gym and auditorium. Lighting upgrades and retro-commissioning. This $1.1M project shows relevance to this contract exhibiting innovative solutions including a pre-fabricated, stand-alone boiler housing that was more cost effective than in-place replacement.

**25. FIRMS FROM SECTION C INVOLVED WITH THIS PROJECT**

<table>
<thead>
<tr>
<th>(1) FIRM NAME</th>
<th>(2) FIRM LOCATION (City and State)</th>
<th>(3) ROLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
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<tr>
<td>f.</td>
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</tbody>
</table>
### G. Key Personnel Participation in Example Projects

#### 26. Names of Key Personnel (From Section E, Block 12)

<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mike Dean</td>
<td>Project Development Manager</td>
</tr>
<tr>
<td>Brian Hanson</td>
<td>Sr. Project Director</td>
</tr>
<tr>
<td>Mark Foster</td>
<td>Account Executive</td>
</tr>
</tbody>
</table>

#### 27. Role in This Contract (From Section E, Block 13)

<table>
<thead>
<tr>
<th>NO.</th>
<th>Role in This Contract</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tbody>
</table>

#### 28. Example Projects Listed in Section F

(Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)

<table>
<thead>
<tr>
<th>NO.</th>
<th>Title of Example Project (From Section F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Harbor View Medical Surgery Supply Fan Wall</td>
</tr>
<tr>
<td>2</td>
<td>King County Elections Building Mechanical &amp; Controls Upgrade</td>
</tr>
<tr>
<td>3</td>
<td>UW Tacoma Energy Efficiency</td>
</tr>
<tr>
<td>4</td>
<td>University of Washington Pressure Independent Control Valves</td>
</tr>
<tr>
<td>5</td>
<td>King County Courthouse &amp; Jail Steam to Hot Water Conversion</td>
</tr>
<tr>
<td>6</td>
<td>Hoquiam SD Middle School Envelope &amp; HVAC Upgrades</td>
</tr>
<tr>
<td>7</td>
<td>The Evergreen State College ESPC Phase 2</td>
</tr>
<tr>
<td>8</td>
<td>Mukilteo School District ESPC Phase 2</td>
</tr>
<tr>
<td>9</td>
<td>North Seattle Community College Energy Efficiency Upgrades Phase 2</td>
</tr>
<tr>
<td>10</td>
<td>North Thurston Public Schools ESPC Phase 1</td>
</tr>
</tbody>
</table>

#### 29. Example Projects Key

<table>
<thead>
<tr>
<th>NO.</th>
<th>Title of Example Project (From Section F)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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</tr>
<tr>
<td>10</td>
<td>North Thurston Public Schools ESPC Phase 1</td>
</tr>
</tbody>
</table>
H. ADDITIONAL INFORMATION

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

I. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

31. SIGNATURE

32. DATE
02/19/2013

33. NAME AND TITLE
Mike Dean, President
## ARCHITECT-ENGINEER QUALIFICATIONS

### PART II - GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

<table>
<thead>
<tr>
<th>2a. FIRM (OR BRANCH OFFICE) NAME</th>
<th>4. DUNS NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrity Energy Services, Co</td>
<td>2002</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2b. STREET</th>
<th>5. OWNERSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>4119 257th Ct. SE</td>
<td>Corporation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2c. CITY</th>
<th>6. OWNERSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issaquah</td>
<td>Small Business Status</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>6b. TELEPHONE NUMBER</th>
<th>7. NAME OF FIRM (If block 2a is a branch office)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(206) 228-7229</td>
<td>NA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6c. E-MAIL ADDRESS</th>
<th>8a. FORMER FIRM NAME(S) (If any)</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:miked@integrity-esco.com">miked@integrity-esco.com</a></td>
<td>NA</td>
</tr>
</tbody>
</table>

### 9. EMPLOYEES BY DISCIPLINE

<table>
<thead>
<tr>
<th>a. Function Code</th>
<th>b. Discipline</th>
<th>c. No. of Employees (1) FIRM (2) BRANCH</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>Mechanical Engineer</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>L05 Lighting - Interior</td>
<td></td>
</tr>
<tr>
<td></td>
<td>L06 Lighting - Exterior</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C01 Office Buildings</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P07 Plumbing and Piping Design</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P08 Prisons &amp; Correctional Fac</td>
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</tr>
<tr>
<td></td>
<td>R04 Recreational Facilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>R05 Refrigeration Plants</td>
<td></td>
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<tr>
<td></td>
<td>R06 Rehab Buildings</td>
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<tr>
<td></td>
<td>R12 Roofing</td>
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<tr>
<td></td>
<td>S04 Sewage Treatment</td>
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<td></td>
<td>S06 Solar Energy</td>
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<td></td>
<td>S11 Sustainable Design</td>
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<td></td>
<td>S12 Swimming Pools</td>
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<td>V01 Value Analysis - LCC</td>
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<td>H04 HVAC</td>
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</tr>
<tr>
<td></td>
<td>H09 Hospitals &amp; Medical Ctr</td>
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<td></td>
<td>E07 Energy Conservation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E02 Educational Facilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C14 Conservation Resource Mgmt.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A12 Automation Controls</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C13 Computer Facilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C10 Commercial Buildings</td>
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</tbody>
</table>

### 10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS

<table>
<thead>
<tr>
<th>a. Profile Code</th>
<th>b. Experience</th>
<th>c. Revenue Index Number (see below)</th>
</tr>
</thead>
<tbody>
<tr>
<td>42</td>
<td>3</td>
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### 11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>0</td>
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<table>
<thead>
<tr>
<th>PROFESSIONAL SERVICES REVENUE INDEX NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Less than $100,000</td>
</tr>
<tr>
<td>2. $100,000 to less than $250,000</td>
</tr>
<tr>
<td>3. $250,000 to less than $500,000</td>
</tr>
<tr>
<td>4. $500,000 to less than $1 million</td>
</tr>
<tr>
<td>5. $1 million to less than $2 million</td>
</tr>
</tbody>
</table>

### 12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

**Signature**

Michael Dean - President

**Date**

02/19/2013
Michael Dean, President  
Integrity Energy Services, Co.  
4119 257th Ct SE  
Issaquah, WA 98029  

RE: Integrity Energy Services  

To Whom It May Concern:  

With respect to your consideration of the State of Washington Energy Program RFP from Integrity Energy Services Company the following information may prove useful.  

We are currently enjoying a prosperous banking relationship with Integrity Energy. Currently KeyBank has is looking forward to growing this relationship and believe we truly have not come close to reaching the full potential these clients will obtain in the very near future. We hold a complete copy of both the operational and management plans, products & services, and project experience as reference tools and will continue to reference their plan through their growth and achievements.  

We are willing to entertain any specific project financing needs that may arise. In these circumstances, normal due diligence would apply, including review the scope, credit capabilities and nature of the project and confirmation of Integrity Energy's sound ongoing performance here at KeyBank.  

Sincerely,  

Trina Tucker  
Relationship Manager  
KeyBank Center  
4th & Union  
Seattle WA  
206.447.5767
* Audit Sub-Consultants can be utilized for unique technology applications.
** 3rd Party Commissioning is optional at an owners request.
Sub-Consultants are selected for their relative experience (site and/or technology)
Sub-Contractors are competitively bid.