### Project #1: DOE Energy One

## COMPANY Support for DOE *EnergyOne!®*

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| **Customer:** | DOE |
| **Contract / Order Name:** | DOE – *EnergyOne!®* |
| **Contract / Order Number:** | 1BITSV-09-D-00013/1BISTY-12-C-0147 |
| **Prime / Major Subcontractor:** | Major Subcontractor  COMPANY performs 100% of the work on this Task Order |
| **Type of Contract:** | T&M |
| **Period of Performance:** | 10/1/2011 - 9/30/2015 |
| **Total Award Value:** | $61,490,163 |
| **Actual Value:** | $55,453,022 |

**Relevance :** The *EnergyOne!®* application is an internally and externally-facing system for DOE major mailers that has a 60+ terabyte database, and Java (J2EE)-based application records with over 100 million transactions daily are used to calculate postage. It tracks approximately 60% of DOE annual revenue ($40B). COMPANY successfully manages a large development team to support *EnergyOne!®* including a 100+-person team, responsible for managing 11 of 26 modules. COMPANY’s support for the DOE *EnergyOne!®* system includes all the aspects of the enterprise architecture for this vast system, full systems development lifecycle management, and an array of IT support services similar to the technical requirements described in Ex-Im Bank Statement of Work (SOW), Section 1.1.1 and Section 1.2.1, of this Statement of Work (SOW) for Task #7. COMPANY’s developers at *EnergyOne!®* are actively supporting the full lifecycle from requirements gathering to implementation and release, adhering to an Agile framework and methodology.

**Results Achieved:** COMPANY transitioned the development approach for *EnergyOne!®* from Waterfall to Agile. COMPANY’s developers work in multiple scrum teams to address the highly complex needs of this large-scale application comprised of 26 distinct functional modules and our team provides leadership on DOE Agile and CI Boards. The conversion to Agile and better testing practices has significantly reduced reported defects for the Agile releases (up to 70% fewer). Bi-weekly sprint demos with customers and stakeholders has allowed our teams to deliver complex custom development solutions more quickly in a phased and iterative approach that proves its success through frequent deliveries.

**Technical Requirements:**

* **Program Management:** COMPANY assists the Portfolio Manager and Program Manager (PM) for support of the *EnergyOne!®* PMO. This Portfolio has an annual spend rate of approximately $100 million and 250 resources. We developed an Integrated Project Plan for all releases and monitor progress for releases, conduct requirements and design meetings with relevant stakeholders.
* **System and Software Development:** For requirements gathering and definition, COMPANY’s developers consult high-level management, business owners, and stakeholders within the customer organization to define business requirements and identify limitations. The development team analyzes the requirements, provides feedback to the business team, and composes a Requirements Traceability Matrix (RTM) and Technical Requirements Design (TRD) to demonstrate our understanding of the requirements, allowing us to establish a common ground between the development team and the business team. When using the Agile methodology, we develop a product backlog with requirements in the form of user stories.
* **Architecture and Design:** COMPANY is responsible for designing, developing, implementing, and managing the application databases/web servers in Development and Test environments. Our DBAs, Webserver and Linux administrators assist in analysis, requirements gathering, and platform and database decision-making, along with hardware implementation, software installation, and server maintenance. Our COMPANY team maintains the current technical architecture and proposes changes needed to accommodate growth, and to improve and support newer technologies. DOE has over 1,000 applications and has set policies and standards for system architecture, storage, database design, interfaces, file transfers, security, data access, logging, frameworks, services and technologies.
* **Coding:** To support Agile development, COMPANY’s DevOps team converted legacy manual deployments to continuous integration (CI) using Jenkins and plugins such as SONAR, JUnit, and Selenium to improve quality. Using compliance checks during development has eliminated security alerts generated from post-installation validation. We automated industry/organization/application standards to reduce the cost-per-deployment and post-production errors. To support deployments, we employ a custom portal to manage releases.
* **Unit, Integration, and Regression Testing:** COMPANY’s team validates system functionality through thorough end-to-end testing, including system, integration, regression, performance, user acceptance, Section 508, and security testing. We develop test plans based on the RTM. Our tests focus not only on pass/fail but also on performance, security requirements, C&A requirements, and other guidelines established by the Energy Service. COMPANY uses automated testing tools, e.g., QTP/Load Runner, to perform regression testing. Developers use JUnit/PLUnit for unit testing. All of the code is scanned during every build for security vulnerability using AppScan tools. Unit Test plans, scripts and results are documented per the CM policies. Automated test results are stored in VersionOne and scheduled regression/performance testing is communicated to the team.
* **Configuration and Release Management:** COMPANY provides configuration, migration, and support for database and application code in all environments and implement CM standards across the *EnergyOne!®* project to improve code quality and deployment efficiency by automation (CI), resulting in less environment downtime for deployments. We are doing automated build and automated deployment.
* **Bug Triage:** COMPANY’s Kanban Team works with DOE management to prioritize and fix defects and production releases to fix the issues are scheduled every 2 weeks. The team holds daily Scrum meetings to review and reprioritize, if required, to keep the bug cycle as short as possible.
* **Production Support:** COMPANY Production Support Team works with DOE service providers to support *EnergyOne!®* and other applications. We are using tools such as Splunk and Appdynamics to proactively alert us in order to provide sufficient time on hand to resolve issues prior to user impact. Custom performance monitoring tools have reduced related incidents by over 80% in last 1 year. Our team is responsible for supporting any and all production issues (24/7 – 365 days). We added Splunk for efficiently/real-time monitoring/alerting, using thousands of log/trace files generated from application/webserver/database/interfaces files. This tool helps us significantly reduce the time to identify problems before any adverse impact on user communities.