California Energy Systems for the 21st Century

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Letter of Support for ESGF   March 1, 2013

To whom it may concern:

I relish this opportunity to recommend the Earth System Grid Federation (ESGF) for an R&D 100 award for its innovation and contributions. At LLNL's Livermore Energy Systems Informatics Capability (LESIC), we are tasked with identifying and implementing systems for integrating and managing large volumes of Energy Systems data. Among the challenges we face is how to structure data across local and regional repositories that can have varying degrees of sensitivity, yet as a whole will contribute greatly to our mission-based projects. In ESGF, we see a solution that will enable us to maximize data integration for simulation in a labor- and computationally- efficient manner.

In the upcoming months, we hope to begin a large integrated Advanced Computing project, called the California Energy Systems for the Twenty-First Century, or CES-21. This project will enable the California Electric and Gas utilities to leverage LLNL's simulation and modeling expertise to solve some of the most challenging problems of our Energy System modularization, including renewable power integration, streaming data, and massively expanding volumes of sensitive data. We have the responsibility of managing those data associated with that effort, as well as developing new techniques for seamless simulation and data analysis. In CES-21, we are looking to innovative approaches like ESGF to provide some leadership in creating solutions to our problems, especially in the domains of data integration and management, pre- and post-processing, as well as data analysis and visualization.

Here at LLNL and LESIC, we hope that ESGF will enable CES-21 and similar projects to help with creating a more efficient grid, a safer energy system, with enthusiastic support of our stakeholders and public partners. We are very pleased that ESGF exists as an easy-to-use model of data distribution, integration, and processing for some of society's most important problems. At LESIC, we look forward to applying ESGF's innovations in the Energy System domain.

Thank you,

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