

J.R. Simplot Learns Benefits of Strategic Energy Management Thanks to DOE, Idaho Office of Energy Resources Grant

In 2009, the U.S. Department of Energy (DOE) awarded a grant to the Idaho Office of Energy Resources (OER) with American Recovery and Reinvestment Act (ARRA) funds. The grant enabled OER to initiate a pilot project that placed two energy engineers onsite at the J.R. Simplot Company (Simplot).¹

The Opportunity

Simplot, one of the largest privately held food and agribusiness firms in the nation, has 15 U.S. industrial facilities in 9 states. In 2009, these facilities consumed nearly 13 trillion British thermal units (Btu) in source energy,² with associated energy expenditures of nearly \$100 million.¹

Idaho's ARRA grant provided \$179,000 to Simplot for 18 months to cost-share the services of two energy engineers. The pilot began in the spring of 2010¹ when Simplot hired two professional engineers to identify and manage activities and projects that could improve energy efficiency throughout Simplot's industrial facilities. Both men had significant experience with the company, which ensured that they fully understood the business and its facilities.

The engineers began tackling their responsibilities by reviewing the results of completed energy assessments and identifying a set of energy projects that could be pursued immediately without additional study—pending the availability of capital. In addition to managing the technical, energy-related aspects of the projects, they also manage the business aspects, which includes soliciting approval for capital expenditures and securing buy-in from corporate leaders; identifying incentives; evaluating equipment lifecycle; and calculating payback periods. The engineers' efforts have resulted in an improved efficiency culture at Simplot, as well as the implementation of energy projects that focus on upgrading the plants' most energy-intensive pieces of equipment, such as steam systems, air compressors, and process heating.

¹ Don Sturtevant, J.R. Simplot. Energy Efficiency Engineer Business Case. October 3, 2011.

² U.S. Department of Energy, Better Buildings, Better Plants Challenge, J.R. Simplot's Energy Performance, <http://www4.eere.energy.gov/challenge/energy-performance/jr-simplot-food>.

³ Personal communication with Don Sturtevant of J.R. Simplot on May 6, 2013.



An aerial view of a Simplot fertilizer production plant—a DOE Better Plants partner. Photo courtesy of Simplot

The Impact

In the pilot project's first year, Simplot saved 318,359 million Btu—enough energy to power 35,400 homes for a year—and eliminated more than 95 metric tons of greenhouse gas emissions—equivalent to the emissions of nearly 30,000 cars. While not all of this can be attributed directly to the work of just two energy engineers, both men were instrumental in leading these energy efforts. In comparison, the associated cost savings for the first year for Simplot was nearly \$3 million,¹ while the total cost for the two engineers was only \$422,625—including salary, benefits, travel, and expenses. Simply put, for every dollar Simplot spent on the energy engineers, the company saved \$10.28 in energy.

For Simplot, the conclusion of this pilot program has been clear—you can't get real, sustained energy savings without full-time "boots on the ground."³ The energy engineers were critical in helping to achieve these savings, and their salaries were recovered many times over. Simplot hired the two energy engineers permanently after the grant period ended and also decided to employ a third energy engineer in cooperation with the Bonneville Power Administration's "Energy Smart Industrial Partner" program. Additionally, Simplot is actively considering hiring additional staff to specifically target energy saving opportunities such as steam, refrigeration, and compressed air systems.

Simplot joined DOE's Better Plants program in 2009 and committed to reduce its energy intensity by 25% over a 10-year period for US-based plants using source energy accounting. Multiple Simplot facilities have already met this goal in less than four years.³