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Christopher Russell, Principal, Energy Pathfinder Management Consulting, LLC A particularly destructive hurricane season in 2005 wreaked havoc on oil and gas production infrastructure in the Gulf Coast region. This damage, in addition to what were already tight global fuel markets, drove U.S. energy prices to unprecedented heights. In the aftermath of price spikes, even “stable” prices remain high enough to threaten the profitability of U.S. based manufacturing facilities. The industrial sector, which is widely dependent on natural gas, pressed the Bush Administration for relief. U.S. Department of Energy Secretary Sam Bodman responded by introducing the Save Energy Now initiative on October 3, 2005:

“America’s businesses, factories, and manufacturing facilities use massive amounts of energy. To help them during this period of tightening supply and rising costs, our Department is sending teams of qualified efficiency experts to 200 of the nation’s most energy-intensive factories. Our Energy Saving Teams will work with on-site managers on ways to conserve energy and use it more efficiently.”

On a broader level, DOE is attempting to distribute a portfolio of “Best Practices” information to 50,000 facilities.DOE’s BestPractices pertain to plant systems commonly found in industry, such as steam, process heating, motor drives, compressed air and insulation.

The DOE very quickly identified 200 forwardthinking participants for energy assessments (and actually had to turn away eager applicants). As of August 16, 2006, the results were in for the first 105 Save Energy Now assessments. In all, the 200 plants selected for energy assessments represent a variety of industries and are located in at least 39 different states. Experts at DOE have projected the anticipated savings for all 200 plants based on the results from the first

105.According to these projections:

- The average plant presents $2.6 million in annual energy savings.
- The total energy-cost-saving opportunities recorded for the first 105 plants total $273.8 million.
- The 200 plants are projected to attain more than $522 million in annual potential energy savings in aggregate.
- The total potential natural gas savings for first 105 plants assessed are estimated at 30.3 trillion Btu annually– enough to serve 421,000 typical houses per year.
- Not every improvement recommendation will be implemented. DOE expects a 40% implementation.
- 47% of the identified savings can be achieved with a payback of nine months or less. Improvement measures include insulation upgrades, steam trap programs and the cleaning of heat transfer surfaces.
- 13 plants reported more than $1.9 million in immediate savings implemented in the first 30 days following the assessment.
- 46% of the potential savings in the assessed plants can be achieved with a payback between nine months and two years. These opportunities include heat recovery and combustion optimization.

There's one final statistic worth mentioning. If one were to pay market value for one of these assessments, it would range anywhere from $5,000 to $12,000, depending on the size and complexity of the facility. Recall that the average value of identified savings potential per plant is $2.6 million. Assume that only 40% of the recommendations will be implemented. That's an average of about $1,000,000 in savings per facility.What's the return on investment (ROI) for an energy assessment if someone actually paid for it? Let's be conservative and use the higher cost assessment value ($12,000). The ROI would be about 83:1.

Industrial facilities that secure an energy assessment will learn about their energy savings potential. So,why aren't more facilities doing this? Companies and sites that refuse energy assessments may end up paying much,much more through energy waste and lost productivity.

You can get more information about this program, including summaries of individual plant assessments, at http://www1.eere.energy.gov/industry/saveenergynow.