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## Co-funded project managers triple the energy and cost reductions for **KAPSTONE PAPER AND PACKAGING**, saving \$835,000 annually.

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Industrial energy efficiency opportunities are readily available. They enable companies to reduce operating costs without impacting production, and they help utilities and their customers achieve efficiency and sustainability goals. They don't, however, materialize on their own.

“Incentive dollars for industrial energy efficiency projects have been available for many years,” says Doug Swier, Conservation Engineer for Cowlitz PUD. “However, there have been few knowledgeable individuals able to focus on identifying and driving those projects. Plant engineers are typically stretched very thin, and other priorities—safety, throughput, reliability, environmental, etc.—leave little time for these folks to pursue cost-effective energy efficiency opportunities.”

To address this barrier, the Bonneville Power Administration designed the Energy Project Manager component for its Energy Smart Industrial (ESI) program. Working with Northwest public utilities and their industrial customers, the ESI program offers assistance and incentives for reducing energy consumption. The Energy Project Management component of the program provides co-funding for additional staff resources that work onsite to identify and manage energy conservation projects from beginning to end.

The largest kraft pulp mill in the United States, KapStone Paper and Packaging is one company that has benefited greatly from Energy Project Management resources. With an average load of 110 megawatts, KapStone produces one million tons of paper each year, and now has two Energy Project Managers dedicated to reducing energy consumption. Working through the ESI program, Cowlitz PUD co-funds their salaries and also provides financial incentives for the energy reductions they achieve.

Their achievements have been nothing short of award-winning. KapStone received the 2012 Washington Industrial Energy Leaders Governor's Award for Leadership in Energy Performance.



**COMPANY**

KapStone Paper and Packaging

**UTILITY**

Cowlitz PUD

**PROJECT**

Energy Project Managers have identified several capital and track and tune projects

**ENERGY SAVINGS**

24,300,000 kWh/y

**PROJECT COST SAVINGS**

\$835,000 per year

**PAYBACK**

2.4 years

### IMPLEMENTING NEW EQUIPMENT, FINE-TUNING OLDER SYSTEMS

Bob Cox and Patrick Sypher, the Energy Project Managers at KapStone, have been busy pinpointing and managing energy efficiency projects at the mill. They are part of a cross-functional “Electrical Reduction Team” made up of mechanical, electrical, and process engineers who share ideas, prioritize opportunities, and get energy projects off the ground. As a result, four projects are currently underway that will greatly reduce KapStone’s energy consumption and costs.

Cox is overseeing a paper machine upgrade that will increase the efficiency of the machine’s vacuum system. He also quantified impeller trim opportunities—with ESI Track and Tune assistance—that will improve pumping efficiency at little or no capital cost. The projects will save KapStone an anticipated 12.8 million kilowatt-hours and \$465,000 each year.

“The primary driver for these projects is cost reduction, but they also help us increase product quality and output,” says Cox. “We’re not only reducing our utility bill and receiving incentive payments; we’re also getting new equipment and fine-tuning our operations.”

Sypher is currently managing two capital projects focused on hot water optimization and digester screen improvements. These projects are expected to deliver 11.5 million kWh and \$370,000 in annual savings.

“The incentives offered by Cowlitz PUD through the ESI program are essential,” says Sypher. “We need a one-year payback period to get these projects approved. Without incentives, it would be five years before we recoup our capital investments.”

Altogether, the projects will reduce the mill’s energy consumption by nearly three megawatts per year. KapStone stands to save more than \$835,000 in annual energy expenses, and Cowlitz PUD acquires a low-cost resource that counts toward state savings requirements.

“KapStone has tripled its energy conservation activities and results since the Energy Project Managers have been in place,” says Swier. “It’s been a very successful arrangement that is helping all of us achieve our energy efficiency goals.”

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**Bob Cox,**  
Capital Projects Analyst and Engineer,  
KapStone

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