



Recovery Act funds helped NewPage Wisconsin System Inc. install new high-efficiency paper machine cleaners at its mill in Wisconsin Rapids, Wisconsin. *Photo courtesy of NewPage Wisconsin Systems Inc.*

Industrial Energy Efficiency Projects Improve Competitiveness and Protect Jobs

Recovery Act Funding Supports Wisconsin Industries

U.S. Department of Energy (DOE) funding of \$14.4 million from the American Recovery and Reinvestment Act (ARRA) of 2009 supported nine industrial energy efficiency projects in Wisconsin. The projects were identified by Focus on Energy, an energy efficiency and renewable resource program funded by Wisconsin utilities. The program also provided project coordination, access to some financing, and technical expertise.

Participating companies provided \$15.6 million for their cost share contribution to project funding. Each project achieved energy savings of 25% or more, helping to improve the companies' competitiveness and protect jobs.

The projects were organized by separate industry energy efficiency improvements. Project activity areas cover:

- Wood-waste boiler air system upgrades
- Paper machine cleaner system installation

- Paper machine dryer hood efficiency improvements
- Paper machine drying efficiency upgrades
- Paper machine economizer upgrades
- Automated lighting control installations
- Drying and moisture removal optimization
- Drying, lighting, and water heating system upgrades
- Steam and heating system redesigns



Didion Milling, Incorporated's new fermentation tanks and CO₂ scrubber vessel are in full operation at its ethanol refinery in Cambria, Wisconsin. *Photo courtesy of Didion Milling, Incorporated*

Public-Private Partnership Delivers Results

For more than a decade, Focus on Energy has been working to promote energy efficiency technologies to residents and businesses. To address the Recovery Act funding opportunity, nine projects were identified for high energy savings potential and selected through competitive bidding.

All nine projects were completed on time and are meeting or exceeding their energy savings goals. “The excellent results and timely implementation prove that the public-private partnership model delivered good value,” said Masood Akhtar, President of CleanTech Partners and principal investigator on the grant. “This was an excellent example of a federal/state/private partnership to save energy in manufacturing and retain and create high paying jobs, and make these companies more competitive globally.”

“Without the collaboration between the Focus on Energy program and the DOE, this project would not have been possible... This collaborative model should be continued.”¹

– Bernie Lakus,
Capital Projects Engineer/
Energy Manager at
Domtar Paper Company



Briggs and Stratton Corporation replaced high-pressure steam boilers with a combination of more efficient low-pressure steam boilers and hot water boilers at its engine manufacturing facility in Wauwatosa, Wisconsin. *Photos courtesy of Briggs and Stratton Corporation*



Estimated Benefits—All Nine Projects

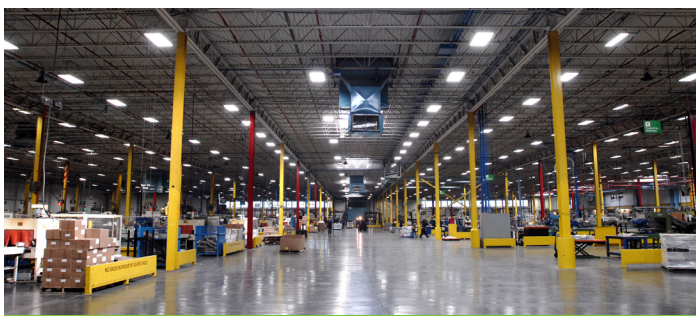
Efficiency	45% process efficiency improvement
Emissions Reduction	84,700 tons CO ₂ per year
Energy Savings	1.2 trillion Btu annually—11 million therms of natural gas and 28,000 MWh of electricity
Reliability	\$9.8 million annually

¹ Ostle, Glenn, “Government and Industry Team Up to Save Energy,” Paper360°, TAPPI, July/August 2012.

Estimated Benefits—Individual Projects

Sub-Awardee	Wisconsin City	Industry	Process Efficiency Improvement	Energy Savings (trillion Btu per year)	Cost Savings (per year)
Briggs and Stratton Corporation	Wauwatosa	Engine Manufacturing	42%	0.10	\$775,824
Didion Milling Incorporated	Cambria	Ethanol Manufacturing	25%	—	—
Domtar Paper Company LLC	Rothschild	Pulp and Paper	38%	0.26	\$1,837,500*
Kohler Company	Kohler	Plumbing Fixtures; Engine/Generator Manufacturing	66%	0.04	\$335,111
NewPage Wisconsin System Corporation	Wisconsin Rapids	Pulp and Paper	45%	0.01	\$208,600
Quad/Graphics Incorporated	Sussex	Commercial Printing	50%	0.03	\$656,269
Thilmany LLC	Kaukauna	Pulp and Paper	42%	—	—
Wausau Paper Specialty Products LLC (now Expera Specialty Solutions)	Mosinee	Pulp and Paper	36%	—	—
Wausau Paper Specialty Products LLC (now Expera Specialty Solutions)	Rhinelanders	Pulp and Paper	58%	—	—

*Boiler no longer in operation; — indicates unavailable data



Quad/Graphics Incorporated upgraded lighting and installed automated lighting controls at its commercial printing facility in Sussex, Wisconsin. Photo courtesy of Quad/Graphics Incorporated

“These projects were on the shelf until Focus on Energy and CleanTech Partners got involved...The financial assistance that we received from the DOE pushed these projects over the hurdle. The projects were well executed, and since completion, they have exceeded our expectations.”²

– Patrick Medvecz, Senior Vice President Operations for Wausau Paper Corp. (now Expera Specialty Solutions)

² Ostle, Glenn, “Government and Industry Team Up to Save Energy,” Paper360°, TAPPI, July/August 2012.



Didion Milling, Incorporated improved the ethanol production process, including optimized drying and moisture removal, at its ethanol refinery in Cambria, Wisconsin. *Photo courtesy of Didion Milling, Incorporated*

Efficiency Projects Strengthen Industry and Save Jobs

In today's competitive world economy, industry has to be vigilant in controlling costs. For many sectors, such as the paper industry, energy use is a significant operational cost so large energy savings can make the difference between operating and shutting down a plant. Collectively, the projects will save an estimated 1.2 trillion Btu annually. These energy savings will improve the competitiveness of the companies and protect jobs. The projects have already created or saved 326 jobs from the industrial energy efficiency improvements.³

Focus on Energy and CleanTech Partners

Focus on Energy is Wisconsin utilities' statewide energy efficiency and renewable resource program funded by the state's investor-owned energy utilities and participating municipal and electric cooperative utilities. Focus on Energy works with eligible Wisconsin residents and businesses to install cost-effective energy efficiency and renewable energy projects. Focus on Energy information, resources, and financial incentives help to implement projects that otherwise would not be completed. Its efforts help Wisconsin residents and businesses manage rising energy costs, promote in-state economic development, protect the environment, and control Wisconsin's growing demand for electricity and natural gas. CleanTech Partners is an implementer of the Focus on Energy's Emerging Technologies Program and also provides "subject matter expertise" in an effort to identify and deploy Best Practices that can benefit Wisconsin.

³ Ostle, Glenn, "Government and Industry Team Up to Save Energy," *Paper360*, TAPPI, July/August 2012.

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