

# Energy efficiency for the pulp and paper industry

## Doing more with less



The need to use energy more efficiently has never been more critical for pulp and paper makers who face rising costs, significant changes in consumption habits, and increasing environmental regulation. ABB combines 120 years of energy expertise with a broad portfolio of products, systems and services to help pulp and paper mills maximize quality and productivity while improving their energy efficiency.

Although every mill is unique, all have areas where substantial energy savings can be realized. These range from power distribution and process electrification to automation and control, and advanced forecasting / simulation solutions that help you optimize your pulp and paper making processes and energy efficiency in a collaborative environment. There are complex interdependencies between paper making processes and a paper mills energy use, so there are many benefits to optimizing these together.

ABB helps its customers improve energy efficiency so they can do more while using less energy:

- ABB's technology specialists will help analyze and optimize energy use to deliver savings for mill operations from wood preparation to pulping, paper making, and power house / recovery processes.
- We provide equipment, systems, software, and services to monitor and report energy use, reduce energy use and losses, and manage equipment and processes more effectively while improving productivity and quality.

ABB focuses on these opportunity areas for energy savings: **power, process, and performance.**

## Power Solutions

Whether you are building a new mill or expanding, ABB can help you design and implement optimized power distribution and process electrification systems.

Our **Power Management Systems** ensure efficient and stable electrical distribution systems.

ABB has a wide variety of solutions to help you increase the energy efficiency of **motor driven systems** while improving control and quality, from premium-efficiency motors to variable speed drives and drive control systems. In addition to saving energy, our direct drive solution for paper machines also reduces maintenance and saves space.

We also offer a number of **power components** such as liquid-cooled drives to eliminate drive room air conditioning requirements, low-loss 'green' transformers, and solutions to improve power quality and for power factor correction.

## Process Solutions

**System 800xA Extended Automation** provides access to rich process information that help operators make timely adjustments that reduce energy waste from boilers to production processes.

Our **Quality Control Systems** ensure optimum paper machine control and performance while reducing energy use. This includes ABB solutions such as SteamPlus Profiler and Fiber Orientation Sensor, which both reduce process steam use.

## Performance Solutions

We also have a comprehensive set of advanced process control solutions to help you make use of the information already in your automation system to predict and control operations. This allows you to manage raw materials and run at the highest level of efficiency:

- ABB offers an enterprise-wide management system that links interrelated mill functions such as production planning, scheduling and trimming to collaboratively optimize reliability, productivity and energy efficiency.
- **cpmPlus** for pulp & paper can optimize your business processes and add flexibility to production management.
- **cpmPlus Energy Manager** can help you understand where and how you use energy, and accurately forecast and simulate energy demand based on production planning.



ABB's collaborative solution for production optimization and energy use.

## Services

ABB offers a number of services to help you discover your mill's energy efficiency improvement opportunities; we then take these through implementation to make certain you harvest the full savings potential. These services range from your entire mill to specific production and support systems such as motor-driven systems and power quality assessments.

- **ABB Fingerprint Services** identifies, documents, and provides implementation plans for specific process opportunities such as boilers, pulp dryers or coaters.
- **ABB Full Service**<sup>®</sup> can manage the maintenance of an entire mill, including energy use performance improvements.