



## Profiles in Energy Efficiency

### ***Production Strategy Saves Money & Energy: Eastman Chemical Company***

Eastman Chemical Company produces a broad range of advanced materials, additives and functional products, specialty chemicals, and fibers that are found in products people use every day. With its global headquarters in Kingsport, TN, Eastman employs approximately 13,500 people worldwide and operates 14 production facilities in the United States.

An active partner in the U.S. EPA's ENERGY STAR program, Eastman has used the ENERGY STAR Guidelines for Energy Management to restructure its energy program and the partnership to secure executive-level support, capital funding, and broader organizational involvement in energy management.

The Eastman Hydroquinone (HQ) Process area initiated a production optimization project to reduce operating costs associated with operating below full capacity. Prior to the project, the operating strategy was to run the HQ process at consistent rate but below 100% capacity to minimize access inventory. However, running the process at lower production levels still required significant amounts of energy and led to major yield losses.

By focusing on optimizing energy and production, Eastman formulated a new campaign strategy for HQ production that improves yield and reduces energy and labor costs. The new strategy involves running the plant at maximum production rates, building inventory, and then taking extended shutdowns to control inventory to acceptable levels. Implementing the project required significant communication and teamwork across divisions, but no capital costs and new investments.

The project demonstrated that energy savings can be found without spending capital or adding new technology. It was the creativity of the process experts that determined how to optimize production to achieve significant cost reduction. Eastman plans to replicate this strategy for other processes currently not running at full operating capacity and that experience a yield increase at higher production rates.

#### **Savings:**

- ✓ Reduced raw material and steam usage as well as labor and overtime costs.
- ✓ Saved roughly 106,000 mmBtu for a 16% annualized energy savings over the previous year.
- ✓ Reduced greenhouse gas emissions by 11,000 metric tons of CO<sub>2</sub> emissions.

#### **Additional Benefits:**

- ✓ No capital cost required for significant energy savings.
- ✓ Increased earnings as a result of lowered energy costs.
- ✓ Facilitation of new production optimization studies within the company.
- ✓ Heightened awareness of the benefits of energy efficiency to new parts of the company.
- ✓ External recognition from the American Chemistry Council in its annual award program.