



Enviroscope

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Metal Finishers Increase Profits With Climate Wise Program

In October 1993, President Clinton developed the Climate Change Action Plan in an attempt to meet the dual challenges of strengthening the economy and reducing the threat of global warming. The Action Plan called for the U.S. greenhouse gas emissions to return to 1990 levels by the year 2000. The challenge facing the Environmental Protection Agency (EPA), the Department of Energy (DOE), private industry, and a host of

other stakeholders was to develop programs and partnerships that will meet the gas emission goals, and also stimulate jobs and growth.

One program of this type, developed by EPA and DOE, is the *Climate Wise* program. The Climate Wise program was founded on two basic principles: (1) Pollution control measures must be in sync with the money-making goals of companies, and (2) individual companies—not the government—know the best, most cost-effective ways to reduce their pollution emissions.

With these two principles firmly intact, Climate Wise has sought to parlay the extensive research capabilities, experience and financial support provided by EPA, DOE, state and local governments, and private resources, into a set of tools for companies to use to refine their processes, increase their efficiency, and improve their bottom lines. Climate Wise offers tailored packages of support to companies that voluntar-

ily agree to reduce their climate-threatening emissions. In exchange for the technical and moral support it offers, the program asks the companies to create their own climate action plans that describe the various steps they will take, based on their own capabilities, and report their results.

The metal finishing industry offers a wide range of opportunities to reduce waste and increase profits. Introducing new techniques and technologies in air compressor efficiency, water consumption, climate control and lighting, and other process-related steps can serve to save both money and the environment.

To date, the metal finishing sector has provided Climate Wise with two of its greatest success stories. Both Majestic Metals of Denver, CO, and Metal Arts in Geneva, NY, have succeeded in decreasing pollution emissions and, at the same time, have increased profits. In addition, Republic Metals Corporation recently joined them in the Climate Wise program.

Majestic Metals was the first metal finishing company to join Climate Wise. It boasts a long list of process changes and adjustments (more than 20) that have served to increase its bottom line and decrease pollution and regulatory problems. A few of these changes include:

- Installing a small, 8-ft curing oven in its screenprint area to augment the existing 18-ft oven. Before the purchase of this new oven, the larger oven had to be cooled from 375 °F to 180 °F to cure smaller, inked parts, and then reheated to bake larger painted and powder-coated parts. With two ovens, each heated for specific tasks, the company reduced its natural gas bill by 15 percent annually. It has also saved one hour per day of transportation time and has decreased finished product handling damage.
- Rerouting the exhaust system from its 50-hp air compressor outside to take in cooler air that is easier to compress. This minor adjustment provided significant utility cost savings for the company.

Metal Arts Company, in cooperation with the New York State Energy Research and Development Authority, is experimenting with creative processes in electroless nickel plating on aluminum substrates, designed to cut costs and pollution, and to improve the product. Two cost-saving action steps include:

- Using a proprietary non-zincate activator bath that makes zinc and

cyanide unnecessary to prepare any aluminum substrate for the autocatalytic electroless plating step. This action has increased process efficiency and reduced hazardous materials disposal costs.

- Developing a high-phosphorus electroless nickel bath that produces a higher-quality finished product and uses less nickel. Following initial tests for use in computer disks, this process has been found to save approximately 30 percent of costs associated with raw materials, labor, energy and hazardous waste treatment. In addition, it has increased the capacity of the plating line by 30 percent. The company is now testing the same process in the production of aluminum wheels that will have a higher level of corrosion protection and enable the wheel manufacturer to pass the CASS test at a lower cost. The preliminary outcome of these tests again points to the creation of a better product at a lower cost.

Climate Wise has the technical capabilities, experience, and flexibility to help improve the production process and save money in many facets of the metal finishing industry. If the savings alone is not cause enough for interest, then improving public relations by being environmentally conscious, as well as staving off potential regulatory action in the future may help.

Finally, if the competition is becoming leaner and more efficient, it just makes good business sense to

heed their example. To learn more about the Climate Wise program, please contact:

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About the Columnist
Kevin James works for the U.S. Environmental Protection Agency in the Office of Policy, Planning and Evaluation. His main area of concentration is with the EPA- and DOE-sponsored Climate Wise program. Kevin comes to EPA as a Presidential Management Intern from the University of Pittsburgh, where he received his MA in public and international affairs. He received his BA from Bates College in Maine.