



"Combining energy efficiency and pollution prevention forces and viewing them simply as efficiency is an opportunity for alignment among stakeholders: business, environmental advocates, and regulators."

From "Energy Efficiency, Pollution Prevention and the Bottom Line," by Myriam Pye and R. Neal Elliott, American Council for an Energy-Efficient Economy
For full text of paper, visit <http://aceee.org/briefs/p2-mp.htm>

Pollution Prevention, Energy Efficiency: Two Sides of the Same Coin

"P2 and E2 are just two types of efficiency, and efficiency has always been recognized as being good for business. As more businesses begin to realize the profitability of resource efficiency, P2/E2 will become more than just a good business opportunity: P2/E2 will prove to be an important strategy in staying competitive."

From "You Say P2, I Say E2: Let's Call the Whole Thing Efficiency," authored by Miriam Pye, American Council for an Energy-Efficient Economy, *Pollution Prevention Review*, Spring 1998 edition

Energy efficiency (E2) and pollution prevention (P2) are two sides of the same waste reduction coin. Businesses that become more energy-efficient are also preventing pollution. The less energy wasted at the plant site, the less electricity has to be produced in power plants that emit pollutants. Likewise, businesses that implement cleaner production methods may, in many cases, reduce waste in energy usage by cutting out unnecessary steps in production processes.

Historically, P2 and E2 have been carried out separately. Now, businesses and technical assistance providers are realizing that pursuing P2 and E2 together can add greater value than pursuing them separately. Here are two examples illustrating the greater value of the comprehensive P2/E2 approach:

E2 Means P2

Two examples of energy efficiency resulting in pollution prevention in the Pacific Northwest come from lighting and motor efficiencies:

- ❑ A lighting retrofit at Tesoro Petroleum Company's Anacortes, Washington, refinery cut the lighting electricity load 26 percent. The 13 million-square-foot retrofit is reducing carbon dioxide emissions by more than 1,622 tons annually.
- ❑ Lafarge's Seattle cement plant is saving \$53,000 per year and reducing carbon dioxide emissions by nearly 232 tons annually as a result of a variable frequency drive installed on a fan motor. The fan, which circulates heat through the full length of the rotary kiln, is greatly oversized for most needs. Varying fan motor speed to match need has reduced average power draw by 75 percent.

P2 Means E2

An example of pollution prevention reducing energy waste comes from the Coors Brewing Company. Coors switched to UV-cured coatings for their cans. This eliminated use of VOC-emitting solvents and drastically reduced generation of hazardous waste. But, the change also had a profound impact on energy use, since Coors no longer needed large ovens to cure their cans.

To see the project summary, with energy and pollution savings, see *NICE3:UV-Curable Coatings for Aluminum Can Production*, DOE/

CH10093-236, on EPA's National Industrial Competitiveness Through Energy Environment Economics (NICE3) web page – <http://es.epa.gov/program/p2dept/energy/nice3/nice3-1.html>

P2/E2 Resources

- ❑ The American Council for an Energy-Efficient Economy (ACEEE) produced a document in 1998 that explains the benefits of combining E2 and P2 for enhancing productivity, improving the bottom line, and benefiting the environment: "Making Business Sense of Energy Efficiency and Pollution Prevention" can be viewed at <http://aceee.org/p2/index.htm>.
- ❑ Another ACEEE report, "Energy Efficiency, Pollution Prevention, and the Bottom Line," published in 1997, provides additional information on combining E2 and P2 into an overall efficiency package that will get business' attention. The paper can be found at <http://www.aceee.org/briefs/p2-mp.htm>.
- ❑ For a listing of ACEEE case studies involving E2 and P2, visit <http://www.aceee.org/p2/p2cases.htm>.
- ❑ The Texas General Services Commission's State Energy Conservation Office has put together a web site (<http://www.infinitepower.com/index.shtml>) that helps identify pollution sources associated with energy consumption in everyday life, and describes renewable energy resources, such as wind and solar. The site has a "Renewable Energy and You" section that has a number of helpful tools to help with understanding the connection between energy use and pollution generation. The tools include a carbon pollution calculator, an electric power pollution calculator, and a water heater calculator.
- ❑ The Alliance to Save Energy published a report, "It Doesn't Have to Hurt: Efficient, Clean, Low-Cost Approaches to Carbon Reduction," that identifies extensive emission reductions that can be achieved through E2. The executive summary can be found at <http://www.ase.org/profess/climate/index.htm>, and subsequent chapters have links on this page.
- ❑ U.S. EPA and the U.S. Department of Energy (DOE) sponsor the National Industrial Competitiveness Through Efficiency: Energy, Environment, and Economics (NICE3) program. NICE3 is "an innovative, cost-sharing program to promote energy efficiency, clean production, and economic competitiveness in industry." A description of NICE3 can be found at <http://es.epa.gov/program/p2dept/energy/nice3/nice-3.html>. This site also has brief examples of E2/P2 projects that have been completed.
- ❑ Climate Wise (<http://www.epa.gov/climatewise>) is a voluntary government-industry partnership that promotes a comprehensive approach to industrial energy efficiency and pollution prevention.

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