

Center for Clean Products and
Clean Technologies

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Projects. EERC's Center for Clean Products and Clean Technologies (CCPCT) has undertaken a life-cycle-based assessment of materials used in new-generation vehicles for the Partnership for a New Generation of Vehicles (PNGV) through Oak Ridge National Laboratory's (ORNL) Energy Division. A previous study evaluated the life-cycle environmental impacts of two prototype vehicles built to meet the goals of the PNGV, an initiative launched in 1993. The PNGV prototypes, the Ford P2000 and the DaimlerChrysler ESX2, were compared to a 1994 midsize US-built (Taurus-class) baseline vehicle. Among its recommendations, this study identified the need for a more in-depth assessment of certain new materials/components. CCPCT's new project with ORNL will provide life-cycle analyses of fuel cells, lithium-ion batteries, and carbon-fiber composites intended for use in future vehicles. CCPCT Director **Gary Davis** and Research Associates **Rajive Dhingra** and **Jonathan Overly** expect to complete their assessment by the end of the year.

Larry Schoff, a senior research associate with EERC's Systems Development Institute, recently co-hosted *TECHNO 2100: Designing Smarter Schools*, on CNBC. The program explored energy-efficiency options for next-generation schools. **Schoff** is technical advisor for EnergySmart Schools, a campaign of the Department of Energy's Rebuild America program, which offers technical assistance to help school systems redirect wasted energy dollars to update or rebuild their schools. Jack Lyons, senior program manager for the Department of Education's National Library of Education, served as co-host for *Designing Smarter Schools*.

Awards. The Waste Management Research and Education Institute recently distributed supplemental stipends of \$3000 for academic year 2000-2001 to four doctoral candidates. **Pedro Sanhueza** (nominated by **Greg Reed**, head, Civil and Environmental Engineering [CEE]) is researching the health effects and associated policy and economic issues of ozone pollution, along with **Reed** and **Susan Smith** (assistant professor, Health and Safety Sciences). **Shawn Hawkins** (nominated by **Reed**), whose research at the Center for Environmental Biotechnology (CEB) included the genetic evaluation of microbial communities in wastewater treatment systems, recently completed work for his M.S. under **Kevin Robinson** (CEE). **Michael Allen** (nominated by **Robert Moore**, head, Microbiology) is studying a bacterial strain to control process upsets in an industrial wastewater treatment system. **Melissa Lenczewski** (nominated by **William Dunne**, head, Geological Sciences), is researching the migration and biodegradation of trichloroethylene in fractured clay-rich materials for CEB, along with **Larry McKay** (associate professor, Geological Sciences).

Presentations. In April, **Gary Davis** and **Jonathan Overly** conducted a workshop at the Society of Automotive Engineers *Total Life Cycle Conference and Exposition* in Detroit, Michigan. The conference, sponsored by General Motors, Ford, DaimlerChrysler, and others, was attended by 250 life-cycle practitioners from industry and academia. **Davis** and **Overly** demonstrated CCPCT's Life-Cycle Design Toolkit, a software program that incorporates life-cycle assessment into product design.