

A wealth of knowledge imparted on *Engineering Sustainable Solutions* participants

On June 18, 2009, 55 participants attended *Engineering Sustainable Solutions for Your Community: a Conference on Strategic Dimensions of Infrastructure* at the Regional Learning Alliance at Cranberry Woods. The American Society of Civil Engineers Pittsburgh Section, Environmental & Water Resources Institute, Architectural Engineering Institute, and Champions for Sustainability (a Program of Sustainable Pittsburgh) hosted this conference, which featured experts on real-world, practical, cost-saving, sustainable solutions for infrastructure design. Conference topics included Sustainable Energy Practice, Green Building, Water Resources Sustainability in Practice, and Sustainable Communities.

The overall theme of the conference was on the increasing importance of useful knowledge in the growing field of sustainability. As the “greening” bandwagon continues to accelerate, responsible community and corporate decision makers need to look past rhetoric for realistic solutions. Engineers rose to meet these challenges and offered some of the latest practical solutions.

The Conference started by addressing energy issues. Jan Lauer (Three Rivers Clean Energy) spoke of the need to find energy solutions that address global warming, energy independence, and the growth in demand. While these challenges are significant, Lauer stated “a wealth of resources makes the region unique,” including carbon dioxide storage sites, strong wind resources, ample water supply, plentiful coal and gas resources, access to the northeast corridor, etc. However, she did caution that there are concerns of a shortage of workers with the technical, skilled backgrounds necessary to implement sustainable technological solutions and stressed the need for reform to the region’s vocational-technical education system. Patricia DeMarco (Rachel Carson Homestead) followed with a talk on energy from a policy perspective. Of particular note was her focus on the demand side of the energy crisis, saying “we have made our consumption a personification of our value, our worth.” Chris Steffy (Industrial Energy Engineering) concluded the energy session by discussing how organizations can increase energy savings/efficiency through a systems-based analysis of core operations.

The energy session was followed by the Building Green Panel Discussion, which featured speakers from the Green Building Alliance, Astorino, Children’s Hospital of Pittsburgh, Civil and Environmental Consultants, and Giant Eagle. The panel talked about their practical experiences with green buildings. Catherine Sheane (Astorino) discussed the importance of reinforcing green building and design with operational procedures, including evaluation and verification of costs and benefits. In reference to cost, Aurora Sharrard (Green Building Alliance) emphasized that additional costs associated with green buildings can be reduced or eliminated through an integrated design process on the front end, as opposed to adding green measures to completed plans.

Tom Walski (Bentley Systems, Inc.) began the discussion on water sustainability issues by stressing the importance of asset management in water distribution systems. This includes monitoring and tracking pipes and leaks and incorporating this information into a usable database; this is critical in efficiently organizing the maintenance of water provision infrastructure. Susanne Adams (Weston Solutions) described her work in analyzing greenhouse gas emissions in wastewater treatment plants and how that data can be used to reduce air pollution. Finally, Jim Pillsbury gave detailed accounts of Westmoreland County’s multiple permeable pavement and green roof projects that were designed to reduce stormwater runoff.

The final conference topic was Sustainable Communities. Lindsay Baxter (City of Pittsburgh) described the City's efforts to become more sustainable, including improved coordination and collaboration within the government, incorporating biodiesel fuels into the city's fleet, and research into solar energy usage. John Trant (Cranberry Township) described local initiatives to deal with rapid growth in the community in a sustainable manner, from traffic signal coordination to activities that promote a wider range of housing choices.

For more information on this and future events (including the presenters' PowerPoint presentation slides), please visit the Champions for Sustainability website at <http://www.c4spgh.org/>.