

## TREEDC Returns to Clarksville



TREEDC Presenters at the July 9, 2013 Clarksville Forum

The Tennessee Renewable Energy and Economic Development Council (TREEDC) returned to Clarksville on July 9, 2013. TREEDC Mayors Kim McMillan and Carolyn Bowers organized the free community renewable energy forum at Freedom Point Park. A total of 70 attendees gathered together to hear presentations from leading Middle Tennessee businesses including PHG Energy, Rhoades Car International, Smithfield Manufacturing, Ameresco and Global Green Lighting. Montgomery County Sustainability Coordinator Michelle Newell and (MTAS) Management Consultant/TREEDC Director Warren Nevad crafted the agenda. The keynote presentation was given by Gresham, Oregon Mayor Shane Bemis who is also the Chairman of the U.S Conference of Mayors Energy Committee.

The Tennessee Department of Environment and Conservation's (TDEC) Energy Education Initiative also sponsored presentations regarding qualified conservation bonds and energy awareness. The TREEDC-Clarksville forum was the fourth out of 5 forums organized under the Tennessee Energy Education Initiative. This Initiative will be delivered in connection with TREEDC Diamond Member Pathway Lending and other statewide energy resource providers and will provide in depth training and educational tools.

The Tennessee Energy Education Initiative was created through a public-private partnership led by the TDEC Office of Energy Programs. It provides in-depth training and educational tools to businesses, public officials and communities to support the implementation of energy efficiency, renewable energy and energy management projects.

Michelle Newell, Program Manager stated that the Green Certification Program was designed to help businesses learn and implement best practices in the area of environmental stewardship in an effort to sustain resources through a series of free workshops taught by environmental and other subject area specialists. Pete Reed, Bi-County Solid Waste Director explained how the Bi-County landfill converts methane gas to renewable energy, which is sold to the Tennessee Valley Authority power grid through the Cumberland Electric Membership Corp. The landfill gas is collected at 21 wells, then moves to the on-site facility through lines, similar to a gravity sewer system.

TREEDC Founding Member Ameresco Regional Director Stu Shunk advised the group that over the past decade, Ameresco has implemented \$100 million dollars of Energy Savings Performance Contracting in the State of Tennessee alone. He also reviewed their partnership with the University of Kentucky (UK) and their work with the Energy Conservation & Sustainable Behavior Program. The UK empowered program is fully customizable & has been designed to:

1. Pinpoint wasteful behaviors
2. Educate individuals on the importance of reducing waste
3. Educate & train individuals on targeted waste reduction strategies

#### 4. Incentivize individuals to take action

The UK program is a model program that can be replicated at the colleges and universities in Tennessee.

Gresham, Oregon Mayor Shane Bemis gave the keynote address. Gresham is the fourth largest city in Oregon with a population of 107,000 residents. Mayor Bemis stated that Oregon ranks as one of the top states in the nation for citizens choosing to purchase clean and renewable power through their utilities. Gresham ranks 8<sup>th</sup> in the nation on the Environmental Protection Agency's (EPA) Green Power Community list. Mayor Bemis also mentioned in 2004 that the city installed a cogeneration power plant to harness the biogas from the wastewater plant and convert it to energy to assist in powering the wastewater plant's operations. The cogenerator produces over half of the plant's energy and saves ratepayers over a \$250,000 each year in energy costs. In 2009, through a power purchase agreement with a private company, the City of Gresham installed the Pacific Northwest's largest ground mounted solar array on site at the Wastewater Treatment Plant. The solar array produces 450,000 kilowatts of energy per year, equating to 8 percent of the plant's total energy needs. The city also purchases 15 percent of the wastewater plant's power from wind power sources. Mayor Bemis added that in 2010, the City Council approved the City's Internal Operations and Facilities Sustainability Plan, which among other important initiatives, launched an aggressive goal to have all city operations use 100 percent clean and renewable energy by 2030.

Global Green Lighting President, Don Leopard, informed the audience that in April 2011 Chattanooga was the First City in the United States to deploy on a large scale, low energy lighting with Smart Grid technology, creating additional energy saving, further maintenance cost reduction, increased reliability, and security features to make the environment safer. The Chattanooga North Shore and Coolidge Park was the first beta test site for this most advanced lighting system in the country to be demonstrated on a large scale basis. Over 300 LED and Induction lights, all containing the wireless Lighting Control system have been successfully deployed and monitored. With average annual savings of

over \$2,750,000, the Chattanooga system pays for itself within 7 years and provides ongoing environmental and community benefits at no charge.

Chris Kozcaja, PHG Energy Director of Business Development presented a powerpoint presentation that illustrated how PHG Energy converts wastes to energy. He stressed that PHG Energy does not use incineration. Their scalable downdraft gasifier converts crop residues, scrap tires and sludge into syngas. The key is to having feedstock with 30 percent or less moisture. The Covington Wastewater project will divert over 300 tons/month diverted from landfill and save over 452 tons of CO2 Emissions per year. The project is expected to be completed in August 2013. Webb also added that General Electric (GE) Power & Water and PHG Energy have successfully collaborated on an innovative project to produce electricity from waste material by employing gasification technology to power to GE's Clean Cycle heat-to-power generator. Phyllis Shelton, Vice-President of Rhoades Car International gave a historical overview of Rhoades Car International which is a manufacturer of solar 4 wheel quadricycles with 1, 2, or 4 seats and 1, 7 and 42 speed gearing with optional pedal-assist electric motor. The frames of the quadricycles are made from recycled steel and that Tennessee-based suppliers make the majority of proprietary components. Rhoades Car International also won the David Lipscomb University 2011 Green Business Innovator of the Year. Shelton also expressed her appreciation to the TREEDC leadership for exploring market development opportunities for Rhoades Car manufacturing in Tennessee and the Philippines.

Levoid Baltimore with TREEDC Gold Member Tennessee Gas Association gave a thorough presentation about the environmental and economic benefits of natural gas for fleets. Mr. Baltimore who works for Elks River Utility District informed the attendees that the natural gas industry was poised to handle the expected increase in demand of natural gas as an alternative transportation fuel for years to come. TREEDC Mayors and TGA were working closely together to support a network on Compressed Natural Gas stations for public and private fleets across Tennessee.

Ron Smithfield, President of Smithfield Manufacturing, Inc. stated that his firm will institute the following sustainable goals:

1. Reduce Electricity \$ by 10%;
2. Recycle more Metal Scrap \$ by 20%;
3. Reduce Oil &Coolant Disposal \$ by 20%; and
4. Reduce Packaging \$ by 10%;

Attendees also participated in an interactive energy survey conducted by Rick Marsh, Director, Industrial Energy Efficiency Network. This survey measures potential energy efficiency markets and awareness.

The lunch was furnished by Ameresco.