



TREEDC - Tennessee Tech University Forum: July 27, 2012

TTU – STEM Center, Cookeville, Tennessee

From: Warren Nevad, MTAS Municipal Management Consultant

On July 27, 2012, the Tennessee Renewable Energy and Economic Development Council (TREEDC) partnered with Tennessee Tech University (TTU), Tennessee Gas Association (TGA), USDA Rural Development, the University of Tennessee (UT) Institute for Public Service (IPS) and PHG Energy to conduct the 2nd annual community outreach forum in the Upper Cumberland area. A total of 92 attendees learned about creative financing measures for public entities in solar and natural gas fleet development. The participants also heard about the State of Tennessee's sustainability and energy efficient incentives. Mayors and officials from Bristol, Byrdstown, Cookeville, Gainesboro, Jackson County, Kingston and Knoxville also attended the forum. TTU Associate Director of Extended Services Dennis Tennant crafted the agenda which consisted of presentations from representatives with Tennessee Gas Association, JBC Solar, Tennessee Department of Environment and Conservation (TDEC), Tennessee Department of Economic and Community Development (ECD), Tennessee Solar Institute, 49 Green, ECotality, ARiES Energy and Pathway Lending.

TREEDC President/Ducktown Mayor James Talley welcomed the crowd and expressed his appreciation for the leadership of TREEDC Chairman/UT President Emeritus Dr. Joe Johnson and Tennessee Tech University Vice President Dr. Susan Elkins for growing the TREEDC membership in the Upper Cumberland region. Mayor Talley announced that TREEDC had been involved in several waste to energy projects and earned an environmental leadership award by Governor Bill Haslam. Dr. Elkins stated that she was very proud of the hard work in organizing the forum by Mr. Tennant. She also noted the large presence of TTU's faculty and staff that we were in attendance. MTAS Consultant/TREEDC Director Warren Nevad thanked Mr. Tennant for bringing in more colleges and universities to the TREEDC network. Nevad added that TREEDC now has 85 city and county members compared to 62 this time last year. He concluded his remarks by stating that TREEDC can help the renewable energy industry in Tennessee grow by focusing on the following key objectives for its members: 1) outreach and awareness; 2) creating developmental opportunities of alternative fuels for local government's fleets such as natural gas, electric vehicles and biofuels; and 3) project assistance for clean energy facilities such as waste to energy and solar development.

Pat Riley of the Tennessee Gas Association and Gibson County Utilities highlighted the environmental and economic benefits of natural gas as an alternative transportation fuel for local government's fleets. He encouraged the local elected and university officials to explore the feasibility of using compressed natural gas as a more cost effective alternative than petroleum. He advised the crowd that TREEDC was undertaking a capital funding program to help aid local governments to bundle their developmental projects regarding the construction of compressed natural gas stations and vehicle conversions.

Catherine Wilt, Director of Policy for the Center for Clean Products gave an informative overview of the Department of Energy SunShot grant program with the University of Tennessee. Partners include TREEDC member cities Memphis, Franklin and Knoxville. The purpose of the proposal is to identify bottlenecks to solar adoption, reduce costs and speed deployment.

Tom Calaway, JBS Solar Vice President presented a powerpoint regarding the benefits of communities using creative financing tools to facilitate the deployment of solar systems to their public facilities. Some of the key discussion points included the following items:

- 1) Solar systems today are financed today by using State Federal tax credits like the Federal Government's 30% tax incentive which expires in 2016;
- 2) Municipalities cannot take advantage of these tax credits;
- 3) To overcome this problem Solar Smart Inc., in agreement with the Municipality, builds the system. Under this arrangement Solar Smart Inc. can take advantage of the tax credits and when the credits expire (normally after seven years) 95% of the ownership "flips" to the Municipality;
- 4) The Municipality then takes over operation of the system and receives the revenue; and
- 5) Projects are cash flow positive from the beginning and are an excellent investment for the taxpayers.

Calaway's powerpoint along with the other powerpoints can be viewed at http://www.treedc.us/newsletters_reports/forum_presentations/index.html

Molly Cripps, ECD Energy Director gave a thorough update of the funding rounds of the Stimulus funded Energy Efficiency Community Development Block Grants (EECDBG) which have provided needed funding of \$13,818, 200 to 145 local government projects across the state. Cripps stated that TREEDC members East Ridge and Sunbright were successful in completing their programs which resulted in significant annual energy savings to these

communities. Cripps also reviewed other successful projects that involved building retrofits, LED traffic lights and more efficient street lighting for local governments. She also added that there was \$3339,519.01 left to be funded to local governments that had not been awarded grants during the prior two rounds. She also stated that her department was looking forward to the strategic planning session with TDEC and TREEDC in the Fall.

Lori Munkeboe, TDEC Director of Sustainable Initiatives gave an overview of TDEC'S Clean Energy grant program funding for year 1. She reviewed the following TREEDC member projects:

- 1) The City of Covington, a municipal local government in Tipton County, Tennessee, is receiving a \$250,000 grant to enact their proposed Waste Biomass Gasification to Energy Project that will not only create electricity, but will also utilize the city's wood waste and biosolids as fuel;
- 2) The City of Brentwood is a municipal government in Williamson County, Tennessee receiving a grant of \$52,250 to implement an energy saving and emissions reducing project at the Brentwood Public Library, which currently consumes more energy than any other public facility in the city;
- 3) The City of Chattanooga is a municipal government receiving \$200,000 to install varying frequency drives (VFD) units on the four UNOX Oxygenation Tank Mixers utilized by the Moccasin Bend Wastewater Treatment Plant in Hamilton County, TN.; and
- 4) The City of Athens, a municipal government in McMinn County, TN, is receiving \$250,000 to construct three Grid-Tied Solar Power Producing Systems and one small office systems.

Stephanie Cox, ECotality Area service Manager for North America gave a thorough review of the ECotality electric vehicle charging project. This was a \$230 million dollar infrastructure study in six (6) states and Washington, DC. The electric vehicles involved in the project included the Nissan LEAF and Chevy Volt. In Tennessee, many successful businesses such as Cracker Barrel, Loveless Café, Peabody and Lowes Vanderbilt hotels all took advantage of the ECotality deployment of various electric charging stations. She also praised TREEDC cities Brentwood and Ducktown for placing electric charging stations at their facilities. The goal in the Tennessee project was to locate 1,000 electric charging stations.

Henning Bollerslev of 49 Green discussed the Danish technology that converts municipal wastes into synthetic diesel by using a microwave conversion process that does not emit

emissions. Bollerslev, a native of Denmark, expressed his appreciation to TREEDC officials for extending an opportunity to develop and commercialize his technology in Tennessee. Bollerslev also stated that the TREEDC model could be replicated in all the states.

Harvey Abouelata, President of ARiESs Energy also gave a detailed powerpoint illustrating the significant environmental progress exhibited by Wampler's Sausage. The Wampler's 30kW and 500kW solar systems produce a total of 694,410 kilowatt hours annually. The Cellulose to hydrogen energy system (CHyP) being developed for Wampplers will produce 3,985,800 kilowatt hours annually. According to Abouelata, the combined 4,680,210 kilowatts of clean energy will be enough to annual power 325 average sized homes in the TVA region.

The CHyP system uses a thermal gasification process that converts cellulosic material such as switchgrass into syngas by reacting it at very high temperatures. Abouelata concluded his remarks by stating that the new tagline for Wampler's Sausage is: **"Established in 1937 and Energy Independent in 2012"**

The networking lunch consisted of a presentation by Pathway Lending Senior Vice President Amy Bunton regarding energy efficiency and clean energy loan programs for businesses in Tennessee. New TTU President Dr. Phil Oldham also appeared at the luncheon. The mayors of TREEDC are planning for a busy Fall 2012. See below schedule or go to www.treedc.us.

Fall 2012 Schedule

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| 1) September 12, 2012 | Murfreesboro: Leadership Middle Tennessee Summit |
| 2) September 23, 2012 | Maryville College: Mountain Challenge |
| 3) September 26-28, 2012 | Montgomery Bell: TDEC Sustainability Summit |
| 4) October 4 th -5 th , 2012 | Ducktown : Board meeting/ECD-TDEC Strategic retreat |
| 5) October 12 th or 26 th , 2012 | Chattanooga: UTC-Volkswagen forum |
| 6) October 18-19, 2012 | Knoxville: Tennessee Solar Energy Association |
| 7) November 12-week | Memphis: Christian Brothers University/Mirimichi forum |