



## **TREEDC – Memphis Forum- Christian Brothers University: November 18, 2012**

From: Warren Nevad, MTAS Municipal Management Consultant

On November 18, 2012, the Tennessee Renewable Energy and Economic Development Council (TREEDC) partnered with Christian Brothers University (CBU), Mirimichi Green, Tennessee Gas Association (TGA), Michael Brady, Inc. and the University of Tennessee (UT) Institute for Public Service (IPS) to conduct the 3<sup>rd</sup> annual community-wide renewable energy forum for Memphis area stakeholders. A total of 81 attendees learned about the various renewable energy related initiatives by CBU and prominent area businesses including Team Green Zone, Memphis Bioworks, Greene Turbine, PHG Energy and Inman Solar.

TREEDC Director/MTAS Consultant Warren Nevad welcomed the crowd and expressed his appreciation for the leadership of TREEDC Schools Coordinator/Memphis Councilman Dr. Edmund Ford, Jr., Memphis & Shelby County Sustainability Director Paul Young and Sean MacInnes, Sustainability Chairman of CBU for organizing the Memphis forum. TREEDC Awards of Excellence were given to these Memphis area leaders. TREEDC Member Pathway Lending announced a commitment of \$10 million through the Sustainable Communities initiative to provide financing for energy efficiency improvements for businesses located in Memphis and Shelby County. This initiative will help more area businesses to be able to implement energy efficiency projects and achieve long-term energy cost savings. This loan program is a public-private partnership between TREEDC Mayors AC Wharton, Jr. and Mark Luttrell, the Joint Offices of Sustainability, and Pathway Lending. According to Memphis and Shelby County Sustainability Director Paul Young, this partnership is also designed to provide the necessary tools and resources to motivate individuals in the community to make their homes and businesses more energy efficient. Pathway Lending Vice President Amy Bunton added that Pathway is working with TREEDC leaders to bring their Sustainable Communities initiative to other TREEDC member cities across the state including Knoxville.

Sean MacInnes expressed his appreciation for the CBU – TREEDC partnership and gave an update of CBU's sustainability initiatives. CBU Director of Living Center Dr. Ben Jordan gave an overview of the necessity of integrating sustainability into your campus' values and practices. He stressed that "personal energy" was crucial to help sustain the clean energy movement in Memphis and the rest of the country. Dr. Jordan also provided some interesting questions and insights by his sustainability students. Andrew Magodvitz with

Team Green Zone reviewed Brother International's energy efficiency projects at their Bartlett site. He also reviewed the appropriate seven action steps necessary to develop energy efficiency projects. His powerpoint along with the other presentations will be available at [http://www.treedc.us/newsletters\\_reports/forum\\_presentations/index.html](http://www.treedc.us/newsletters_reports/forum_presentations/index.html)

TREEDC Member Memphis Bioworks reviewed some of their recent sustainability projects including the LED garage lighting retrofit and the garage solar array project. Dr. Steven Bares advised the audience that Memphis Bioworks installed 292 LED fixtures which reduced greenhouse gases by 190 tons. Pauline Vernon explained that the garage solar array project contained 2,982 Sharp Monocrystalline module panels covering 86,000 square feet or 2 acres. This solar array produces enough electricity to power 100 average homes a year. Christina Treglia, Manager of the Tennessee Department of Environment & Conservation Department (TDEC) Sustainable Government Program gave an overview of TDEC'S Clean Energy grant program funding for year 1 including the Covington waste to energy project.

Geoff Greene, President of Greene Turbine gave a powerpoint presentation that showed illustrations of the turbine which has an internal fluid drive that can provide multi-megawatts of affordable, pollution free electricity. This system operates underwater powered by ocean and/or large river currents. The biggest advantage to the system is once deployed and operational there is a very low cost to maintain the system. Other features of the system include:

- ◆ Zero carbon footprint in operation;
- ◆ Built from simple materials & Commercial Off-The-Shelf parts;
- ◆ Can be scaled-up to provide multiple MW per unit;
- ◆ Simplicity leads to reliability & durability;
- ◆ Environmentally benign; and
- ◆ Generates power 24/7

Dr. John Hochstein of the University of Memphis has also worked closely on this project which recently received a TDEC Clean Energy Grant.

Chris Koczaja, PHG Energy Vice President of Sales & Engineering presented a powerpoint presentation that illustrated how PHG Energy converts wastes to energy. He stressed that the 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. This process can offer clean carbon neutral energy solutions to waste

disposal costs. The Covington Wastewater project will divert over 300 tons/month diverted from landfill and save over 452 tons of CO2 Emissions per year. Biochar is also created from the process is stable and has secondary uses. TREEDC will organize a tour of the facility with PHG Energy at the Tennessee Municipal League Annual Conference in Memphis in June 2013.

Jeff O'Connor with Inman Solar gave a detailed powerpoint presentation regarding Inman Solar's projects in Chattanooga, Memphis and Atlanta, Georgia. Inman Solar is a turnkey Solar Photovoltaic (PV) Solar Developer. O'Connor also added that solar creates jobs, consumes no water and that installing 5kW of solar is the carbon equivalent of taking a car off the road or planting 1.5 acres of trees. Pat Riley of TREEDC Gold Member 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 the TREEDC energy fund program would aid local governments to bundle their developmental projects regarding the construction of compressed natural gas stations and vehicle conversions. He concluded his remarks by stating that he saved over \$75 in fuel costs today by using his truck which is powered by natural gas.

During lunch, Nevad gave an overview of the TREEDC International Exchange Program. This program created by the TREEDC board is designed to cultivate technology and informational exchange among TREEDC's business, colleges, local government and state agency members with international renewable energy related counterparts. Many Tennessee renewable energy firms conduct business overseas and the mayors of TREEDC desire to help advance their business plans by engaging other countries to help start similar grassroots outreach endeavors. TREEDC is working with Greene Turbine, PHG Energy, Mirimichi Green, ARiES Energy and Harrelson & Associates to help open up other markets in the Philippines, Kenya and other countries in the Exchange Program. TREEDC also is becoming active in promoting geothermal for schools, jails and state parks. TREEDC is also gearing up for the 2013 membership campaign. A schedule of 2013 events will be released shortly. Nevad presented Rich and Deb Peterson with an appreciation award and introduced Rich Peterson, the lunch keynote speaker.

Peterson gave an overview of TREEDC Founding Member Mirimichi Green. This organization is a sister company to Mirimichi Golf Course owned by entertainer and film star Justin Timberlake. Peterson stressed that the Timberlake family wants to be ambassadors for the environment. Mirimichi Green has currently developed and implemented comprehensive and advanced sustainability programming, and is one of the most recognized and award winning golf courses in the world for these efforts. Mirimichi

Green uses a process that merges sound science with sustainability to implement innovative, resourceful and effective solutions. The staff has completed over 350 projects throughout the world. Projects include various brownfield sites, petroleum products, heavy metals, nutrients, pesticides and other contaminated lands and water. Peterson explained the patented EASIE Green Process in environmental solutions which is contained in their website at <http://www.mirimichigreen.com/>. Peterson concluded his remarks by stating that the company is developing agricultural turf and garden products that are derived from beef tallow and offers benefits such as greater weed control and slower growth of grass and turf. He is looking forward to working with TREEDC in the future to examine the feasibility of distribution of these products to TREEDC member cities and counties across the state.

TREEDC is a statewide grassroots organization of 88 cities and counties promoting the economic benefits of renewable energy for Tennessee communities. TREEDC was formed by the University of Tennessee President Emeritus Dr. Joe Johnson in 2008. The organization recently received the Governor's award on energy resources and leadership. Please go to [www.treedc.us](http://www.treedc.us) for more information.

