



TREEDC

TENNESSEE RENEWABLE ENERGY & ECONOMIC DEVELOPMENT COUNCIL



TREEDC-Philippines

2016 Report

www.treedc.us

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Introduction

The Tennessee Renewable Energy & Economic Development Council (TREEDC) is a nonprofit grassroots organization of 96 mayors promoting the economic and environmental benefits of renewable energy for Tennessee communities. TREEDC was formed by the University of Tennessee President Emeritus Dr. Joe Johnson in 2008 and has grown substantially since its formation. TREEDC has expanded not only in the United States, but has also grown internationally. One of our key partners for this program is the Philippines. By visiting the country and holding educational forums, conferences and meetings with Mayors and university leaders, we have established a relationship with the people and the government

International Exchange Program

TREEDC has partnered with the Renewable Energy Association of the Philippines (REAP) to develop the TREEDC International Exchange Program which enrolls Philippine colleges and cities as honorary members and to provide educational and career training opportunities for students. TREEDC has identified the Philippines as the pilot country to be used in this initiative.

In 2013, TREEDC conducted 3 free community renewable energy forums with Tennessee Tech University at Philippine member universities in the Manila, Central Luzon and Bicol regions. Our team also provided Typhoon relief efforts in Tacloban. In 2014, we held forums in the Mindanao and Visayas regions. We also engaged in project planning for waste to energy and solar facilities for our Philippine members. Our first solar project was developed in 2015 at Puerto Princesa City Hall by Vis Solis.

Mission of Program

To create renewable energy marketing opportunities and jobs for both Philippines and Tennessee entities through educational forums, business networking, social responsibility and collaborative projects while increasing clean energy solutions in the Philippines.

Program Objectives

- 1) Creating sister city/college matches for Tennessee and Philippines;
- 2) Exchanging information and technology;
- 3) Creating market opportunities for businesses in the Philippines and Tennessee; and
- 4) Expanding by building a similar TREEDC network in the Philippines in partnership with REAP by including other membership sectors such as business, government, academic, and other non-profits.

Program Members

Bicol University
 Central Bicol State University
 Central Philippine University
 Philippines Electronic and Communications Institute of
 Technology (PECIT)
 Polytechnic University of the Philippines
 Maritime Academy of Asia and the Pacific Systems Plus
 College Foundation
 Technological University of the Philippines
 The University of the Philippines Los Banos
 The University of Philippines Visayas
 Maritime Academy of Asia and the Pacific

Bataan Peninsula State University
 Lyceum University of the Philippines
 Philippine Normal University
 Pamantasan ng Lungsod ng Pasig
 Philippine Association of Extension Progr. Implementers
 Mapua Institute of Technology
 Carlos Hildago Memorial State College
 Northern Negros State College

 Miag-ao ,Butuan, Daet, Mabalacat, Naga City
 Sorsogon , Puerto Princesa & Iloilo City

Past Visits

October 24 –30, 2012 - During our initial meeting on October 24, 2012, we gave an overview of the history of TREEDC and the international exchange program where cities in the Philippines could partner with a TREEDC city and university to exchange best practices and information related to our business partners. The TREEDC International Exchange program is also designed to give prospective partners dialogue on how to replicate a similar TREEDC model. We explained that our TREEDC business partners have developed biodiesel processing, geothermal and solar facilities and are also developing waste to energy projects across the state of Tennessee. TREEDC has become the front door to many of these projects across the state because the development community knows that mayors and colleges are the key officials to starting and accelerating production of clean energy. Also, during our initial visit we visited with Philippine Department of Energy and we partnered with the Renewable Energy Association of the Philippines (REAP) which was started in 1985 and is the umbrella organization for the various biomass, solar, wind and geothermal organizations throughout the Philippines.

March 16 – April 2, 2013 - During March 2013, the TREEDC delegation along with REAP President Oly Serafica met with Presidents ,Chancellors and Vice Presidents representing Central Bicol State University, Central Philippine University, University of Philippines Los Banos, Philippine Electronics and Communication Institute of Technology, Polytechnic University of the Philippines, Systems Plus College Foundation, and Technological University of the Philippines. These schools all agreed in principle to become members of TREEDC and to be matched for a sister school from the TREEDC college/university sector for informational and technology exchanges. TREEDC plans to court more Philippine schools and cities in the future. The TREEDC delegation will work with REAP to organize several free community outreach forums at various schools across the country in September. TREEDC also plans to replicate its renewable energy network developmental model in the Philippines.

The Business Mirror published a story relating to this visit:

<http://businessmirror.com.ph/index.php/en/news/economy/11513-us-group-to-pilot-test-renewable-energy-program-in-phl>

June 26-July 7, 2013 – TREEDC delegation returned to the Philippines to provide an update on the International Exchange Program with its Philippine members and to schedule four educational community forums at various colleges in the Metro Manila, Central Luzon and Bicol Regions later on in the year. The purpose of these forums is to promote awareness of Tennessee’s best practices in renewable energy and to connect different educational opportunities and jobs for both Philippines and Tennessee entities through outreach, business networking, student career development, and collaborative projects. During the trip, James Talley, Mayor of Ducktown and TREEDC President, spoke at the League of Corporate Social Responsibility Conference in Manila about the International Exchange Program. TREEDC also participated in the Asian Development Bank’s Clean Energy Forum and met with officials from Cemex and Phillips, Philippines. The City of Ducktown,

Tennessee became the Sister City of Mabalacat, Pampanga where TREEDC has a local office. TREEDC was also featured in GNN News Network which was broadcasted across the country.

September 21-October 5, 2013 – Delegates returned to the Philippines at this time to conduct our initial international renewable energy forums as part of the TREEDC International Exchange Program. We have partnered with the Renewable Energy Association of the Philippines (REAP) to enroll Philippine colleges and universities, municipalities and chambers of commerce as honorary members of TREEDC. During the trip, TREEDC and REAP conducted three educational forums at different colleges. A total of 610 Philippine students, faculty, business leaders and mayors were introduced to Tennessee renewable energy related business and research along with Philippine projects throughout the country. TREEDC, Tennessee Tech University representative, Dennis Tennant, and TREEDC founding member, Vis Solis, met with the Commerce Selection of the US Embassy to share results of the program with the federal government. TREEDC presented papers at the International Research on Higher Education which was coordinated by the Department of Science and Technology and Polytechnic University of the Philippines. Plans were made to sponsor a 3 day conference in the Caraga Region of Mindanao in February 2014.

February 15- March 2, 2014 - Delegates from the Tennessee Renewable Energy & Economic Development Council joined forces with the Renewable Energy Association of the Philippines to conduct educational conferences in Butuan City and Mariveles, Bataan Philippines in February. TREEDC also participated in the Philippine Investment Forum in Manila where TREEDC President James Talley spoke about the TREEDC International Exchange Program. He announced that TREEDC selected the Philippines as its Pilot Country because of its vast potential of renewable energy resources, high energy costs and frequent brownouts. TREEDC also followed up with member cities Naga City and Mabalacat to provide updates and to make plans for future projects and visits. TREEDC, E3 Solutions, Tennessee based ARiES Energy and REAP officials traveled to Butuan City in Mindanao on February 19, 2014 for the 2nd Caraga Renewable Energy Forum. During a press conference held at the Philippine Electronics and Communication Institute of Technology (PECIT) Conference Room, TREEDC, REAP, PECIT and other guests discussed the potentials and benefits of renewable energy in the region and the need for active collaboration between government agencies, technology providers, the private sector and media to encourage its widespread utilization. Several media networks including the Philippine Information Agency of Caraga, Channel 5 News, a local affiliate of NBC, and several others attended the press conference. The final day of the conference included educational tours of PECIT's renewable energy demonstration projects and a field trip/tour of a biogas system powering a lemongrass distillery.

March – June 2014 – TREEDC International Affairs Director Doug Jackson who lives in the Philippines has conducted a series of follow-up visits and project planning dialogue with our Tennessee and Philippine business members, university and government stakeholders. The TREEDC International Affairs Director is working every day to help build our grassroots educational approach across the Philippines. We have boots on the ground every day.

June 4- 18, 2014 – Our team provided a presentation to the Asia Clean Energy Forum in Mandaluyong. We also conducted follow-up visits with some of our university members to explore the feasibility of developing renewable energy campuses and to provide future tuition assistance to needy students. TREEDC will also continue to explore solutions to the rapid problem of landfill waste management.

October 12-14, 2014 – TREEDC hosted our Philippine dignitaries for our Inaugural International Renewable Energy Conference at Tennessee Tech University. TREEDC Member Vis Solis organized tours of renewable energy facilities across Tennessee to help build educational awareness and market opportunities for Tennessee and Philippine businesses. The delegation visited the Vis Solis solar field and a tanning studio with solar panels in Fayetteville, Tennessee, traveled to Ducktown, Tennessee to visit their solar park, and toured Wampler’s Sausage Factory to observe their renewable energy project. During the conference, Philippine and Tennessee renewable energy stakeholders developed an action plan to help each other advance renewable energy by creating more educational awareness, initiate social responsibility programs which facilitate energy efficiency, biomass and solar related projects.



Pictured above: Members of the October 2014 Filipino Delegation at the TREEDC Conference at Tennessee Technological University

November 2014- TREEDC hosted Mabalacat City Councilors and their secretary. The City of Mabalacat provided a key to the city to TREEDC President James Talley. The dignitaries from Mabalacat also visited PHG Energy and visited solar arrays in Ducktown and Franklin, Tennessee.

December 2014 – The Tennessee Renewable Energy & Economic Development Council (TREEDC), the University of Tennessee (UT) and Tennessee Technological University (TTU) delegates returned to the Philippines in December 2014 to participate in a national PAEPI convention, regional green technology summit and two academic forums. The objectives of this visit were to become more familiar with Philippines laws and customs; commence preparations for an International Trade Mission to the Philippines around July 2015; and to cultivate proposals from TREEDC-Philippine members interested in seeking partnerships with U.S technology manufacturers and providers.

TREEDC visited the campuses of San Beda College, Holy Angel University, Technological University of the Philippines (TUP) Visayas and Taguig City campuses, Philippine Normal University (PNU) Cadiz and Manila campuses and Pasig City University. TREEDC also had the privilege of meeting the Mayors from Pasig City, Toboso and Bacolod as well as the Vice-Mayor of Cadiz City in Negros Occidental.



Pictured above: ARiES Energy Cellulose to Hydrogen Project and Opportunities for Women in Renewable Energy by Mary Shaffer Gill, Vice President, ARiES Energy, Mayor James Talley, Warren Nevad

July 15-31, 2015- TREEDC conducted another successful trade visit with its Philippine stakeholders across the Luzon, Visayas and Mindanao regions from July 15 to July 31. During this recent visit, TREEDC entered into Memorandums of Agreements of technical assistance and educational capacity building with Catanduanes State University, San Beda College and Central Mindanao State University during the Philippine Association of Program Implementers Association (PAEPI) Annual Conference in Manila. TREEDC and the

University of Tennessee Municipal Technical Advisory Service (MTAS) also shared best practices in municipal governance with a host of cities across the Philippines. The delegation conducted numerous business developmental meetings for public and private entities in the Bicol region, Visayas, and Metro Manila areas. During the trade mission, TREEDC met with the American Chamber of Commerce, U.S. Department of Commerce, Philippine Congressman Sherwin Gatchalian, Congressman Al Bichara along with Naga City Mayor John Bongat, Prieto Diaz Mayor Benito Doma and Legazpi City Mayor Noel Rosal to discuss strategies of creating more local jobs and training opportunities for renewable energy through partnerships with TREEDC's technology providers. TREEDC also met with University presidents representing Bicol University, University of Valenzuela, Technological University of the Philippines, Maritime Academy of Asia and the Pacific and Central Bicol State University. TREEDC also provided renewable energy scholarships to students representing Pamantasan ng Lungsod ng Pasig-University of Pasig City and Catanduanes State University. TREEDC and its U.S technology providers will return to the Philippines before the end of 2015.



TREEDC visits Congressman Sherwin Gatchalian and the University of Valenzuela

October 24-November 8, 2015

The TREEDC delegation consisted of TREEDC President/ Dunlap Mayor Dwain Land, The University of Tennessee MTAS Management Consultant/TREEDC Director Warren Nevad, TREEDC International Affairs Director Doug Jackson and Steve Harmon, TREEDC Member/President of Harmon Construction. The TREEDC delegation met with the Board of Directors with the United Nations of the Philippines (UNAP), Congressman Sherwin [Gatchalian](#), and the Bases Conversion and Development Authority (BCDA) President Arnel Paciano D. Casanova.

TREEDC and President/Mayor Land each established five (5) college scholarships for Pasig City University on November 4, 2015. In addition, the Richard Nevad, Sr. Memorial Scholarship was established by the Nevad family during an educational forum at Catanduanes State University on October 26, 2015. The TREEDC delegation conducted business developmental meetings for commercial entities and colleges in the Bicol, Visayas and Metro Manila areas in order to continue to cultivate developmental opportunities for TREEDC American technology providers. TREEDC also met with the BCDA, a Philippine government instrumentality vested with corporate powers to transform former US military bases into alternative productive civilian use. TREEDC is collaborating with the Technological University of the Philippines to provide renewable energy sources to its future campus at the Clark Green City Project. This project will cover 9,450 hectares and is envisioned to be the first smart, disaster-resilient and green city in the Philippines. Located at the heart of Central Luzon and populated by 12 million people, Clark Green City is positioned strategically between highly urbanizing cities of San Fernando, Angeles and Olongapo in Central Luzon as well as the cities of San Carlos, Dagupan and Urdaneta in Northern Luzon.

TREEDC concluded its visit by confirming its list of Philippine visitors to the 2nd Annual International Renewable Energy Conference set for December 14-15, 2015 at Tennessee Tech University.

February 8 - February 29, 2016



TREEDC Visits Makati Vice Mayor Leonardo Magpantay

The TREEDC delegation participated in the Annual Philippine Association of Program Extension Implementers (PAEPI) conference held at the University of Philippines-Diliman which consisted of over 75 universities providing outreach similar to the University of Tennessee Institute for Public Service. (IPS). Members of the TREEDC delegation also met with Makati Vice Mayor Leonardo Magpantay, Puerto Princesa Mayor Lucilo Bayron, Lapu - Lapu Mayor Paz Radaza and legal staff with Cebu Mayor Attorney Michael Rama. MTAS Management Consultant Nevad and Mayor Land shared best practices in municipal management with these cities.

During the 2 day PAEPI Conference, Thomas Austin with Acres Energy shared their plans of coordinating renewable energy with USA technology providers to promote TREEDC's mission of connecting renewable energy with economic development. The TREEDC delegation made plans for future educational forums at Palawan State University, University of Rizal System and social responsibility and clean energy projects in Tacloban. Plans were also developed to implement solar facilities for the City of Virac and TREEDC member Catanduanes State University. Memorandums of Understandings were created with Technological University of the Philippines (TUP) and Naga Metro Chamber of Commerce to promote educational awareness, capacity building and project development. Members of the TREEDC delegation also visited Iloilo City and Subic Bay area.

TREEDC also held a forum at TUP Visayas. Schools that participated in this forum included TREEDC members Northern Negros College of Science and Technology (NONESCOST), Carlos Hilado Memorial State College and private schools in the Bacolod area. Negros Occidental Governor Alfred Marañon Jr. declared the province as the Solar Energy Capital of the Philippines. The TREEDC delegation also met with officials from San Beda College to share plans for community solar and student exchange programs. TREEDC also discussed replicating their organization in the Philippines with TUP to generate more support from the Philippine government and stakeholders. TREEDC concluded its trip by meeting with Renewable Energy Association of the Philippines President Oly Serafica to discuss plans for the upcoming Power Trends Conference, pico-hydro development in Mindanao and TREEDC's return trip in July 2016

Membership

Due to our strong worldwide network, we are able to continue to promote and connect renewable energy with economic development for all communities and schools. We also started our statewide elementary school energy education program and partnered with the University of Tennessee Institute for Public Service (IPS), Pathway Lending and the Tennessee Department of Environment and Conservation (TDEC) to conduct a series of educational forums across the state. The TREEDC mayors have reached out to Arkansas, Florida, Georgia, Minnesota, Mississippi and the Philippines to showcase our Tennessee technology providers and best practices. The TREEDC mayors have also developed an exciting plan which will offer regional forums and opportunities to network among

renewable energy related stakeholders and communities. These events are free and we provide our guests with food and refreshments. We will continue to reach out to our schools by cosponsoring an Energy Careers Week in February and hosting elementary school forums across the state. We are proud partners with Tennessee Tech University and will conduct our 3rd Annual International Conference on renewable energy in Chattanooga, Tennessee in December 2016.

Conclusion

Thank you for your time. We, at TREEDC, greatly appreciate the work that you do and would be honored to have your support. If you choose to support our outreach in the Philippines, please contact TREEDC.

We hope that you will join our TREEDC Team!

