Board Meeting Notes

The BTU Board of Directors met on Monday, March 17, 2014 and discussed the following topics:

Financial

Joe Hegwood, Chief Financial Officer for the City of Bryan/BTU, presented the financial report. Revenue is up due to weather and both O&M and Capital spending are below budget.

Operations

Gary Miller, General Manager of BTU, presented the Annual Performance Report to the Board. He explained that the report was an overview of BTU's performance for the 2013 Fiscal Year. He further pointed out that BTU had steady growth in both the City and Rural systems, the SAIDI and SAIFI numbers were improved and that BTU's expenditures for rebate programs were under budget due to cancelling old programs and implementing the new Smart Home programs. The report will be presented to the Bryan City Council during its next joint meeting.

The Board discussed and approved the award of contracts for the following:

- Lake Bryan Forcemain Project to maintain the sanitary system for the public; and
- Repair and rewind a 12.5 MVA power transformer.

Randy Trimble, BTU Group Manager of Transmission and Distribution, presented the safety statistics for February, which stated that BTU had no at-fault vehicle accidents or recordable incidents. He next presented the SAIDI and SAIFI report for February. He explained that the outages in both systems were short and due to equipment failures and one public accident.

Mr. Trimble also presented Resolution Number BTU-P-189. The approved resolution authorizes BTU system operators to take or direct timely and appropriate real-time actions when necessary.

He lastly informed the Board that the American Public Power Association awarded BTU the distinguished Reliable Public Power Provider (RP_3) Diamond Designation award. This award is given to municipal electric utilities that demonstrate high proficiency in reliability, safety, workforce development and system improvement.

Mr. Miller informed the Board that the MyCon General Contractors sent letters of appreciation for BTU's help in removing the fiber and poles for the grand opening of the Walmart store on N. Harvey Mitchell Parkway. The Bryan/College Station Chamber of Commerce also thanked BTU for sponsoring the 2014 Economic Outlook Conference.

Bryan Texas Utilities

205 East 28th Street • Bryan, TX 77803

email: ContactBTU@btutilities.com

Hours of Operation
Monday - Friday, 8 a.m. - 5 p.m.

Board of Directors

Mr. Carl L. Benner, Chairman
Mr. Chris Peterson, Vice Chairman
Mr. Paul Turney, Secretary/Treasurer
Mr. Art Hughes, Ex-Officio
Mr. Flynn Adcock
Mr. David Bairrington
Mr. Bill Ballard
Mr. Ben Hardeman

General Manager

Gary Miller

Group Managers

Larry Gurley
Randy Trimble
David Werley

Division Managers

James Bodine
Bill Bullock
Shawndra Green
Michael Hering
Ken Lindberg
Doug Lyles
Vicki Reim
Scott Smith
James Tanneberger

Lee R. Starr, Chief Risk Officer

City of Bryan

Kean Register, City Manager
Joe Hegwood, CFO
Bernie Acre, CIO

IMPORTANT NUMBERS

Billing/Collections/Connects	(979) 821-5700
Electrical Outage/Lines Down	(979) 822-3777
Distribution/Line Design	(979) 821-5770

BRYAN TEXAS UTILITIES
BTU
THE DIFFERENCE IS YOU

Employee Spotlight

Josh Carmack

Energy Scheduler/Trader

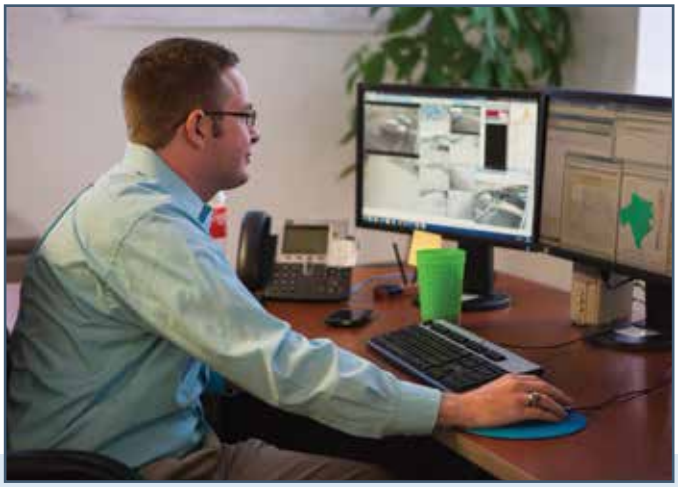
Story by Gina Florence.
Photos by Ryan Stout.

The BTU office known as the Qualified Scheduling Entity or QSE sits in a small-unmarked building just south of downtown Bryan. In this facility, Energy Schedulers/Traders are buying and selling energy to meet customers' needs on the wholesale marketplace through the Electric Reliability Council of Texas (ERCOT). Similar to the stock market, Energy Schedulers/Traders buy energy when the prices are low and sell when the rates are higher.

Energy schedulers maintain a 24-hour, seven-days-per-week operation. They monitor both day-ahead and real-time data for opportunities to buy and sell power on the electric grid.

Josh Carmack joined BTU as an Energy Scheduler/Trader in 2010 after graduating from Sam Houston State University with his Bachelors of Business Administration Degree. He knew other energy traders at different companies and became interested in this role. When he saw an opening at BTU, he jumped at the opportunity.

"I was convinced this was something I would like to pursue," Josh said. As a shift worker, he is one of five energy schedulers/traders who rotate between days and nights. "An average day shift consists of creating energy and ancillary bids and offers for the ERCOT day-ahead market. Then we are monitoring our local system, the ERCOT grid, and the price of the energy as it changes throughout the day. Based on monitoring, I make decisions on when to turn power plants on and off."



Energy schedulers/traders constantly try to determine the cheapest way to get energy "today"—whether that means BTU generates its own or buys it on the market. They also forecast for the busier summer months when energy levels peak.

Energy schedulers must be vigilant in their duties; big swings in energy demand can happen quickly and they must be ready to make adjustments as soon as those indicators become apparent. "During energy emergencies, I know that a small mistake could cost the company and consumers money," he said.

In addition to working full time at the QSE, Josh is also pursuing his Masters of Business Administration Degree from Prairie View A&M University.

"I think my MBA will help me perform my job even better. Many of my classes will be focused on economics and dealing with profits and loss (P&Ls). Both are key concepts for this job. My managers have been supportive of me going back to school."

Josh recommends to anyone who is interested in becoming an energy trader that they study economics and stay in school. "I left school for four years and returned when I knew I wanted to continue towards my MBA. It is challenging to get into the schedule of studying and finishing assignments on time while working full time."

Trying to balance work and school, Josh does make time for his two dogs, as well as some hobbies. He enjoys playing golf, hunting and going out in the Northgate area.

"On my days off, I play a lot of golf; mainly at the Bryan Municipal Course. It's usually not too crowded on my days off. I like living in Bryan-College Station; it has the amenities of a large city but the feel of a small town."

Right now, Josh enjoys the rotating shift because he's never doing the same job for more than a few days in a row. "I don't have an average day," he said. "It is always something new." However, he hopes to grow within BTU and, one day, graduate from the rotating shift schedule.

BTU Receives RP_3 Diamond Designation from the American Public Power Association

Story by Louellen S. Coker.

Bryan Texas Utilities (BTU) is pleased to announce that it is a proud recipient of the Reliable Public Power Provider (RP_3) Diamond Designation—the highest RP_3 award possible—from the American Public Power Association (APPA), the service organization for the nation's more than 2000 community owned electric utilities that, combined, serve more than 47 million Americans.

BTU was recognized on April 7 at the APPA Annual Engineering & Operations Technical Conference in Oklahoma City for demonstrating high proficiency in reliability, safety, workforce development and system improvement. Criteria within each of the four RP_3 areas are based upon sound business practices and recognized industry leading practices. Once earned, RP_3 utilities undergo comprehensive scrutiny every three years to maintain this prestigious distinction. BTU was first recognized in 2009 and again in 2011 with Platinum Designation (the second highest award).

Out of the 94 utilities that received the RP_3 distinction in 2014, BTU—with its score of 98.5—was one of the 29 nationwide that received the coveted Diamond Designation for scoring a 98 or higher. BTU was the only utility in Texas to receive this designation.

"BTU, along with the other RP_3 utilities, stands out as a model of safe, reliable and forward-thinking utility operations," said Brent McKinney, chair of APPA's RP_3 Review Panel. "They provide a high level of service to communities all over the country."

What is the RP_3 Program?

Every municipal electric utility that wants to be considered for the award must submit an extensive application packet that shows the utility is committed to its employees, customers and community. The award signifies that the utility is focused on operating an efficient, safe and reliable power distribution system.

BTU has long taken pride in its ability to maintain a level of reliability that surpasses that of other sectors of the utility industry. Prior to the RP_3's program's implementation in 2005, support for a utility's ability to quickly "get the lights back on" was primarily anecdotal. The program is an effort to not only document high workforce standards and allow utilities to gain public recognition for their sustained efforts at providing excellent service, but also to provide direction to further improve the utility's efforts.

Why does BTU participate?

While BTU is proud to receive this honor, the utility participates in the program for more than just "bragging rights." Randy Trimble, BTU Group Manager of Transmission and Distribution, explained, "In addition to giving BTU a tool for marketing what we do best within our community, the program provides criteria with specific benchmarks that can be used to create a structured framework for improving and/or sustaining a reliable electric system through ongoing operational self-checks." He emphasized, "We used the criteria and recommendations of the review panel from our earlier awards to improve upon our previous platinum designations. Through our efforts we've become a much stronger utility."

In short, BTU participates to ensure that it continually focuses on its mission "to give its customers exceptional service with reliable, competitively priced electricity while acting as responsible and caring member of the community."

Shown with the RP_3 Diamond Designation plaque awarded on April 7 are (left to right) Brent McKinney, Chair of APPA's RP_3 Review Panel; Randy Trimble, BTU Group Manager of Transmission and Distribution; Ray Berger, BTU Safety and Training Officer and Mike Hyland, APPA Senior Vice President of Engineering and Operations.

What are the criteria?

According to the APPA, being recognized by the RP_3 program demonstrates to community leaders, governing board members, suppliers and service providers a utility's commitment to its employees, customers and community. It is also a sign of a utility focused on operating an efficient, safe and reliable distribution system. A score of at least 80 percent is required to become an award recipient.

In the review process, each discipline—reliability, safety, workforce development and system improvement—is weighted equally with specific criteria that are based on sound business practices and a commitment to safe and reliable delivery of electricity.

Reliability

While "keeping the lights on" is our customers' embodiment of reliability, electric system reliability extends beyond reliable day-to-day service. Just a few of the key elements the reliability section scrutinizes include reliability indices, a mutual aid agreement, a system-wide disaster management plan (emergency response plan), along with both cyber and physical security.

Safety

The safety section analyzes the utility's commitment to employee safety beginning with management and flowing through the entire organization. Specific areas include the use of an approved safety manual, employee training including first aid, CPR and hazard assessment. Additionally, the utility's incident rate, reporting and tracking of near misses as well as the adherence to the safety program are part of the criteria. The utility must have a culture of safety to excel in this area.

Workforce development

The workforce development section explores the breadth and depth of a utility's commitment to developing all of its employees. It encompasses traditional training opportunities (workshops, college courses, in-house training), as well as broader methods of professional development and maintaining a sound workforce that includes networking and volunteerism.

System improvement

The system improvement criteria examines system improvement efforts and the degree to which the utility is acting as a good steward of its assets in a manner that ensures long-term system reliability and performance. Here, the focus is on participation in national, regional and local research and development programs, system planning and betterment projects, as well as maintaining the system's integrity and efficiency.

Transformers 101: Voltage Conversion that Powers our Lives

Story by Derek Merta, E.I.T., BTU Distribution Engineer.

In our April 2014 issue, we discussed the importance of substations in the article, *Substations 101: Powerful Connections that Affect our Daily Lives*. In addition to connecting our homes, schools and businesses to the power grid that moves electricity around our state and nation, substations house equipment that converts or "steps-down" high voltage power into a lower voltage that is stepped-down once again shortly before it is connected to our buildings.

This voltage step-down is accomplished through the use of transformers.

No, not the animated action figures that change from cars into robots that very likely appeared in your mind's eye. A transformer in the electric world is a piece of power equipment that is used to transform (or convert) power of one voltage level into power of another voltage level.

Describing how transformers work, Randy Trimble, BTU Group Manager of Transmission and Distribution said, "A transformer is usually built with coils of wire wrapped around a continuous piece of metal called a core. The primary coil is connected to the higher voltage while the secondary coil supplies power to the load at a lowered voltage level."

He specified, "Transformers work because there are more wraps (or windings) on one side of the core than the other. The number of wraps on each side of the core determines how much difference there will be in the voltage. In the Basic Transformer Operation diagram on the opposite page (top), side B has fewer windings than side A, so the voltage on side B will be lower than the voltage on side A."

This change in voltage happens without any moving parts through a phenomenon known as electromagnetism, one of the basic forces of nature.

BTU's electric grid consists of three main types of voltage levels: transmission, distribution and service. Transformers are necessary to convert power from a

Transformer located in the Rayburn Substation that is used to lower transmission voltage (69,000 Volts) down to distribution voltage (12,470 Volts).

A pad mounted distribution transformer used to provide service voltage to homes in an area with underground electric lines.

Transformers are necessary to convert power from a higher to a lower and usable voltage level.

higher to a lower and usable voltage level.

The highest level of voltage is called transmission voltage. Transmission voltage is present on the power lines that run between substations. The BTU transmission lines are powered at 69,000 Volts and 138,000 Volts. Transmission, or high voltage lines, are used to transmit energy over great distances before being transformed to the middle voltage level known as distribution voltage.

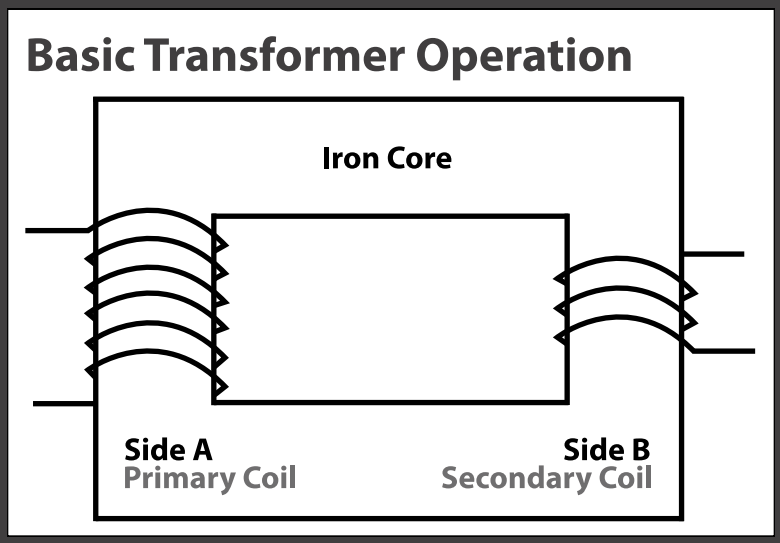
Shawndra Green, BTU Division Manager of Engineering and System Planning, explained, "The transformers that lower transmission voltage to distribution voltage are typically located in substations. These are very large because they must provide power for hundreds of homes."

These transformers (shown on the opposite page left and to the right center), are very heavy—with some weighing over 70 tons—and must be placed on a strong foundation on the ground.

After being stepped down to distribution voltage at substation transformers, power then runs on distribution lines into neighborhoods. BTU distribution lines are powered at 12,470 Volts.

To be usable, the power must undergo one last transformation. "Because the transformers that lower distribution voltage to service voltage are used to provide power to a few structures, they are much smaller than the ones found at substations," Ms. Green elaborated. "The smaller size of these transformers allows them to be installed near the homes they will serve either on poles in neighborhoods with overhead electric lines (shown to the right bottom) or on small pads in neighborhoods with underground electric lines (shown on the opposite page right)."

The lowest level of voltage is called service voltage. While transmission and distribution voltages are easier to send over long distances, this voltage is safer and more efficient to use in the home, school or office. Service voltages range from 120 to 480 Volts.



Above: Transformer located in the Koppe Bridge Substation used to transform 138,000 to 12,470 Volts. Below: A pole mounted distribution transformer used to provide service voltage to homes in an area with overhead electric lines.

BTU Sends Three Area Students to Washington, D.C. for 2014 Youth Tour

Story by Keri Honea.

Bryan Texas Utilities (BTU) has proudly selected three local high school students, Dalton Jones, Eric Pillai and Kimberly Wagnon, to send to Washington, D.C. as part of the National Rural Electric Cooperative Association's (NRECA) annual Government-in-Action Youth Tour. For this year's competition, hopeful participants had to write an essay describing what life would be like without electricity, something not many of us care to think about unless we're camping. Students also had to submit a letter of recommendation from an educator.

The winners will go on an expenses-paid trip to Washington, D.C. with students from across the country, from June 12th to the 20th, where they will learn about the U.S. government and tour our nation's capital.

Paul Buckner, BTU's Coordinator for Youth Tour, greatly enjoys helping sponsor the Youth Tour each and every year. "It's exciting to see our local students have the chance to meet other young people from across the country as they take advantage of this unique opportunity," he explained. "In addition to meeting other like-minded youths, they will develop a better understanding of how the U.S. government functions and possibly consider a career in government or public service."

The Government-in-Action Youth Tour developed from comments that Senator Lyndon B. Johnson made to the NRECA in 1957. The NRECA started the tour in 1964 and, every summer since then, participating states send students to Washington, D.C. to learn more about and witness first-hand how our government works. Approximately 1500 students and chaperones participate in the Youth Tour each year. Please visit www.btutilities.com or contact Paul at (979) 821-5859 or at pbuckner@btutilities.com for more information about the Government-in-Action Youth Tour.

Dalton Jones

Dalton Jones, son of Kyle and Dee Ann Jones, is a senior at Rudder High School. Dalton is involved in his school's band programs, and this year earned the honor of serving as Head Drum Major for the marching band. He is on the Student Council, and participates in numerous other extra-curricular activities. He plans to attend Texas A&M University. Dalton is eager to go to Washington, D.C. as a tribute to his grandmother, who always wanted to visit our nation's capital. "I deem this a great honor to experience some of the places I know she wanted to visit," he said. "To visit our nation's capital, will fulfill a dream of mine, and in a sense, hers as well."

Eric Pillai

Eric Pillai, son of Suresh and Melinda Antal Pillai, a sophomore at A&M Consolidated High School, participates in the Creative Writing and Interfaith Clubs. Eric is currently working on his Eagle Project with the Boy Scouts and enjoys scuba diving. He plans to study Petroleum Engineering before attending law school at Harvard. He is looking forward to seeing the inner-workings of the government. "I'll get to experience the political process first hand in a way that would be nearly impossible as an average citizen," he explained. "This is a one-in-a-million experience, and I'm very happy to have been chosen."

Kimberly Wagnon

Kimberly Wagnon is the daughter of Jilliene and Randy Wagnon. A sophomore at Bryan Collegiate High School, she plans to attend Sam Houston State University to pursue a Criminal Justice degree after she graduates. She is part of the Ambassadors Club at her school, and she volunteers as an office assistant at Sul Ross Elementary School. Mostly, she looks forward to visiting the FBI headquarters in DC, as her dream is to become a CSI (Crime Scene Investigator) or forensic scientist.