

UPDATE

APRIL - JUNE 2009



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Open House Generates Partnerships

For Southwestern and its customers, the May 27, 2009, Webbers Falls Open House hosted by the Tulsa District of the U.S. Army Corps of Engineers (Corps) was just one more example of what can be accomplished when partners in Federal hydropower work together.

The event, which was designed to publicize the upcoming rehabilitation of the project, drew staff members from several congressional offices as well as a healthy contingent of Corps, Southwestern, and customer representatives.

Colonel Anthony Funkhouser, Commander of the Tulsa District, welcomed the attendees and emphasized the importance of working together to accomplish common goals.

Southwestern's Administrator, Jon Worthington, spoke of the importance of hydropower, both regionally and nationally, and quantified its benefits by citing the average 5,570 gigawatt-hours produced each year at the hydropower plants within Southwestern's

marketing area, as well as the nine million barrels of oil saved each year by its production.

Addressing the importance of the rehabilitation from a customer's perspective were Ron Bowen, General Manager of City Water and Light of the City of Jonesboro, Arkansas (Jonesboro), and Ted Coombes, Executive Director of the Southwestern Power Resources Association (SPRA), Southwestern's largest customer group.



Photo Courtesy of Tulsa District Corps.

ADMINISTRATOR JON WORTHINGTON AND SPRA EXECUTIVE DIRECTOR TED COOMBES DON THE PROPER HEADGEAR ON A TOUR OF WEBBERS FALLS DURING AN OPEN HOUSE HOSTED BY THE CORPS' TULSA DISTRICT.



Photo Courtesy of Tulsa District Corps.

INCLINED-AXIS, KAPLAN-TYPE TURBINES PRESENT CERTAIN CHALLENGES, MAKING THEM THE FOCUS OF THE WEBBERS FALLS MAJOR REHABILITATION.

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Southwest Security 2.0

Security and reliability go hand in hand when it comes to the production and transmission of electric power. Keeping physical and cyber (computer network) assets safe from accidents, burglary, and sabotage helps keep power flowing dependably to businesses, services, and consumers so that it is ready when needed. Southwestern understands this important connection, and is actively implementing perimeter improvements, facility monitoring systems, and enhanced badging protocols as part of an increased security posture.

Rian Short, Southwestern's Security Program Manager, has coordinated many of these projects since he arrived at Southwestern in October 2008.

"In the last year the agency has re-written every security manual that's out there," he says. "We've improved our processes and procedures. We've also built stronger relationships with the Federal Bureau of Investigation, and are letting local law enforcement agencies know who we are and what we impact in their jurisdictions."

Many of the changes are a result of Southwestern's response to the Critical Infrastructure Protection (CIP) requirements of the North American Electric Reliability Corporation (NERC), which were recently strengthened. CIP standards encompass physical and cyber security. Because of Southwestern's role in the regional electric industry, many of its facilities and systems fall under the critical infrastructure category.



WIRELESS, MOTION-ACTIVATED CAMERAS AT THE BROWN SUBSTATION KEEP A WATCHFUL EYE ON SOUTHWESTERN'S ASSETS.



NEW, MORE OBVIOUS SIGNS HAVE BEEN AFFIXED AT THE ENTRANCES TO SOUTHWESTERN'S FACILITIES TO SUPPLEMENT PHYSICAL SECURITY IMPROVEMENTS.

12 (HSPD-12), which establishes standard security and credentialing functions throughout the Federal government. The standardized badges, which will replace the myriad of credentials used among Federal organizations, will employ proximity sensors, employee information, and biometric data so that an employee's badge can be used at any Federal facility where credentials are required.

"Southwestern is one of the first DOE organizations to be rolling out the 'logic' that makes these new badges operate like smart cards," says Short. "Eventually, an employee's badge will tell the system what that employee has been given access to no matter where in the Federal complex the employee is using it." 💧

"Keeping our systems secure from outages or other problems can avoid a cascade effect that would impact over eight million people in this part of the country," Short explains.

Southwestern's improvements not only involve paperwork and procedures, but also readily observable upgrades at several facilities.

"We've restricted access to certain buildings by redesigning gate systems and making improvements to entryways and reception areas," says Short. "We're also expanding the use of video monitoring at our sites."

Short has been impressed with the effectiveness of the high-tech wireless video and motion detector alarm system that are being installed at Southwestern's substations and elsewhere. "The units work similarly to cell phones in the way they automatically transmit video signal directly to the security dispatchers," he says. "They're highly sensitive to detecting motion, employ night vision, and are specially designed to withstand the kind of strong electromagnetic fields encountered at some of our facilities."

In another important security upgrade, Southwestern is one of the first organizations within the Department of Energy (DOE) to implement a new badging system being developed under Homeland Security Presidential Directive

WEBBERS FALLS FROM PAGE 1

Photo Courtesy of Tulsa District Corps.



OPEN HOUSE ATTENDEES OBSERVED THAT DISASSEMBLY OF THE UNIT #3 TURBINE AT WEBBERS FALLS SOMETIMES REQUIRES A HEAVY-HANDED APPROACH.

Dan Lehman, Project Engineer of the Webbers Falls rehabilitation project, finished up the Open House briefings with a look at the technical challenges involved. Lehman emphasized that the main goals of the project were elimination of turbine shaft cracking, reduction in corrosion, and better alignment of the turbine with the shaft. He also spoke of a new shaft design that increased the diameter while maintaining the same weight, with the goal, he said, of reducing fatigue on the shaft.

Photo Courtesy of Tulsa District Corps.



STANDING IN FRONT OF A CROSS-CUT SCHEMATIC OF THE INCLINED-AXIS TURBINE, COLONEL ANTHONY FUNKHOUSER OF THE CORPS' TULSA DISTRICT DESCRIBES THE COLLABORATIVE PROCESS THAT WILL MAKE WEBBERS FALLS FULLY FUNCTIONAL ONCE MORE.

Both spoke of the importance of the Jonesboro Memorandum of Agreement (MOA), which allows customer funding of non-routine maintenance items at Corps projects. Bowen noted that, to date, Southwestern's customers, through SPRA's Federal Power Marketing Committee, have funded well over \$170 million under the MOA, with Webbers Falls alone receiving \$70 million to fund rehabilitation work.

Following the customer perspective, Howard Davidson, Webbers Falls Powerplant Specialist, described the operational problems over the years at Webbers Falls, which he explained were mostly caused by the slant-axis design of the turbines. Davidson said this particular design, which is unique to the Webbers Falls, Ozark, and Harry S. Truman powerplants in Southwestern's marketing area, was chosen due to its minimal physical footprint, which in turn lowered initial construction costs.

He explained that as the plant went into production, however, it became clear that the 12 degree angle of the turbine creates oscillatory forces which cause excessive vibration that ultimately results in the failure of the turbine shaft due to cracking. Currently, one unit at the plant is non-operational due to a cracked turbine shaft.

Addressing the scope of the rehabilitation was Dan Brueggenjohann, Project Manager of the Webbers Falls rehabilitation project.

Brueggenjohann reported that the rehabilitation will include turbine fabrication, disassembly, and reassembly of all three units, plus rewind of the generators and upgrade of the turbine governors. He said the Corps estimates that once the rehabilitation is complete plant capacity will increase by 8.5 percent.

Lehman concluded by expressing his appreciation of the knowledge sharing between the Little Rock District and Tulsa District that has enabled the work at Webbers Falls to progress smoothly thus far. The Ozark Powerplant Turbine Rehabilitation contract was awarded in May 2005 for turbine design, turbine model testing, turbine fabrication, disassembly and reassembly of all five turbines, and replacement of one speed increaser. Lehman said lessons learned at Ozark have been applied with good results at Webbers Falls.

In addition to the informative briefings, participants in the Open House were able to tour areas of the plant and observe the normal operations of Units #1 and #2, as well as the ongoing disassembly of Unit #3. Lunch was provided by members of the Webbers Falls powerplant crew and other Corps employees. 💧

Fascination with Hydropower Is Only Logical



SPRA EXECUTIVE DIRECTOR TED COOMBES TELLS AN ANIMATED TALE OF LEGISLATIVE ADVENTURES AT SPRA'S 2009 ANNUAL MEETING.

With national interest in green energy on the rise, members of the Southwestern Power Resources Association (SPRA) came together for SPRA's 52nd annual meeting on April 10-12, 2009, in Tulsa, Oklahoma, mindful of their continuing role in the success of the Federal hydropower program – the most logical “green energy” alternative available. Owing to its pedigree as the oldest, most-developed, and least-polluting power source, hydropower was expressed in the conference theme as the “HydroLOGIC” choice for the future.

Over the two-day meeting, Southwestern briefed SPRA's committee members on the status of hydropower operations and regulatory issues on the first day, and followed up with briefings on competing uses, rates, and Federal hydropower marketing activities on the second.



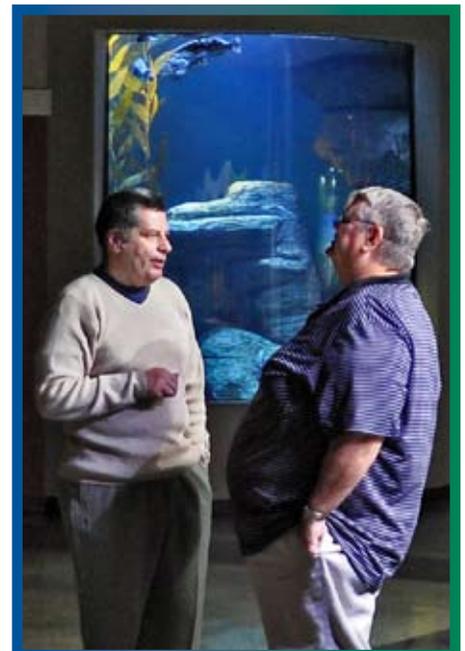
SOUTHWESTERN'S MICHAEL BRAIRTON AND JON WORTHINGTON SPEAK WITH INHOFE STAFF MEMBER BLU HULSEY AND TED COOMBES AT SPRA'S ANNUAL MEETING.

An important topic of discussion was the January 2009 ice storm that impacted nearly 300 miles of Southwestern's transmission system and destroyed tens of thousands of local distribution poles across 70 counties of northern Arkansas and southern Missouri. Southwestern reported to SPRA on the joint efforts among Southwestern, its customers, and contract crews from Western Area Power Administration and other organizations that succeeded in restoring power. Southwestern also provided an update on its plans to continue replacing optical ground wire and other system components in some of the areas that had suffered the most damage. Southwestern Administrator Jon Worthington personally thanked the customers who had helped jump-start restoration efforts by providing resources to Southwestern immediately after the storm.

Social activities enjoyed by conference-goers included two nights out on the town. The first night, SPRA members were invited out to a local entertainment venue where they could get dinner and a live show. For the traditional second-night gala,



(L) ADMINISTRATOR JON WORTHINGTON REPORTS ON SOUTHWESTERN'S RECENT ACTIVITIES AS TED COOMBES AND SPRA PRESIDENT BOB WILLIAMS LISTEN.



(R) GORDON STEWART, HUSBAND OF SOUTHWESTERN PUBLIC UTILITIES SPECIALIST TRACEY STEWART, CHATS WITH BLAKE ELLIOTT OF KANSAS CITY, KS, IN THE COOL, AQUATIC AMBIENCE OF THE TULSA AQUARIUM.



TOM GEBHARD AND CHRISTIAN McMURRAY, REPRESENTING EAST TEXAS COOPERATIVES, JOIN SPRA MEMBERS AND SPOUSES AT THE MANTA RAY EXHIBIT AT THE TULSA AQUARIUM.



KEYNOTE SPEAKER BLU HULSEY ADDRESSES THE CROWD REGARDING UPCOMING LEGISLATIVE INITIATIVES AND OTHER ITEMS OF INTEREST.

the Tulsa Aquarium opened its doors for an exclusive evening. SPRA members attended a reception and strolled among the aquatic displays before having a sit-down dinner in the glow of the ceiling-high fish tanks. The shark tunnel proved to be a favorite spot on the tour.

On the final day of the meeting, SPRA Executive Director Ted Coombes reported on the state of the SPRA organization, including legislative matters of interest to the membership, and Worthington gave the Administrator's Report, covering Southwestern's activities over the preceding 12 months. Blu Hulsey, Esq., from the office of U.S. Senator James Inhofe, provided the keynote address.

The meeting concluded with the election of SPRA board members for the coming year, and a buffet luncheon. 💧



MICHAEL BRAIRTON, SOUTHWESTERN'S DEPUTY ADMINISTRATOR AT THE POWER MARKETING LIAISON OFFICE IN WASHINGTON, D.C., INTRODUCES HIMSELF TO SPRA'S MEMBERS.



SOUTHWESTERN EMPLOYEES AND CUSTOMER REPRESENTATIVES SOCIALIZE AT A SANDWICH BUFFET IN THE HOTEL ATRIUM BEFORE HEADING HOME AFTER THE MEETINGS.



TAKING THEIR CHANCES AT A SPRA-SPONSORED OUTING ON TUESDAY EVENING ARE WILLIAM HILLER WITH BEARSKIN SERVICES AT SOUTHWESTERN; MALDEN'S TED BELLERS; FULTON'S DARRELL DUNLAP; DARREN DUNLAP WITH MISSOURI PUBLIC UTILITIES ALLIANCE; TOM GEBHARD WITH EAST TEXAS CO-OPS; DIXIE ELECTRIC'S LESLIE AND JUANITA FALKS; AND SPRA'S TED COOMBES AND BARBARA DELGROSSO.

Whitney Turbine Under Way

Fabrication is in progress on the new stainless steel Units #1 and #2 for Whitney Dam Powerhouse. The turbines, being manufactured by Toshiba Corporation at its Keihin factory in Japan, are anticipated to be delivered in December 2009 and March 2010, respectively. The units are being replaced as part of a major rehabilitation project at Whitney.

Terry Bachim, Project Manager at the Fort Worth District of the U.S. Army Corps of Engineers, has been in constant contact with the contractors to monitor their progress. "After completion of the rehab we are expecting a 12 MW total increase in capacity for both units, from an existing 30 MW plant to a 42 MW plant," says Bachim. The Fort Worth District anticipates that the rehabilitation will be completed in 2012 or 2013. 💧



Photo Courtesy of Fort Worth District Corps.

THE RUNNER OF THE FUTURE WHITNEY UNIT #1 UNDERGOES WELDING AT TOSHIBA'S KEIHIN FACTORY IN JAPAN IN EARLY JUNE 2009.



Photo Courtesy of Little Rock District Corps.

VISITORS TO TABLE ROCK'S 50TH ANNIVERSARY, WHICH INCLUDED LOCAL, REGIONAL, AND STATE DIGNITARIES AS WELL AS TOURISTS, GATHERED AT THE ORIGINAL DEDICATION SITE ON THE DAM OVERLOOK.

Table Rock: 50 Years of Hydropower

Table Rock Dam and its hydroelectric powerplant turned 50 this year, and the Little Rock District of the U.S. Army Corps of Engineers (Corps) marked the event with a ceremony on June 14, 2009, on the same site at the visitor overlook where the original dedication ceremony took place on the same date in 1959. Local, regional, and state dignitaries were invited to attend. Several people who were involved with the dam's construction were also present, with name tags that stated "I Was Here 50 Years Ago."

To cap off the celebration, the Corps had previously coordinated with Southwestern to briefly spill water through all ten of the dam's flood control gates, a rare and impressive sight for the many visitors. 💧

Sparks of Interest

THE SENATE CONFIRMED DANIEL B. PONEMAN ON MAY 21, 2009, TO SERVE AS DEPUTY SECRETARY OF THE DEPARTMENT OF ENERGY. Since 2001, Poneman, an attorney, has been a Principal of The Scowcroft Group, an international business advisory firm. From 1993 to 1996, he served as Special Assistant to the President and Senior Director for Non-Proliferation and Export Controls at the National Security Council. While a senior fellow with the Forum for International Policy, he co-authored the book *Going Critical: The First North Korean Nuclear Crisis*, which received the 2005 Douglas Dillon Award for Distinguished Writing on American Diplomacy.



THE NEXT QUARTERLY MEETING OF THE SOUTHWESTERN POWER RESOURCES ASSOCIATION (SPRA) will be held at the Tan-Tar-A Resort on Lake of the Ozarks in Osage Beach, Missouri, on September 15-17, 2009. For registration and additional meeting information, contact Barbara DelGrosso, SPRA's Director of Operations, at 918-622-7800, or bdg18@sbcglobal.net.

Gore Crew Provides Extra Lift at Dardanelle



RYAN HOOG AND JIM O'KELLEY SHOW OFF THEIR INNOVATIVE FORKLIFT ATTACHMENT, WHICH SAVED A SIGNIFICANT AMOUNT OF TIME DURING A RECENT OUTAGE AT DARDANELLE.

When the Little Rock District of the U.S. Army Corps of Engineers (Corps) was in need of a quick turnaround for a switch replacement at Dardanelle in May 2009, Southwestern delivered.

Three hand-operated disconnects were scheduled for replacement during a Main Bus outage, and the Corps was concerned about depending on a single transmission line for an extended period. To mitigate that concern, Southwestern's Gore Substation Crew designed a device to be used as a forklift attachment for lifting switches into place at substations, significantly reducing the anticipated outage.

"There were energized lines from our transformer running directly over at least one of the disconnects, so they couldn't do the job the way they normally would have," said the Corps' Ann Willcutt, Hydropower Test Engineer. "It was expected that the job would take the better part of two weeks to complete, but due to Tony Cochran and his crew's expertise, the entire outage lasted less than three days."

"This was a time when we really needed to run the units due to an overabundance of water," she added. "I am very appreciative of the amazing job they did."

The Southwestern employees involved in the switch replacement project were Working Foreman Tony Cochran, Electricians Jim O'Kelley, Ryan Hoog, Robert Van Brunt, Walter Evans, and Larry Selvidge, and Electrician Helper Ray House. O'Kelley and Hoog designed the device and had a metal fabricator build it before the start of the project.

Southwestern Administrator Jon Worthington was pleased with the teamwork and service demonstrated by the crew. "These guys represent Southwestern in such a professional manner," he says. "They completed the job in significantly less time than allotted, and that meant that Southwestern had the power available to market, generate revenue, and continue meeting our contract requirements." 💧

SW Hydro Conference Meets

Representatives from Southwestern, the U.S. Army Corps of Engineers (Corps), and municipalities and cooperatives who receive Federal power from Southwestern's marketing area came together in Tulsa, Oklahoma, on June 10-11, 2009, for the annual Southwestern Regional Hydropower Conference.

This group meets annually to discuss the state of Federal hydropower projects and to prioritize funding of non-routine maintenance items through the innovative 1999 Memorandum of Agreement (MOA) among Southwestern, the Corps, and City Water and Light Plant of the City of Jonesboro, Arkansas.

Much of the discussion at this year's conference focused on the status of major rehabilitations at Ozark, Webbers Falls, and Whitney, as well as ongoing concerns and limitations regarding pumpback systems such as the one installed at Harry S. Truman.

Corps personnel also reported on projects receiving funding through the American Recovery and Reinvestment Act. Additionally, attendees reviewed and discussed projects that are currently impacting Federal hydropower, including those related to minimum flows, re-allocations, vegetation control, environmental and cultural resource protection, and dissolved oxygen requirements.

The next conference is tentatively scheduled for June 2010 and will be hosted by the Corps' Little Rock District. 💧



JON WORTHINGTON ENGAGES IN DISCUSSION WITH COL. ROGER WILSON OF THE KANSAS CITY DISTRICT AND COL. ANTHONY FUNKHOUSER OF THE TULSA DISTRICT, WHICH HOSTED THE CONFERENCE.

NEW EMPLOYEES

Jay Asbell

ELECTRONICS TECHNICIAN
DIVISION OF SCHEDULING & OPERATIONS

Brad Gahring

ENGINEERING STUDENT TRAINEE
DIVISION OF ENGINEERING & PLANNING

Nicki Perryman

PUBLIC UTILITIES STUDENT TRAINEE
DIVISION OF CUSTOMER SERVICE

Craig Shultz

ENGINEERING STUDENT TRAINEE
DIVISION OF ENGINEERING & PLANNING

Angela Summer

PROGRAM ASSISTANT
DIVISION OF SCHEDULING & OPERATIONS

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