

UPDATE

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One West Third Street
Tulsa, Oklahoma
74103-3502
918-595-6600
Fax 918-595-6656
www.swpa.gov

The **UPDATE** is published by and for customers, retirees, and employees of Southwestern Power Administration like:



Annette Nichols
Power System
Dispatcher
Springfield, MO

Special thanks to:
Marti Ayers
Mike Deihl
Ruben Garcia
Darrell Gilliam
William Hiller
Doug Johnson
Beth Nielsen
Carlos Valencia
Rutha Williams
&
Dennis Foss
St. Louis District
Corps of Engineers

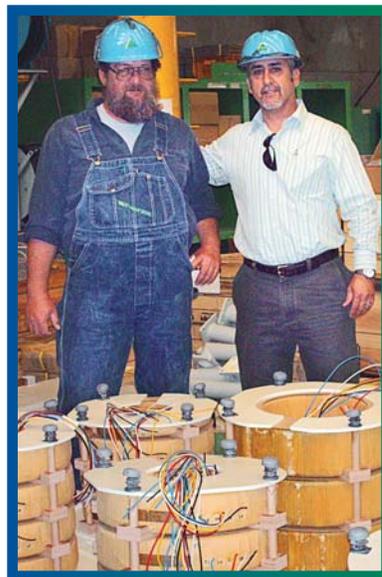
Equipped for Transformation

When it comes to replacing capital equipment, Southwestern seeks the best value among the world's manufacturers. In the case of Norfolk Substation's transformers, due to be replaced in August 2006, that search took the agency all the way across the Pacific Ocean for the second time in a year.

Last April, Marty Smith, Working Foreman with the Springfield Maintenance Substation Crew, and Carlos Valencia, General Engineer with the Division of Engineering and Planning, represented Southwestern at the pre-tanking inspection of Norfolk Autotransformers



CARLOS VALENCIA (BLUE HELMET) OBSERVES AS HYUNDAI'S ENGINEERS PREPARE TO LOWER ONE OF NORFORK'S NEW AUTOTRANSFORMERS INTO ITS TANK.



MARTY SMITH AND CARLOS VALENCIA ONSITE AT THE HYUNDAI FACTORY IN S. KOREA.

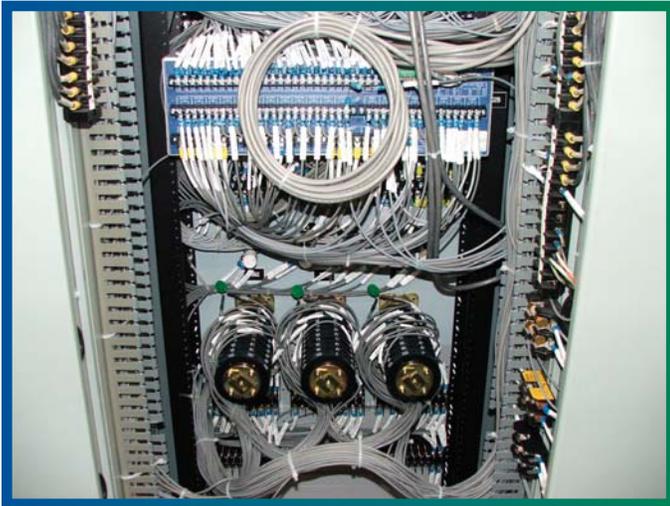
No. 1 and No. 2 at Hyundai Heavy Industries Co., Ltd. (Hyundai) in Ulsan, South Korea.

Hyundai was awarded the contract for the Norfolk project based not only on the cost to build the transformers, but also on the company's ability to meet contract technical requirements and its past performance with similar projects. Of the bid responses, Hyundai was judged as offering the best overall value to Southwestern. Southwestern has previously purchased a transformer from another South Korean firm, ILJIN Heavy Industries Co., Ltd., in Incheon, for installation at the Springfield Substation in 2005.

Norfolk's new autotransformers are due to arrive in August and will replace the facility's original units, which are 58 and 60 years old, respectively. In addition to utilizing new technology, the new units' 70 megavolt-ampere (MVA) rating provides much greater capacity than the 25 MVA of the old ones.

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Cannon Relay Replacement Complete



A NETWORK OF INTERIOR PANEL WIRING CONNECTS THE NEW PROTECTIVE RELAYS FOR CANNON'S UNIT # 2.

Southwestern and the St. Louis District of the U.S. Army Corps of Engineers (Corps) teamed up in late 2005 and early 2006 to replace outdated relays and related equipment at Clarence Cannon Dam in Monroe City, Missouri.

The project included replacing the 25-year-old electro-mechanical relays for the generators, transformers, and station service with microprocessor-based protective relays that offer more functionality and reliability.

According to Clarence Cannon Powerplant & Mark Twain Lake Operations Manager, Dennis Foss, the old electro-mechanical relays had failed testing in the past, and parts were becoming difficult if not impossible to find. The new relays offer better diagnostic features, more relevant data, and increased accuracy, all of which greatly reduce maintenance efforts and costs in the long term while increasing reliability.

Foss's crew of electricians, John Stone, Terry Oltman, and trainee Cory Graupman, performed the physical installation and wiring of the relays, and Southwestern Electrical Engineer Doug Johnson, who acted as project manager during the installation and testing, says that the Corps team did a great job. "This is not something that these guys do every day," Johnson says, "but they stepped up and showed their considerable skills to get the project completed on time and under budget."

The replacement of the relays was funded under the 1999 Memorandum of Agreement (MOA) among Southwestern, the Corps, and City Water and Light Plant of Jonesboro, Arkansas, which allows Southwestern's customers to directly fund non-routine maintenance, rehabilitation, or modernization activities at Corps hydroelectric facilities.

Johnson says in this case extra savings were realized because, during the necessary, though minimal, outages required by the relay replacement, the Corps completed two other significant equipment replacements simultaneously, only this time with funding taken directly from their own budget.

"The Corps procured an annunciator board and autosynchronizer, and coordinated their replacement with the work on the relays. They took advantage of the planned outages and minimized the additional drawing coordination that would have been required if done at a later date."

Johnson explains that Southwestern's technical support contractor developed drawings to install the new annunciator so that it worked with the expanded functionality of the digital relays, and Corps mechanics Kevin Long and Travis Arch designed, built, and installed the new annunciator cabinet to match the existing switchboard cabinet construction.

"The old annunciator board wouldn't have accommodated what the new relays offer. The annunciator is supposed to show different alarm conditions, and the old



JOHN STONE, SENIOR ELECTRICIAN, TERRY OLTMAN, JOURNEYMAN ELECTRICIAN, AND DENNIS FOSS, OPERATIONS MANAGER, HELPED COMPLETE THE RELAY WORK AT CLARENCE CANNON POWERPLANT.

annunciator didn't have space for all the new alarms the micro-processor based relays are capable of reporting." The new annunciator board also features extra space to allow for added monitoring that will become available with the upgrade of Cannon's voltage regulators, tentatively planned for a future fiscal year.

For the autosynchronizer, which enables a generator to be properly connected to the electric distribution system, the Corps again minimized drawing coordination and took advantage of the planned outages, already scheduled for the relay replacement, to replace a rapidly aging piece of equipment with a new autosynchronizer that promises to deliver better performance and easier maintenance.

All phases of the project were completed in approximately four months, says Johnson, who praises the effort and commitment of all parties involved, especially the Corps electricians who were integral to making the project a success.

"Special thanks and appreciation go to John Stone, Terry Oltman, and other Corps personnel for their dedicated and tireless efforts to complete the work on time while ensuring a quality product."

Powerplant Operations Manager Dennis Foss seconds Johnson's thanks to the Corps crew, and adds additional thanks to Southwestern's customers for funding the relay replacement. "Special thanks should also be extended to the customers for the funding that enabled this important work to occur." 💧

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The pre-tanking inspection of the Norfolk units involved a final assessment of each autotransformer's internal assembly, and provided an opportunity for Southwestern to examine how the components of each autotransformer fit inside their respective tanks. "If, sometime in the future, Southwestern is required to perform some type of internal investigation or work on any of these two units, we will know the best way to get to each different component," says Valencia, reflecting the value of this kind of hands-on examination during testing. "Knowing which manholes to open will minimize the exposure of internal components to the outside ambient moisture." Moisture inside a transformer can damage components, leading to outages and presenting a serious fire hazard.

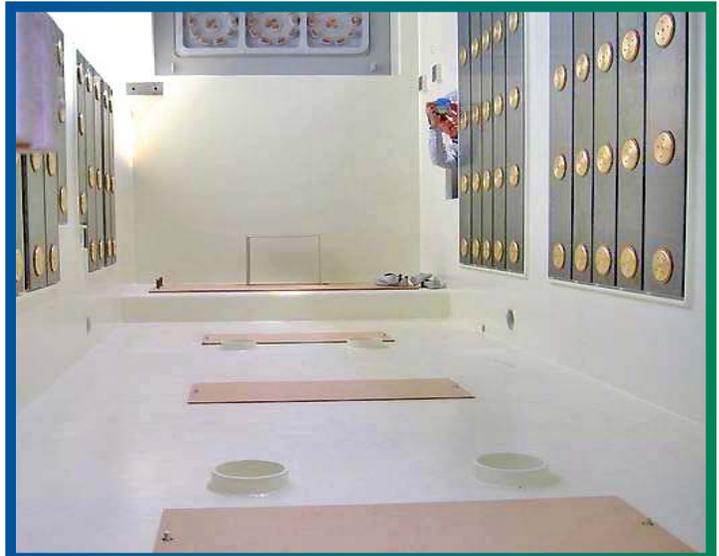
Also underscoring the importance of onsite inspections at the factory, Valencia notes that he and Smith were able to review and revise Hyundai's manufacturer drawings that will be submitted prior to delivery of the autotransformers, including developing wiring diagrams which had been requested but omitted from the package.

"Wiring drawings are very important to Southwestern's daily work," says Valencia, "so in a couple of days we were able to work with their engineering team and project manager and finalize the required drawings."

After a close inspection of both units, Smith and Valencia were satisfied with all the design solutions implemented by Hyundai to meet Southwestern's specifications, and considered the pre-tanking of both units to be acceptable.

Valencia was pleased with the outcome of the onsite inspection. "It was very beneficial to have two individuals there who have extensive experience with and knowledge of autotransformer design, construction, field operation, and testing," he says. "If Southwestern had not been present to witness and inspect the pre-tanking of both units, we would have missed the opportunity to get detailed information on the internal components and verify the drawings."

The pre-tanking inspection was the only assembly phase at which Southwestern personnel were present during the manufacture of the new units. Additional extensive testing will take place once the autotransformers are on the pad at Norfolk to ensure that they are operating correctly prior to being brought into service. 💧



CARLOS VALENCIA EXAMINES THE INTERIOR OF ONE OF NORFOLK'S NEW AUTOTRANSFORMER TANKS PRIOR TO THE INSTALLATION OF THE WINDINGS.

SPRA Conference Successful

April showers were on everyone's mind at the 49th Annual Southwestern Power Resources Association (SPRA) meeting, held April 11-13, 2006, at the Downtown Doubletree in Tulsa, Oklahoma. Employing the theme of "Rainmakers," representatives from Southwestern and SPRA's membership focused on collaboration and optimism in the face of the ongoing regional drought that has endured since March 2005.

The meetings began as Southwestern briefed SPRA attendees on rates-related issues and the current status of hydropower operations, with updates on the status of several major rehabilitation projects. Afterwards, SPRA members and spouses joined Southwestern staff for a picnic reception on the bank of the Arkansas River, where everyone enjoyed a cool evening breeze as well as hamburgers and hotdogs catered by Backyard Burgers. Dinner was followed by a colorful exhibition of drumming and dancing by the young members of the Northern Plains Indian Club in Pawnee, Oklahoma, who performed Pawnee and Ojibwe dances reflecting the tribes' heritage, including the Grass Dance, the Southern Straight, Fancy dances, and the Intertribal, wherein audience members were invited to participate.

The second day of meetings engendered discussion of various competing uses, such as minimum flow requirements and Southwestern's Federal power marketing activities, as well as the low energy-in-storage conditions at the reservoirs. This latter topic prompted much detailed discussion about the logistics of Southwestern's implementation of a voluntary Deferral of Peaking Energy program, whereby customers might opt to defer a certain amount of Peaking Energy from the summer months of 2006 until later contract years, in an effort to reduce hydropower-related water usage at the reservoirs during the drought. There was a great amount of interest among SPRA's members, and it was agreed that Southwestern would finalize a proposal for such a program.

The second evening, SPRA members and Southwestern staff gathered for a sit-down dinner, with many dressed in rain garb to highlight the conference theme and to compete for a "Best City Slicker" door prize. All in attendance thoroughly enjoyed and learned from the entertainment provided by Jack Gladstone, a Blackfoot storyteller and musician whose multi-media presentation combined stories, images, and songs to provide an overview of American Indian culture and history.

On the final day of the meeting, SPRA Executive Director Ted Coombes reported on the state of the SPRA organization, and Mike Deihl gave the Administrator's Report for Southwestern. Keynote speaker Deborah Sliz, President of Morgan Meguire, LLC, a government relations and consulting firm in Washington, DC, informed attendees about current legislative initiatives affecting the electric utility industry.

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



SOUTHWESTERN EMPLOYEES STAND UP TO BE RECOGNIZED AT THE SPRA ANNUAL MEETING ON APRIL 13, 2006. SOUTHWESTERN AND SPRA MEMBERS WERE PRAISED AND THANKED BY BOTH TED COOMBES, EXECUTIVE DIRECTOR OF SPRA, AND MIKE DEIHL, ADMINISTRATOR OF SOUTHWESTERN, FOR THEIR STRONG WORKING RELATIONSHIPS, ESPECIALLY IN TOUGH CIRCUMSTANCES SUCH AS THE CURRENT DROUGHT.



(LEFT) A DYNAMIC PRESENTATION BY KEYNOTE SPEAKER DEBORAH SLIZ KEPT EVERYONE'S ATTENTION ON IMPORTANT LEGISLATIVE ISSUES. (RIGHT) IT WAS STANDING ROOM ONLY AS ADMINISTRATOR MIKE DEIHL PROVIDED AN OVERVIEW OF SOUTHWESTERN'S PAST YEAR TO A PACKED HOUSE. (BELOW) SINGER/SONGWRITER JACK GLADSTONE RAISED SPIRITS AND GOT TOES TAPPING AT THE CONFERENCE DINNER.



(ABOVE) "CITY SLICKERS" DEBORAH SLIZ AND MARTI AYERS WERE AMONG THOSE WHO DRESSED FOR WET WEATHER AT THE CONFERENCE DINNER. (LEFT) PAWNEE AND OTOE DANCERS LEAD CONFERENCE-GOERS IN THE INTERTRIBAL DANCE DURING AN OUTDOOR RECEPTION AT TULSA'S RIVER PARKS.



(ABOVE) JASON GRAY, JEREMY ROGERS, ANGELA WALL, AND MARTI AYERS PREPARE THE BUFFET (AND THEIR PLATES) FOR A BREAKFAST WITH CUSTOMERS AT TULSA HEADQUARTERS. (RIGHT) ANGIE ECHOHAWK OF THE NORTHERN PLAINS INDIAN CLUB EXPLAINS THE SONGS PERFORMED BY THE CLUB'S DRUMMERS DURING THE PICNIC AND RECEPTION.



(ABOVE) DARRELL GILLIAM (WHITE SHIRT) DISCUSSES DROUGHT ISSUES WITH LESLIE FALKS (DIXE ELECTRIC), DAVID DARNELL (MALDEN, MISSOURI), AND ANDREW LACHOWSKY (AECC) AT A SOUTHWESTERN-SPONSORED BREAKFAST.

Southwestern, Customers Develop Drought Response

A continuing series of thunderstorms and squall lines in the last two months has not broken the drought in Arkansas, Oklahoma, Missouri, and Texas. According to the National Oceanic and Atmospheric Administration's Climate Prediction Center, low inflows and above-average temperatures will persist throughout the summer, impacting Southwestern's ability to generate hydropower. However, with the support of its customers, Southwestern has coordinated a response to the ongoing drought that will help the agency maximize its resources and protect the Federal hydropower mission in this region.



THE ARKANSAS RIVER'S LOW FLOW REVEALS A SANDY RIVERBED IN JUNE 2006, AS SOUTHWESTERN CONTINUES TO CONSERVE STORAGE AT THE KEYSTONE RESERVOIR UPSTREAM. DESPITE RECENT RAINS, SUCH MEASURES WILL REMAIN NECESSARY THROUGHOUT THE SUMMER.

Peaking Energy Deferrals

To survive a drought worse than the "year of record" (the 1953-1954 critical drought period), Southwestern and its customers have developed and implemented a voluntary Deferral of Peaking Energy Program, which applies to those customers who receive energy from Southwestern's 17-reservoir interconnected system. The logistics of the program are based on lengthy discussions and customer input that took place at the March 2006 Southwestern Power Resources Association (SPRA) meeting at the offices of Associated Electric Cooperative, Inc., in Springfield, Missouri, and at the April 2006 SPRA meeting in Tulsa, Oklahoma.

The basic concept of the Deferral of Peaking Energy Program is that each participating customer, via an amendment to its Power Sales Contract, limits its utilization of Peaking Energy during June through September 2006, and at the same time limits the amount of hours of Peaking Energy scheduled during its Contract Year ending in 2007. Lowering the amount of hydropower Peaking Energy required to be generated during the summer will help preserve electrical capacity in the system and will also reduce Southwestern's need to purchase energy on the open market to meet contractual requirements.

Following each customer's Contract Year ending in 2007, the deferred energy will then be provided back by Southwestern as additional Peaking Energy in subsequent Contract Years, when there is hopefully more water available in the interconnected system.

The program became effective on June 1, 2006, with almost 30 customers pledging to participate, representing over 1400 megawatts, or 75%, of the contract demand marketed by Southwestern from the interconnected system. Eventually, Southwestern expects to receive contract amendments that reflect 90% customer participation.

A Model of Cooperation

The Deferral of Peaking Energy Program is a model of cooperation and compromise between Southwestern and its customers. "All the customers understand the value of their Federal power allocations, and they have been very receptive to assisting Southwestern in dealing with this severe drought we've been having," says Darrell Gilliam, Public Utilities Specialist in the Division of Customer Service, who along with his colleagues has been instrumental in shepherding customers through the amendment process. "We really are happy the customers came to the plate."

Gilliam, who has been something of the agency's point man for implementing the program, has traveled to many local meetings over the last two months to further explain how it all works and why it has become necessary. "I like to go out and try to be helpful," he says. "Any time a customer wants Southwestern to come explain something, we will. We always welcome the opportunity to discuss areas of mutual concern."

"The customers have all been very supportive," he continues, noting that customer-agency cooperation improves the long-term stability of the Federal hydropower effort. "I have found that the customers' main concern right now is that they be able to continue receiving low-cost Federal power and energy."

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SPARKS OF INTEREST

THE NEXT QUARTERLY MEETING OF THE SOUTHWESTERN POWER RESOURCES ASSOCIATION (SPRA) will be held on Thursday, July 13, 2006, at the Embassy Suites Hotel in Tulsa, Oklahoma. This will be an abbreviated meeting, with the following schedule:

- 8 AM - Combined Rates Subcommittee and Federal Power Marketing Committee meeting
- 12 PM - Executive Committee meeting
- 1 PM - Board of Directors meeting

For registration and additional meeting information, contact Barbara DelGrosso, SPRA's Director of Member Services, at 918-622-7800 or bdg18@sbcglobal.net.

A combined **PUBLIC INFORMATION AND COMMENT FORUM** is scheduled for Southwestern's headquarters in Tulsa, Oklahoma, on Wednesday, July 12, 2006 at 9:00 a.m., regarding Southwestern's proposal to increase Integrated System rates. If no one indicates an intent to attend the Public Information and Comment Forum, no such forum will be held.

Those wishing to comment on the proposed increase are invited to do so before August 15, 2006, by writing to the attention of Forrest E. Reeves, One West Third Street, Tulsa, Oklahoma, 74103, calling 918-595-6696, or e-mailing gene.reeves@swpa.gov.

Hydropower Conference Focuses on Drought Issues

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 Kansas City, Missouri, on June 7-8, 2006, for the annual Southwestern Regional Hydropower Conference.

This dynamic group has been meeting since 1997 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 Jonesboro, Arkansas (Jonesboro).

Much of the discussion at the conference focused on the effects of the current drought on Federal power stakeholders. The Corps said it had contingency plans in place to deal with the lack of inflows and discussed the Corps' efforts to mitigate the regional effects of the drought. Southwestern explained how it operates the Federal reservoir system as a whole and tries to maximize the resources available.

Also presented was an overview of Southwestern's Deferral of Peaking Energy Program, in which Southwestern's customers have voluntarily agreed to defer the use of contracted energy in the critical months of June, July, August, and September 2006, in exchange for energy to be received in contract years ending in 2008, 2009, and 2010.

Public Utilities Specialist Jake Gage, who presented the information on the deferral program, praised Southwestern's customers for their participation in the program, saying that without it, Southwestern may have had to implement less desirable measures to deal with the low reservoir conditions.

Southwestern's customers then got their turn to put hard numbers to the economic impacts they were facing due to their participation in the deferral program and due to the continuing effects of the drought.

Keith Hartner of Associated Electric Cooperative, Inc., laid the groundwork for the other presenters by pointing out that the cost of Federal power seems to be on the rise. Bob Williams of the City of Carthage, Missouri, said his municipality faced \$100,000 in direct costs due to participation in the deferral program. Bill Goshorn of Kansas Electric Power Cooperative, Inc., said his organization was facing a 21% increase in the cost of power to make up for what it normally would have received from Southwestern. Rick Henley of Jonesboro handed out a detailed breakdown of the cost of generating power with gas turbines, and concluded that Jonesboro's economic impact would be around \$1,422,400.

The next conference is tentatively slated for June 2007 and will be hosted by the Corps' Vicksburg District. 💧

NEW EMPLOYEES

MARK CHAPMAN, ELECTRICIAN

DIVISION OF JONESBORO/GORE TRANSMISSION MAINTENANCE

RETIREMENTS

DALE MARSHALL, ELECTRICIAN

DIVISION OF JONESBORO/GORE TRANSMISSION MAINTENANCE



HAVE A SAFE AND PATRIOTIC INDEPENDENCE DAY!

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Southwestern Administrator Mike Deihl also feels very strongly about the positive working relationship between Southwestern and its customers. "This program really is the kind of collaborative effort that is good for the whole," says Deihl. "We're facing tough times together, and the cooperation and assistance from our customers has been most welcome, and should enable us to get through this difficult period." 💧

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WATTS INSIDE?



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