SCANNER

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SECOND INTERTIE WITH ENTERGY NEARS COMPLETION

VEHICLE MAINTENANCE KEEPS SMEPA'S FLEET ROLLING

CONVERSION OF MB LOAD ACCOMPLISHED SUCCESSFULLY

SOUTH MISSISSIPPI ELECTRIC POWER ASSOCIATION

The Scanner Magazine is published quarterly for employees and retirees of South Mississippi Electric

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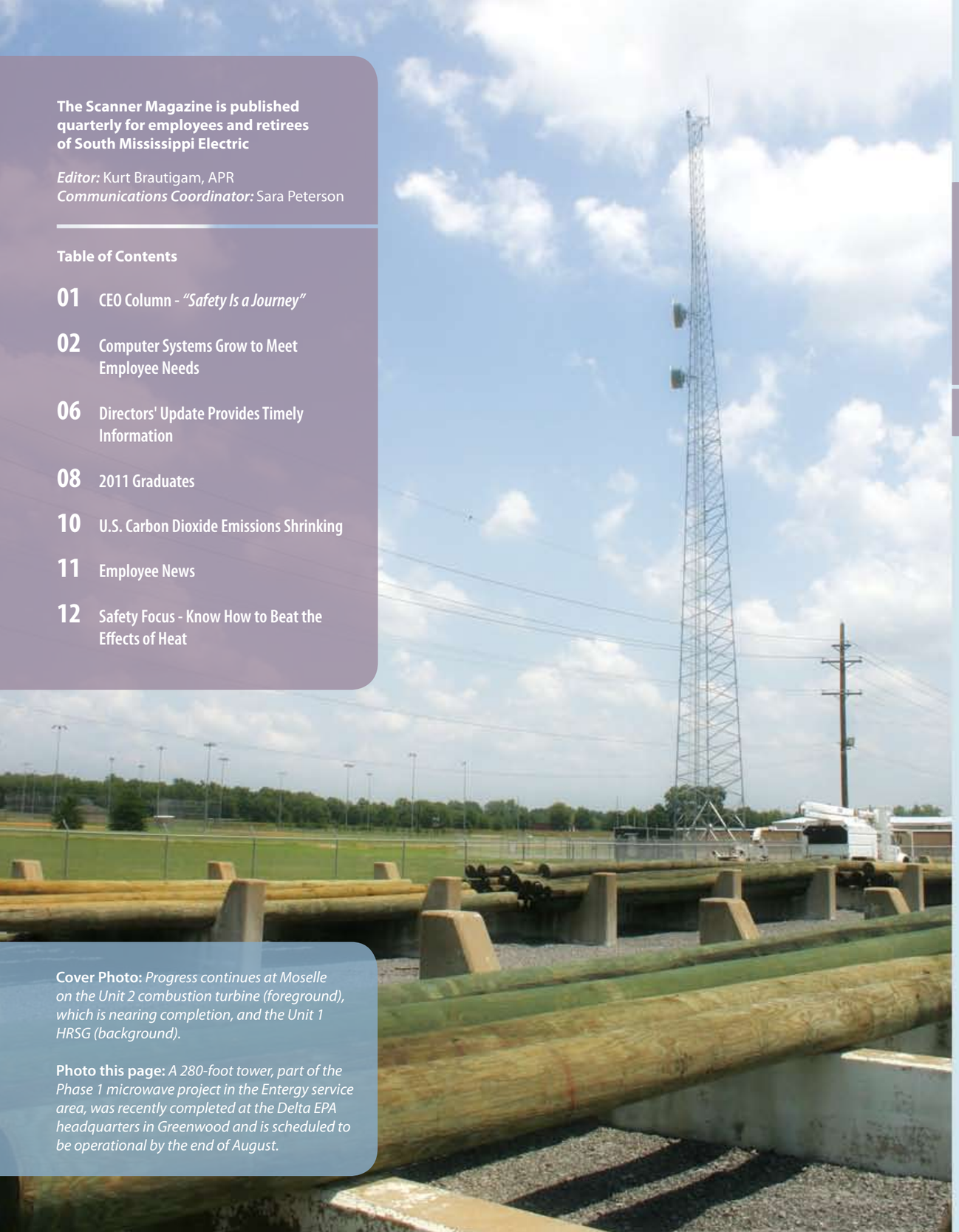
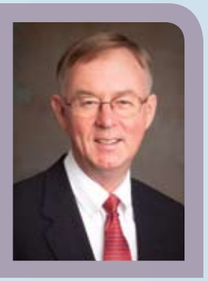


Cover Photo: *Progress continues at Moselle on the Unit 2 combustion turbine (foreground), which is nearing completion, and the Unit 1 HRSG (background).*

Photo this page: *A 280-foot tower, part of the Phase 1 microwave project in the Entergy service area, was recently completed at the Delta EPA headquarters in Greenwood and is scheduled to be operational by the end of August.*

SAFETY IS A JOURNEY



Jim Compton,
General Manager/CEO

To me, attitude is the most important part of a strong safety program. Every employee has to have the attitude that safety is an integral part of planning and performing work activities. A close second is compliance. Every employee needs to know and follow company policies, training procedures, and applicable government regulations.

South Mississippi Electric has been fortunate in that we have never had an OSHA audit, as they are usually triggered by a serious accident or fatality. But by not having been exposed to the inspection process, we were uncertain about how some of the rules might be interpreted or applied. We determined that we did not want to wait for an official audit to learn, as the fines can be very expensive.

Thus, we recently engaged Dana Ripley to conduct a safety program evaluation at our generating facilities to assess how we would do on an OSHA audit. Dana has many years of experience with OSHA regulations in industrial settings, particularly in power plants. As part of the process, Dana engaged plant management in a series of conference calls leading up to the on-site inspections. The actual field evaluation was conducted during the last two weeks of June. Dana visited all of SMEPA's generating facilities and spent several days at the large stations. Overall, the inspection exercise went well.

As would be expected, Dana has developed a list of "Opportunities for Improvement." Many of these dealt with record keeping, record organization, and signage. Some dealt with developing written procedures and policies for work practices. No unsafe work practices were noted, but certainly compliance with the recommendations would lessen the risk of incident or injury.

SMEPA's safety committees, as well as management at both plants, were involved in the physical safety evaluation. The report which was provided to me indicated that the employees and management at both Morrow and Moselle were very interested, motivated and supportive of SMEPA's safety program, as well as this evaluation. In the exit meeting, Dana particularly noted the high quality of employees that we have at our plants.

Plant management, the safety committees and employees have now taken the Opportunities for Improvement and assigned responsibility for each, with a time limit for completion. This has been a valuable exercise for all of us, and it has improved our safety performance and awareness. The harder task will be to maintain that level of compliance and attitude in the future.

We certainly hope to never have to undergo a real OSHA inspection resulting from a serious accident or fatality. However, OSHA spot audits are increasing. The initial goal for this audit exercise was to measure where we are from a regulatory compliance perspective, and to match our safety improvements with OSHA requirements. The ultimate purpose of the safety program evaluation was to provide a better benchmark for our work procedures and maintenance programs.

SMEPA management is committed to achieving a top tier, effective safety program.

Every employee needs to know and follow company policies, training procedures, and applicable government regulations.

The large number of Federal regulations for the electric power industry is sometimes overwhelming, but when regulations are properly done, with industry input, those safety regulations provide thoughtful, reasoned procedures to lessen the risk of accidents and injuries. SMEPA management is very committed to achieving a top tier, effective safety program. Good safety is good for our insurance rates but, more importantly, it is vital for our employees and their families.

It is essential that each of us exhibit and promote an appropriate safety attitude if we are to continue to maintain a successful safety program and to assure compliance with OSHA requirements.

Computer Systems Grow to Meet Employee Needs

South Mississippi Electric's daily operations have become increasingly dependent upon computers since they were first introduced at the Association in 1974. Today, nearly 40 years later, two groups and 16 employees are responsible for the hardware, software, networks and systems that monitor SME's electrical grid and generating units, oversee the wide range of business operations required of a billion-dollar organization, and provide security for facilities spread across numerous locations.

The Business Information Systems group and the Control and Computer Systems group, previously combined as the Computer Information Systems department, were separated in late 2008 to streamline the tasks and focus of each group. Since then, the two groups have grown in terms of size and responsibility to accommodate the ever-changing computer-related and business application needs of the Association and to comply with all financial audit, government and regulatory requirements associated with the electric power industry.

The nine members of the Business Information Systems (BIS) group (eight full-time employees and one part-time intern) primarily work behind the scenes to maintain the business computer systems that support functions ranging from payroll and purchasing to work order management and vehicle maintenance.

The team, led by Mike McCrary, director of business information systems and advisory services, researches, develops, implements and supports computer systems for various functions that help SME employees perform their jobs more accurately and efficiently. In order for these systems to function properly, the team also maintains the databases of information upon which the systems operate. For example, Oracle EBS is the computer system used to process payroll every two weeks (among other functions). The information used to process payroll, such as time worked and hourly rates, is stored in the Oracle EBS database.

"The BIS group contributes to the overall goals of SMEPA by supporting the computer-user community in everything related to their jobs," said Tonya Hutchinson, application developer. "Each user depends on us to keep all computer applications and databases functioning properly."

Overall, the group maintains all Association computer applications, with the exception of most applications used by the Control Center, including:

- Oracle EBS – used for purchasing, payroll, accounts receivable and payable, human resources, self-service human resources, fixed assets, inventory, learning management, general ledger, project accounting/costing, cash management, iProcurement, iExpense, time and labor, and Discoverer reporting
- ImageNow – an image scanning and retention program currently used for invoices (can be expanded in the future for record retention)
- HelpSTAR – the online help desk system used to report and track change management and user issues for any computer, application, or phone system
- ModWed – a web interface program that allows multiple engineers to access Modeling On Demand software to build power simulation load flow models
- Hyperion – a budgeting software that helps produce SME's annual budget and, ultimately, to develop rates
- Akonix – an instant message tracking system that logs information exchange between the Control Center and outside entities to document discussions on rates and other power purchase information (supported by Control and Computer Systems, with the database maintained by BIS)
- Maximo – an asset and work order management system
- SharePoint – software used to create the member, human resources, vault and management portals
- MicroSoft Enterprise Project Management – project management software used by engineering
- Gasboy – a vehicle fuel and maintenance reporting/tracking system used at headquarters
- Petrovend – a vehicle fuel and maintenance reporting tracking systems used at the Field Operations Center (FOC)

Each member of the team has their own area of expertise; however, their work intermingles and is dependent on one another. For example, Hutchinson supports Maximo, which is dependent upon the database that is maintained by Will Berry, Oracle database administrator.

Berry is also responsible for data backup and restoration. Mission-critical information, such as information in Oracle EBS and Maximo, is saved hourly to a back-up storage server at the FOC. In the event that a system crashes at headquarters, information from as recent as within the hour can be retrieved from the back-up at the FOC. All systems are backed up nightly and copies of storage tapes are taken off-site monthly so that information can be maintained securely in multiple locations.

Will Berry (left) and Mark Dodd use consoles to access, update and maintain more than 50 servers in the computer room.

BIS employees Tonya Hutchinson (left) and Russell de Lassus

"Recovery and restoration of data is something that all database administrators hope they never have to do, but we have to be ready when necessary," said Berry. "One precautionary step we take is to test our back-up systems at the FOC periodically to ensure that they are running properly and that they will perform as needed if necessary."

Hutchinson's primary role in supporting Maximo is to find solutions to issues that may arise, fulfill new requests, and implement enhancements to the application. End-users, such as employees in engineering, communications and vehicle maintenance, use Maximo to access information stored in the Oracle EBS database to track materials needed for jobs, regular inventory items, and activities and other vital information associated with SME assets (for example: company vehicles and transmission line structures). The system has the capability to track all purchases from the time a purchase requisition is issued, when an order is placed, and finally to an invoice.

Senior Developer Nancy Brooks works to provide the link that allows information in the database to communicate with the application. Brooks' method of coding processes the information and turns it into something that is readable by the application.

"My job is to help make the user's job easier," said Brooks. "If the user needs the application to perform a function or produce a report that it currently does not do, they can submit their request and I work to make the application accomplish what they need. Employees are the experts when it comes to their jobs, so helping them get what they need is a team effort."

Russell de Lassus, Oracle functional analyst, plays a key role in supporting the end-user. de Lassus administers HelpSTAR, SME's help-request ticketing system. Employees access HelpSTAR on their desktop to report any issues with their computer, its associated equipment, or their telephone. Once an issue has been reported, it enters a dispatch queue and is routed to the appropriate person in BIS, Control and Computer Systems, or the Communications group. The ticket documents the status of the request, helping to streamline the work in all three groups.

In addition, de Lassus also serves as system administrator for Oracle EBS, creating user accounts, granting permission access for users, trouble-shooting issues with the application, and supplying front-end configurations.

Sylvia Foxworth, functional business analyst, provides support for ImageNow, SharePoint, and Microsoft's Enterprise Project Management. She has also been working with the treasury section to implement GTreasury, SME's forthcoming treasury system.

Foxworth also maintains SharePoint portals, which are a variety of internal and external web sites that function as a point of access to information for groups of users. Portal sites have been developed for the vault, member services, management and human resources, and there are ongoing plans to develop an engineering portal.

Senior Business Information Analyst Rob Huggins provides the same kind of support for Hyperion, the reporting application used to provide business intelligence. Hyperion applications include creating SME's annual budgets, identifying budget trends, and comparing budget forecasts to actual expenditures, which cumulatively lead to setting rates.

Rob Huggins (right) consults with Bobby Vinson, controller, about finance reports

"Our business is unique so the budgeting application was custom designed to meet the company's requirements," said Huggins.

"The recent Oracle EBS upgrade has also allowed us to expand our reporting capabilities. As a result, the safety and training group can now search the SMEPA database to identify employees who have completed specific training programs. They can enter their search information, such as an employee's name, and identify what training courses they have participated in and when the course occurred. Before the upgrade, finding such information required

searching through spreadsheets. As we implement more new systems, we will be able to offer a wider variety of reporting capabilities to employees."

Jesse Torres, business information manager, schedules, coordinates and oversees the group's projects and maintains the relationships with each department they work with to ensure that needs are being met. In addition, Torres works closely with McCrary to schedule future projects. The two take into consideration the need for new applications, assets necessary to conduct projects, the ability of the BIS staff to handle project load and provide proper support after implementation, and the training required for end-users to implement new applications.

"Our main goal is end-user satisfaction," said Torres. "This is easier said than done and a daily challenge. We do not always have all the answers, but we work closely with other departments and outside vendors to get the answers. Our group is relatively new, but we work well together. The success of BIS is our team. I work with a group of dedicated and hardworking individuals."

One goal is to grow the group's training program for end-users. Torres currently plans for the training required for users to operate new programs, whether the training is in-house, on-line or off-site. In the future, McCrary and Torres hope to expand upon the training offered in-house to enhance SME employees' computer skills and abilities.

"We are very fortunate to have a top-class center that is dedicated to computer training," said McCrary. "Our information system is very sophisticated for an organization of our size, and our goal is to help employees use it to its fullest potential.

"Our department thrives on teamwork. We support and work well with the end-users, but they are the ones that own the system. They really take ownership of their system and convey to us what is happening from their standpoint and how we can help them be more efficient. That is our group's key to accomplishing our mission."

As a follow-up to the recent Oracle EBS upgrade, the group is now implementing the Procurement Contracts module to aid in the administration of contracts through the system. In the near future, BIS also plans to implement a new asset tracking system and a relay group application to maintain SME's protective relays. Plans will also continue for a new engineering portal and GTreasury. ImageNow may also be expanded to provide electronic record retention.

Although they are now two separate groups, BIS and Control and Computer Systems often collaborate on projects. Once one group introduces a new application or the other group introduces new hardware, the two work together to ensure compatibility between the hardware and the application. BIS relies on Control and Computer Systems, led by Tommy Clark, director of control and computer systems, to maintain the personal computers, operating systems and browsers upon which the BIS applications run. Clark's group also supplies back-up and back-up storage, as well as assists in the restoration of backed up files and databases for the applications that are managed by BIS and those for the Control Center.

Scotty Barron, control systems manager, William Fortenberry, control systems assistant, and Guy Isaac, systems/network administrator, provide application support and reporting services for the Control Center and plant control rooms that are similar to the services BIS provides for the rest of the Association. In the Control Center alone, more than 25,000 points of operations data are scanned every four seconds. As any point in the data changes, that point is documented and saved.

"Our role is to make sure that all of the applications necessary for the Control Center to operate efficiently are running and performing to the best of their ability," said Barron. "We also provide the system operators the ability to generate and store the reports they need to do their jobs."

The main applications that Barron's group supports in the Control Center include:

- Energy Management System (EMS) – a collection of servers and applications used to operate SME's grid through generation control; also receives constant SCADA (supervisory control and data acquisition) input and keeps up with scheduling and reliability requirements
- OATI (Open Access Technology International) – a scheduling, energy trading and transmission application
- Pattern Recognition Technology (PRT) – an application used in forecasting generation and transmission loads
- eDistributed Network Architecture (eDNA) – documents historical data that flows through the Control Center; can retrieve data and replay any event on the system, such as how the system was affected during Hurricane Katrina

Guy Issac (left) works closely with Gary DeFatta and SME's other system operators on Control Center applications

- Control System Information Email – an in-house-developed application that provides information to specific employees about system events via email (this information is primarily obtained from the eDNA)
- Inter-Control Center Communications Protocol (ICCP) - provides data exchange over wide area networks between utility control centers, neighboring utilities, power pools and regional control centers/reliability coordinators

Deric Thompson changes out an employee's PC hardware

In contrast to the department-specific computer applications provided by BIS and Barron's group, Mark Dodd, systems network manager, and systems/network administrators Ken Sumrall and Deric Thompson provide support and maintenance for all standard software applications (Microsoft Suite, for example) and all of the equipment and hardware associated with the organization's servers, storage, desktop and laptop computers. This includes computer networking, firewalls, Internet access, email, remote access, and Websense.

In addition, the three maintain the H and Q drives, as well as all of the Association's BlackBerries, cellular phones and printers. They also oversee network security, including Internet access security, networked laptop security, and other Critical Infrastructure Protection. The group also maintains a fleet of computer equipment available for loan to SME employees for business purposes.

Since SME is a 24-hours-a-day operation, employees in Control and Computer Systems and BIS are on call at all times. Remote access from outside SME facilities is available through a virtual private network (VPN), which enables them to log in from home on system-protected laptops and correct most problems that occur outside normal business hours. The groups are also mindful of causing disruptions to daily operations, so they often schedule installation, maintenance and repair work during off-hours.

"We try to work nights and weekends whenever downtime is required in order to minimize the inconvenience to our employees so that the system performs when they need it to," said McCrary.

"The goal of both groups is to provide our organization with a secure system that will run 24 hours a day, 7 days a week with no interruptions," said Clark. "Our employees should never have to come to work and wonder if their systems will work. They should always have confidence that they will."

The Early Years of Computers at SME

- **1974 -** South Mississippi Electric's first venture into computers was using the Sigma 9 system located at The University of Southern Mississippi in 1974.
- **1976 -** Harris, SME's first operations control system, debuted in 1976. Harris was SME's first in-house computer system.
- **1977 -** The building for the Control Center was completed in 1976 and computers and electronic equipment were installed in 1977.
- **1979 -** SME purchased an HP1000 with Duncan software to process bills. The first complete business system, a Harris 800, was installed circa 1982.
- **1979 -** A new translator computer was purchased and placed into operation. Thirty contracts were completed and closed out during the year.
- **1980 -** SME had 2 computer analysts on staff.
- **1981 -** The new Harris 800 computer was installed and placed in service. Programs for load forecasting, load flow, short circuit studies and payroll were placed in operation during the year.
- **1982 -** SME personnel assume most of computer maintenance to reduce outage times and cost.
- **1987 -** The second Harris Control Center system, featuring a dispatcher's load flow system and a transaction evaluation program, was installed.
- **1989 -** HP 9000 with Oracle relational database and networking capabilities was installed.
- **1990 -** Personal computers first introduced in different areas of the Association.

Directors' Update Provides Timely Information

National environmental issues. Compliance with reliability standards. How Mississippi Power views the industry. The state of South Mississippi Electric.

Our industry has more than its fair share of issues, and all of the above topics and several others were discussed at South Mississippi Electric's fifth annual Directors' Update, held June 7-8 at the Hattiesburg Lake Terrace Convention Center. More than 160 people attended the update, including directors from all eleven Members and other invited employees and guests.

This year the meeting was expanded to two days, with SME staff members providing information regarding Association-specific topics during several afternoon sessions on the first day.

Tommy Clark, director of control and computer systems, addresses the audience

"It is essential for everyone associated with running our business to be aware of these many issues," said Jim Compton, general manager/CEO. "We face a very difficult time in terms of the number of issues that can now affect our industry. Our challenge is not only to understand and work through each item, but to effectively communicate the potential consequences to all of our Members and to their members."

The Tuesday breakout sessions allowed attendees to choose between several topics, including an update on Japan's nuclear crisis presented by Nuclear Specialist Brad Edwards; a presentation by System Operations Manager Gary Hutson about Control Center dispatch economics; an update on construction projects provided by Generation Projects Manager Chris Rhodes; an overview of SME financial issues provided by Chief Financial Officer Ray Haley; and two presentations by Chief Operating Officer Nathan Brown regarding the potential effects of Entergy's plans to join MISO and economic evaluations that SME conducted before deciding to invest in the Kemper IGCC project.

During the second day's meeting, Compton updated the audience about the Association's plans to meet power supply needs, as well as the financial planning required for the next several years. He noted that system demand continues to grow, with new summer and winter system peaks being established in 2010. Total revenues for the year were a record $789 million, but wholesale rates to Members actually decreased by 7.4%.

"Our challenge moving forward will be finding the financing to pay for new generation resources and environmental compliance while trying to moderate the impact on rates," he told the group. "Over the next five years, we plan to spend more than $1 billion to expand our generation and transmission resources, increasing our debt as well as equity.

"SMEPA must remain financially strong and continue the positive trends we have established. Our equity to assets ratio, which has increased to more than 15% over the past five years, is an important element to avoid over-leveraging our balance sheet. We must maintain adequate margins for debt service, and we must continue to have cash on hand for contingencies. Our Board of Directors has provided support and sound judgment in ensuring that SMEPA meets its financial targets."

Compton also discussed the changing environmental landscape that threatens the electric industry. "The Environmental Protection Agency is using the Clean Air Act to force drastic modifications to emissions limits, which will severely impact America's fossil-fuel generation fleet," he said. "An estimated 36,000 megawatts of coal-fired resources in the eastern half of the country may be forced to shut down by 2018 if the strictest regulation proposals are passed. Once the new regulations are passed, we will have to determine our options, as will virtually every other major electric power provider.

"What remains to be seen in such a scenario is how the country will replace these lost resources. It would appear that natural gas will have to play a significant role, with estimates of its use as a boiler fuel doubling in the next twenty years. I'm not sure it is in the best interest of anyone to become so dependent on a resource that has proven over the years to be unstable in price and availability."

Mississippi Power Company's president, Ed Day, told attendees that his company faces the same regulatory and cost challenges as SME and the rest of the industry, noting that it will be difficult to make major operational adjustments in the short timeframe that EPA is proposing. Decisions about whether to retrofit coal plants or build new natural gas facilities require time for planning, permitting, design and construction.

Day said that the Southern Company (MPC's parent company) believes, like SME, that having generation resource options is the best strategy. Southern Company is currently building a nuclear plant in Georgia and is pursuing options with renewables, including a new solar facility that recently came on line in New Mexico. Day also mentioned Southern's strong support for the Kemper IGCC project, which he called "21st Century coal" because of its low emissions and carbon capture capabilities.

"We are very proud of our partnership with SMEPA on Kemper," Day noted. "Our goals on this project—having a low cost, reliable, stable energy source that is good for the state—are aligned with yours. It is very powerful to say that we are working together."

Joel Gilbert, co-founder and chief software architect for Apogee Interactive, discussed his thoughts about the future of the energy industry. A 40-year veteran of the industry, Gilbert pointed out how important it is to help customers understand how complex the industry is. "Electric service is vital to all of our lives, but most people are not aware of how the many issues we are facing will affect them," he said. "All they hear when our industry is discussed are simplified soundbites and they think the choices are simple, but they are not. We must engage people or they will not develop any personal commitment to these issues."

As an example, Gilbert said that the public discussion regarding wind and solar energy has not effectively made the point that such resources are not reliable, are costly, and will require backup capacity. He also pointed out that while natural gas may be relatively inexpensive now, if the country continues to invest in new gas-fired generation and then the cost of fuel increases, it will have significant effects.

In looking to the future, Gilbert suggested not only that the industry should find more ways to communicate with customers, but that customers will expect more communication. Social media is a way of life for younger consumers and that mindset will only expand. It will be highly important to educate customers about the industry's side of the story as national energy choices are being debated.

Mary Hauner-Davis, an environmental engineer with Burns & McDonnell, provided meeting attendees with more information about six major regulations that EPA is currently proposing for electric generating facilities: Utility Maximum Achievable Control Technology (MACT), aimed primarily at further reducing existing emissions levels for particulate matter, mercury and acid gas hazardous air pollutants; Clean Air Transport Rule (CATR), which addresses sulfur dioxide and nitrogen oxides levels; National Ambient Air Quality Standards (NAAQS), which would increase standards associated with ozone; the Greenhouse Gas Tailoring Rule; proposals for considering coal combustion by-products as hazardous; and rules affecting cooling water intake structures.

"As Mr. Compton mentioned (earlier in the program), these rules taken together have the capacity to shut down anywhere from 35,000 to 65,000 megawatts of coal-fired resources around the country," Hauner-Davis said. "In order to comply with the new regulations as they are written now or are being proposed, many plants will have to install scrubbers, SCRs (selective catalytic reduction), carbon injection and baghouses, or other technology. The sheer expense of adding such equipment to many existing facilities will make them economically unviable."

Hauner-Davis, who is familiar with South Mississippi Electric's generating facilities, encouraged the Association to continue its pro-active approach in considering compliance options. "SMEPA has always been good with evaluating what it needs to do as regulations change," she said. "Your varied portfolio of resources gives you options, and I know you are careful to consider any rate impact as you make your decisions."

Tommy Clark, director of control and computer systems, was the morning session's final speaker. He discussed the growing number of NERC reliability standards and how important it is to comply with the requirements, including at the distribution system level.

"Compliance has always been important, but the number of standards has been growing rapidly," he noted. "Every day it seems like there are reports of various companies that have been hacked or compromised in some way. We can never let our guard down."

SME must meet standards related to critical cyber assets, transmission operations, communications, facilities connections, interconnection reliability and several other operational categories. Much of the threat comes from outside the organization, which is why it is vital that all employees are alert to website or email viruses and other possible cyber intrusions. One way to help in that effort is to maintain strong passwords and to constantly be aware of the source of any electronic information introduced to work-related computers.

"We need for everyone to be vigilant in safeguarding our systems, including our Members' employees," Clark said.

"All of the presenters did an excellent job," said Compton. "Attendees rated the meeting very highly and expressed their appreciation to us for providing the information. These directors and key staff members are the leaders of their organizations. As we face numerous challenges together, it is critical that we have a shared understanding of the issues and their effects on all of us. We look forward to providing more information in the future."

Wesley Brown, painter helper at Morrow, impressed the audience with his Elvis Presley performance

Congratulations Graduates!

Heather Rogers Bagwell is the daughter of Bruce and Rosa Rogers. She graduated from Samford University's McWhorter School of Pharmacy with a Doctor of Pharmacy degree and received several awards and scholarships. Heather is married to Brian Bagwell and is employed as a pharmacist at Walgreens in Hattiesburg.

Joshua Paul Bradshaw, son of Joey and Melinda Bradshaw, graduated from South Jones High School. He received several awards and scholarships during his high school career, including the Jones County Junior Livestock Association Scholarship, the Don James Memorial Scholarship and the EPAs of Mississippi Foundation Scholarship. Josh plans to attend Jones County Junior College in the fall.

Heather Nicole Brown, daughter of Jeff and Mandy Brown, graduated from A Beka Academy with honors. She will continue her education at Jones County Junior College and Mississippi State University, pursuing bachelor's and master's degrees in accounting.

Shanna Casanova is the daughter of Kenny Casanova. She graduated from Jones County Junior College as a registered nurse with an associate's degree in nursing.

Stephen Ashley Chancellor, son of Greg and Phyllis Chancellor, is a recent home school graduate. He is an eagle scout and enjoys playing the guitar and mandolin as well as reading about history and politics. Stephen plans to attend Jones County Junior College in the fall.

James Alexander Clark, son of Terry Clark, graduated from Oak Grove High School. He will attend Copiah-Lincoln Community College on a golf scholarship, possibly pursuing a career in electrical engineering.

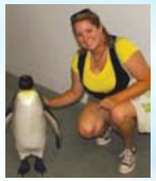
Patrick Aaron Compton is the grandson of Jim and Debbie Compton. He graduated from Saint Patrick High School with high honors. Patrick is the recipient of a Band of Gold Scholarship and plans to major in pre-med/biology at Gulf Coast Community College.

Courtney Danielle Cooper is the daughter of Joe and Bonita Cooper. She graduated from Sumrall High School with special honors. She received numerous awards and recognition in high school, including Sumrall's Miss Hospitality and Sumrall High School Hall of Fame. Courtney plans to attend Jones County Junior College.

Katie Ann Everett is the daughter of Steve and Melody Everett. She graduated from Presbyterian Christian School with high honors in the top 10 percent of her class. Katie received numerous awards and scholarships, including a full scholarship to William Carey University, where she will pursue a bachelor's degree in nursing.

Tyler Polk Hammett, son of Barry and Libby Hammett, graduated from The University of Southern Mississippi with a bachelor's degree in business administration. Tyler will continue his career at BancorpSouth.

Greg Keyes II, son of Greg and Angela Keyes, is a graduate of Petal High School, where he played on the school soccer team for five years. Greg is the recipient of a robotics scholarship from BAE Systems. He will attend Mississippi State University in the fall majoring in computer engineering.



Samantha Kelly McElhaney is the daughter of Steve and Patty McElhaney. She recently graduated from the University of Central Florida with a master's degree in early childhood development after completing her undergraduate degree in arts in film and television from New York University. Her plans are to work in science education with an emphasis on connecting science education and children's media together.

Krista McRainey, granddaughter of Rodney and Rhonda Culpepper, graduated from Petal High School. Krista plans to attend Jones County Junior College's School of Cosmetology.

Aleshia Gabrail McSwain is the daughter of Billy and Lucretia McSwain. She is a 2011 graduate of William Carey University's School of Nursing. She is employed as a registered nurse at Forrest General Hospital.

Shelby Garrett Mozingo, son of David and Mandy Mozingo, graduated from Petal High School with honors. He earned several awards and scholarships while in high school. Shelby plans to attend Pearl River Community College and Mississippi State University in pursuit of a degree in mechanical engineering.

Bradley Rayborn, son of Mark and Valerie Rayborn, graduated from Purvis High School with honors. Bradley pitched for PHS in the 2009-2011 baseball playoffs and was recognized as a 2011 Prep Player of the Week, among other honors. He will be attending Pearl River Community College on a baseball scholarship.

Dulana Dasha Reese is the daughter of Duane and Cammie Reese. She graduated from Bassfield High School with honors, earning multiple awards and scholarships. Dulana's plans are to attend The University of Southern Mississippi and major in biology/pre-med before attending medical school at Tulane University.

Jessi Simmons, daughter of Pat and Denise Simmons, graduated from Petal High School with highest honors. She received numerous awards and recognition in high school and was an active volunteer. Jessi received multiple scholarships and plans to attend The University of Southern Mississippi, where she will major in nutrition and dietetics. Her career plan is to become a pediatric dietitian at Saint Jude's Children's Research Hospital.

Chelsea Reagan Bounds Smith, daughter of Raymond Bounds, graduated from Purvis High School. Chelsea is married to Jeremy Smith and plans to attend Bossier Parish Community College. She will study applied science in the care and development of young children.

Presley Stiglets is the daughter of Tracy and Stacey Stiglets. She graduated from Oak Grove High School with honors. She will attend Pearl River Community College on a soccer scholarship, where she will begin her pursuit of a degree in dentistry.

Culen Taylor, the son of Tony and Kyna Williams, recently graduated from U.S. Army Basic Combat Training at Fort Sill, Oklahoma. He will attend the U.S. Army Ordnance School at Fort Lee, Virginia and then will be assigned to a duty post in the United States Army.

Emily Lauren Torres is the daughter of Jesse and Rhonda Torres. She graduated from Oak Grove High School with special honors. She will attend The University of Southern Mississippi's Honors College on a Luckyday Scholarship where she will major in nursing.

Kris Trest, grandson of Rodney and Rhonda Culpepper, graduated from Oxford High School with honors. He plans to attend Jones County Junior College's Honors College.

Nikki Vinson is the daughter of Bobby Vinson. She graduated with highest honors from The University of Southern Mississippi with a degree in dietetics and nutrition.

U.S. Carbon Dioxide Emissions Shrinking

From a column by Dr. Patrick J. Michaels

When it comes to the possibility of human-caused global warming, carbon dioxide (CO_2) emissions from the burning of fossil fuels (coal, oil, natural gas) receive the most attention and are the target of legislation at the federal and state levels as well as regulation from the Environmental Protection Agency.

Most of these legislative and regulatory proposals have as their goal a 20% reduction of CO_2 emissions by the year 2020, and then further 20% reductions in each decade up to 2050. The ultimate goal is to force the levels of CO_2 emitted in the U.S. down about 80% below what we currently emit—a value so low as to be equivalent, on a per person basis, to the amount that was emitted in the mid-1860s. While such a scenario is hard for most of us to imagine, legislation passed by the House of Representatives in 2009 mandated an even greater reduction of 83%; at the time the Senate chose not to vote on the matter.

Nonetheless, such proposals are still quite alive and are probably being debated at the EPA as you read this. But would such reductions of U.S. emissions have any detectable effect on the world's climate?

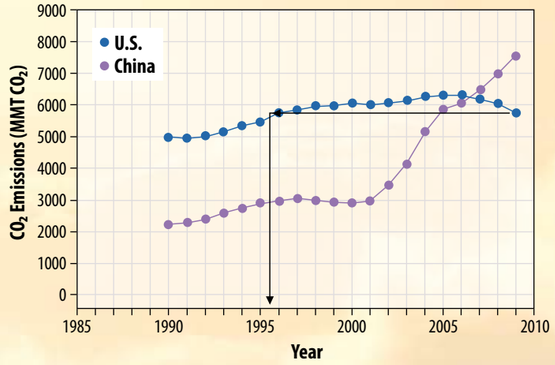
The answer is no, not as long as China and other rapidly developing nations such as India continue to expand their emissions like gangbusters. This is obvious from the latest data on national and international carbon dioxide emissions trends (through 2009) that was just released by the U.S. Energy Information Administration (EIA).

CO_2 emissions in the U.S. fell by a record 7.1% from 2008 to 2009, dropping to their lowest levels in 15 years. In addition there is now an overall slight downward trend since 1999.

The EIA attributes the 2009 decline primarily to three factors—an economy in recession, a particularly hard-hit energy-intensive industries sector, and a large drop in the price of natural gas that caused fuel switching away from coal to natural gas in the electric power sector. Note that two of the three factors are related to the overall health of our economy, while the other is a result of the normal search for more efficient energy.

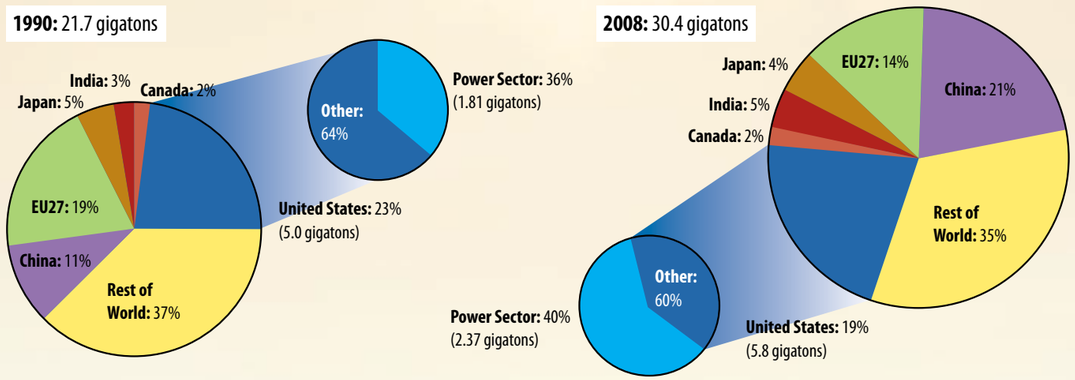
So how do U.S. emissions now stack up against those from other nations? The answer is that we are increasingly becoming a bit player in the global carbon dioxide sweepstakes.

The chart below shows the levels of carbon dioxide emissions in the U.S. and China from 1990-2009.



Carbon dioxide emissions from the United States and China, 1990-2009 (data source, EIA). Figures are in Million Metric Tons (MMT).

Global and US CO_2 Emissions



Several things are obvious:

- U.S. emissions in 2009 were the lowest since 1995 (solid black line on chart).
- The trend in U.S. emissions has been downward since 1999.
- China's emissions have increased by about 175% since 1999.
- In 2009, China's annual emissions were 42% greater than ours.

The trend in China's emissions since 1999 is an increase of 508 million metric tons [mmtCO_2] per year—an amount equal to about 1/10th of U.S. total annual emissions.

Think about this for a minute. As noted above, the typical CO_2 emissions reduction rate targeted by proposed Congressional legislation or EPA regulation is about 20% per decade—equivalent to a decline that averages about 120 mmt CO_2 per year. China currently is increasing its total emissions by an average of 508 mmt CO_2 per year!

In other words, China is adding new CO_2 emissions at a rate that is four times faster than the proposed reductions of ours. What would take us a year to achieve, China undoes in three months, then goes on to add three times that amount during the rest of that year.

This dismal math illuminates the inherent silliness in using "global warming" as a reason for pushing for big reductions in U.S. carbon dioxide emissions. As long as China chugs along as it has for years, nothing our country does really matters.

Politicians, who have as their first responsibility improving the situation for Americans here and now, ought to be seeking ways to get the U.S. CO_2 emissions heading upwards again rather than worrying about ways to try to reduce them, because two of the three reasons given by the EIA for the recent drop in U.S. CO_2 emissions have to do with hard economic times. Turn around the economy and you will turn around emissions.

What's in store for the immediate future? Probably more of the same—that is, a relatively low level of carbon dioxide emission from the U.S.—as the circumstances that led to the low value in 2009 have not really changed all that much. Hopefully, for all our sakes, the trend in U.S. CO_2 emissions will not stay negative for too much longer—at least not for the current reasons.

Patrick J. Michaels, Ph. D., is Senior Fellow in Environmental Studies at the Cato Institute, a non-profit public policy research organization. He is also a Distinguished Senior Fellow in the School of Public Policy at George Mason University.

Employee News

New Employees

Yu-Loong Liew joined Bulk Power Operations at Headquarters as operations planning engineer on May 3. A native of Kuala Lumpur, Malaysia, he earned bachelor's and master's degrees in electrical engineering from Mississippi State University and previously worked as a design engineer at Howard Industries. Liew enjoys reading and building computers, and he and his wife Judy have a son, Asher.

Marlene Roney joined SME as benefits specialist on May 23. She grew up in Amite, Louisiana and received an accounting degree from Southeastern Louisiana University. Marlene previously worked at the University of Southern Mississippi in contract and grants accounting. She likes to read, sing and play the piano. Marlene and her husband Paul have three children.

Lab Technician **Ray Reeves** began work at Plant Morrow on June 27. He earned a degree in petroleum engineering from Mississippi State University and previously worked at Magnolia Scientific, an environmental testing lab. Born in Key West, Florida and a raised in a military family, Ray spent much of his youth in Bogue Chitto, Mississippi. He enjoys sports, music and travelling.

Randall Woods started as electrical projects engineer for Bulk Power Operations on July 11. A native of Ackerman, Mississippi, he attended the University of Mississippi and earned a bachelor's degree in electrical engineering. He comes to SME after previously serving as a senior project engineer for Masonite. Randall and his wife Angel have a daughter, Rachel. He enjoys golf and woodworking.

New Director Joins SME Board

Jerry Sisco is Magnolia EPA's new representative on South Mississippi Electric's Board of Directors, replacing Bruce McCaffery. Sisco has been a Magnolia EPA director since 1996. He operates a dairy farm in the West Lincoln community of Lincoln County.

Dixie Electric Names New General Manager

After conducting a national search, Dixie Electric Power Association's board of directors hired **Randy Smith** as the Association's new general manager.

Smith, who previously served as engineering manager and has worked with Dixie Electric for 25 years, began his new role on July 4. He replaced long-time employee James T. Dudley, Jr., who returned in November 2010 as Dixie Electric's Interim General Manager.

Smith earned his degree in electrical engineering from Mississippi State University and is a graduate of the Management Internship Program through the National Rural Electric Cooperative Association.

Know How to Beat the Effects of Heat

When human bodies become overheated, they are designed to dissipate heat by varying the rate and depth of blood circulation, by losing water through the skin and sweat glands, and—as the last extreme is reached—by panting. When blood is heated above 98.6 degrees, the heart begins to pump more blood, blood vessels dilate to accommodate the increased flow, and the bundles of tiny capillaries threading through the upper layers of skin are put into operation. The body's blood is circulated closer to the skin's surface and excess heat drains off into the cooler atmosphere. At the same time, water diffuses through the skin as perspiration. The skin handles about 90 percent of the body's heat dissipating function.

By itself, sweating does not cool the body unless the water is removed by evaporation, and high relative humidity retards evaporation. The evaporation process itself works this way: the heat energy required to evaporate the sweat is extracted from the body, thereby cooling it. Under conditions of high temperature (above 90 degrees) and high relative humidity, the body does everything it can to maintain 98.6 degrees inside. The heart pumps a torrent of blood through dilated circulatory vessels; the sweat glands pour out liquid—including essential dissolved chemicals, like sodium and chloride, onto the surface of the skin.

Heat disorders generally result from a reduction or collapse of the body's ability to shed heat by circulatory changes and sweating, or a chemical (salt) imbalance caused by too much sweating. When heat gain exceeds the level the body can remove, or when the body cannot compensate for fluids and salt lost through perspiration, the temperature of the body's inner core begins to rise and a heat-related illness may develop.

Ranging in severity, heat disorders share one common feature: the individual has overexposed or over-exercised for his or her age and physical condition in the existing thermal environment. Studies indicate that, other things being equal, the severity of heat disorders tend to increase with age—heat cramps in a 17-year-old may result in heat exhaustion for someone over 40 and in heat stroke for a person over 60.

"Heat-related illnesses are a great risk, especially in the summer months for outdoor workers or workers in hot, humid areas," said Roy Foster, job training and safety manager. "If you work outside or want to enjoy the outdoors during hot weather, the key to preventing a heat disorder is to stay hydrated and avoid overly exerting yourself."

If you have to be outside or work in a hot location, the following tips will help you to prepare your body for the heat before the heat gets the best of you:

- Drink plenty of fluids—even when you are not thirsty. When exerting yourself in the heat, a good rule of thumb is two to four glasses of cool water an hour.
- Replenish your body of the salt and minerals you lose while perspiring by drinking a sports beverage. Avoid liquids that dehydrate you, such as caffeine drinks and alcoholic beverages—drink only water or sports drinks. Also steer clear from overly sugary drinks, which can cause you to lose more body fluid.
- Wear a hat that provides adequate coverage from the sun.
- Dress appropriately. Wear loose-fitting, well-ventilated thin clothing in light colors. A black shirt, or other dark color, can absorb heat from the sun and raise your body temperature.
- Work or take breaks in shaded areas or a cool place whenever possible. Stay inside as much as possible on extremely hot days and make use of the air conditioner. This can help your body stay cool even when you go back to the warmer environment.
- Don't get too much sun. Sunburn makes the job of heat dissipation that much more difficult.

"Try to limit the amount of time you spend outdoors while exposed to extreme temperatures, and perform any heat-related tasks in the early morning and later evening hours whenever possible," said Foster. "The temperatures should be cooler, and this would be the best time to perform tasks in work areas that are hot, especially during the summer months."

KNOW THE SYMPTOMS OF HEAT DISORDERS

HEAT CRAMPS: Painful spasms usually in muscles of legs and abdomen possible. Heavy sweating.

First Aid: Apply firm pressure on cramping muscles or gentle massage to relieve spasm. Give sips of water. If nausea occurs, discontinue use.

HEAT EXHAUSTION: Heavy sweating, weakness, skin cold, pale and clammy. Pulse thready. Normal temperature possible. Fainting and vomiting.

First Aid: Move the victim out of sun. Lay down and loosen clothing. Apply cool, wet cloths. Use fans or move the victim to air conditioned room. Provide sips of water but if nausea occurs, discontinue use. If vomiting continues, seek immediate medical attention.

HEAT STROKE (or sunstroke): High body temperature (106° F or higher). Hot dry skin. Rapid and strong pulse. Possible unconsciousness.

First Aid: Heat stroke is a severe medical emergency. Summon emergency medical assistance or get the victim to a hospital immediately. Delay can be fatal. Move the victim to a cool environment. Reduce body temperature with cold bath or sponging. Remove clothing, use fans and air conditioners. If temperature rises again, repeat process. Do not give fluids.

The Moselle Repower Project continues to move forward. Steam drums have been installed on top of both heat recovery steam generators (HRSGs); freestanding stair towers are in place; the pipe rack is nearing completion and pipe fitters are installing the high energy piping that will provide steam to the two existing steam turbines. In addition, both generator step-up transformers have been energized, which has allowed the start-up process to begin.

OUR MISSION

Deliver the South's best value for safe and reliable electric energy and serve as a common resource for our Member-owners

OUR DAILY RESPONSIBILITY

Knowing and complying with all environmental and regulatory requirements

OUR COMPETITIVE STRENGTHS

- An experienced, skilled work force
- A commitment to employee safety and system reliability
- A long-term contractual relationship with our Member systems
- Financial health, including that of our Members
- Sustained load growth in our Members' service territories
- Long-range planning for cost-effective generation resources
- Fuel diversity in generation resources

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