Tennessee Valley Authority
Annual Report on Energy Management
FY 2003

(Including Department of Energy
Reporting Guidance and Outline)

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Stephen L. Brothers, Manager, TVA Internal Energy Management Program (IEMP)

OUTLINE AND INSTRUCTIONS FOR THE ANNUAL REPORT

I. Management and Administration. This section will describe (1) the agency's establishment of an energy management infrastructure and (2) the agency's use of management tools to implement Executive Order 13123.

A. Energy Management Infrastructure

1. **Senior Agency Official**. Identify the agency's senior energy official and describe the official's role and responsibilities.

   LeAnne Stribley is the designated Senior Energy Official and Executive Vice President of Administration.

   Stephen L. Brothers manages the TVA Internal Energy Management Program (IEMP) and is Senior Manager of Energy Legislation and Management under Administration.

   David R. Zimmerman is the manager of Sustainable Design under Energy Legislation and Management.

2. **Agency Energy Team**. Identify the members of the team and describe the team's responsibilities.

   TVA formed the Agency Energy Management Committee (AEMC) to facilitate compliance with federal statutes, Executive Orders, federal regulations, TVA energy and related environmental management objectives, and obligations under the Environmental Protection Agency's (EPA) Green Lights Program (GL), EPA's Energy Star Buildings Program (ESB) and EPA's Energy Star Program (ESP). The AEMC serves as the agency energy team. This committee is comprised of representatives from each TVA organization responsible for energy management and associated environmental considerations in facility and general operations inside the agency. The AEMC provides an avenue for sharing lessons learned and replicating success. The members are:

   - **Stephen L. Brothers, chairperson for the AEMC;**
   - **William H. Lehman, Fleet Management;**
   - **David R. Zimmerman, Sustainable Design;**
   - **David W. Stewart, Fossil;**
   - **Aaron B. Nix, Facilities Management Environmental;**
   - **William R. McNabb, Facilities Management O&M;**
   - **Jay T. Grafton, Nuclear;**
   - **Terry L. Rutledge, Nuclear alternate;**
   - **Teresa S. Wampler, River System Operations and Environment;**
   - **David R. Dinse, Public Power Institute;**
   - **Tommy K. McEntyre, River Operations;**
   - **Bryan H. Jones, Information Services;**
   - **Carolyn B. Marvel, Fossil alternate;**
   - **David A. Gordon, Heavy Equipment;**

- **Judy G. Driggans, Chief Financial Officer representative;**
- **Bryan D. Singleton, Chief Financial Officer alternate;**
- **Barry M. Gore, Transmission and Power Supply;**
- **V. Edward Hudson, Demand Side Management Program;**
- **David R. Chamberlain, Customer Service and Marketing;**
- **Tina I. Broyles, Transmission and Power Supply alternate;**
- **Mary H. Moore, General Counsel; and**
- **Sherri R. Collins, General Counsel.**

B. Management Tools

1. **Awards (Employee Incentive Programs).** Describe the agency's use of employee incentive programs to reward exceptional performance in implementing Executive Order 13123.

   TVA utilizes pay for performance as one method to reward employees' efforts toward meeting agency goals. One of the benefits to TVA's agency goals is savings attributed to the implementation of cost effective energy and related environmental projects. An example of one pay for performance goal is reduction in cost per square foot for building operation which includes energy consumption.

2. **Performance Evaluations.** Describe agency efforts to include successful implementation of provisions of Executive Order 13123 in the position descriptions and performance evaluations of senior energy officials, members of the agency energy team, heads of field offices, and facility/energy managers.

   To the extent to which employees are responsible for activities that are related to the objectives of Executive Order 13123 (E.O. 13123), their job descriptions contain reflective line items and their performance is evaluated in terms of the extent to which they accomplish such goals.

3. **Training and Education.** Describe activities undertaken to ensure that all appropriate personnel receive training for energy management requirements. (Note: The number of employees trained will be reported on the agency's Data Report and Energy Scorecard. Expenditures on training will also be reported on the Data Report). Describe agency outreach programs that include education, training, and promotion of ENERGY STAR® and other energy efficient products for Federal purchase card users.

   TVA uses various training methods to accomplish objectives of the IEMP. Information updates are provided on current federal requirements and regulations to employees, managers, and TVA customers upon request. Energy management and associated environmental training is provided to managers and employees as needed. Employee awareness activities are used to educate employees on how they impact energy consumption and the environment through their daily activities at work and home. TVA also educates staff on energy and environmental related topics through the TVA University.

4. **Showcase Facilities.** Highlight exemplary new or existing facilities that the agency has designated Showcase Facilities in FY 2003. Describe why the facilities

are considered Showcase Facilities (i.e., discuss the facility design, the improvements made in energy or water efficiency, the use of renewable energy, etc.).

The TVA Chattanooga Office Complex (COC) continued to be TVA's designated Showcase Facility for FY 2003. The COC was completed in 1986 and encloses approximately 1.2 million square feet of floor area, and is made up of five interconnected buildings (Signal Place, Lookout Place, Blue Ridge, Missionary Ridge, and Monteagle Place). It integrates the use of passive energy strategies, energy management practices, and environmental programs and activities. Occupants' daily activities have been recognized as a major component in facility performance. Energy and environmental awareness programs have been established to inform the occupants of the impacts their actions have on this performance. The combinations of original design elements, energy and environmental activities, and aggressive energy reduction operation and maintenance efforts have resulted in the COC becoming a model facility.

During FY 2003 we began to consolidate TVA space to reduce cost. This resulted in an increase in the occupancy density of the COC. To offset the increased energy demand from this increased density we continue to investigate energy efficiency measures and have implemented measures which include:

- **Better placement of task lights resulting in reduction of numbers used;**
- **Use of digital lighting controls which can be operated from the users PCs;**
- **Orienting offices to better utilize daylighting over mechanical lighting;**
- **Use of more efficient T5 lighting in place of existing T8 and T12; and**
- **Use of more efficient flat panel displays in place of conventional cathode ray tube displays.**

ENERGY MANAGEMENT AND ASSOCIATED ENVIRONMENTAL EFFORTS

Energy consumption in the COC exceeds TVA's target for facility design and the FY 2010 building energy reduction goal established in E.O. 13123. This low energy consumption rate supports the reduction of CO_2 and other environmental impacts at the source.

Since initial construction, additional energy and environmental improvements have been implemented in the COC. One of these improvements was the design and installation of a chilled and hot water storage system for the COC and Monteagle Place (MP) buildings. The system allows the two buildings, through a symbiotic relationship, to better use site energy and reduce the need for source energy. During FY 2003 we rebuilt one of the MP chillers which improved its overall efficiency.

COC Original Design Features:

- **VAV air handlers with full economizer capabilities.**
- **Energy Management and Control System (HVAC, Lighting, Fire).**
- **Heat recovery from MP chillers.**
- **Approximately 30 footcandles of ambient lighting supplemented with daylighting and task lighting.**
- **Renewable energy attributes such as daylighting.**
- **Thermal storage through structural and fluid mass.**

Additional Improvements:

- **Chilled water crossover piping allows the COC and adjacent facility to share chilled water and run the most efficient mix of chillers.**
- **Water fountains are heated and cooled through heat exchangers to better manage temperature and humidity in the building.**
- **Motion sensors and timers have been installed in the COC (i.e., conference rooms, restrooms, enclosed offices, closets, etc.).**
- **LED exit lights have been installed.**
- **Energy efficient lighting has been added.**
- **COC storage tanks are used for chilled and hot water storage (3 x 19,000 gallons).**
- **Heat exchangers and chilled water were used to cool the secondary water loop allowing the abandonment of rooftop evaporative coolers and associated fans, motors, and sump heaters.**
- **Equipment (i.e., fixtures, motors, ballasts, chillers etc.) was upgraded to energy efficient models as failures occurred.**
- **Variable Frequency Drives (VFDs) and energy efficient motors have been installed on all large air-handling units.**
- **The energy management system has been upgraded to be more user friendly.**
- **Chiller efficiencies have been evaluated so the most energy efficient mix of chillers can be run for operating conditions.**
- **Upgrading to more energy efficient equipment is evaluated during modifications (fixtures with T-8 lamps and electronic ballasts, etc.).**
- **Energy efficient motors are installed where applicable.**
- **During purchase of replacement parts, energy efficient and environmentally friendly materials were ordered and stocked.**
- **Chillers have been retrofitted to accept non-CFC refrigerant.**
- **Energy Star equipment was installed where applicable.**
- **Building entry air locks with automated doors have been installed to reduce the infiltration of outside air.**

ENVIRONMENTAL PROGRAMS AND ACTIVITIES

TVA demonstrates a commitment to environmental stewardship through the implementation of its environmental programs and activities at the COC. Examples of these efforts include, but are not limited to, toxic reduction, affirmative procurement, waste minimization, and recycling.

Toxic Reduction:

TVA continues its efforts to reduce the amount of toxic chemicals used in its operation and maintenance activities for the building. The volume of toxic chemicals purchased in corporate office buildings has been reduced by over ninety percent since 1994. The COC is the largest single contributor to this effort.

Affirmative Procurement:

TVA reduces environmental impacts at the COC and other facilities through affirmative procurement of materials with recycled content. In FY 2003, TVA issued a Corporation-wide Affirmative Procurement Policy and revised the Agency's Affirmative Procurement Plan. During FY 2003 TVA purchased $5.87 million of materials meeting guidelines established under the Resource Conservation and Recovery Act (RCRA) out of $11.99 million (forty-nine percent), and $63.40 million of other recycled content materials.

Waste Minimization and Recycling Programs:

TVA is a Federal Charter Partner in the EPA "WasteWise Program." Through this program, TVA has made a commitment to achieve results in three areas:

1) **Waste prevention;**
2) **Collection of recyclables; and**
3) **Use of recycled materials.**

This aligns with TVA's mission of stimulating economic growth by protecting the Tennessee Valley's natural resources and building partnerships for the public good. TVA has established the Solid Waste Leverage Team and a Solid & Hazardous Waste Regulatory Policy Team to support the "WasteWise Program."

During FY 2003 TVA generated 12,637 tons of solid waste which includes corporate facilities such as the COC. TVA partners with a nonprofit organization which trains and develops work skills in mentally and physically challenged clients. These clients, in conjunction with their respective organizations, collect, sort, and market the recycled material from the COC. In addition to the typical office waste recycling, TVA continues its efforts in recycling used batteries, fluorescent light tubes, oil, scrap metals, building materials, wood waste, and ballasts. TVA also utilizes a redeployment program which collects and redeploys used equipment and materials. During FY 2003 TVA donated or sold 20,006 tons of material and equipment through scrap contracts, auctions and sales, and donations.

Sustainable carpet is used throughout the COC. This carpet contains and uses high performance backing made from one hundred percent recycled content. TVA has an agreement with the carpet manufacturer to recycle carpet removed from the COC which has kept used TVA facility carpet out of the landfill while saving an equivalent amount in raw materials.

5. **Other Energy and Related Environmental Initiatives.** Highlight new or existing energy and related environmental initiatives that the agency has accomplished in FY 2003. Provide a brief description of these initiatives.

INDUSTRIAL INITIATIVES

TVA provides an initiative for its direct-served and distributor-served industrial customers, which focuses on providing solutions to energy-related problems in the manufacturing environment. TVA works with clients to help them identify and solve problems related to their use of energy such as manufacturing processes, environmental issues, and plant operations. The targeted segments, such as the textile and food processing industries, are selected because of the large presence of such industries in the TVA service area, high energy usage, or the availability of solutions for their existing problems. The TVA industrial marketing managers mainly rely on in-house expertise, but sometimes bring in consultants to assist these industrial clients.

As a prime example of TVA energy assistance to a major industrial customer, TVA representatives developed and co-chaired an in-house energy conservation team to identify and implement energy cost savings opportunities at the Saturn Spring Hill automobile assembly plant. The team achieved savings in excess of $1.1 million in FY 2003 and over $4 million since the beginning of the initiative four years ago. Using a similar approach, TVA identified additional energy savings of over $500,000 at the Athens, Alabama, Delphi plant in FY 2003 over the $2.5 million identified previously. During FY 2003, Delphi implemented a TVA recommendation to repair multiple compressed air leaks in the plant, resulting in the replacement of a 1500 HP air compressor with a 700 HP air compressor.

COMMERCIAL INITIATIVES

TVA works with Tennessee Valley commercial and institutional customers to provide solutions to their energy-related problems and to encourage the selection of energy efficient equipment. For example, TVA is working with schools, governments, offices, retail, healthcare, and other commercial segments to provide information on the various energy options available to them. As part of that effort, TVA provides feasibility studies conducted by independent private sector professional engineers, to compare different types of systems on a life-cycle-cost basis. Also, if the customer is interested in closed loop geothermal heat pumps, TVA will provide test bores and thermal conductivity tests at the proposed project site to assist with the design of the ground heat exchanger. Furthermore, TVA sponsors continuing education for Tennessee Valley architects and engineers on the proper design and application of geothermal heat pumps. In the TVA service area, there are approximately 190 geothermal systems installed or in design as the result of TVA's promotion of this energy efficient technology. Demand for TVA assistance to commercial customers on energy-related problems continues to grow.

RESIDENTIAL INITIATIVES

TVA and power distributors have a long history of residential energy-efficiency programs for the Valley. These programs are marketed under the brand name *energy right*®.

About 150 distributors participate in the various initiatives from the *energy right*® Program. These initiatives are described below:

New Homes Plan **promotes all-electric, energy-efficient new homes. All homes built *energy right*® must meet a minimum rating in overall energy efficiency. Homes built at least fifteen percent better than the minimum rating, qualify as *energy right*® Gold, and those built thirty percent better qualify as *energy right*® Platinum.**

Heat Pump Plan **promotes the installation of high efficiency heat pumps in homes and small businesses. Installation, performance, and weatherization standards have been established to ensure the comfort of the customer and the proper operation of the system. A Quality Contractor Network has been established for maintaining high installation standards. Through a third-party lender, TVA provides ten year financing for residential heat pumps with repayment through the consumer's electric bill.**

Water Heater Plan **promotes the installation of energy-efficient electric water heaters in homes and small businesses.**

New Manufactured Homes Plan **promotes the installation of electric heat pumps in new manufactured homes.**

In Concert With The Environment **(in partnership with Nexus Energy Software) is a comprehensive environmental and energy education program directed to middle school and junior high school students. Student participants receive an energy survey to complete for their households. Results from the survey indicate the home's estimated annual and monthly energy usage by appliance and gives a number of energy, environmental and water recommendations for the student and their family to implement.**

energy right Home e-valuation® **(in partnership with Nexus Energy Software) allows residential customers to play an active role in saving energy in their homes. After completing an energy survey, customers receive a personalized report that breaks down the home's annual and monthly energy usage by appliance, and gives a number of energy recommendations as well as information about distributor products and services.**

energy right **Home *e*-Valuation Online is a web-based home energy audit for residential customers to complete interactively via the Web. Customers complete the survey and receive a detailed analysis of their energy use based on their answers and average TVA rates.**

energy right **Small Business *e*-Valuation is an energy audit for small and medium-sized business customers that is completed online. Customers complete the survey and receive a detailed analysis of their energy use and customized savings. They can also benchmark their facility's use against similar businesses.**

More information is available at the *energy right*® website (www.energyright.com)

DEMAND SIDE MANAGEMENT

TVA and thirteen of its power distributors are involved in a Direct Load Control program. This program involves power distributors installing radio controlled switches on their customer's air-conditioners and water heaters. During peak demand periods TVA is allowed to curtail the power to this equipment. The power distributors receive a bill credit for each operable switch. The participating power distributors are allowed to determine the type of incentive given to their customers. Currently, TVA can curtail approximately 45 MW of load upon demand.

PUBLIC POWER INSTITUTE

As a national leader in demonstrating the value of public power, TVA created the Public Power Institute (PPI) to develop and implement solutions for energy, environmental, and economic issues through 21st century technologies.

The technology focus areas for PPI are: Biomass and Renewables; Clean and Advanced Energy; Environmental Impacts and Reduction; and Energy Use and Industrial Ecology.

TVA's PPI promotes the value of public power in a competitive marketplace by:

- **Using TVA facilities as a living laboratory to test new energy technologies;**
- **Showcasing technologies that benefit the public; and**
- **Providing scientific input on regulatory and public policy issues.**

The institute serves both as a research laboratory seeking new ways to achieve sustainable power production and as a public policy clearinghouse for energy and environmental issues. PPI represents the vision and ultimate mission of public power: to put the public good first and to emphasize long-term benefits over short-term gains.

PARTNERSHIPS

Recognizing that the PPI's ability to accomplish its mission is largely dependent upon partners, PPI collaborates with others, including federal, state, local, private, not-for-profit, and educational entities. These collaborative efforts allow for the development of technologies for power production, power delivery, and power use. The following are the major partnerships that leverage external expertise and promote cooperation between the public and private sectors.

Utility-Related Organizations:

- **Large Public Power Council**
- **East Kentucky Power Cooperative**
- **Tennessee Valley Public Power Association (TVPPA)**
- **American Public Power Association (APPA)**
- **National Rural Electric Cooperative Association (NRECA)**

Research Organizations and Partnerships:

- **National Farmers Union**
- **Alabama Farm Bureau**
- **Alliance to Save Energy**
- **British Petroleum (BP) Amoco**
- **Corporate Executive Board**
- **Mississippi Alternative Energy Enterprise (MAEE)**
- **Solar Electric Power Association**
- **Coal Utilization Research Council**
- **Electricity Storage Association**
- **Environmental and Energy Study Institute**
- **Electric Power Research Institute (EPRI)**
- **Oak Ridge National Laboratory (ORNL)**
- **U.S. Department of Energy(DOE)**
- **U.S. Department of Agriculture**
- **U.S. Department of Defense**
- **U.S. Environmental Protection Agency (EPA)**
- **Geothermal Heat Pump Consortium**
- **Center for Transportation and the Environment (CTE)**
- **Electric Drive Transportation Association**
- **U.S. Department of Transportation**
- **American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE)**
- **American Bioenergy Association**
- **American Wind Energy Association**
- **CEA Technologies, Incorporated**
- **Center for Air Toxics Metals**
- **Consortium For Energy Efficiency**
- **Consortium on Seismic Qualification of Substation Equipment**
- **East Tennessee Clean Fuels Coalition**
- **Gasification Technology Council**

- **Interstate Renewable Energy Council**
- **IRIS Consortium New Uses Council**
- **Power System Electric Research Council**
- **Utility Wind Interstate Group**

Universities:

- **UT Space Institute**
- **Mississippi State University**
- **Tennessee Technological University**
- **Tuskegee University**
- **University of Alabama**
- **University of Kentucky**
- **University of Tennessee at Chattanooga**
- **University of Tennessee at Knoxville**
- **Vanderbilt University**
- **University of Mississippi**
- **Carnegie Mellon**
- **Middle Tennessee State University**
- **University of Akron**

PPI helps TVA fulfill its commitment to provide competitively-priced and reliable power while promoting environmental stewardship and economic development. The PPI is positioned today to help develop, demonstrate, and deploy new energy-related technologies for a better tomorrow.

PPI RECENT HIGHLIGHTS/ACCOMPLISHMENTS

New Technologies Demonstrated – PPI's Technologies Demonstrated Indicator is a measure of the number of research and development technologies which are demonstrated for the first time at TVA facilities, at customer sites (distributor, directly served, and consumer), and through partnerships and collaborations.

1. **Soybean-Based Electric Distribution Transformer Oil – BioTrans - BioTrans was developed and patented by Waverly Iowa Light & Power as a soybean electric distribution transformer oil with assistance from the American Public Power Association. Nashville Electric Service (NES) is presently implementing a 24-month demonstration project of transformers filled with BioTrans. Three additional distributors of TVA Power, Appalachian Electric Coop., Athens Tennessee Utility Board, and Gibson EMC, have started parallel demonstrations. Additionally, TVA has conducted a retrofill of one of its 700 kw transformers at the Buffalo Mountain Wind Farm with 250 gallons of BioTrans.**

2. **Mini SODAR Technology for Augmenting Wind Tower Measurements – This project involves using a technology originally developed to measure winds with helicopters hovering nearby. The system utilizes a high frequency acoustic signal to track the winds and was adapted to provide detailed information for wind energy systems.**

3. **Roofing Integrated Photovoltaics with Net-metering Alternative – In a joint partnership with ORNL, DOE, and Habitat for Humanity, three in a series of five state-of-the-art energy-efficient Habitat homes, have been completed in Loudon County, Tennessee. These initial homes introduce the Zero Energy Building (ZEB) concept by featuring utility-interactive PV systems that qualify for TVA's Green Power Switch® Generation Partners demonstration. Total estimated capacity of each home generation system is 2 kW.**

4. **TVA-Wide New Technologies Implemented - The TVA–Wide Technology Implementation Indicator is a measure of the number of new technologies which TVA organizations have implemented or applied for the first time (as part of normal operations).**

   - **Thermal Conductivity Mapping for Geothermal Heat Pumps - A CD ROM was developed that contains thermal conductivity test data and for 89 sites in the Tennessee Valley overlaid on a geology map. This data was disseminated to the private design professionals in the Valley to aid in designing large commercial geothermal heat pump systems.**

   - **eScan – eScan diagnostic technology was developed and implemented to pinpoint ductwork problems and problems in the operation of heating, ventilation, and air conditioning systems. Middle Tennessee Electric Membership Corporation is offering the eScan diagnostic technology to their residential customers**

Other Current Activities:

- **Development and commercialization by TVA and ORNL of the frostless heat pump;**
- **Partnered with ORNL, DOE and others to develop a revolutionary hybrid solar lighting (HSL) concept that integrates light from both solar and electric sources. Construction started on a demonstration of HSL technology at the TVA Public Power Institute Facility in Muscle Shoals, Alabama;**
- **Demonstrating passive treatment of high-acidity and high-iron coal ash leachate at a TVA fossil plant;**
- **Involved in multi-organizational public and private partnerships to demonstrate and evaluate alternative fueled vehicle (AVF) options within the Great Smoky Mountain National Park and other national parks;**
- **Leading a partnership with NPS/DOE/EPRI to study fine particulate and nitrogen loadings in the Great Smoky Mountains National Park;**
- **Participating in flue gas mercury speciation tests as part of the joint EPRI/DOE/EPA test program to determine if SCRs change the state of the mercury to a form that can be removed by wet limestone scrubbers;**
- **Completing a 16-year performance evaluation and a survey of passive TVA constructed wetlands technologies for acid drainage treatment;**

- **Characterizing fate and form of ammonia in ash sluice water derived from Selective Catalytic Reduction systems at a fossil plant;**
- **Continued microturbine testing/demonstration program (30 kW Capstone and 60 kW Capstone);**
- **Completed computer simulation phase of novel, low temperature power cycle technology development, then submitted the patent and began engineering design of demonstration pilot plant;**
- **Cooperated with Voith Hydro, Inc. in establishing and operating Hydro Resource Solutions, LLC, a Tennessee limited liability company which develops and markets energy efficiency enhancing hardware and software for the hydro power industry;**
- **Initiated a joint DOE, EPRI, and TVA project, the Carbon Capture and Water Emissions Treatment System (CCWESTRS), which will demonstrate integration of fossil power plant operations with terrestrial carbon sequestration technologies;**
- **Evaluating and demonstrating Demand Side Management (DSM) initiatives to prepare for future changes in the energy and market place. Demonstrations underway include:**
  - **Uptown Memphis Green Buildings;**
  - **Net Zero Energy Building Demonstration; and**
  - **Price Response Load Management demonstration/evaluation;**
- **"Energy Efficiency Education" market transformation initiative with the State of Tennessee;**
- **Efficient technology demonstration for wastewater treatment;**
- **Increased nuclear electrical generation by 11.6 MW by installing more accurate feed water flow instrumentation; and**
- **Began testing and demonstration with EPRI of a Stirling cycle engine. The demonstration will use biogas from the Lenoir City Utility Board sewage treatment plant as a fuel source. Cogeneration opportunities will be investigated as part of the demonstration.**

II. Energy Efficiency Performance. This section will highlight data calculated for reporting on the Data Report and the Energy Scorecard. The purpose of the section is to provide narrative information in support of these data.

A. Energy Reduction Performance

Site-Delivered vs. Source Energy—The factors used for converting the reporting units to Btu have a significant impact on how performance toward the energy efficiency goals and other goals of E.O. 13123 are measured. "Energy use" is defined as the energy that is used at a building or facility and measured in terms of energy delivered to the building or facility. Recognizing this, OMB and DOE will use Btu based on the site conversion factors for both electricity and steam as the primary measure of performance. However, because carbon emissions are generally proportional to source energy use, reductions in source Btu will also be considered more seriously than in the past. The conversion factor for electricity of 3,412 Btu per kilowatt hour, the rate of consumption by the end-user on site, will be used for measuring performance. The difference between the site conversion rate and the estimated source conversion rate of 10,346 Btu per kilowatt hour is attributable to transmission and conversion losses associated with electric generation. The site conversion factor for purchased steam is 1,000 Btu per pound. Generation inefficiencies and distribution losses are included in the source conversion factor of 1,390 Btu per pound. Separate tables showing agency consumption using the source conversion factors for electricity and steam, along with estimated carbon emissions, will be included in DOE's Annual Report to Congress.

TVA's facility inventory and the type of activities these facilities are used for continues to evolve as the agency faces new challenges. This facility information is updated through the AEMC. The AEMC remains the focal point for disseminating energy and related environmental information to TVA organizations and employees and implementing TVA's Energy Plan (see Attachment 8). The AEMC is also responsible for the development of TVA's Implementation Plan (see Attachment 6). To benchmark success the AEMC utilizes many tools including the Energy Scorecard (see Attachment 2). The AEMC allows representatives to voice problems in meeting regulations and goals and share success stories which can then be applied throughout TVA. To benchmark success the AEMC uses many tools including:

TVA NEW BUILDING DESIGN

TVA is designing new buildings to not only meet energy efficiency standards but also sustainable standards. Technologies such as daylighting, passive solar heating, geothermal heat pumps, advanced controls and non-toxic, recycle-content building materials are being incorporated into new building designs.

TVA FACILITY IMPROVEMENTS

TVA implements various energy efficiency improvements in its facilities. Some examples of typical energy reduction improvements are as follows:

- **Laboratory exhaust hoods have been equipped with Variable Speed Drives to reduce exhaust requirements when hoods are not being used;**
- **Air handlers have been equipped with variable speed drives to reduce makeup air to laboratory space when the exhaust hoods airflow is at a reduced level;**
- **Heating, ventilating, air conditioning, and exhaust hood systems have been added to TVA's Energy Management and Control System;**
- **Energy Management Control Systems have been added to control heat pump heating and cooling systems;**
- **Variable Frequency Drives have been added to building heating, ventilating, and air conditioning units;**
- **New lighting systems using T-8 lamps, electronic ballasts and motion sensors have been installed in many existing buildings;**
- **New lighting systems using T-5 lamps, electronic ballasts, and varied control systems have been installed in existing buildings;**
- **New high efficiency heat pump systems have been installed in many buildings;**
- **Existing air handlers have been rebuilt to improve efficiency; and**
- **Existing chillers have been rebuilt to improve efficiency.**

OPERATION AND MAINTENANCE ACTIVITIES FOR BUILDINGS

TVA continues to improve its energy efficiency and environmental stewardship through operation and maintenance activities. The following is a list of operation and maintenance practices and activities for FY 2003:

- **Recycle scrap metals, used oil, substation and communication station service batteries, and storm damaged or deteriorating steel structures;**
- **Recycle expired fluorescent lamps;**
- **Recycle or reuse waste material when feasible;**
- **Educate employees on energy efficiency;**
- **Encourage employees to implement energy efficient ideas and practices;**
- **Turn off equipment when not needed;**
- **Have custodians turn off building equipment after cleaning;**
- **Clean lamps, fixtures, and diffusers;**
- **Use the most efficient lamps available (i.e., screw-in fluorescent, screw-in halogen, screw-in high pressure sodium, energy efficient fluorescent lamps, etc.);**
- **Reduce lighting levels where light output exceeds requirements for the space;**
- **Install motion sensors to control lighting in rooms where economical (offices, restrooms, conference rooms, etc.);**
- **Install light switches or motion sensors in areas not currently controlled;**
- **Disconnect unnecessary lamps and ballasts;**
- **Disconnect unnecessary transformers;**
- **Install energy efficient electronic ballasts;**
- **Perform group relamping;**
- **Install photocell control on outdoor lighting;**
- **Rewire lamps to permit shutoff of unneeded lights;**
- **Minimize the number of ballasts installed (use a four-lamp ballast, for two adjacent two-lamp fixtures);**
- **Revise building operating procedures for efficiency and cost;**
- **Install programmable thermostats and use the night and weekend setback features to reduce energy use during unoccupied periods;**
- **Set thermostats in mechanical rooms and unoccupied areas so the least amount of energy will be used without causing the equipment to deteriorate;**
- **Verify and calibrate all controls periodically, including time clocks;**
- **Keep all outside doors and windows closed when heating or cooling, using vestibules properly;**
- **Keep garage and warehouse doors closed as much as possible while heating or cooling;**
- **Replace broken windows;**
- **Replace missing insulation;**
- **Add caulking where necessary;**
- **Replace worn weather-stripping on windows and doors;**
- **Reduce the amount of infiltration air where possible but always meet fresh air requirements;**
- **Eliminate ventilation during unoccupied hours;**
- **Operate exhaust fans only when required;**
- **Verify that all outside air dampers are operating properly;**
- **Operate HVAC in economizer mode when conditions are favorable;**

- **Eliminate ductwork leaks;**
- **Reduce ductwork and piping resistance where possible;**
- **Avoid heating and cooling at the same time;**
- **Change filters as recommended;**
- **Clean HVAC coils;**
- **Test and balance HVAC systems;**
- **Optimize chiller operation;**
- **Recycle waste heat when feasible;**
- **Lower domestic hot water temperature;**
- **Repair hot, chilled, or domestic water leaks;**
- **Cut off nonessential gas to buildings during the summer;**
- **When replacing motors, use properly sized energy efficient motors;**
- **Balance three-phase loads;**
- **Use cog-type belts for higher efficiency;**
- **Eliminate steam trap leaks; and**
- **Properly insulate hot water and steam lines to reduce energy loss.**

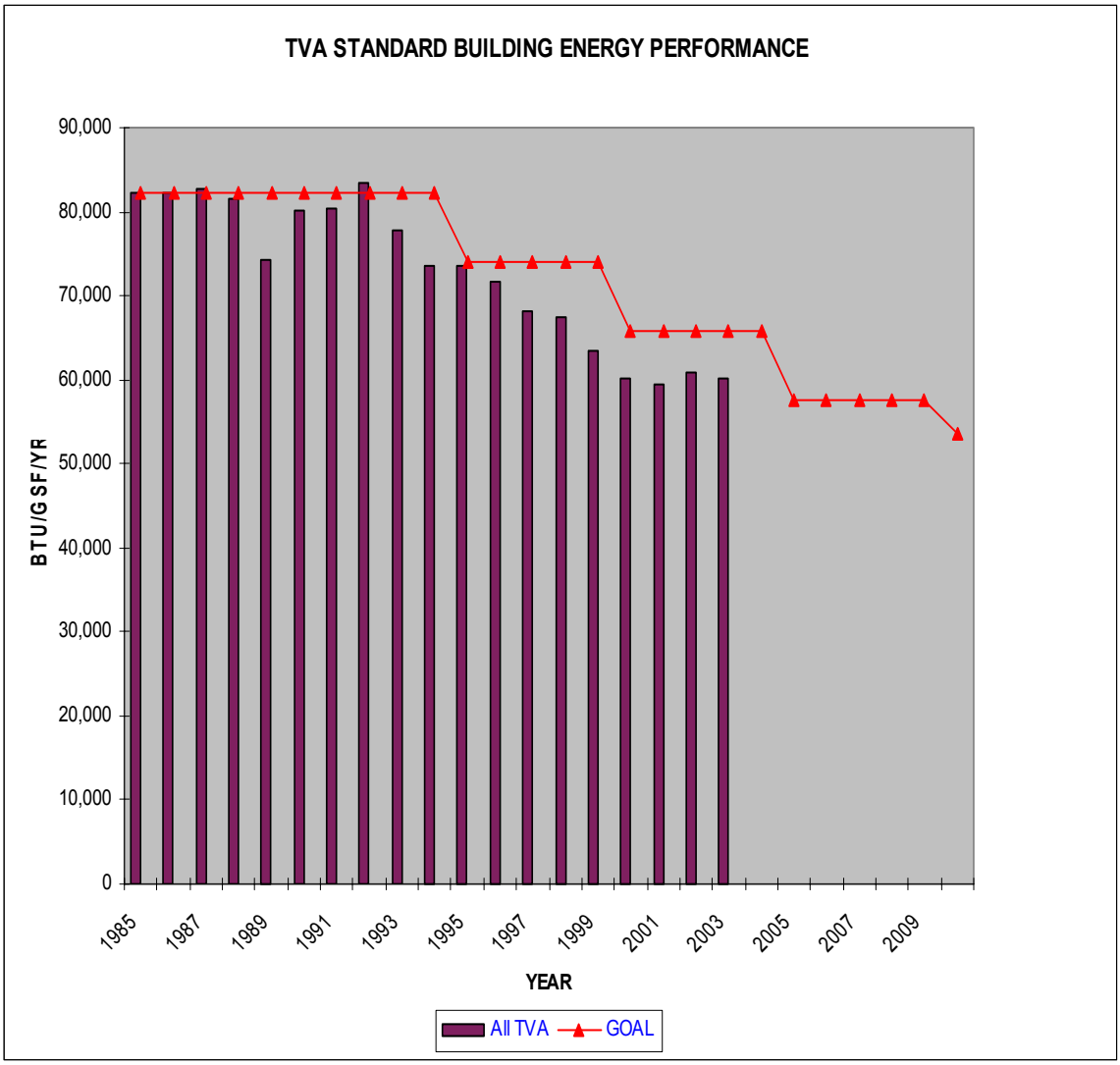
1. **Standard Buildings.** Report energy use for standard buildings in units of Btu-per-gross-square-foot (Btu/GSF) for FY 1985 (the base year) and FY 2003. Report the percent change from FY 1985 and from the FY 2002. (Note: This information will be reported on the agency's Energy Scorecard). Discuss any extenuating factors that may be skewing the accuracy of this performance measure.

Leased Spaced—Each agency that controls its Federally-owned building space or directly pays the utilities in its leased space will report to DOE the agency's aggregate energy consumption for various fuel types (see Data Report instructions). Reporting on leased buildings may pose some difficulty depending on the nature of the lease (partially serviced, fully serviced). In cases where an agency is responsible for paying utility bills for space that is leased, the agency is expected to report energy consumption for the leased space to DOE. If an agency is leasing from the General Services Administration, GSA is responsible for reporting.

Delegated Space—Agencies that have been delegated responsibility by GSA for operation and maintenance of buildings they occupy are required to report, to DOE, energy consumption for these buildings during the years the buildings are under their control. An agency should *not* adjust the FY 1985 baseline to reflect the addition of buildings delegated by GSA if those buildings were not under the agency's control during the base year period. The FY 1985 consumption and square footage of any building delegated after FY 1985 is included in GSA's FY 1985 baseline. To also include this square footage and consumption in the agency's baseline would result in double reporting. The impact of delegation activity on the Btu/GSF rates of most agencies should be minimal. In cases where building delegations account for a large increase in the percentage of an agency's building inventory and its Btu/GSF is greatly impacted, this situation will be documented in the text of DOE's Annual Report to Congress.

Lack of Base Year Data—Comparisons to a FY 1985 base year will not be possible for agencies that had no buildings under their control during the base year. Where comparisons to the FY 1985 base year are not possible, that specific item in the data table will be footnoted as "not applicable" in the report. In order to maintain accurate data and comply with the legislation, FEMP will work with relevant agencies to determine alternative approaches that would minimize double counting, but provide comparative information on Btu/GSF consumption.

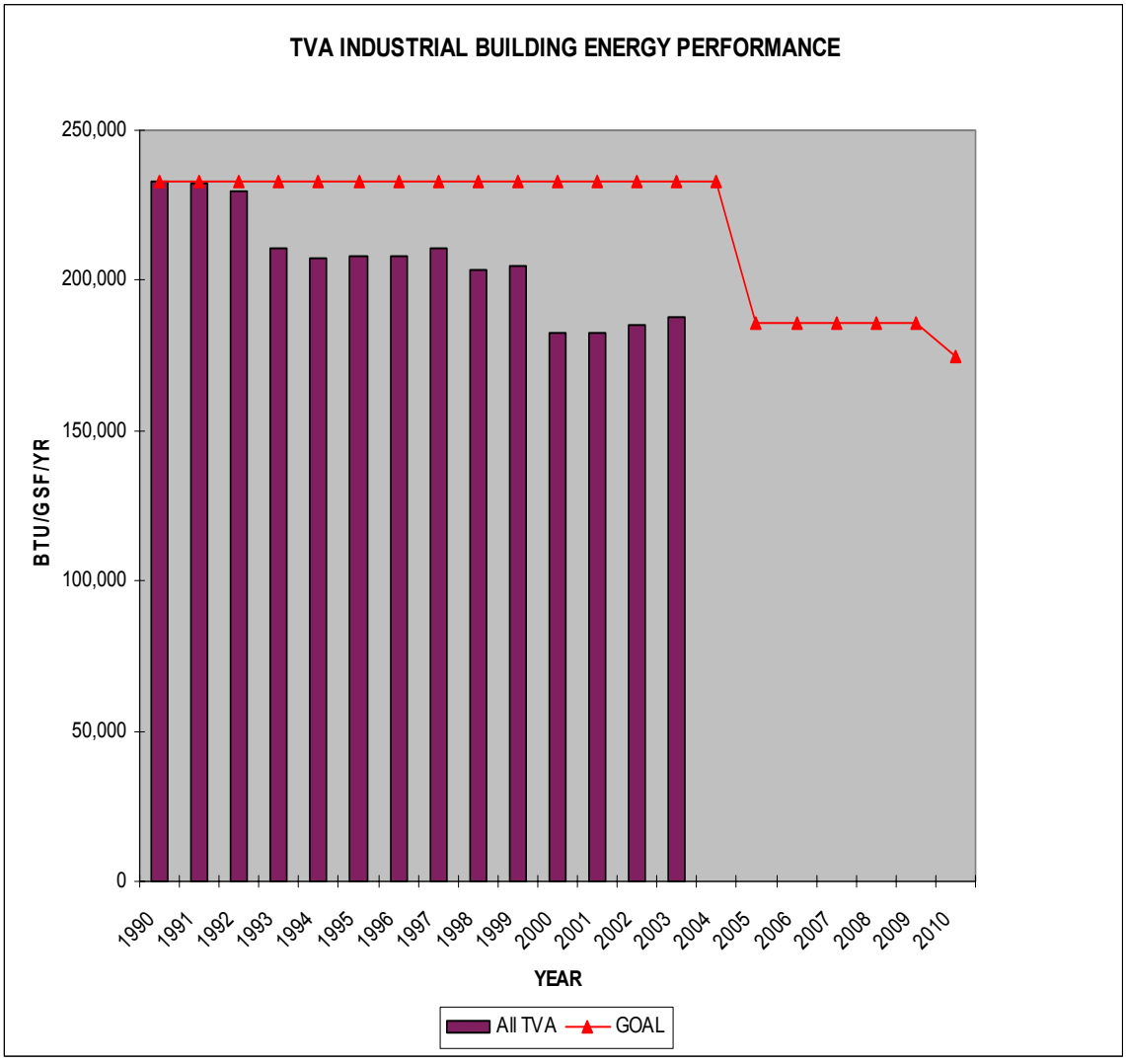
TVA continues to reduce energy use in its facilities through the coordination of energy management efforts. TVA has ended FY 2003 with a Btu/GSF of 60,256 which is a twenty-seven percent reduction from FY 1985.



2. **Industrial and Laboratory Facilities.** Identify the facility inventory subject to this goal, referencing Section IV, Part D that lists the buildings included. Describe the performance measure(s) used (Btu/square foot, Btu/production unit, etc.). (Refer to FEMP web site for the guidance document *Section 203 Performance Goals for Industrial, Laboratory, Research, and Other Energy-Intensive Facilities* www.eren.doe.gov/femp/resources/indust.html).

   Report energy use (in the designated performance measure) for industrial and laboratory facilities for FY 1990 (the base year) and FY 2003. Report the percent change from FY 1990 and from the FY 2003. (Note: This information will be reported on the agency's Energy Scorecard). Discuss any extenuating factors that may be skewing the accuracy of this performance measure.

   TVA has ended FY 2003 with a Btu/GSF of 187,849 which is a nineteen percent reduction from FY 1990.



3. **Exempt Facilities**. Refer to Section IV E—a list of exempt facilities and an explanation of why they were exempted. (Refer to DOE's *Criteria for Exempting Facilities from the Goals of Executive Order 13123 and Guidance for Reporting Exemptions* www.eren.doe.gov/femp/resources/criteria.html).

Although buildings found exempt according to the criteria are not subject to the requirements of Sections 202 and 203 of Executive Order 13123, DOE will continue to collect energy consumption data for these buildings under the new reporting category of "Exempt Buildings." This ensures that accurate reporting on overall Federal energy consumption is maintained.

TVA has a long history of demonstrating stewardship toward energy reduction and will continue to work toward reducing energy use in its generation, transmission and related energy intensive buildings. Energy reduction in these buildings has become increasingly more difficult given the majority of the energy consumption in these buildings is largely attributed to process energy (generation and transmission of electricity). In recognition of the above and the fact that only so much can be done to make these buildings more efficient in a cost effective manner, TVA, in discussion with DOE has decided to exempt these buildings. Attachment 5 contains a list of TVA's exempt facilities.

The following is a list of projects implemented in FY 2003 or planned for future implementation related to energy/water efficiency and sustainability in these exempt facilities.

TRANSMISSION POWER SUPPLY EFFICIENCY

TVA's Transmission Power Supply staff considers energy efficiency and environmental impacts for each project and activity. Following is a list of activities which have been completed in FY 2003 or planned for future implementation:

- **Reactive Power: Optimizing the power factor of electrical supply helps minimize losses associated with the transmission of electricity. TVA has installed new capacitors at Summer Shade, West Cookeville, Crossville, Dickson, and Watts Bar Fossil Plant.**
- **Replacement of Conductors: Rebuilding transmission lines with larger conductors reduces losses. Present worth analyses enable the optimum conductor to be selected that balances the capital cost against losses for the life of the line and the predicted loading. Reconductored lines include Solutia-Ratcliff, Pin Hook-Hurricane Creek, Pin Hook-Murfreesboro Rd, Chickamauga-Hamilton, and Trinity-Morgan (2 lines).**
- **Construction of New Lines: New lines help to ensure that electricity can be delivered reliably for the minimum transmission loss. The environmental impact of new lines is very carefully minimized through careful design and route selection, study of all possible alternatives including new technologies, and realizing the best performance from existing resources, as well as a detailed process for public involvement. New lines were constructed from Eagle Bend-North Knoxville, West Ringgold-Dug Gap-Center Point, Jonesborough-Sullivan 161-kV Line,**

Center Point-County Line 230-kV Line, Center Point-Alpha, and East Point-Hanceville.

- **New Substations and Line Loops: Like new lines, designing a system with sufficient substations and connections to the transmission system enables supply to consumers to be achieved most directly while enhancing reliability and minimizing losses. New construction includes substations at Stateline and Pin Hook. New transmission connections include Colbert-Tupelo, Colbert - West Point, John Sevier-W. Johnson City, and Davidson-Wilson.**
- **Replaced 500 kV GIS Switchyard at, Maury, TN 500 kV Substation with more efficient switchgear.**
- **Installed load-break switches on the Elizabethton-Cranberry transmission line at Roan Mountain Tap and Hampton Tap and on the Mayfield-Murray and Marshall-Murray transmission lines for more efficient load distribution.**
- **Replaced obsolete relays with more efficient solid-state relays on the Browns Ferry-Trinity #1, Browns Ferry-Maury, the Browns Ferry Union and the Davidson-Maury transmission lines.**
- **Continued installing steel poles instead of wood reducing the number of trees cut; replacing 1,639 existing wood poles with steel poles**
- **Installed over 2,640 steel cross arms for failing wooden cross arms.**
- **Continued yearly repair or replacement of a significant number of HVAC units as they were determined to no longer provide a high level of reliability. High efficiency electric heat pumps were used exclusively. Each through wall and window heat pump unit and central system heat pumps was required to have a Seasonal Energy Efficiency Rating (SEER) rating of 10 or higher.**
- **Smaller modular switchouses which are more energy efficient are now being installed instead of the old block switchouses of the past.**
- **Replaced 45 obsolete compressors for air blast breakers with more efficient units.**

HYDRO EFFICIENCY

The table below lists both completed and on-going projects at TVA hydro plants in FY 2003. These projects are aimed at increasing overall hydro efficiency by reducing energy consumption, maintaining plant availability, lowering maintenance costs, and increasing megawatt capacity. They also support environmental stewardship in that environmental impacts are included as part of the project development process. In addition, by maximizing hydro efficiency, TVA is able to burn less fossil fuel, reducing the amount of carbon released into the atmosphere.

As shown below, TVA's hydro modernization is of particular importance in terms of energy management. This initiative, designed to ensure the availability of reliable hydroelectric generation in the future, has improved the facilities' efficiency by an average of approximately 5 percent since its inception in 1992. When completed around 2015, TVA's modernization program will have increased the hydro system's power output by more than 700 MW. TVA's automation program, another key energy management initiative, also is significantly reducing operating costs and increasing hydro efficiency.

Plant Name	Project Name	Cost (000's)
Blue Ridge	Waterways Replacement	6,396
Blue Ridge	Replace Thrust Runner, Shoes, and Guide Shoes	532
Chickamauga	Replace Generator Neutral Oil Circuit Breakers	200
Douglas	Sluiceway Trash Racks	238
Fontana	Emergency Spillway-Closure Abandonment	558
Hiwassee	Replace Draft Tube Unwatering Pump	141
Hydro System	Coating Program	5,668
Hydro System	Transformer Replacement	3,050
Hydro System	Gate, Guides, Seals & Trash Racks	1,917
Hydro System	Remoting and Automation	13,974
Hydro System	Security Program	903
Hydro System	Tailwater Warning Device	732
Hydro System	Modernization Program	24,956
Hydro System	Unwatering Pump Program	478
Hydro System	Evaluation of Spillway Gates	200
Hydro System	Fire Protection/Detection Program	2,054
Hydro System	Standardized Maintenance Program	357
Hydro System	Navigation Lock Dewatering and Inspection	165
Melton Hill	Unit 1: Replace Generator Leads	182
Melton Hill	Unit 1: Replace Stator Winding	608

Pickwick	**Rewind Unit 4 Stator**	**358**
Pickwick	**Shaft Replacement**	**714**
Raccoon Mountain	**Units 1-4: Capacity Upgrade**	**15,416**
Watts Bar	**Hydro Recovery**	**19,242**
Wilson	**Unit 20: Purchase & Install Stator Winding**	**1,004**
	Total All Projects	**100,043**

NUCLEAR EFFICIENCY

TVA Nuclear considers energy efficiency and environmental impacts for each project and activity. Many projects were initiated or completed in FY 2003 to maintain plant availability and increase electrical generation. The following is a list of energy management and related environmental projects at TVA Nuclear plants in FY 2003.

NUCLEAR ENERGY PROJECTS COMPLETED IN FY 2003

Plant Name	Project Name	Cost (000's)
Browns Ferry	**Increased Unit 2 electrical generation 4 MW/hr by installing a more efficient power source for the reactor cooling water recirculation pumps.**	**8,381**
Browns Ferry	**Installed a more accurate Unit 2 Main Control Room MVAR Meter to better quantify generation losses and improve thermal efficiency. Estimated 0.5 MWe/hr losses per year will be identified and corrected as the project progresses.**	**277**

Sequoyah	**Improved heat rate and life of plant by replacing the Unit 1 steam generators. Steam generator replacement in combination with generator high pressure turbine rotor replacement increased Unit 1 electrical output by 21 MW/hr.**	**175,806**
Sequoyah	**Improved heat rate by replacing the Unit 1 generator high pressure turbine rotor.**	**7,364**
Sequoyah	**Replaced 4 transformers containing PCB with non-PCB transformers.**	**590**
	Total All Projects	**192,418**

NUCLEAR ENERGY PROJECTS IN PROGRESS IN FY 2003

Plant Name	Project Name	Cost (000's)
Browns Ferry	**Increase Unit 3 electrical generation 4 MW/hr by installing a more efficient power source for the reactor cooling water recirculation pumps.**	**7,250**
Browns Ferry	**Install a spent reactor fuel dry storage facility.**	**19,108**
Browns Ferry	**Remove PCBs from transformers.**	**3,222**
Browns Ferry	**Increase Unit 2 and 3 electrical output by 110 MW/hr per Unit.**	**172,425**
Browns Ferry	**Restart the Unit 1 reactor, 1280 MWe/hr**	**1,733,400**
Sequoyah	**Install a spent reactor fuel storage facility.**	**26,277**
Sequoyah	**Remove PCBs from transformers.**	**4,768**
Sequoyah	**Increase Unit 2 electrical generation at least 13 MW/hr by replacing the generator high pressure turbine rotor.**	**10,067**
Watts Bar	**Improve Unit 1 heat rate by replacing the steam generators**	**216,662**
Watts Bar	**Increase annual Watts Bar Dam electrical generation 3 MW/hr by**	**893**

	raising Watts Bar Nuclear Plant design and license basis ultimate heat sink temperature.	
	Total All Projects	**2,194,072**

FOSSIL EFFICIENCY

Fossil Power Group has made significant improvements in reducing the number of forced outages at its fossil power plants since the implementation of the Failure Prevention Initiative in June 2000 and the Human Performance Initiative in the Spring of 2001. In FY 2003, TVA reduced the number of forced outages at its fossil plants by 20 percent compared to the number in FY 2001. In addition, an overall reduction of 13 percent has been achieved in the total number of outages which includes forced, maintenance, and planned outages. The reduction in number of outages means fewer generating unit startups which improves unit operational efficiency and helps reduce the delivered cost of power.

Many energy management and related environmental projects were completed at TVA Fossil plants during FY 2003. We support these projects which include heat rate improvements, maintaining plant availability, reducing energy consumption, lowering maintenance costs, environmental stewardship, and increasing overall efficiency.

The following is a list of projects for FY 2003:

Plant	Description	Cost (000's)
Paradise	**PAF--U3 Replace ILP Turbine Buckets**	**2,139**
Allen	**ALF--U2-3 Bio-Gas Fuel Supplement**	**5,290**
Allen	**ALF--U3 Replace #8 HP Feedwater Heater**	**1,663**
Allen	**ALF--U1 Selective Catalytic Reduction (SCR) Addition**	**34,206**
Allen	**ALF--U2 Selective Catalytic Reduction (SCR) Addition**	**28,906**
Allen	**ALF--U3 Selective Catalytic Reduction (SCR) Addition**	**48,832**
Allen	**ALF--U1-3 Install Water Cannons**	**2,944**
Colbert	**COF--U1 Air Preheater**	**2,132**
Colbert	**COF--U1 Sootblower Retrofit**	**1,156**
Colbert	**COF--U2 Sootblower Retrofit**	**938**
Colbert	**COF--U4 Sootblower Retrofit**	**761**
Cumberland	**CUF--U2 HP Turbine - Replace Rotor & Inner Cylinder Blades**	**4,301**

Cumberland	**CUF--U1 HP Turbine Capacity Increase**	**7,936**
John Sevier	**JSF--U1 Replace Long & Rotary Sootblowers**	**780**
John Sevier	**JSF--U4 Replace Long & Rotary Sootblowers**	**1,183**
Shawnee	**SHF--U5 Upgrade HP Stationaries**	**733**
Shawnee	**SHF--U7 Upgrade IP Stationaries**	**393**
Widows Creek	**WCF--U6 Refurbish/Replace LPSF&LPDF L-0 Blades**	**810**
	Total All Projects	**145,103**

Following is a list of ongoing and/or future Projects:

Plant	PROJECT TITLE	Cost (000's)
Allen	**ALF--U1 Replace #8 HP Feedwater Heater**	**2,229**
Allen	**ALF--U3 Retube #6 HP Feedwater Heater**	**700**
Bull Run	**BRF--U1 HP TurbineE - Replace Rotor & Inner Cylinder**	**11,564**
Bull Run	**BRF--U1 LP Heaters Replacement**	**1,289**
Colbert	**COF--U4 Air Preheater**	**2,178**
Gallatin	**GAF--U3 IP Turbine Replace Nozzle Block**	**449**
Gallatin	**GAF--U1 IP Nozzle Replacement**	**913**
Gallatin	**GAF--U1 HPT Control Stage Upgrade, Nozzle, Blading Replacement**	**760**
Johnsonville	**JOF--U3 Condenser Tube Replacement of West Side**	**506**
Kingston	**KIF--U5 Replacement of HP Feedwater Heater #3**	**621**
Kingston	**KIF - U1 Replace Air Preheaters**	**310**
Kingston	**KIF - U2 Replace Air Preheaters**	**310**
Kingston	**KIF - U3 Replace Air Preheaters**	**310**
Kingston	**KIF - U4Replace Air Preheaters**	**310**
Kingston	**KIF - U5 Replace Air Preheaters**	**355**
Kingston	**KIF - U7 Replace Air Preheaters**	**355**
Kingston	**KIF - U8 Replace Air Preheaters**	**355**
Paradise	**PAF--U1 HP Capacity Increase**	**6,701**
Paradise	**PAF--U3 HP Capacity Increase**	**9,616**
	Total All Projects	**39,831**

4. **Tactical Vehicle and Equipment Fuel Use**. Refer to the Data Report to identify the fuel use for tactical vehicles and other equipment. Discuss trends in the use of each type of fuel and methods employed to reduce fuel use.

Vehicle Fleet Consumption—To relieve reporting burdens on Federal agencies, GSA's Agency Report of Motor Vehicle Data (Form SF-82) was revised for collecting acquisition, fuel consumption, and fuel cost data for motor vehicles directly from vehicle fleet managers. The use of the SF-82 eliminated the need to report fuel consumption data for non-tactical motor vehicles to DOE. GSA now collects this data, including alternative fuel consumption data reported under Sections 303 and 308 of EPACT, and forwards this information to DOE for inclusion in the Annual Report to Congress. For more information on the SF-82, please contact Ms. Lois Mandell of GSA's Federal Vehicle Policy Division at (202) 501-2824.

FLEET FUEL EFFICIENCY

TVA's fleet strategy is to examine current vehicle use and where possible, when vehicles need replacement, choose those that are most efficient. TVA, as a major provider of electricity will continue to make use of alternative fueled vehicles (AFVs) including those that use electric power and acquire additional vehicles to meet requirements under EPAct92. TVA has recognized the value of hybrid electric vehicle technology in reducing fuel consumption, increasing versatility, and promoting electric propulsion and has included these vehicles in its fleet. TVA created a hybrid-fleet program in FY 2002 which is a partnership effort between TVA's Energy Management and Fleet Management organizations. TVA added two hybrid gas/electric vehicles to its fleet in FY 2002 and eleven in FY 2003.

During FY 2003 TVA increased gasoline fuel use by eleven percent and diesel fuel use by thirty-eight percent compared to FY 2002. The increase in gasoline and diesel use is mostly due to the increased trucking of fuel to the combustion turbine sites, construction at the Browns Ferry Nuclear site and construction of selective catalytic reduction (SCR) scrubbers to meet clean air act requirements at many TVA fossil fuel generation sites.

VEHICLE FUEL EFFICIENCY OUTREACH PROGRAMS

TVA encourages employees to use mass transit systems, vans for group travel, and car pools, when available and feasible. The use of coordinated TVA and vendor delivery, pickup routing schedules, and just-in-time delivery is utilized throughout TVA. This coordinated effort avoids double handling and, multiple trips to the same sites, and reduces deadheading.

The TVA service area covers all of Tennessee and portions of six other states, therefore employees are widely dispersed and often travel significant distances to attend meetings and presentations. TVA continues to install technologies which enable employees to travel less and conduct more meetings from their remote work sites. The reduction of required travel realized through telecommunication improvements has resulted in a savings of fuel and related expenses. Also, saving electrical energy consumption is a conscious decision factor when selecting and purchasing new equipment with energy saving features. Examples include the following:

- **Meeting Place – This technology enables audio conferencing, real-time online document collaboration, and remote presentations among employees at different locations. Employees can participate in audio conferencing without operator assistance, simultaneously share, view, and edit documents from computers, and conduct and participate in remote presentations without having to travel. On average, over 1,850 such meetings are held monthly using this system.**

- **Work From Home – There are approximately 3,800 employees who have dial-up access capability. These employees have the ability to conduct TVA business from their computer at home or elsewhere off TVA premises, which can result in savings if travel is not required to conduct work.**

  The capability to work from home also allows IS support staff to resolve virus, security related problems, and other issues from home. Prior to implementing this capability, staff would have to travel to work locations to resolve problems that can now be resolved remotely, therefore saving fuel and related expenses.

- **Video Conference Rooms – TVA has 46 video conference rooms throughout the Tennessee Valley service area. Approximately 1,240 video conferences were held in FY 2003, eliminating the need for travel to these meetings.**

- **PC and Monitor Efficiency - During the past year TVA replaced approximately 3,000 computers with new units that have the latest energy savings features. It is policy to enable all energy saving features available in new PCs and monitors so the maximum possible energy savings can be realized.**

- **Conference Calls – There were approximately 120 conference calls set up monthly by TVA operations which enabled employees to conduct business without having to travel and meet face-to-face.**

- **Streaming Media – This technology was introduced the last quarter of FY 2003 and is quickly becoming a popular medium of sharing real-time presentations through employee computers. Employees can now view presentation from their office without having to travel to video conference facilities or to the origin of the presentation. Usage data has yet to be captured on this new technology.**

HEAVY EQUIPMENT

Utilization of the Total Base Number (TBN - measure of oil's alkaline) value as an oil indicator has resulted in a reduction in TVA's oil consumption due to extended oil drain intervals. Accordingly, the oil change interval in some of the smaller diesel engines has changed to 320 hours or 10,000 miles to protect TVA's equipment. Turbo pre-cleaners are being used on tractor scrapers and dozers to lengthen air filter life and extend oil change intervals. Air filter indicators used on TVA's equipment have reduced filter changes (especially oil bath type), and additionally provide better engine protection. We continued the program of TBN oil values for FY 2003.

TVA uses Fuel Mag with small compressors to kill bacteria and spores that grow in fuel that is stored for long periods of time. It should decrease the amount of contaminated fuel that has to be disposed. These units can also eliminate down time due to filter and fuel injector plugging.

TVA's maintenance shops are using filter crushers to get all possible oil out of filters before disposal. The three maintenance facilities are using oil burners to heat their facilities using TVA's generated used oil.

These projects provide TVA with the benefits of reduced potential of adverse environmental impacts from spillage of waste oil and fuel, increased operational efficiency, increased availability of units, and decreased cost due to reduction in oil consumption.

TVA incorporates EPA emission standards in specifications for both on-road and off-road trucks.

FEDERAL VEHICLE FUEL EFFICIENCY

The following tables show a comparison of TVA's annual mileage and miles per gallon (mpg) performance for sedans and light trucks from FY 1975 through FY 2003.

ANNUAL MILEAGE

FY	Miles Driven		Percent Increase/(Decrease)	
	Sedans	Trucks*	Sedans Base Yr. 75	Trucks* Base Yr.79
75	12,222,850	N/A	0	N/A
76	14,698,600	N/A	20	N/A
77	14,331,650	N/A	17	N/A
78	14,101,300	N/A	15	N/A
79	13,779,900	25,947,000	13	0.0
80	14,788,300	25,989,000	21	0.2
81	14,922,450	27,655,000	22	7
82	24,714,480	24,878,000	4	(4)
83	12,125,848	25,122,699	(1)	(3)
84	11,760,288	24,947,558	(4)	(4)
85	11,958,251	21,237,202	(2)	(18)
86	12,359,000	24,954,488	1	(4)
87	12,905,706	24,064,000	6	(7)
88	12,650,124	24,008,436	3	(7)
89	11,312,417	22,599,061	(7)	(13)
90	15,665,480	23,516,512	28	(9)
91	19,175,027	24,120,233	57	(7)
92	23,264,550	24,318,622	91	(6)
93	25,557,833	25,702,300	109	(1)
94	29,766,173	23,947,797	144	(8)
95	30,096,968	23,996,720	146	(8)
96	28,388,572	24,998,289	132	(4)
97	20,298,902	24,343,292	66	(6)
98	7,124,589	26,623,769	(42)	3
99	7,939,345	21,335,796	(35)	(18)
00	9,723,679	27,701,582	(20)	5
01	9,290,949	25,242,686	(24)	(3)
02	10,793,620	23,520,150	(12)	(9)
03	11,788,288	26,175,474	(4)	1

*Figures for Trucks include both light duty (<8500 lbs GVWR) & medium duty (8501 – 16000 lbs GVWR).

MPG PERFORMANCE

FY	Annual MPG			Percent Increase/(Decrease)		
	Sedans Base Yr. 75	Trucks* Base Yr. 79		Sedans Base Yr. 75	Trucks* Base Yr. 79	
		4 x 2	4 x 4		4 x 2	4 x 4
75	15.1	N/A	N/A	0	N/A	N/A
76	15.0	N/A	N/A	(1)	N/A	N/A
77	15.6	N/A	N/A	3	N/A	N/A
78	16.2	N/A	N/A	7	N/A	N/A
79	16.3	11.6	8.2	8	0	0
80	17.9	12.0	8.3	19	3	1
81	19.2	13.2	7.9	27	14	(4)
82	22.7	14.2	8.5	50	22	4
83	26.2	16.0	9.8	74	38	20
84	27.5	16.4	9.5	82	41	16
85	26.9	16.1	10.2	78	39	24
86	27.6	18.2	10.8	83	57	32
87	26.6	17.5	11.4	76	51	39
88	24.6	15.3	11.0	63	32	34
89	28.3	15.9	13.1	87	37	60
90	28.4	15.7	11.6	88	35	41
91	29.6	18.2	15.7	96	57	91
92	27.7	21.2	12.4	84	83	52
93	31.9	17.3	13.6	105	49	66
94	29.8	15.5	12.9	97	34	57
95	31.2	14.5	13.4	107	25	63
96	29.1	13.2	12.7	66	14	44
97	28.3	14.2	12.7	87	22	44
98	26.6	15.4	14.4	76	33	76
99	25.4	12.8	11.9	68	10	45
00	26.3	13.7	12.8	74	18	56
01	26.6	13.9	13.2	76	20	61
02	26.0	14.1	12.9	72	22	57
03	27.4	14.0	12.7	81	21	55

*Figures for Trucks include both light duty (<8500 lbs GVWR) & medium duty (8501 - 16000 lbs GVWR).

PROCUREMENT OF ALTERNATIVE FUELED VEHICLES

As a major supplier of electricity, TVA is particularly interested in supporting the use of electric vehicles (EVs). TVA has incorporated EVs into its fleet operations and supports power distributors and local communities with EV technology demonstrations. TVA is also utilizing electric vehicles at its plant sites to reduce fuel consumption and emissions.

TVA currently has the following EVs:

- **1 U.S. Electricar Prism sedans**
- **4 Solectria Ford sedans**
- **2 Ford Ranger pickup trucks**
- **3 GEM electric cars**
- **5 EZGOs electric vehicles**

B. Renewable Energy. Discuss agency's policy and efforts to encourage purchase of electricity generated from renewable energy sources. (Note: The quantitative information related to this section [see below] will be reported on the agency's Data Report and Energy Scorecard. On the Energy Scorecard, self-generated renewable energy use and purchased renewable energy use will be aggregated into a single value).

GREEN POWER SWITCH® (GPS)

TVA and twelve public power companies launched GPS on Earth Day, April 22, 2000. GPS was the first program of its kind offered in the Southeast and provided consumers with an economic opportunity to participate in TVA's development of renewable energy resources. The program originally included supply from wind and solar energy sources. The program was expanded in FY 2001 to include electricity generated from methane gas at a landfill in Murfreesboro, Tennessee, and a waste water treatment plant in Memphis, Tennessee. Future expansion plans include additional wind turbines and solar installations at locations across the Tennessee Valley.

Fifteen solar generating facilities are presently operating in Tennessee, Kentucky, Alabama, Virginia and Mississippi. One additional solar installation is planned to be built in Memphis, Tennessee, during FY 2004. One commercial scale wind power generation site has been operational since November 2000. TVA is in negotiations to purchase power from new wind turbines. These wind turbines will be added to the existing wind site located on Buffalo Mountain in Anderson County, Tennessee, by the end of FY 2004. GPS also benefits from generation produced from a four megawatt waste water treatment methane gas project located at TVA's Allen Fossil plant near Memphis, Tennessee. The GPS program is managed through TVA's Marketing Organization.

Under the GPS program, residential customers can purchase green power blocks of 150 kilowatt hours each, at a cost of $4.00 per block. These blocks represent approximately, twelve percent of a typical home's monthly energy use. Commercial and industrial customers can sign up for 150 kilowatt hour blocks at a cost of $4.00 per block based on the amount of energy they use each month. When two blocks of GPS are purchased each month for one year, the associated reduction of atmospheric carbon dioxide is equivalent to planting an acre of trees in the Tennessee Valley. As of September 30, 2003, there were 7,097 residential customers purchasing 12,255 blocks and 358 business customers purchasing 10,361 blocks for a total of 22,616 purchased blocks of green power.

Today there are 65 TVA power distributors and one direct served customer participating in the GPS program throughout the Tennessee Valley. TVA plans to continue expanding the GPS program by offering it to additional power distributors as renewable energy supplies allow.

TVA's GPS program was awarded the "2003 TVA Environmental Excellence Award for Partnership and Public Involvement" and the "2003 Center for Resource Solution National Award for Creative Marketing of Green Power". GPS and the State of Tennessee's Department of Environment & Conservation awarded Lowe's Home Improvement Warehouse for their leadership in purchasing green power for their TVA's service area stores. Lowe's was the largest purchaser of green power in the southeastern U.S. in FY 2003.

TVA launched the Generation Partners Program in support of Green Power Switch. Generation Partners pays customers fifteen cents per kWh for all the generation they produce from solar and wind generation installed on their home or small business. The energy from Generation Partners is used to supply renewable energy for Green Power Switch.

RENEWABLE ENERGY TECHNOLOGY MONITORING

The purpose of the program is to monitor and evaluate new technologies in wind energy, solar photovoltaics (PVs), and biopower. Additionally, advanced wind energy forecasting and storage technologies are being monitored and evaluated.

Renewable energy technologies are becoming more reliable and cost effective. As more utilities offer renewable energy alternatives, manufacturers achieve lower costs through economy of scale. The cost of wind energy, for example, has decreased about ninety percent over the last 20 years. Renewable energy portfolios are mandated in 13 states and may be mandated at the national level in the near future. In anticipation of renewable portfolio mandates and in response to customer needs TVA continues to assess and evaluate new and advanced renewable technologies.

Advanced wind energy forecasting and resource assessment technologies aid in the selection of wind farm sites, resulting in increased efficiencies and lower costs. Hybrid systems, such as combining a renewable resource like wind with energy storage, are also being evaluated. Hybrid systems may alleviate the intermittency problem associated with renewables and result in higher value renewables when the demand is at its greatest. These advancements in technologies will ultimately result in the ability to offer competitively priced renewable energy.

1. **Self-generated renewable energy.** Identify/estimate energy use from electricity self-generated from renewable sources (photovoltaics, wind turbines) and renewable energy thermal projects (solar thermal, biomass, geothermal). Also report energy generated on Federal lands or by projects facilitated by your agency, but which may be sold to other parties. Agencies should report the annual energy generated from all renewable energy systems installed after 1990 and in place during FY 2003.

   TVA utilizes photovoltaics, wind, and methane as part of its mix to provide renewable energy to its customers through its GPS program.

2. **Purchased renewable energy.** Identify the renewable (i.e., wind, solar, geothermal, biomass) energy component of power purchases under competitive contract in megawatt-hours. (Note: Guidelines for counting renewable energy projects and purchases of electricity from renewable energy sources toward agency progress in reaching their goals are available on the FEMP web site www.eren.doe.gov/femp/resources/countguide.html. Information on the Federal renewable energy goal is also available on the FEMP Web site at www.eren.doe.gov/femp/resources/renewableguide.html).

   TVA purchased 1,170 MWh from the TVA GPS program for use in its Knoxville Office Complex, Chattanooga Office Complex, and Huntsville office.

   TVA's current efforts are directed toward large scale solar installations in highly visible locations through its GPS program. The Generation Partners Program allows residential and small commercial customers to install solar/wind generation and sell their excess power to TVA's GPS program.

C. **Petroleum.** Identify petroleum-based fuels (fuel oil, LPG/propane) used in buildings in FY 1985 and in FY 2003 and the percentage change from FY 1985. (Note: The FY 2003 data will be reported on the Data Report and the Energy Scorecard).

TVA consumed 10,712 gallons of petroleum in building operations in FY 2003 which is a decrease of fifty-one percent from the FY 1985 baseline of 21,920 gallons.

D. Water Conservation. Identify/estimate water consumption and cost by the agency in FY 2003 and outline any agency-specific issues related to collection of water consumption data. (Note: This information will be reported on the Data Report and the Energy Scorecard). Refer to DOE's *Guidance to Federal Agencies for Determining Baseline Water Usage* and *Guidance to Establish Water Efficiency Improvement Goal for Federal Agencies* on the FEMP web site http://www.eere.energy.gov/femp/resources/water.html and http://www.eere.energy.gov/femp/resources/waterguide.html. Also in this section, highlight activities undertaken to improve water efficiency. Discuss progress in developing Water Management Plans and implementing Best Management Practices for efficient use of water (See the document, *Guidance to Establish Water Efficiency Improvement Goal for Federal Agencies* on FEMP's Web site www.eere.energy.gov/femp/resources/waterguide.html.)

During FY 2003 energy surveys including water were conducted at multiple TVA power plant sites.

TVA consumed 171,700,000 gallons of potable water in FY 2003 with an estimated cost of $359,700. These numbers exclude the water consumption of the exempt buildings.

TVA considers water management plans as part of its operation and maintenance activities. As part of these activities more than 70 facilities have been covered representing over 3.6 million GSF. This represents over thirty-seven percent of TVA's standard and industrial facilities GSF.

To date TVA has implemented the Best Management Practices (BMPs) in more than eleven percent of its gross square footage.

III. Implementation Strategies. The purpose of this section is to identify and describe the use of strategies to reduce energy consumption and improve energy efficiency. It is not expected that each agency will have employed every strategy; rather, each strategy identified in Executive Order 13123 is listed as a subsection to remind agency officials of the existence of these strategies and to encourage their use where practical and life-cycle cost effective.

In each of the following subsections, present highlights for each of the strategies that were used. If certain strategies were not used, explain why not. Please provide narrative where strategies that were identified as focal points in the previous year's Implementation Plan were successful, where challenges existed in implementing strategies, and how challenges were overcome.

TVA implements many energy management measures through a number of strategies which include the following:

AGENCY ENERGY MANAGEMENT COMMITTEE

TVA Agency Energy Management Committee is a forum for sharing of information and success stories on energy efficiency efforts for application across the agency.

NEW CONSTRUCTION

TVA combines teams of designers to incorporate energy efficiency and sustainability at the start of new building designs.

RENOVATION

TVA takes advantage of renovation activities by incorporating energy efficiency and sustainability into its spaces that are being reconfigured for change.

OPERATIONS & MAINTENANCE

Operation and maintenance (O&M) personnel are the front line, used to identify potential energy and sustainable problems and opportunities on a daily basis. O&M staff take corrective action where needed and seek help from engineering, energy and sustainable staff to resolve technical issues when necessary.

Examples of O&M activities are the efficient operation of building EMCS systems, the placement of controls on lighting and other energy consuming equipment, and replacement of inefficient lighting when actions are determined to be life-cycle cost effective. In addition TVA considers efficiency improvements in its industrial, power plant and transmission operations when life-cycle cost effective.

As part of its operation and maintenance function, TVA has an emergency curtailment procedure which reduces energy use in its buildings during energy emergencies.

VEHICLE FUEL

TVA looks at its overall fleet and business needs on a continuous basis to match the work needs of each individual to the most efficient vehicle. TVA investigates efficient vehicles such as hybrid cars and adds these vehicles to its fleet to meet business needs. TVA also investigates ways to extend the life cycle of vehicles especially special purpose vehicles. TVA's detailed Fleet Strategy is provided as Attachment 9.

A. **Life-Cycle Cost Analysis**. Outline procedures in place to ensure the use of life-cycle cost analysis in making investment decisions about in products, services, construction, and other projects to lower the Federal Government's costs and to reduce energy and water consumption. Highlight examples where life-cycle cost analysis was used in capital budgeting decisions concerning

energy efficiency. Report on the successes and challenges of implementing life-cycle cost effective projects. (Under EPACT, energy conservation projects that will pay back investment costs within 10 years must be undertaken).

TVA's Energy Plan provides that life-cycle analysis will be used in making investment decisions regarding energy/water efficiency and sustainable measures.

B. Facility Energy Audits. Describe the number/percentage of agency facilities audited for energy and water efficiency during FY 2003, and the total percentage of facilities audited to date. (In accordance with EPACT and Executive Order 13123, approximately 10 percent of facilities should be audited each year).

TVA has evaluated building inventory for potential energy conservation measures. These facilities are being re-evaluated in accordance with E.O. 13123 and TVA's Memorandum of Understanding with the EPA. This past summer, TVA completed survey efforts at its fossil facilities to update building inventory information and uncover potential energy/water-saving opportunities.

C. Financing Mechanisms. Provide narrative information related to the use of Energy-Savings Performance Contracts (ESPCs) and Utility Energy Services Contracts (UESCs). (Note: Quantitative information related to ESPCs and UESCs will be reported on the Data Report and the Energy Scorecard). Report funding requested and received for FY 2002 and funding requested for FY 2003 for the performance of energy surveys/audits and for applied energy conservation measures (Note: This information will be reported on the Data Report).

Funding procedures for energy management and related environmental projects are reviewed through the IEMP and the AEMC. Recommendations and comments are submitted to the proper organizations for implementation consideration. Projects for facilities are primarily funded through renovation, operation, maintenance, and modernization efforts. Projects covered under general operations are ranked for economic benefit compared to other TVA projects to determine funding availability and implementation status and are funded mainly through the capital budgeting process.

D. ENERGY STAR® and Other Energy-Efficient Products. Describe steps taken to promote the purchase of ENERGY STAR® products and/or products that are in the upper 25 percent of energy efficiency as designated by FEMP. Note whether energy efficient criteria have been incorporated into all guide specifications and product specifications developed for new construction and renovation. Also note whether such criteria have been incorporated into product specification language. (See the ENERGY STAR® products and "green" products web sites by GSA [www.fss.gsa.gov/environ], DOE [www.eere.energy.gov/femp/procurement/], and EPA [www.energystar.gov/products/])

TVA's Energy Plan provides that TVA will strive, where cost-effective, to meet the Energy Star Building criteria for energy performance and indoor environmental quality in eligible facilities to the maximum extent practicable as described by section 403(c) of E.O. 13123. This includes purchasing Energy Star and other energy efficient products when feasible.

TVA continues its efforts to buy materials which have positive environmental qualities including soy ink, rechargeable batteries, low mercury lamps, and non-toxic supplies. TVA also purchases materials which meet sustainable architecture criteria. These are non-toxic building materials which have recycled content, and their creation, use, and disposal does not damage the environment.

E. Energy Star® Buildings.. Report the number and percentage of buildings that have met the Energy Star® Building criteria and have officially been designated ENERGY STAR® Buildings. (Buildings must rank in the top 25 percent in energy efficiency relative to comparable commercial and Federal buildings to be eligible for the ENERGY STAR® Buildings designation. See www.energystar.gov).

TVA currently has two facilities that meet the ENERGY STAR® Buildings criteria. These are the Chattanooga Office Complex and the Edney building which represent 11 percent of TVA's overall corporate square footage.

F. Sustainable Building Design. Report whether sustainable building design principles have been incorporated into the siting, design, and construction of new facilities. (See www.wbdg.org for a description of sustainable building design principles).

TVA is incorporating sustainable design criteria into renovation and new construction efforts. A Sustainable Checklist and Design Guideline along with an Energy Process that includes sustainability have been written and are being reviewed by the AEMC and management. All of these efforts are being done as part of an agency sustainable program under TVA's IEMP.

TVA continues to buy materials that have positive environmental qualities and include those that meet RCRA requirements and other recycled content materials. Examples of environmental products purchased include soy ink, rechargeable batteries, low mercury lamps, and non-toxic supplies and movable/reusable wall systems in place of drywall. TVA also purchases materials which meet sustainable architecture criteria. These non-toxic building materials have recycled content, and their creation, use, and disposal minimize environmental impacts.

G. Energy Efficiency in Lease Provisions. Describe how energy and water efficiency are considered when agencies enter into new leases or renegotiate/extend existing leases (e.g., preference for buildings with sustainable design and development, preference for certified ENERGY STAR® Buildings, etc.)

Where applicable, TVA uses model lease provisions based on those recommended by the General Services Administration (GSA) and such provisions will be incorporated into new and renewed leases provided they are cost-effective. The model lease provisions address energy and water efficiency.

H. Industrial Facility Efficiency Improvements. Highlight activities undertaken to explore efficiency opportunities in energy-intensive facilities. This may include activity in the following areas: steam systems, boiler operation, air compressor systems, industrial processes, fuel switching, cogeneration, and other efficiency and renewable energy technologies.

TVA continuously looks for opportunities to improve energy efficiency in its industrial facilities. During FY 2003 several projects were implemented in TVA industrial facilities including the replacement of four chilled water pumps with higher efficiency pumps in the TVA Monteagle Place computer center. In Monteagle Place the condensing tube bundles were acid cleaned which should give us a better than 10 percent increase in performance. In some of TVA's lab facilities high-efficiency heat pumps were installed which are connected to TVA's EMC system for more efficient control.

I. Highly Efficient Systems. Describe new construction and/or retrofit projects for which combined cooling, heating, and power systems were installed. Report whether local natural resources were surveyed to optimize use of available biomass, geothermal, or other naturally occurring energy sources.

TVA considers the implementation of high efficiency systems as mentioned above when it is life-cycle cost effective.

J. Off-Grid Generation. Describe the installation of non-renewable distributed generation technologies such as fuel cells, microturbines, generators (dedicated and peak shaving), and other power generation alternatives. Distributed generation from renewable sources (solar, wind, etc.) should have already been reported in Section II, part B. Some distributed generation projects could be grid connected and should be reported if used by the agency to reduce demand usage from the power grid.

TVA is currently researching, testing, and demonstrating the use of green power technologies.

K. Electrical Load Reduction Measures. Describe agency activities undertaken to reduce electricity load during power emergencies. These activities are required under the President's Memorandum of May 3, 2001 on Energy Conservation at Federal Facilities. (See www.eren.doe.gov/femp/resources/presidential_direct.html for information on electrical load reduction measures.)

As part of its operation and maintenance function, TVA has an emergency curtailment procedure which reduces energy use in its buildings during energy emergencies.

IV Data Tables and Inventories. Include the items listed below:

- **FY 2003 Annual Energy Management Data Report.** A blank Data Report form and instructions for completing the form is included as Attachment 1 of this Guidance. Also include a Data Report for any revisions to past years' energy data along with an explanation for the revision.

- **Energy Scorecard for FY 2003.** A blank Scorecard is included as Attachment 2 of this Guidance.

- **Goals of Executive Order 13123 and NECPA/EPACT** (optional). This table was prepared by OMB/DOE and is attached to this guidance document. Agencies may wish to include this table in their Annual Reports for reference (see Attachment 3).

- **Industrial and Laboratory Facilities Inventory**. This should include the following information: building name and building location (city and state) (see Attachment 4).

- **Exempt Facilities Inventory**. This should include the following information: building name, building location (city and state), and justification for exempt status.

V. Attachment. Attach a FY 2004 Implementation Plan to this FY 2003 Annual Report. Consult Attachment 6, *Guidance for Preparing the Federal Agency Implementation Plan for FY 2004*.

1) **FY 2003 Annual Energy Management Data Report (electronic file "Attachment 1_DataReport_12-03.xls")**
2) **Energy Scorecard for FY 2003 (electronic file "Attachment 2_Scorecard_12-03.doc")**
3) **Goals of Executive Order 13123 and NECPA/EPACT (electronic file "Attachment 3_EO_13123_Goals_12-03.doc")**
4) **Industrial & Lab Buildings (electronic file "Attachment 4_Industrial_Lab_12-03.xls")**
5) **Exempt Facilities Inventory (electronic file "Attachment 5_Exempt Facilities_12-03.xls")**
6) **FY 2004 Implementation Plan including Guidance for Preparing the Federal Agency Energy Management Implementation Plan (electronic file "Attachment 6_Implementation_Plan_12-03.doc")**
7) **Reporting Units and Conversion Factors for Federal Energy Management Reporting (electronic file "Attachment 7_Conversion_Factors_12-03.doc")**
8) **TVA Energy Plan 12-4-03 Final (electronic file "Attachment 8_TVA Energy Plan_12-03.doc")**
9) **TVA Fleet Strategy FY 2003 (electronic file "Attachment 9_Fleet Strategy_12-03.doc")**

Attachment 1

FY 2003 ENERGY MANAGEMENT DATA REPORT

Agency: TVA

Prepared by: Steve Brothers

Date: 12/23/2003

Phone: 423-751-7369

PART 1: ENERGY CONSUMPTION AND COST DATA

1-1. Standard Buildings/Facilities

Energy Type	Consumption Units	Annual Consumption	Annual Cost (Thou. $)	Unit Cost ($)	Site-Delivered Btu (Billion)	Est. Source Btu (Billion)	Est. Carbon Emissions (Metric Tons)
Electricity	MWH	164,795.4	$9,887.7	$0.06 /kWh	562.3	1,705.0	27,231
Fuel Oil	Thou. Gal.	10.7	$12.0	$1.12 /gallon	1.5	1.5	30
Natural Gas	Thou. Cubic Ft.	2,052.9	$16.6	$8.07 /Thou Cu Ft	2.1	2.1	31
LPG/Propane	Thou. Gal.	0.0	$0.0	#DIV/0! /gallon	0.0	0.0	0
Coal	S. Ton	0.0	$0.0	#DIV/0! /S. Ton	0.0	0.0	0
Purch. Steam	BBtu	0.0	$0.0	#DIV/0! /MMBtu	0.0	0.0	0
Other	BBtu	0.0	$0.0	#DIV/0! /MMBtu	0.0	0.0	
		Total Costs:	$9,916.3	Total:	565.9	1,708.6	27,292
Standard Buildings/Facilities (Thou. Gross Square Feet)		9,391.3		Btu/GSF:	60,256	181,931	

1-2. Industrial, Laboratory, Research, and Other Energy-Intensive Facilities

Energy Type	Consumption Units	Annual Consumption	Annual Cost (Thou. $)	Unit Cost ($)	Site-Delivered Btu (Billion)	Est. Source Btu (Billion)	Est. Carbon Emissions (Metric Tons)
Electricity	MWH	22,293.6	$1,337.6	$0.06 /kWh	76.1	230.6	3,684
Fuel Oil	Thou. Gal.	0.0	$0.0	#DIV/0! /gallon	0.0	0.0	0
Natural Gas	Thou. Cubic Ft.	0.0	$0.0	#DIV/0! /Thou Cu Ft	0.0	0.0	0
LPG/Propane	Thou. Gal.	0.0	$0.0	#DIV/0! /gallon	0.0	0.0	0
Coal	S. Ton	0.0	$0.0	#DIV/0! /S. Ton	0.0	0.0	0
Purch. Steam	BBtu	0.0	$0.0	#DIV/0! /MMBtu	0.0	0.0	0
Other	BBtu	0.0	$0.0	#DIV/0! /MMBtu	0.0	0.0	
		Total Costs:	$1,337.6	Total:	76.1	230.6	3,684
Energy-Intensive Facilities (Thou. Gross Square Feet)		404.9		Btu/GSF:	187,849	569,599	

1-3. Exempt Facilities

* - Energy indicated below does not include generation and transmission power.

Energy Type	Consumption Units	Annual Consumption	Annual Cost (Thou. $)	Unit Cost ($)	Site-Delivered Btu (Billion)	Est. Source Btu (Billion)	Est. Carbon Emissions (Metric Tons)
Electricity	MWH	367,498.7	$22,049.9	$0.06 /kWh	1,253.9	3,802.1	60,727
Fuel Oil	Thou. Gal.	0.0	$0.0	#DIV/0! /gallon	0.0	0.0	0
Natural Gas	Thou. Cubic Ft.	0.0	$0.0	#DIV/0! /Thou Cu Ft	0.0	0.0	0
LPG/Propane	Thou. Gal.	0.0	$0.0	#DIV/0! /gallon	0.0	0.0	0
Coal	S. Ton	0.0	$0.0	#DIV/0! /S. Ton	0.0	0.0	0
Purch. Steam	BBtu	0.0	$0.0	#DIV/0! /MMBtu	0.0	0.0	0
Other	BBtu	0.0	$0.0	#DIV/0! /MMBtu	0.0	0.0	
		Total Costs:	$22,049.9	Total:	1,253.9	3,802.1	60,727
Exempt Facilities (Thou. Gross Square Feet)		19,167.9		Btu/GSF:	65,417	198,360	

1-4. Tactical Vehicles and Other Equipment

	Consumption Units	Annual Consumption	Annual Cost (Thou. $)	Unit Cost ($)	Btu (Billion)	Est. Carbon Emissions (Metric Tons)
Auto Gasoline	Thou. Gal.	2,422.6	$2,713.3	$1.12 /gallon	302.8	5,860
Diesel-Distillate	Thou. Gal.	1,204.4	$1,397.1	$1.16 /gallon	167.1	3,333
LPG/Propane	Thou. Gal.	0.0	$0.0	#DIV/0! /gallon	0.0	0
Aviation Gasoline	Thou. Gal.	75.3	$146.9	$1.95 /gallon	9.4	178
Jet Fuel	Thou. Gal.	71.0	$170.8	$2.41 /gallon	9.2	178
Navy Special	Thou. Gal.	0.0	$0.0	#DIV/0! /gallon	0.0	0
Other	Thou. Gal.	0.0	$0.0	#DIV/0! /MMBtu	0.0	
	Total Costs		$4,428.1		488.5	9,548

1-5. WATER CONSUMPTION, COST AND EFFICIENCY MEASURES

	Consumption Units	Annual Consumption	Annual Cost (Thou. $)
Water	Million Gal.	171.7	$359.7
Best Management Practice Implementation Tracking Data			
Number of facilities* in agency inventory			1,009
Number of facilities with completed water management plans			70
Number of facilities with at least four (4) BMPs fully implemented **			2
*number in the agency inventory, can be buildings, bases, or campuses			

** - These two buildings represent 11% of the gsf.

1-6. RENEWABLE GREEN ENERGY PURCHASES

(Only include renewable energy purchases developed or contracted after 1990)

	Consumption Units	Annual Consumption	Annual Cost (Thou. $)
Electricity from Renewables	MWH	1,170.0	$31,200.0
Natural Gas from Landfill/Biomass	MMBtu	0.0	$0.0
Renewable Thermal Energy	MMBtu	0.0	$0.0
Other Renewable Energy_____*			

*For other renewable energy that does not fit any category, please fill in the type, units used, annual consumption and cost, and include any additional information in your narrative submission. For example, biodiesel used in non-transportation applications. (Renewable fuels used for transportation will be collected through GSA's Fleet Managment reporting process.)

1-7. SELF-GENERATED RENEWABLE ENERGY INSTALLED AFTER 199(

	Consumption Units	Total Annual Energy	Energy Used by Agency*
Electricity from Renewables	MWH	30.0	30.0
Natural Gas from Landfill/Biomass	MMBtu	0.0	0.0
Renewable Thermal Energy**	MMBtu	0.0	0.0
Other Renewable EnergyHMOD***		9,602.0	9,602.0

*Energy used by agency equals total annual generation unless a project sells a portion of the energy it produces to another agency or the private sector. It can equal zero in the case of non-Federal energy projects developed on Federal land.

**Examples are geothermal, solar thermal, and geothermal heat pumps, and the thermal portion of combined heat and power projects. Thermal energy from geothermal heat pumps should be based on energy savings compared to conventional alternatives.

***For other renewable energy that does not fit any category, fill in the type, units used, annual consumption and cost, and include any additional information in your narrative submission. For example energy displaced by daylighting technology or passive solar design.

PART 2: ENERGY EFFICIENCY IMPROVEMENTS

2-1. DIRECT AGENCY OBLIGATIONS

	FY 2003		Projected FY 2004	
	(MMBTU)	(Thou. $)	(MMBTU)	(Thou. $)
Direct obligations for facility energy efficiency improvements, including facility surveys/audits		$400.0		$400.0
Estimated annual savings anticipated from obligations	4,549.5	$80.0	4,549.5	$80.0

2-2. ENERGY SAVINGS PERFORMANCE CONTRACTS (ESPC)
(we have no ESPCs to report)

	Annual savings (MMBTU)	(number/Thou. $)
Number of ESPC Task/Delivery Orders awarded in fiscal year & annual energy (MMBTU) savings.	0.0	0
Investment value of ESPC Task/Delivery Orders awarded in fiscal year.		$0.0
Amount privately financed under ESPC Task/Delivery Orders awarded in fiscal year.		$0.0
Cumulative guaranteed cost savings of ESPCs awarded in fiscal year relative to the baseline spending.		$0.0
Total contract award value of ESPCs awarded in fiscal year (sum of contractor payments for debt repayment, M&V, and other negotiated performance period services).		$0.0
Total payments made to all ESP contractors in fiscal year.		$0.0

2-3. UTILITY ENERGY SERVICES CONTRACTS (UESC)
(TVA is a utility)

	Annual savings (MMBTU)	(number/Thou. $)
Number of UESC Task/Delivery Orders awarded in fiscal year & annual energy (MMBTU) savings.	0.0	0
Investment value of UESC Task/Delivery Orders awarded in fiscal year.		$0.0
Amount privately financed under UESC Task/Delivery Orders awarded in fiscal year.		$0.0
Cumulative cost savings of UESCs awarded in fiscal year relative to the baseline spending.		$0.0
Total contract award value of UESCs awarded in fiscal year (sum of payments for debt repayment and other negotiated performance period services).		$0.0
Total payments made to all UESC contractors in fiscal year.		$0.0

2-4. UTILITY INCENTIVES (REBATES)
(TVA is a utility)

	Annual savings (MMBTU)	(Thou. $)
Incentives received and estimated energy savings	0.0	$0.0
Funds spent in order to receive incentives		$0.0

2-5. TRAINING

	(number)	(Thou. $)
Number of personnel trained/Expenditure	250.0	$18.8

Attachment 2

FY 2003 Federal Agency Energy Scorecard

Department/Agency Name	Contact Name and Phone
Tennessee Valley Authority	Steve Brothers (423) 751-7369
Name of Senior Energy Official	**Signature of Senior Energy Official**
LeAnne Stribley	

Did your agency . . .	Yes	No	Anticipated Submittal Date
1. Submit its FY 2003 energy report to OMB and DOE by January 1, 2004 (Sec. 303)?	X		12-23-2003
2. Submit a FY 2004 Implementation Plan by January 1, 2004 (Sec. 302)?	X		12-23-2003
Did your agency . . .	**Yes**	**No**	**Comments**
3. Implement or continue to use renewable energy projects at Federal installations or facilitate the siting of renewable generation on Federal land in FY 2003 (Sec. 204)? (Report all self-generated renewable energy from projects installed after 1990; refer to Table 1-7 on the Energy Management Data Report)	X		If yes, how many projects and how much energy generated? (Specify unit: MWH or MMBtu) Solar 1 30 MWH Wind ____ ____ ____ Thermal[1] ____ ____ ____ Biomass ____ ____ ____ Other RE(1) 42 9602 MWH
4. Purchase energy generated from new renewable energy sources in FY 2003 (Sec. 204)? [2]	X		If yes, how much: 1,170 MWH or ____ MMBtu
5. Invest direct FY 2003 appropriations in projects contributing to the goals of the Order (Sec. 301)? (2)		X	If yes, how much: $ ____
6. Specifically request funding necessary to achieve the goals of the Order in its FY 2005 budget request to OMB (Sec. 301)? (Refer to OMB Circular A-11, Section 25.5, Table 2) (2)		X	If yes, how much: $ ____
7. Perform energy audits of 10% of its facility space during the fiscal year (Sec. 402)? (3)	X		What percentage of facility space was audited during the FY? 11 % How much facility space has been audited since 1992? 100 %
8. Issue to private-sector energy service companies (ESCOs) any energy savings performance contract (ESPC) task orders (Sec. 403(a))? (Refer to Table 2-2 on the Energy Management Data Report) (4)		X	How many? ____ Annual savings (MMBtu): ____ Total investment value[3]: $ ____ Cumulative guaranteed cost savings: $ ____ Contracts award value: $ ____

1 Examples are geothermal, solar thermal, and geothermal heat pumps. Thermal energy from geothermal heat pumps should be determined as follows: Thermal energy = Total geothermal heat transferred – electrical energy used.
2 "New" renewable energy means sources developed after 1990.
3 Investment value includes design, materials, labor, overhead, and profit but excludes contractor's financing costs and government's administration costs. Using investment value allows comparison with other traditional execution methods such as appropriated and working capital funded projects.

Did your agency . . .	Yes	No	Comments
9. Issue any utility energy services contract (UESC) task orders (Sec. 403(a))? (Refer to Table 2-3 on the Energy Management Data Report) (5)		X	How many? _____ Annual savings (MMBtu):_____ Total investment value[3]: $_____ Cumulative cost savings: $_____ Contracts award value: $_____
10. Incorporate energy efficiency requirements into relevant acquisitions (Sec. 403(b)(3))? (6)	X		See TVA Energy Plan
11. Adopt and apply the sustainable design principles (e.g., Whole Building Design Guide, Leadership in Energy and Environmental Design (LEED)) to the siting, design, and construction of new facilities or major (budget line item) renovations begun in FY 2003 (Sec. 403(d))? (7)	X		Number of new building design/construction projects in FY 2003: 0 Number of these projects that can or will be certified under LEED: 0
12. Provide training to appropriate personnel[4] on energy management (Sec. 406(d))? (8)	X		Number of appropriate personnel trained: 250 Total number of appropriate personnel: 250
13. Implement any additional management tools (Sec. 406)?	X		Check all that apply: Awards: X Performance Evaluations: X Showcase Facilities: X Number of Showcase Facilities designated in fiscal year: 1
14. Establish Water Management Plans (WMPs) and implement at least 4 Best Management Practices (BMPs) in at least 10% of agency facilities (Sec. 207,503(f))? (9)	X		Number of facilities with WMPs and 4 BMPs: 3 Number of facilities in agency inventory: 1009

NOTE: Provide additional information if a "No" reply is used for any of the questions above.

Please enter data from annual energy report pertinent to performance toward the goals of Executive Order 13123	Base Year	Previous Year (2002)	Current Year (2003)	% Change (Current vs. Base)
15. Site Energy Efficiency Improvement Goals (Sec. 202). 1985 Base Year	82,357 Btu/Ft^2	60,776 Btu/Ft^2	60,256 Btu/Ft^2	(27) %
16. Source Energy Use (Sec. 206). 1985 Base Year	402.4 BBtu	565.0 BBtu	566.0 BBtu	41 %
17. Industrial/Energy Intensive Facilities Goals (Sec. 203). 1990 Base Year	232,662 Btu/unit	185,536 Btu/unit	187,848 Btu/unit	(15) %
18. Water Conservation Goal (Sec. 207). 2000 Base Year	173.1 MGal	172.6 N/A	171.7 MGal	(1) %
19. Renewable Energy (Sec. 204) Energy used from self-generation and RE purchases (10)	N/A	103.2 BBtu	125.3 BBtu	N/A

Abbreviation Key: Btu/Ft^2 = British thermal units per gross square foot
Btu/unit = British thermal units per unit of productivity (or gross square foot when such a unit is inappropriate or unavailable)
MGal = Million gallons
MMBtu = Million British Thermal Units

4 Appropriate personnel include the agency energy management team as well as Federal employees and on-site contractors who are energy or facility managers, operations and maintenance workers, design personnel, procurement and budget staff, and legal counsel.

BBtu = Billion British Thermal Units
RE = Renewable energy
N/A = Not applicable

(1) This value represents a very small percentage of renewable power from hydro modernization and is based on projects covering multiple units and the number of effected facilities.
(2) TVA is self funded through its power operations and does not request appropriations to support its statutory mission; therefore, TVA has not submitted any such requests.
(3) Since FY 1992, TVA has evaluated 100-percent of its buildings, and plans to reevaluate facilities as needed to implement cost effective energy management objectives and/or update portfolio information.
(4) TVA considers the use of ESCOs where cost effective and in the best interest of the agency and its customers.
(5) TVA is a utility.
(6) TVA incorporates energy efficiency language where appropriate.
(7) TVA is in the process of developing a sustainable design program.
(8) This includes employees not specified under sec. 406(d) since all employees play an important part in energy management.
(9) During FY 2003 TVA developed an agency wide water plan which is currently being reviewed. Prior to FY 2003 TVA had implemented 4+ BMPs in two of its facilities accounting for 11% of TVA's total facility square footage.
(10) The source conversion factor was used for this value (11600 Btu/kWh).

Attachment 3
Goals of Executive Order 13123 and NECPA/EPACT

Executive Order 13123

Category	Goal	Comments
Greenhouse Gas Emissions	30% reduction by 2010	Base year is 1990. DOE will calculate agencies' progress toward this goal and report it on agencies' annual energy scorecards
Energy Efficiency		
Standard Buildings	• 30% improvement by 2005 • 35% improvement by 2010	Base year is 1985
Industrial and Laboratory Facilities	• 20% improvement by 2005 • 25% improvement by 2010	Base year is 1990
Exempt Facilities	N/A	Despite lack of quantitative goal, agencies should implement strategies to improve energy efficiency at these facilities.
Renewable Energy	• Implement renewable energy projects • Purchase electricity from renewable energy sources • Install 2,000 solar energy systems at Federal facilities by 2000 • Install 20,000 solar energy systems at Federal facilities by 2010	Installation of Federal solar energy systems will help support the Million Solar Roofs initiative
Petroleum	Reduce petroleum use	Switches to alternative energy sources should be life-cycle cost effective
Source Energy	Reduce use of source energy	Accomplish by undertaking projects that are life-cycle cost effective
Water Conservation	Reduce water consumption*	Accomplish via life-cycle cost effective measures, energy-savings performance contracts, or other financing mechanism

NECPA/EPACT

Energy Efficiency	20% improvement by 2000	Base year is 1985
Financing	Undertake all energy efficiency improvement projects that have a simple payback period of 10 years or less by 2005	E.O. 13123 expands this goal by mandating that any energy efficiency project that is life-cycle cost effective be undertaken
Audits	Conduct audits for energy efficiency on 10% of facilities annually	E.O. 13123 includes language supporting this goal

* FEMP has established water efficiency improvement goals as directed by the Executive Order. Agencies must implement Water Management Plans and Best Management Practices according to the following schedule:

05% of facilities by 2002
15% of facilities by 2004
30% of facilities by 2006
50% of facilities by 2008
80% of facilities by 2010

For more detail, see the FEMP guidance document Water Efficiency Improvement Goal for Federal Agencies

Attachment 4

TVA Industrial & Lab Laboratory Buildings - FY 2003

Building Name	Gross SF
Monteagle Place	149,000
Prototype Opers Bldg (Pilot Plant)	40,482
Catalyzer # 3 - Plant	9,000
Well Houses	4,726
Chemical Feed House	3,686
Fermentation Bldg (Pilot Plant)	2,000
Fleet Harbor Pumping Station	1,944
PDW Pumping Station	1,512
Backwater Protection	1,450
Marshall Pump House	621
Martin Pump House	572
Pump House	572
Duck River Ltg/Heat	400
Pump Station (Watts Bar Res)	376
Dandridge Pump Sta. (Doug Dam)	240
Big Sandy Pumphouse - Heat/Ltg	150
Big Sandy Pumphouse - Motor	150
Camden 161 kV Pump House	150
Lexington Water Pump (Temporary)	150
West Sandy Pump House	150
West Sandy Pump House (Lts/Ht)	150
Wellhouse	54
Chl/Dc/Msc Laboratory Bldg/Power Stores	56,682
N Engineering Lab Bldg B	21,059
N Engineering Lab Bldg N	20,710
BFN Low Lvl Rdwst Bldg. (E-32)	20,000
Engineering Lab Annex	19,000
Catalyzer # 4 - Radio/High Pressure Lab	9,000
Catalyzer # 1 - Mineral Lab	9,000
Catalyzer # 5 - Plant	9,000
Catalyzer # 6 - Nitro Fertilization Office	9,000
Aquatic Biology Lab (Main)	5,619
Catalyzer # 2 - Nitro Fertilization Lab	3,000
BFN Biothermal Research	2,658
N Engineering Lab Bldg H	1,080
Chl/Dc/Msc Coal Laboratory	1,000
N Maintenance Building	589

Attachment 5

TVA Exempt Buildings - FY 2003

Following is a list of TVA's exempt buildings which house generation, transmission and related energy intensive activities. Energy reduction in these buildings has become increasingly more difficult given that the majority of the energy consumption in these buildings is largely attributed to process energy (generation and transmission of electricity). In recognition of the above and the fact that only so much can be done to make these buildings more efficient in a cost effective manner, TVA, in discussion with DOE has decided to exempt these buildings.

TBD - To be determined - being analyzed

Building Name	Gross SF
ALF AMMONIA UNLOADING CONT RM	160
ALF BARGE UNLOADER	2,500
ALF BC 8 CONVEYOR & TUBE	2,500
ALF BIO-GAS BUILDING 1	360
ALF BIO-GAS BUILDING 2	1,464
ALF BOTTLE GAS STORAGE SHED	250
ALF CHEM POND PUMP STR EQUIP SHED	24
ALF CONVEYOR 1A & 1B	5,000
ALF CONVEYOR 2A & 2B	7,000
ALF CONVEYOR 3A & 3B	3,500
ALF CONVEYOR 6A	3,500
ALF CONVEYOR 6B	3,500
ALF CONVEYOR 7A	1,500
ALF CONVEYOR 7B	1,500
ALF CRUSHER BLDG FIRE PROT EQUIP BLDG	475
ALF D.I. WATER TANK VALVE ROOM	250
ALF ECOLOCHEM STORAGE VALVE HOUSE	800
ALF ELEC EQUIP BUILDING (6.9 KV SWITCHGEAR)	2,900
ALF FIRE PROT EQUIP BLDG #1	300
ALF FIRE PROT EQUIP BLDG #2	160
ALF HYDROGEN STORAGE BLDG EAST (UNIT 1)	400
ALF HYDROGEN STORAGE BLDG WEST (UNITS 2 & 3)	224
ALF MCC BLDG	225
ALF NEW CRUSHER BLDG & ELEC ROOM	6,300
ALF OLD CRUSHER BUILDING	6,500
ALF PH COMPRESSOR SHED 1	800
ALF PH COMPRESSOR SHED 2	800
ALF PH PPTR 1A & 1B	5,200
ALF PH PPTR 2A & 2B	5,200

ALF PH PPTR 3A & 3B	5,200
ALF POWERHOUSE	428,539
ALF RECLAIM HOPPER A	250
ALF RECLAIM HOPPER B	250
ALF SMOKE STACK 1	707
ALF SMOKE STACK 2	707
ALF SMOKE STACK 3	707
ALF STACKER CONVEYOR	100
ALF SWITCHYARD SUPPLY SHED	127
ALF TIRE FUEL HANDLING FACILITY	2,700
ALF TRANSFER STATION A	1,200
ALF TRANSFER STATION B	2,000
ALF TRANSFER TOWER	5,205
ALF UNIT 1 CEMS BLDG	90
ALF UNIT 1 SWYD RELAY BLDG	600
ALF UNIT 2 CEMS BLDG	90
ALF UNIT 2 SWYD RELAY BLDG	600
ALF UNIT 3 CEMS BLDG	90
ALF UNIT 3 SWYD RELAY BLDG	600
ALF UNLOADER ELEC. BLDG	280
ALF WATER INTAKE STRUCTURE	5,000
ALF WATER TREATMENT BUILDING	4,277
ALF XFMR FIRE PROT VALVE HOUSE	140
APH DAM	1,550
APH DIESEL GENERATOR BUILDING	154
APH POWERHOUSE	27,500
APH VALVE HOUSE	1,480
APU ROCKHOUSE, BUCKEYE, BAGWELL PUMP HOUSE	360
APU WHITESIDE PUMP HOUSE	720
BFN CONTROL BUILDING	36,000
BFN PLANT 500 KV SWITCH HOUSE	TBD
BFN RADWASTE EVAPORATOR BLDG	4,680
BFN REACTOR BUILDING	361,944
BFN TELEPHONE NODE BLDG. (W-19)	1,524
BFN TURBINE BUILDING	468,442
BFN UNIT 1 & 2 DSL.GEN. BLDG	17,285
BFN UNIT 3 DIESEL GENERATOR BLDG	17,850
BFN UNIT 3 RESTART	23,100
BGK ABERDEEN 161 KV SWITCH HOUSE	TBD
BGK ADAIRVILLE 69 KV SWITCH HOUSE	48
BGK AVION FARMS	TBD
BGK BOWLING GREEN 161 KV SWITCH HOUSE	3,640
BGK BOWLING GREEN MICROWAVE	390
BGK BRISTOW	272
BGK BRISTOW 161 KV SWITCH HOUSE	TBD
BGK BURKESVILLE 69 KV SWITCH HOUSE	TBD
BGK CADIZ 161 KV SWITCH HOUSE	1,008
BGK CANEYVILLE 69 KV SWITCH HOUSE	TBD
BGK CASKY 161 KV SWITCH HOUSE	480
BGK CELINA 69 KV SWITCH HOUSE	TBD

BGK CLIFTY 69 KV SWITCH HOUSE	TBD
BGK CLIFTY CREEK 161 KV SWITCH HOUSE	TBD
BGK DALE HOLLOW HYDRO PLANT 69 KV SWITCH HOUS	TBD
BGK EAST BOWLING GREEN 161 KV SWITCH HOUSE	696
BGK EAST LEITCHFIELD 69 KV SWITCH HOUSE	TBD
BGK EDMONTON 69 KV SWITCH HOUSE	TBD
BGK ELKTON 69 KV SWITCH HOUSE	288
BGK FOUNTAIN RUN 69 KV SWITCH HOUSE	TBD
BGK FRANKLIN 161 KV SWITCH HOUSE	288
BGK GLASGOW 161 KV SWITCH HOUSE	284
BGK HARTSVILLE NUC PLANT CONST 69 KV SWITCH H	TBD
BGK HOLLIS CHAPEL MICROWAVE	390
BGK HOMER 69 KV SWITCH HOUSE	TBD
BGK HOPKINSVILLE 161 KV SWITCH HOUSE	3,700
BGK HOPSON 69 KV SWITCH HOUSE	288
BGK JAMES RIVER CORP.	TBD
BGK KENDALL MFG CO.	TBD
BGK LAFAYETTE 161 KV SWITCH HOUSE	3,240
BGK LAFAYETTE DISTRICT 69 KV SWITCH HOUSE	TBD
BGK LAFAYETTE TELE	TBD
BGK LEITCHFIELD 69 KV SWITCH HOUSE	TBD
BGK LOGAN ALUMINUM	288
BGK LOGAN ALUMINUM 161 KV SWITCH HOUSE	TBD
BGK MCCREARY COUNTY 161 KV SWITCH HOUSE	TBD
BGK MID SOUTH STONE	TBD
BGK MONTICELLO 69 KV SWITCH HOUSE	TBD
BGK MORGANTOWN 69 KV SWITCH HOUSE	TBD
BGK MOSS 69 KV SWITCH HOUSE	TBD
BGK ORLINDA 69 KV SWITCH HOUSE	TBD
BGK PENCHEM 69 KV SWITCH HOUSE	288
BGK PORTLAND 161 KV SWITCH HOUSE	TBD
BGK PORTLAND 161 KV SWITCH HOUSE	1,008
BGK POTTER & BRUMFIELD, INC.	TBD
BGK RED BOILING SPRINGS, TN 69 KV SWITCH HOUS	TBD
BGK ROSINE 69 KV SWITCH HOUSE	TBD
BGK RUSSELLVILLE 161 KV SWITCH HOUSE	240
BGK RUSSELLVILLE DISTRICT 69 KV SWITCH HOUSE	84
BGK SALMONS 161 KV SWITCH HOUSE	TBD
BGK SCOTTSVILLE 161 KV SWITCH HOUSE	TBD
BGK SOUTH BOWLING GREEN 161 KV SWITCH HOUSE	TBD
BGK SOUTH SCOTTSVILLE 161 KV SWITCH HOUSE	TBD
BGK SUMMER SHADE 161 KV SWITCH HOUSE	3,882
BGK TOMPKINSVILLE 69 KV SWITCH HOUSE	TBD
BGK TOMPKINSVILLE PS 161 KV SWITCH HOUSE	TBD
BGK WAYNE COUNTY 161 KV SWITCH HOUSE	TBD
BGK WESTMORELAND 161 KV SWITCH HOUSE	TBD
BGK WOLF CREEK HYDRO PLANT 161 KV SWITCH HOUS	TBD
BGK ZIELINSKI CONST CO. 69 KV SWITCH HOUSE	TBD
BLN AIRPORT RD 161 KV SWITCH HOUSE	TBD
BLN AKZO INDUSTRIAL FIBERS	TBD

BLN AUXILIARY BLDG	205,000
BLN BLESSINGTON POINT MICROWAVE	TBD
BLN CENTRE 46 KV SWITCH HOUSE	TBD
BLN COLLINSVILLE DISTRICT 46 KV SWITCH HOUSE	TBD
BLN CONST 46 KV SWITCH HOUSE	TBD
BLN CONTROL BLDG	41,850
BLN FORT PAYNE 161 KV SWITCH HOUSE	1,550
BLN FORT PAYNE DISTRICT 46 KV SWITCH HOUSE	TBD
BLN FYFFE 161 KV SWITCH HOUSE	TBD
BLN GAYLESVILLE 46 KV SWITCH HOUSE	TBD
BLN HENAGAR 161 KV SWITCH HOUSE	TBD
BLN HOLLYWOOD 46 KV SWITCH HOUSE	TBD
BLN KEY 46 KV SWITCH HOUSE	TBD
BLN LEESBURG 161 KV SWITCH HOUSE	TBD
BLN LEESBURG DELIVERY POINT 46 KV SWITCH HOUS	TBD
BLN LEESBURG YARN MILL	TBD
BLN LIM ROCK 161 KV SWITCH HOUSE	TBD
BLN LITTLE RIVER 46 KV SWITCH HOUSE	TBD
BLN MERICO	TBD
BLN MURPHY HILL 500 KV SWITCH HOUSE	TBD
BLN NORANDAL 161 KV SWITCH HOUSE	TBD
BLN PLANT 500 KV SWITCH HOUSE	TBD
BLN RAINSVILLE 161 KV SWITCH HOUSE	TBD
BLN RAINSVILLE 46 KV SWITCH HOUSE	TBD
BLN REACTOR BLDG	72,000
BLN SAND ROCK 46 KV SWITCH HOUSE	TBD
BLN TURBINE BLDG	342,090
BLN WININGER MICROWAVE	326
BOH CONTROL BUILDING	14,500
BOH POWERHOUSE/DAM	37,000
BRF AMMONIA UNLOADING	135
BRF ARMSTRONG RUBBER CO. 69 KV SWITCH HOUSE	TBD
BRF ASH SILO BUILDING	1,587
BRF ASH SILO EQUIPMENT BUILDING	720
BRF ASH SILO SCALE HOUSE	64
BRF BEAR CREEK 700 161 KV SWITCH HOUSE	TBD
BRF BECHTAL ENG.	TBD
BRF BEECH GROVE PROCESSING CO. 69 KV SWITCH H	TBD
BRF BLOCK 69 KV SWITCH HOUSE	TBD
BRF BRAYTOWN 161 KV SWITCH HOUSE	288
BRF BREAKER BLDG	1,400
BRF CEDAR BLUFF 69 KV SWITCH HOUSE	TBD
BRF CEMS EQUIPMENT SOUND	56
BRF CEMS KEEPER	160
BRF CLAXTON 69 KV SWITCH HOUSE	TBD
BRF CLINCH RIVER BREEDER CST 161 KV SWITCH HO	TBD
BRF CLINTON 69 KV SWITCH HOUSE	TBD
BRF COAL CREEK 69 KV SWITCH HOUSE	TBD
BRF COAL SAMPLE EAST	200
BRF COAL SAMPLE WEST	200

BRF COALFIELD 69 KV SWITCH HOUSE	TBD
BRF CONTROL & SAMPLING BLDG	5,466
BRF CONVEYOR BC-1	500
BRF CONVEYOR BC-14	4,500
BRF CONVEYOR BC-2	500
BRF CONVEYOR BC-3&4	3,500
BRF CONVEYOR BC-5&6	1,700
BRF CONVEYOR BC-7	11,000
BRF CONVEYOR BC-8	850
BRF CONVEYOR BC-9&10	17,800
BRF D H COMPOUNDING CO.	TBD
BRF DOE-OAK RIDGE K-25 161 KV SWITCH HOUSE	TBD
BRF DOE-OAK RIDGE K-27 161 KV SWITCH HOUSE	TBD
BRF DOE-OAK RIDGE K-31 161 KV SWITCH HOUSE	TBD
BRF DOE-OAK RIDGE K-33 161 KV SWITCH HOUSE	TBD
BRF DOE-TVA 161 KV SWITCH HOUSE	TBD
BRF EAGLE BEND 161 KV DYERSBURG	TBD
BRF EAGLE BEND MANUFACTURING	TBD
BRF EATON CROSSROADS 161 KV SWITCH HOUSE	TBD
BRF EBENEZER 161 KV SWITCH HOUSE	TBD
BRF ELZA 161 KV SWITCH HOUSE	TBD
BRF FAIRVIEW 69 KV SWITCH HOUSE	TBD
BRF FLAT FORK 69 KV SWITCH HOUSE	TBD
BRF HUNTSVILLE 161 KV SWITCH HOUSE	1,008
BRF HYDROGEN TRAILER PORT	1,156
BRF JELLICO 161 KV SWITCH HOUSE	TBD
BRF KARNS 161 KV SWITCH HOUSE	TBD
BRF LIVE COAL SILO	8,295
BRF LOVELL 69 KV SWITCH HOUSE	TBD
BRF MELTON HILL HYDRO PLANT 69 KV SWITCH HOUS	TBD
BRF NORTH SHORE 69 KV SWITCH HOUSE	TBD
BRF OAK RIDGE 161 KV SWITCH HOUSE	TBD
BRF OAK RIDGE MICROWAVE	462
BRF OFFICE WING	18,500
BRF OLIVER SPRINGS 69 KV SWITCH HOUSE	TBD
BRF PETROS 69 KV SWITCH HOUSE	TBD
BRF PLANT 500 KV SWITCH HOUSE	TBD
BRF POWER HOUSE	552,034
BRF PRECIPITATOR 1	12,276
BRF PRECIPITATOR 2	12,276
BRF PRECIPITATOR CONTROL BLDG	1,911
BRF PUMPING STATION	7,068
BRF RIVER 161 KV SWITCH HOUSE	TBD
BRF ROSEDALE 69 KV SWITCH HOUSE	TBD
BRF SMOKE STACK	3,443
BRF SOLWAY 161 KV SWITCH HOUSE	TBD
BRF SWITCHGEAR	1,272
BRF SWITCHYARD MANIT. BLDG	1,500
BRF TRANSFER & BREAKER	1,000
BRF TRANSFER STATION & CREW ROOM	2,583

BRF TRANSFER STATION A	3,150
BRF TRANSFER STATION B	2,583
BRF TRANSFER STATION C	600
BRH POWERHOUSE	4,216
BRH SMALL TURBINE GENERATOR	580
BRH SPILLWAY EQUIPMENT BUILDING	680
CBT AMERICAN MEGOTTEAUX	TBD
CBT BELFAST 161 KV PUMP HOUSE	96
CBT BELFAST 161 KV SWITCH HOUSE	3,562
CBT BLUE SPRINGS 46 KV SWITCH HOUSE	TBD
CBT BON AQUA 161 KV SWITCH HOUSE	TBD
CBT BOSTON WOVEN HOSE 69 KV SWITCH HOUSE	TBD
CBT CENTERVILLE 161 KV SWITCH HOUSE	851
CBT CENTERVILLE FALLOUT SHELTER	816
CBT CLIFTON CITY 69 KV SWITCH HOUSE	TBD
CBT COLLINS CREEK 161 KV SWITCH HOUSE	TBD
CBT COLLINS CREEK 46 KV SWITCH HOUSE	TBD
CBT COLLINWOOD 69 KV SWITCH HOUSE	TBD
CBT COLUMBIA 161 KV PUMP HOUSE	72
CBT COLUMBIA 161 KV SHELTER	1,600
CBT COLUMBIA DISTRICT 46 KV SWITCH HOUSE	1,101
CBT COLUMBIA PRIMARY 161 KV SWITCH HOUSE	1,350
CBT COLUMBIA SPECIALTIES, INC	TBD
CBT CORNERSVILLE 46 KV SWITCH HOUSE	52
CBT COSMOLAB INC	TBD
CBT CULLEOKA 46 KV SWITCH HOUSE	85
CBT DUNN 46 KV SWITCH HOUSE	TBD
CBT ELKTON 46 KV SWITCH HOUSE	TBD
CBT ETHRIDGE - VHF RADIO	TBD
CBT FEDDERS LANE 46 KV SWITCH HOUSE	TBD
CBT FREEMAN WOOD PRODUCTS	TBD
CBT GANTON TECHNOLOGIES	TBD
CBT GENERAL ELECTRIC 46 KV SWITCH HOUSE	TBD
CBT GRAHAM LUMBER CO INC.	TBD
CBT HASSELL & HUGHES LUMBER CO.	TBD
CBT HENPECK LANE 161 KV SWITCH HOUSE	TBD
CBT HILLTOP 161 KV SWITCH HOUSE	TBD
CBT HOHENWALD 161 KV SWITCH HOUSE	TBD
CBT HOOKER-SHEA 46 KV SWITCH HOUSE	TBD
CBT HOOVER-MASON 46 KV SWITCH HOUSE	TBD
CBT JINGO 161 KV SWITCH HOUSE	TBD
CBT KANTUS CORPORATION	TBD
CBT LAWRENCEBURG 161 KV SWITCH HOUSE	1,945
CBT LAWRENCEBURG DISTRICT 46 KV SWITCH HOUSE	TBD
CBT LAWRENCEBURG REMOTE	TBD
CBT LEWISBURG 161 KV SWITCH HOUSE	320
CBT LEWISBURG 46 KV SWITCH HOUSE	763
CBT LINDEN 69 KV SWITCH HOUSE	TBD
CBT LOBELVILLE 161 KV SWITCH HOUSE	TBD
CBT LORETTO 46 KV SWITCH HOUSE	TBD

CBT MAURY 500 KV SWITCH HOUSE	5,689
CBT MONSANTO 161 KV SWITCH HOUSE	1,700
CBT MONSANTO 46 KV SWITCH HOUSE	TBD
CBT MOUNT PLEASANT 161 KV SWITCH HOUSE	2,800
CBT MOUNT PLEASANT DISTRICT 46 KV SWITCH HOUS	TBD
CBT MOUNT PLEASANT PS 161 KV SWITCH HOUSE	TBD
CBT MT. PLEASANT 161 KV SWITCH HOUSE	1,380
CBT MT. PLEASANT PS 161 KV SWITCH HOUSE	TBD
CBT MURRAY-OHIO MFG CO.	TBD
CBT NATIONAL CARBON CO. 46 KV SWITCH HOUSE	TBD
CBT NATIONAL CARBON CO. EAST 46 KV SWITCH HOU	TBD
CBT NATIONAL CARBON CO. WEST 46 KV SWITCH HOU	TBD
CBT NORTH COLUMBIA 46 KV SWITCH HOUSE	TBD
CBT ONLY 161 KV SWITCH HOUSE	TBD
CBT PICKENS LANE 46 KV SWITCH HOUSE	TBD
CBT PULASKI 161 KV SWITCH HOUSE	TBD
CBT PULASKI DISTRICT 46 KV SWITCH HOUSE	TBD
CBT PULASKI IND PARK 46 KV SWITCH HOUSE	TBD
CBT SATURN 161 KV SWITCH HOUSE	TBD
CBT SOUTH COLUMBIA 161 KV SWITCH HOUSE	TBD
CBT SPONTEX INC	TBD
CBT SPRING HILL 46 KV SWITCH HOUSE	TBD
CBT SPRING HILL MICROWAVE	391
CBT TELEDYNE SYSTEMS CO.	TBD
CBT UCAR CARBON CO.	TBD
CBT VICTOR SWITCH HOUSE	TBD
CBT WALKER DIE CASTING, INC	TBD
CBT WALTER L. ANDERSON 161 KV SWITCH HOUSE	TBD
CBT WAYNESBORO 161 KV SWITCH HOUSE	288
CBT WAYNESBORO DISTRICT 69 KV SWITCH HOUSE	TBD
CBT WEST COLUMBIA 161 KV SWITCH HOUSE	TBD
CBT WEST COLUMBIA 46 KV SWITCH HOUSE	TBD
CBT WILLIAMSPORT 46 KV SWITCH HOUSE	52
CBT WRIGLEY 69 KV SWITCH HOUSE	TBD
CCK ACETY-ARC INC	TBD
CCK AIR PRODS & CHEMS, INC	TBD
CCK DEGUSSA	TBD
CCK ELF ATOCHEM N. AMER. INK 161 KV SWITCH HO	TBD
CCK GILBERTSVILLE 69 KV SWITCH HOUSE	TBD
CCK GOODRICH Z1 161 KV SWITCH HOUSE	TBD
CCK GOODRICH Z2 161 KV SWITCH HOUSE	TBD
CCK GOODRICH Z3 161 KV SWITCH HOUSE	TBD
CCK INTERNATIONAL SPECIALTY PROD	TBD
CCK KENTUCKY HYDRO PLANT 161 KV SWITCH HOUSE	TBD
CCK L.W.D., INC	TBD
CCK LIVINGSTON COUNTY 161 KV SWITCH HOUSE	TBD
CCK NORTH STAR STEEL 161 KV SWITCH HOUSE	TBD
CCK TIPTONVILLE 69 KV SWITCH HOUSE	TBD
CHC ABB COMBUSTION ENG TUBEMILL	TBD
CHC ADM MILLING CO.	TBD

CHC BANDY, R. H. 115 KV SWITCH HOUSE	5
CHC BASF AMNICOLA HWY	TBD
CHC BASF POLYMER DRIVE	TBD
CHC BRISON 115 KV SWITCH HOUSE	TBD
CHC BUNGE FOODS	TBD
CHC BUSTER BROWN APPAREL	TBD
CHC BUTLER, J. W. 115 KV SWITCH HOUSE	TBD
CHC CALHOUN	TBD
CHC CAPACITORS AND OTHER	TBD
CHC CARGILL, INC.(FLOUR MILL)	TBD
CHC CATOOSA 161 KV SWITCH HOUSE	TBD
CHC CENTER POINT 115 KV SWITCH HOUSE	TBD
CHC CENTRAL SOYA CO. INC	TBD
CHC CHATT PSC RADIO	TBD
CHC CHATTANOOGA PAPERBOARD CORP	TBD
CHC CHH CHICKAMAUGA LOCK	TBD
CHC CHICKAMAUGA HYDRO PLANT 161 KV SWITCH HOU	TBD
CHC COALMONT A & B 161 KV SWITCH HOUSE	TBD
CHC COALMONT COMM	TBD
CHC COLVARD, T. W. 115 KV SWITCH HOUSE	TBD
CHC CONAGRA COLD&DRY STORAGE	TBD
CHC CONAGRA PROCESSING PLANT	TBD
CHC CONCORD 161 KV SWITCH HOUSE	1,280
CHC COOPER HEIGHTS	TBD
CHC CORONET INDUSTRIES	TBD
CHC DALTON	TBD
CHC DATA CENTER MICROWAVE	TBD
CHC DAYTON 161 KV SWITCH HOUSE	273
CHC DAYTON DISTRICT 69 KV SWITCH HOUSE	TBD
CHC DIXIE YARNS RINGGOLD PLANT	TBD
CHC DIXIE YARNS WATKINS ST	TBD
CHC DUG GAP 115 KV SWITCH HOUSE	TBD
CHC DUG MOUNTAIN-RADIO	TBD
CHC EDWARDS, J. C. 161 KV SWITCH HOUSE	TBD
CHC EUREKA FOUNDRY CO.	TBD
CHC FALLING WATER 161 KV SWITCH HOUSE	80
CHC FORT OGLETHORPE	TBD
CHC FULLER, R. C. 115 KV SWITCH HOUSE	TBD
CHC GA - AL STATE LINE	TBD
CHC GALAXY CARPET MILLS, INC	TBD
CHC GARRETT 115 KV SWITCH HOUSE	TBD
CHC GORDON COUNTY IND PK 115 KV SWITCH HOUSE	TBD
CHC GORE 46 KV SWITCH HOUSE	TBD
CHC HALETOWN 69 KV SWITCH HOUSE	48
CHC HAMILTON 161 KV SWITCH HOUSE	TBD
CHC HASSLER 115 KV SWITCH HOUSE	TBD
CHC IMPERIAL BONDWARE CORP.	TBD
CHC JASPER TELE	TBD
CHC KAYSER-ROTH CORP.	TBD
CHC KENSINGTON	TBD

CHC KIKER B. H. 115 KV SWITCH HOUSE	TBD
CHC LAFAYETTE 115 KV SWITCH HOUSE	TBD
CHC LODGE MANUFACTURING CO.	TBD
CHC LOOKOUT MOUNTAIN RADIO	TBD
CHC LOUGHRIDGE 115 KV SWITCH HOUSE	TBD
CHC LOVELL FIELD	TBD
CHC MISSIONARY RIDGE PCC	TBD
CHC MOBILE & PORTABLE CAP. & GRD	TBD
CHC MOCCASIN 161 KV SWITCH HOUSE	2,500
CHC MOCCASIN BEND WASTE WATER PL	TBD
CHC MOCCASIN RADIO	TBD
CHC MONTLAKE MICROWAVE	510
CHC MORGANVILLE 161 KV SWITCH HOUSE	TBD
CHC MOSS LAKE 115 KV SWITCH HOUSE	TBD
CHC MUELLER CO.	TBD
CHC NICKAJACK LOCK	TBD
CHC OGLETHORPE 161 KV SWITCH HOUSE	3,600
CHC OUTBOARD MARINE CORP.	TBD
CHC RACCOON MTN MICROWAVE	665
CHC REICHHOLD CHEMICALS, INC	TBD
CHC RICHARD CITY 46 KV SWITCH HOUSE	TBD
CHC RIDGEDALE 161 KV SWITCH HOUSE	100
CHC ROCK SPRING 500 KV	TBD
CHC ROCK-TENN CORP.	TBD
CHC ROPER CORPORATION	TBD
CHC ROPER, 115 KV	TBD
CHC SALEM CARPET MILLS 46 KV SWITCH HOUSE	48
CHC SALEM CARPET MILLS(LAFAYETT)	TBD
CHC SALEM CARPET MILLS(S PITTSB)	TBD
CHC SCT YARNS	TBD
CHC SELOX, INC - ACCESS RD	TBD
CHC SELOX, INC - ST. ELMO	TBD
CHC SEQUOYAH TRAINING RADIO	268
CHC SHAW INDUSTRIES	TBD
CHC SIGNAL MOUNTAIN CEMENT 69 KV SWITCH HOUSE	TBD
CHC SIGNAL MOUNTAIN MICROWAVE	328
CHC SOUTH CALHOUN INDUSTRIAL PARK 115 KV	TBD
CHC SOUTHERN CELLULOSE INC.	TBD
CHC SOUTHERN FOUNDRY	TBD
CHC SPRING PLACE	TBD
CHC STEPHENSVILLE MICROWAVE	390
CHC SUMMERVILLE	TBD
CHC SUTTON LUMBER CO.	TBD
CHC TAYLORS RIDGE	TBD
CHC TECUMSEH PRODUCTS	TBD
CHC TEXTILE RUBBER & CHEMICAL CO	TBD
CHC TILTON 115 KV	TBD
CHC TRENTON MICROWAVE	TBD
CHC U. S. PIPE & FOUNDRY	TBD
CHC UNITED TECHNOLOGIES	TBD

CHC VAAP 161 KV SWITCH HOUSE	TBD
CHC VELSICOL CHEMICAL CORP.	TBD
CHC VOLTAGE/CURRENT TRANSFORMERS	TBD
CHC VULCAN MATERIALS, CHAT	TBD
CHC WALKER COUNTY 161 KV SWITCH HOUSE	TBD
CHC WALLACEVILLE 161 KV SWITCH HOUSE	TBD
CHC WEST RINGGOLD 230KV SWITCH HOUSE	1,344
CHC WHITESIDE 26 KV SWITCH HOUSE	TBD
CHC WHITFIELD 115 KV SWITCH HOUSE	TBD
CHC WHITFIELD INDUSTRIAL PARK 115 KV	TBD
CHC YOUNG, R. W.	TBD
CHC YOUNG, R. W. 115 KV	TBD
CHH DIESEL GENERATOR BUILDING	350
CHH POWERHOUSE/DAM	102,200
COF CONVEYOR BC-19	900
COF 161 KV SWITCH HOUSE	9,549
COF ASH SILO BUILDING	9,300
COF BAKER LANE 46 KV SWITCH HOUSE	TBD
COF BARGE UNLOADER #1	1,680
COF BARGE UNLOADER #2	1,200
COF BARTON PS 161 KV SWITCH HOUSE	TBD
COF CEMS 1 & 2	240
COF CEMS 3 & 4	240
COF CENTRAL ELECTRIC CONTROL	7,640
COF CHEROKEE 161 KV SWITCH HOUSE	TBD
COF CHEROKEE DISTRICT 46 KV SWITCH HOUSE	TBD
COF COAL SAMPLE BLDG #1	240
COF COAL SAMPLE BLDG #2	252
COF COLBERT IND PARK 46 KV SWITCH HOUSE	TBD
COF CONTROL ROOM BY STEAM FITTERS	123
COF CONVEYOR BC-1	1,000
COF CONVEYOR BC-10&11	6,000
COF CONVEYOR BC-12&13	5,000
COF CONVEYOR BC-16	1,200
COF CONVEYOR BC-17	1,000
COF CONVEYOR BC-18	600
COF CONVEYOR BC-2	1,000
COF CONVEYOR BC-5	600
COF CONVEYOR BC-6	600
COF CONVEYOR BC-8&9	10,000
COF CONVEYOR CONTROL BLDG	4,603
COF CT UNITS 1&2 CONTROL HOUSE	360
COF CT UNITS 3&4 CONTROL HOUSE	360
COF DRY FLY ASH FACILITY	9,216
COF GENERATOR PUMP BLDG	700
COF HYDROGEN TRAILER PORT A	720
COF HYDROGEN TRAILER PORT B	720
COF LITTLEVILLE 46 KV SWITCH HOUSE	TBD
COF MARGERUM 46 KV SWITCH HOUSE	TBD
COF MCC 1 & 2	124

COF MCC 3 & 4	124
COF MCC 5 & 6	124
COF MCKINNY LUMBER CO AL	TBD
COF MOBILE SW GEAR NO. 1	TBD
COF MOBILE SW GEAR NO. 2	TBD
COF MOBILE TRANSFORMER NO. 3 46 KV SWITCH HOU	TBD
COF MOBILE TRANSFORMER NO. 4 69 KV SWITCH HOU	TBD
COF MOBILE TRANSFORMER NO. 5 69 KV SWITCH HOU	TBD
COF MULBERRY 46 KV SWITCH HOUSE	TBD
COF MUSCLE SHOALS 46 KV SWITCH HOUSE	TBD
COF NEW SMOKE STACK	1,418
COF NEW SMOKE STACK #5	371
COF OAKLAND 161 KV SWITCH HOUSE	864
COF OLD SMOKE STACK #1	162
COF OLD SMOKE STACK #2	162
COF OLD SMOKE STACK #3	162
COF OLD SMOKE STACK #4	162
COF POWERHOUSE	719,500
COF PRECIPITATOR CONTROL ROOM 1	856
COF PRECIPITATOR PUMP CONTROL 3 & 4	600
COF PRIDE 46 KV SWITCH HOUSE	TBD
COF PUMP CONTROL BLDG	52
COF RED BAY DISTRICT 46 KV SWITCH HOUSE	TBD
COF ROBBINS INC - EAST	TBD
COF ROBBINS INC - WEST	TBD
COF ROBBINS TIRE & RUBBER CO.	TBD
COF ROGERS GROUP INC	TBD
COF RUSSELLVILLE 161 KV SWITCH HOUSE	TBD
COF TRANSFER STATION	2,448
COF TRANSFER STATION A	2,400
COF TRANSFER STATION B	1,440
COF TRANSFER STATION D	1,440
COF TRANSFER STATION E	2,400
COF TRANSFER STATION F	840
COF TUSCUMBIA 46 KV SWITCH HOUSE	TBD
COF UNIT 5 ELECTRICAL EQUIP ROOM	1,000
COF UNIT 5 PPTR WASHDOWN PAD	10,000
COF UNITS 1&2 PPTR ELECTRICAL EQUIP ROOM	1,000
COF UNITS 1&2 PPTR WASHDOWN PAD	9,800
COF UNITS 1&2 PPTR WEATHER ENCLOSURE	9,800
COF UNITS 3&4 PPTR ELECTRICAL EQUIP ROOM	1,000
COF UNITS 3&4 PPTR WASHDOWN PAD	9,800
COF WACO 161 KV SWITCH HOUSE	TBD
COF WATER SUPPLY	16,892
CRH POWERHOUSE/DAM	83,100
CTH POWERHOUSE/DAM	4,430
CUF 500KV SWITCHYARD STORAGE BUILDING	6,000
CUF ABSORBER BUILDING	107,500
CUF AMMONIA UNLOADING CONTROL BUILDING	800
CUF ASH SILO 1	3,421

CUF ASH SILO 2	3,421
CUF ASH SILO CONTROL ROOM	432
CUF ASH SILO SERVICE BLDG	2,268
CUF AUXILIARY BOILER ROOM 1	880
CUF AUXILIARY BOILER ROOM 2	880
CUF BARGE UNLOADER (LIMESTONE)	5,080
CUF BREAKER BLDG	7,072
CUF BREAKER BLDG VALVE STATION	480
CUF CAUSTIC BLDG	1,680
CUF COAL BARGE UNLOADER	5,080
CUF CONVEYOR BC-13	2,000
CUF CONVEYOR BC-14&15	12,700
CUF CONVEYOR BC-16&17	2,200
CUF CONVEYOR BC-2	2,000
CUF CONVEYOR BC-20&21	2,200
CUF CONVEYOR BC-3&4	4,300
CUF CONVEYOR BC-34	3,000
CUF CONVEYOR BC-34A	2,400
CUF CONVEYOR BC-35	1,700
CUF CONVEYOR BC-5&6	1,500
CUF CONVEYOR BC-7&8	1,200
CUF CONVEYOR BC-9	6,600
CUF CONVEYOR BCL-1	300
CUF CONVEYOR BCL-2	500
CUF CONVEYOR BCL-3	4,500
CUF CONVEYOR BCL-4	750
CUF CONVEYOR BCL-5&6	350
CUF CONVEYOR BCL-7	750
CUF CONVEYOR BCL-8	325
CUF EMISSIONS CONTROL BLDG 2	128
CUF FAN CONTROL 2A1-2A2	384
CUF FAN CONTROL 2B1-2B2	384
CUF FAN CONTROL 2C1-2C2	384
CUF HYDROGEN PORT	1,122
CUF LIMESTONE PREP BUILDING	27,720
CUF LIMESTONE STORAGE SILO	3,848
CUF LIMESTONE SWITCH GEAR	1,355
CUF LIMESTONE TRANSFER TOWER #1	2,800
CUF LIMESTONE TRANSFER TOWER #2	3,738
CUF LIMESTONE TRANSFER TOWER #3	2,800
CUF MECHANICAL BLDG EQUIPMENT ROOM	6,750
CUF NEW SMOKE STACK 1	1,963
CUF NEW SMOKE STACK 2	1,963
CUF OLD SMOKE STACK 1	6,082
CUF OLD SMOKE STACK 2	6,082
CUF POWERHOUSE	1,564,438
CUF PPTR 1A	15,000
CUF PPTR 1B	15,000
CUF PPTR 1C	15,000
CUF PPTR 2A	15,000

CUF PPTR 2B	15,000
CUF PPTR 2C	15,000
CUF PPTR CONTROL 1A	1,800
CUF PPTR CONTROL 1B	1,800
CUF PPTR CONTROL 1C	1,800
CUF PPTR CONTROL 2A	1,800
CUF PPTR CONTROL 2B	1,800
CUF PPTR CONTROL 2C	1,800
CUF PPTR UTILITY BLDG	1,088
CUF SAMPLE BLDG	640
CUF SERVICE BUILDING	60,000
CUF SLURRY PUMP BLDG	1,000
CUF STACKOUT CONVEYOR TOWER	804
CUF SURGE HOPPER BLDG	7,072
CUF TRANSFER STATION 3	1,120
CUF TRANSFER STATION A	6,450
CUF TRANSFER STATION B	6,240
CUF WATER TREATMENT PLANT	6,000
CVT ALLIED SIGNAL (BENDIX)	TBD
CVT ANDERSON MICROWAVE	312
CVT APH 161 KV SWITCH HOUSE	TBD
CVT ATHENS 161 KV SWITCH HOUSE	4,200
CVT AVERY DENNISON CORP.	TBD
CVT BENDIX CORPORATION	TBD
CVT BENTON 69 KV SWITCH HOUSE	TBD
CVT BLAIRSVILLE 69 KV SWITCH HOUSE	TBD
CVT BLUE RIDGE HYDRO PLANT 69 KV SWITCH HOUSE	TBD
CVT BOWATER 161 KV SWITCH HOUSE	TBD
CVT BOWATER DE-INKING PLANT 161 KV SWITCH HOU	TBD
CVT BRAWLEY MTN MICROWAVE/RADIO	64
CVT BYRDSTOWN 69 KV SWITCH HOUSE	TBD
CVT CARLEX GLASS CO. 69 KV SWITCH HOUSE	TBD
CVT CATERPILLAR CORP.	TBD
CVT CHARLESTON 161 KV SWITCH HOUSE	2,952
CVT CHARLESTON DISTRICT 69 KVSWITCH HOUSE	TBD
CVT CHATUGE HYDRO PLANT 69 KV SWITCH HOUSE	TBD
CVT COPPER BASIN 161 KV SWITCH HOUSE	665
CVT COPPER BASIN COMM	TBD
CVT COTTONPORT RADIO	416
CVT CRAB ORCHARD 69 KV SWITCH HOUSE	TBD
CVT CROSSVILLE 161 KV SWITCH HOUSE	4,000
CVT CROSSVILLE RADIO	TBD
CVT DECATUR 69 KV SWITCH HOUSE	TBD
CVT DELANO 26 KV SWITCH HOUSE	TBD
CVT EAST CLEVELAND 161 KV SWITCH HOUSE	3,080
CVT EAST CLEVELAND COMM	TBD
CVT EAVES BLUFF MICROWAVE/RADIO	525
CVT ELLIS MOUNTAIN MICROWAVE	275
CVT ENGLEWOOD 69 KV SWITCH HOUSE	TBD
CVT EPWORTH 69 KV SWITCH HOUSE	TBD

CVT ETOWAH SWITCH HOUSE 69 KV SWITCH HOUSE	48
CVT FORT CREEK 69 KV SWITCH HOUSE	TBD
CVT FREDONIA 161 KV SWITCH HOUSE	TBD
CVT FRIENDSVILLE 69 KV SWITCH HOUSE	TBD
CVT GEORGETOWN 69 KV SWITCH HOUSE	TBD
CVT GRANDVIEW RADIO/MICROWAVE	36
CVT GRIMSLEY 69 KV SWITCH HOUSE	TBD
CVT HARDWICK CLOTHES INC	240
CVT HARRISON BAY 161 KV SWITCH HOUSE	TBD
CVT HAYESVILLE 69 KV SWITCH HOUSE	TBD
CVT HIWASSEE HYDRO PLANT 161 KV SWITCH HOUSE	TBD
CVT HIWASSEE MICROWAVE	405
CVT HOPEWELL 69 KV SWITCH HOUSE	TBD
CVT HUBER CORP. 69 KV SWITCH HOUSE	TBD
CVT JAMESTOWN 69 KV SWITCH HOUSE	TBD
CVT JENA 69 KV SWITCH HOUSE	TBD
CVT JOHNSON CONTROLS	TBD
CVT KAYSER-ROTH HOSIERY	TBD
CVT KIE 238 RADIO	TBD
CVT KIMBERLY-CLARK CORP. 161 KV SWITCH HOUSE	TBD
CVT LAMONTVILLE RD 161 KV SWITCH HOUSE	TBD
CVT LANG STREET 69 KV SWITCH HOUSE	TBD
CVT LOUDON 161 KV SWITCH HOUSE	952
CVT LOUDON DISTRICT 69 KV SWITCH HOUSE	TBD
CVT MADISONVILLE 69 KV SWITCH HOUSE	TBD
CVT MAGIC CHEF	TBD
CVT MARBLE 69 KV SWITCH HOUSE	54
CVT MAREMONT 69 KV SWITCH HOUSE	TBD
CVT MAYLAND 69 KV SWITCH HOUSE	TBD
CVT MCDONALD 69 KV SWITCH HOUSE	TBD
CVT MONTEREY 161 KV SWITCH HOUSE	TBD
CVT MOUSE CREEK 69 KV SWITCH HOUSE	TBD
CVT MURPHY 161 KV SWITCH HOUSE	960
CVT NEW HAYESVILLE 69 KV SWITCH HOUSE	TBD
CVT NIOTA 69 KV SWITCH HOUSE	TBD
CVT NOTTELY 69 KV SWITCH HOUSE	TBD
CVT NOTTELY HYDRO PLANT 69 KV SWITCH HOUSE	TBD
CVT OCOEE NO. 1 HYDRO PLANT 69 KV SWITCH HOUS	TBD
CVT OCOEE NO. 2 HYDRO PLANT 69 KV SWITCH HOUS	TBD
CVT OCOEE NO. 3 HYDRO PLANT 161 KV SWITCH HOU	TBD
CVT OCOEE VILLAGE 69 KV SWITCH HOUSE	TBD
CVT OSWALD DOME MICROWAVE	476
CVT PEERLESS ROAD	TBD
CVT POND CREEK - FIBRE OPTIC	TBD
CVT RICEVILLE 69 KV SWITCH HOUSE	TBD
CVT ROCKWOOD 161 KV SWITCH HOUSE	3,159
CVT ROCKWOOD DISTRICT 69 KV SWITCH HOUSE	TBD
CVT ROOSEVELT MT MICROWAVE	487
CVT SCHULLER INTERNATIONAL	TBD
CVT SEQUOIA 69 KV SWITCH HOUSE	TBD

CVT SHULLER INTERNATIONAL 69 KV SWITCH HOUSE	TBD
CVT SOUTH ATHENS 69 KV SWITCH HOUSE	TBD
CVT SOUTH CLEVELAND 161 KV SWITCH HOUSE	TBD
CVT SPRING CITY 161 KV SWITCH HOUSE	1,568
CVT SPRING CREEK 69 KV SWITCH HOUSE	TBD
CVT STALEY 161 KV SWITCH HOUSE	TBD
CVT SUGAR GROVE 161 KV SWITCH HOUSE	TBD
CVT SWEETWATER 161 KV SWITCH HOUSE	TBD
CVT SWEETWATER 69 KV SWITCH HOUSE	TBD
CVT TASSO 69 KV SWITCH HOUSE	TBD
CVT TELLICO 161 KV SWITCH HOUSE	TBD
CVT TELLICO DISTRICT 69 KV SWITCH HOUSE	TBD
CVT TELLICO RES.DEV.AUTH. 69 KV SWITCH HOUSE	TBD
CVT TEN MILE 161 KV SWITCH HOUSE	TBD
CVT VISKASE CORP PLANT 69 KV SWITCH HOUSE	TBD
CVT VONORE 69 KV SWITCH HOUSE	16,737
CVT WAUCHECHA BALD RADIO	80
CVT WBF PLANT 161 KV SWITCH HOUSE	665
CVT WBH PLANT 161 KV SWITCH HOUSE	TBD
CVT WBN CONST	TBD
CVT WBN PLANT 500 KV	TBD
CVT WBN UTIL CORR	TBD
CVT WELLSVILLE 161 KV SWITCH HOUSE	TBD
CVT WHITE OAK MOUNTAIN RADIO	80
CVT WOOD GROVE 69 KV SWITCH HOUSE	TBD
DGH POWERHOUSE/DAM	84,700
EST AEDC 161 KV SWITCH HOUSE	TBD
EST ANDERSON 46 KV SWITCH HOUSE	TBD
EST AQUATECH CORP.	TBD
EST BLANCHE 46 KV SWITCH HOUSE	TBD
EST COPPERWELD CORP. 46 KV SWITCH HOUSE	TBD
EST COWAN 46 KV SWITCH HOUSE	80
EST DOE-MHD LABORATORY 46 KV SWITCH HOUSE	TBD
EST DRY CREEK DISTRICT 46 KV SWITCH HOUSE	TBD
EST FAYETTEVILLE 161 KV SWITCH HOUSE	3,552
EST FAYETTEVILLE DISTRICT 46 KV SWITCH HOUSE	TBD
EST FLINTVILLE 46 KV SWITCH HOUSE	TBD
EST FRANKLIN INDUSTRIAL MINERALS	TBD
EST GONCE 26 KV SWITCH HOUSE	TBD
EST HILLSBORO 46 KV SWITCH HOUSE	48
EST LYNCHBURG 46 KV SWITCH HOUSE	240
EST NORTH TULLAHOMA 161 KV SWITCH HOUSE	TBD
EST ORME MOUNTAIN MICROWAVE	TBD
EST PARK CITY 46 KV SWITCH HOUSE	TBD
EST PETERSBURG 46 KV SWITCH HOUSE	TBD
EST SEWANEE 69 KV SWITCH HOUSE	80
EST SEWANEE MICROWAVE	375
EST SHERWOOD 46 KV SWITCH HOUSE	100
EST TFH PLANT 46 KV SWITCH HOUSE	TBD
EST WINCHESTER DISTRICT 46 KV SWITCH HOUSE	TBD

ESTILL SPRINGS 46 KV SWITCH HOUSE	48
EZT WELLHOUSE (WATAUGA DAM)	76
FNH DIESEL GENERATOR BUILDING	240
FNH POWERHOUSE/DAM	118,414
FPH POWERHOUSE/DAM	22,129
FTL FLH POWERHOUSE/DAM	92,540
GAF 161 KV SWITCH HOUSE	1,319
GAF ALGOOD 69 KV SWITCH HOUSE	TBD
GAF ALLIED AUTOMOTIVE 69 KV SWITCH HOUSE	TBD
GAF ASH SILO	600
GAF BARGE UNLOADING BUILDING	2,240
GAF BAXTER 69 KV SWITCH HOUSE	TBD
GAF BREAKER BUILDING	1,911
GAF BREAKER SWITCHGEAR BUILDING	740
GAF BUILDING OUTSIDE BL-1	435
GAF CARPENTER SHOP	3,675
GAF CARTHAGE 161 KV SWITCH HOUSE	864
GAF CARTHAGE DISTRICT 46 KV SWITCH HOUSE	TBD
GAF CEMS 1	90
GAF CEMS 2	90
GAF CEMS 3	90
GAF CEMS 4	90
GAF CENTRAL ELECTRICAL CONTROL	4,095
GAF COMPRESSOR BUILDING	474
GAF CONVEYOR BC-1	900
GAF CONVEYOR BC-11	1,600
GAF CONVEYOR BC-13	350
GAF CONVEYOR BC-2	1,500
GAF CONVEYOR BC-3	14,000
GAF CONVEYOR BC-4	27,000
GAF CONVEYOR BC-5&6	28,000
GAF CONVEYOR BC-7&8	7,400
GAF CONVEYOR CONTROL BUILDING	676
GAF COOKEVILLE 69 KV SWITCH HOUSE	TBD
GAF CRUSHER BUILDING	4,340
GAF DOUBLE SPRINGS 161 KV SWITCH HOUSE	TBD
GAF EAST COOKEVILLE 69 KV SWITCH HOUSE	TBD
GAF FPVH & MCC BLDG	300
GAF GAINESBORO 69 KV SWITCH HOUSE	TBD
GAF GORDONSVILLE 46 KV SWITCH HOUSE	TBD
GAF HOEGANAES CORP. 161 KV SWITCH HOUSE	TBD
GAF HOPPER BUILDING A	276
GAF HOPPER BUILDING B	840
GAF HOPPER SHED	80
GAF HYDROGEN TRAILER PORT A	714
GAF HYDROGEN TRAILER PORT B	700
GAF JERSEY MINIERE ZINC CO 46 KV SWITCH HOUSE	TBD
GAF JERSEY MINIERE ZINC-ELMWOOD	85
GAF LAKEVIEW 161 KV SWITCH HOUSE	TBD
GAF MARTHA 161 KV SWITCH HOUSE	TBD

GAF MCC BUILDING	400
GAF NORTH COOKEVILLE 69 KV SWITCH HOUSE	TBD
GAF OCANA 69 KV SWITCH HOUSE	TBD
GAF POWER HOUSE	713,267
GAF PPTR 1-1	10,000
GAF PPTR 1-2	10,000
GAF PPTR 2-1	10,000
GAF PPTR 2-2	10,000
GAF PPTR 3-1	10,000
GAF PPTR 3-2	10,800
GAF PPTR 4-1	10,000
GAF PPTR 4-2	10,800
GAF PUMP BUILDING	77
GAF SAMPLE PREP BUILDING	1,410
GAF SMOKE STACK #1	4,779
GAF SMOKE STACK #2	4,779
GAF SUMNER RESOURCE AUTH PLANT	TBD
GAF TRANSFER STATION 6	195
GAF TRANSFER STATION B	3,340
GAF TRANSFER STATION B VALVE HSE	240
GAF TRANSFER STATION C	1,209
GAF TRANSFER STATION D	1,680
GAF WATER PURIFICATION BUILDING	3,745
GAF WATER SUPPLY BUILDING	7,755
GAF WEST COOKEVILLE 161 KV SWITCH HOUSE	1,555
GAF WILLIAM L BONNELL	TBD
GAF WILSON 500 KV PUMP HOUSE	572
GAF WILSON TELE	TBD
GCT CEMS 5 & 6	90
GCT CEMS 7 & 8	90
GCT UNIT 1 CONTROL ROOM	180
GCT UNIT 2 CONTROL ROOM	180
GCT UNIT 3 CONTROL ROOM	180
GCT UNIT 4 CONTROL ROOM	180
GCT UNIT 5 PEECC BLDG	280
GCT UNIT 6 PEECC BLDG	280
GCT UNIT 7 PEECC BLDG	280
GCT UNIT 8 PEECC BLDG	280
GEK BARKLEY HYDRO PLANT 161 KV SWITCH HOUSE	TBD
GEK CADIZ DISTRICT 69 KV SWITCH HOUSE	TBD
GEK CASKY 69 KV SWITCH HOUSE	241
GEK CERULEAN 69 KV SWITCH HOUSE	48
GEK COUNTRY CLUB 69 KV SWITCH HOUSE	TBD
GEK DUNMOR 69 KV SWITCH HOUSE	88
GEK EDGOTEN 161 KV SWITCH HOUSE	912
GEK ELKTON HILL RADIO/MICROWAVE	144
GEK GREENVILLE RADIO	TBD
GEK HAPPY HOLLOW 69 KV SWITCH HOUSE	TBD
GEK HOPKINSVILLE DISTRICT 69 KV SWITCH HOUSE	TBD
GEK HOPKINSVILLE MICROWAVE	64

GEK KENTECH PLASTICS	TBD
GEK KIRKMANSVILLE 69 KV SWITCH HOUSE	54
GEK LYON 69 KV SWITCH HOUSE	TBD
GEK NORTH DRIVE 69 KV SWITCH HOUSE	TBD
GEK PARADISE FOSSIL PLANT 500 KV	TBD
GEK PEABODY 69 KV SWITCH HOUSE	TBD
GEK PEEDEE 69 KV SWITCH HOUSE	48
GEK PEMBROKE 69 KV SWITCH HOUSE	48
GEK PRINCETON 161 KV SWITCH HOUSE	TBD
GEK ROCKCASTLE 69 KV SWITCH HOUSE	TBD
GEK SKYLINE DRIVE 69 KV SWITCH HOUSE	TBD
GEK SUPERIOR GRAPHITE 69 KV SWITCH HOUSE	TBD
GFH CONTROL BUILDING	4,360
GFH INTAKE HOUSE	100
GFH POWERHOUSE	9,780
GFH ROCK HOUSE	930
GOT NILES FERRY 69 KV SWITCH HOUSE	16,000
GUH POWERHOUSE/DAM	80,747
HDC HARTSVILLE N.P. 161KV SWITCH HOUSE	962
HIH DAM	16,500
HIH POWERHOUSE/CONTROL BUILDING	25,100
HTA ADDISON 161 KV SWITCH HOUSE	TBD
HTA AIR PRODS	TBD
HTA ALBERTVILLE 161 KV SWITCH HOUSE	3,700
HTA ALBERTVILLE DISTRICT 46 KV SWITCH HOUSE	1,000
HTA ALPHA 69 KV SWITCH HOUSE	1,344
HTA AMERICAN MAIZE	TBD
HTA AMERICOLD COMPRESSOR CO.	TBD
HTA AMOCO 161 KV SWITCH HOUSE	TBD
HTA ARAB 161 KV SWITCH HOUSE	864
HTA ARAB DISTRICT 46 KV SWITCH HOUSE	TBD
HTA ARAB TELE	TBD
HTA ARDMORE 161 KV SWITCH HOUSE	1,120
HTA ASBURY RADIO	TBD
HTA ATHENS 161 KV SWITCH HOUSE	1,540
HTA ATHENS DISTRICT 46 KV SWITCH HOUSE	TBD
HTA ATHENS TELE	TBD
HTA BEAULIEU OF AMERICA CONST.	TBD
HTA BECHTEL CORP.	TBD
HTA BELLE MINA 46 KV SWITCH HOUSE	TBD
HTA BERLIN 46 KV SWITCH HOUSE	TBD
HTA BESSEMER 115 KV SWITCH HOUSE	TBD
HTA BLOUNTVILLE 115 KV SWITCH HOUSE	TBD
HTA BOAZ 46 KV SWITCH HOUSE	TBD
HTA BOAZ CARPET YARN, INC	TBD
HTA BOAZ SOUTH 46 KV SWITCH HOUSE	TBD
HTA BOWATER LUMBER CO.	TBD
HTA BREMEN 46 KV SWITCH HOUSE	TBD
HTA BRINDLEY 46 KV SWITCH HOUSE	42
HTA BRYANT 161 KV SWITCH HOUSE	80

HTA CADDO (TEMP. TAP) 46 KV SWITCH HOUSE	TBD
HTA CADDO 161 KV SWITCH HOUSE	TBD
HTA CEDAR CREEK 46 KV SWITCH HOUSE	TBD
HTA CEDAR LAKE 161 KV SWITCH HOUSE	TBD
HTA CERRO WIRE & CABLE CO. INC	TBD
HTA CHASE 161 KV SWITCH HOUSE	TBD
HTA COLLINSVILLE 161 KV SWITCH HOUSE	240
HTA CONTINENTAL GRAINS	TBD
HTA COPELAND CORP. 46 KV SWITCH HOUSE	TBD
HTA COURTLAND 46 KV SWITCH HOUSE	75
HTA COYNE CYLINDER CO.	TBD
HTA CULLMAN 161 KV SWITCH HOUSE	1,526
HTA CULLMAN RADIO	TBD
HTA DANVILLE 46 KV SWITCH HOUSE	TBD
HTA DECATUR 161 KV SWITCH HOUSE	2,045
HTA DRUMMOND 115 KV SWITCH HOUSE	TBD
HTA EAST CULLMAN 161 KV SWITCH HOUSE	TBD
HTA ENGELHARD CORPORATION	TBD
HTA EVA ROAD 161 KV SWITCH HOUSE	TBD
HTA FABIUS MICROWAVE	320
HTA FAIRVIEW 46 KV SWITCH HOUSE	TBD
HTA FALKVILLE 46 KV SWITCH HOUSE	TBD
HTA FARLEY 161 KV SWITCH HOUSE	1,152
HTA FARLEY TELE	TBD
HTA FEDERAL MOGUL 46 KV SWITCH HOUSE	TBD
HTA FINLEY 161 KV SWITCH HOUSE	1,578
HTA FLINT 46 KV SWITCH HOUSE	TBD
HTA FRENCH MILL 46 KV SWITCH HOUSE	TBD
HTA FRUHAUF CORP.	TBD
HTA FULTONDALE 115 KV SWITCH HOUSE	259
HTA GENERAL MOTORS 161 KV SWITCH HOUSE	TBD
HTA GERALDINE 46 KV SWITCH HOUSE	TBD
HTA GOLD KIST, INC	TBD
HTA GOODYEAR INC.	TBD
HTA GOOSE POND 161 KV SWITCH HOUSE	1,100
HTA GROVE OAK 46 KV SWITCH HOUSE	80
HTA GUNTERSVILLE 161 KV SWITCH HOUSE	240
HTA GURLEY 161 KV SWITCH HOUSE	TBD
HTA HANCEVILLE (TEMP)	TBD
HTA HANCEVILLE 161 KV SWITCH HOUSE	TBD
HTA HANCEVILLE 46 KV SWITCH HOUSE	TBD
HTA HANCEVILLE IND 46 KV SWITCH HOUSE	TBD
HTA HANEY 161 KV SWITCH HOUSE	TBD
HTA HARTSELLE 161 KV SWITCH HOUSE	TBD
HTA HARTSELLE DISTRICT 46 KV SWITCH HOUSE	TBD
HTA HENEGAR 161 KV SWITCH HOUSE	560
HTA HICKORY HILLS 46 KV SWITCH HOUSE	TBD
HTA HOLLY POND 46 KV SWITCH HOUSE	TBD
HTA HORTON 46 KV SWITCH HOUSE	TBD
HTA HUNTSVILLE 161 KV SWITCH HOUSE	3,800

HTA IRONMAN 161 KV SWITCH HOUSE	TBD
HTA JACKSONVILLE 46 KV SWITCH HOUSE	TBD
HTA JETPORT 161 KV SWITCH HOUSE	1,800
HTA JONES CHAPEL 46 KV SWITCH HOUSE	TBD
HTA KEYES FIBRE CO. 46 KV SWITCH HOUSE	TBD
HTA KING COAL CO. 46 KV SWITCH HOUSE	TBD
HTA KNIGHTON 46 KV SWITCH HOUSE	TBD
HTA LACEYS SPRING 161 KV SWITCH HOUSE	TBD
HTA LAMBERT CHAPEL MICROWAVE	330
HTA LIMESTONE 500 KV SWITCH HOUSE	6,500
HTA LIQUID CARBONIC DIOXIDE	TBD
HTA LOCUST FORK 115 KV SWITCH HOUSE	TBD
HTA MADISON 500 KV PUMP HOUSE	572
HTA MADISON 500 KV SWITCH HOUSE	6,124
HTA MALLARD-FOX IND PARK 161 KV SWITCH HOUSE	TBD
HTA MATHIS MILL 46 KV SWITCH HOUSE	TBD
HTA MILLER STEAM 500 KV SWITCH HOUSE	TBD
HTA MONSANTO CHEMICAL 161 KV SWITCH HOUSE	400
HTA MONSANTO MICROWAVE	341
HTA MONTE SANO MICROWAVE	510
HTA MORGAN 46 KV SWITCH HOUSE	TBD
HTA MOULTON 161 KV SWITCH HOUSE	500
HTA MOULTON DISTRICT 46 KV SWITCH HOUSE	TBD
HTA MOUNT HIGH 46 KV SWITCH HOUSE	TBD
HTA MOUNT HOPE 46 KV SWITCH HOUSE	TBD
HTA MOUNT ROSZELL 46 KV SWITCH HOUSE	TBD
HTA MOUNT TABOR 46 KV SWITCH HOUSE	TBD
HTA MUELLER CO.	TBD
HTA NANCE 161 KV SWITCH HOUSE	480
HTA NEEL 161 KV SWITCH HOUSE	TBD
HTA NORTH HUNTSVILLE 161 KV SWITCH HOUSE	864
HTA NORTON INDUSTRIES	TBD
HTA ONAN, INC. MET STA	TBD
HTA PAINTER 46 KV SWITCH HOUSE	TBD
HTA PENCE 46 KV SWITCH HOUSE	TBD
HTA PLEASANT VIEW 161 KV SWITCH HOUSE	TBD
HTA POPLAR CREEK 46 KV SWITCH HOUSE	TBD
HTA PRICEVILLE 161 KV SWITCH HOUSE	TBD
HTA PRICEVILLE 46 KV SWITCH HOUSE	TBD
HTA RED BAY 161 KV SWITCH HOUSE	240
HTA REDSTONE ARSENAL NO. 1 161 KV SWITCH HOUS	TBD
HTA REDSTONE ARSENAL NO. 2 161 KV SWITCH HOUS	TBD
HTA REDSTONE ARSENAL NO. 3 161 KV SWITCH HOUS	TBD
HTA REYNOLDS 161 KV SWITCH HOUSE	1,560
HTA SCOTTSBORO 161 KV SWITCH HOUSE	2,860
HTA SECTION 46 KV SWITCH HOUSE	80
HTA SELOX	TBD
HTA SHOALS 161 KV SWITCH HOUSE	2,250
HTA SOUTH CULLMAN 46 KV SWITCH HOUSE	TBD
HTA SOUTH CULLMAN IND PARK 161 KV SWITCH HOUS	TBD

HTA SOUTHERN DUCTILE CASTING CO	TBD
HTA SPRING CREEK 161 KV SWITCH HOUSE	TBD
HTA STEVENSON 161 KV SWITCH HOUSE	480
HTA TARRANT CITY 46 KV SWITCH HOUSE	TBD
HTA THORTON TOWN MICROWAVE	462
HTA TOWN CREEK 46 KV SWITCH HOUSE	TBD
HTA TRADE 46 KV SWITCH HOUSE	TBD
HTA TRAFFORD 115 KV	TBD
HTA TRIMBLE 46 KV SWITCH HOUSE	TBD
HTA TRINITY 500 KV PUMP HOUSE	572
HTA TRINITY 500 KV SWITCH HOUSE	6,700
HTA TRINITY TELE	TBD
HTA UNION GROVE 46 KV SWITCH HOUSE	TBD
HTA VALLEY CREEK 115 KV SWITCH HOUSE	1,152
HTA WEBB WHEEL 46 KV SWITCH HOUSE	TBD
HTA WHEELER HYDRO PLANT 161 KV SWITCH HOUSE	TBD
HTA WHITESBORO 46 KV SWITCH HOUSE	TBD
HTA WILSON MOUNTAIN RADIO	TBD
HTA WOLVERINE CO.	TBD
JCT CEMS 1	108
JCT CEMS 2	108
JCT FINGER	352
JCT JACKSON 500 KV SWITCH HOUSE	500
JCT LIGHTFOOT 69 KV SWITCH HOUSE	170
JCT MAIN CONTROL SHACK	200
JCT NEW CASTLE MICROWAVE	336
JCT ROCK SPRINGS MICROWAVE	312
JCT SAVANNAH 161 KV SWITCH HOUSE	276
JCT SELMER 161KV SWITCH HOUSE	864
JCT SOUTH JACKSON	11,469
JCT TRACE PARK MICROWAVE	312
JCT UNIT 1 CONTROL HOUSE	180
JCT UNIT 10 CONTROL HOUSE	180
JCT UNIT 11 CONTROL HOUSE	180
JCT UNIT 12 CONTROL HOUSE	180
JCT UNIT 13 CONTROL HOUSE	180
JCT UNIT 14 CONTROL HOUSE	180
JCT UNIT 15 CONTROL HOUSE	180
JCT UNIT 16 CONTROL HOUSE	180
JCT UNIT 17 PEECC BLDG	280
JCT UNIT 18 PEECC BLDG	280
JCT UNIT 19 PEECC BLDG	280
JCT UNIT 2 CONTROL HOUSE	180
JCT UNIT 20 PEECC BLDG	280
JCT UNIT 3 CONTROL HOUSE	180
JCT UNIT 4 CONTROL HOUSE	180
JCT UNIT 5 CONTROL HOUSE	180
JCT UNIT 6 CONTROL HOUSE	180
JCT UNIT 7 CONTROL HOUSE	180
JCT UNIT 8 CONTROL HOUSE	180

JCT UNIT 9 CONTROL HOUSE	180
JKT ADAMSVILLE 69 KV SWITCH HOUSE	TBD
JKT ALAMO 161 KV SWITCH HOUSE	288
JKT ALUMAX 161 KV SWITCH HOUSE	TBD
JKT BEECH BLUFF 161 KV SWITCH HOUSE	TBD
JKT BEKAERT STEEL	TBD
JKT BELLS 69 KV SWITCH HOUSE	TBD
JKT BETHEL SPRINGS 69 KV SWITCH HOUSE	TBD
JKT BOLIVAR 161 KV SWITCH HOUSE	609
JKT BOLIVAR DISTRICT 46 KV SWITCH HOUSE	288
JKT BROADVIEW MICROWAVE	80
JKT BROWNSVILLE 161 KV SWITCH HOUSE	240
JKT BROWNSVILLE DISTRICT 161 KV SWITCH HOUSE	1,578
JKT CHESTERFIELD TELE	TBD
JKT CONSOLIDATED ALUMINUM CORP.	TBD
JKT DOUBLE BRIDGES 161 KV SWITCH HOUSE	1,008
JKT DUPREE 161 KV SWITCH HOUSE	TBD
JKT DYERSBURG 161 KV SWITCH HOUSE	1,944
JKT DYERSBURG DISTRICT 69 KV SWITCH HOUSE	TBD
JKT DYERSBURG FABRICS	TBD
JKT DYERSBURG FABRICS-NORTH PLT	TBD
JKT DYERSBURG FABRICS-SOUTH PLT	TBD
JKT DYERSBURG IND PARK 161 KV SWITCH HOUSE	TBD
JKT EATON AXLE CORP. 69 KV SWITCH HOUSE	TBD
JKT FLORIDA STEEL 161 KV SWITCH HOUSE	TBD
JKT GATES 69 KV SWITCH HOUSE	TBD
JKT GRAND JUNCTION 46 KV SWITCH HOUSE	TBD
JKT GREENWAY 69 KV SWITCH HOUSE	TBD
JKT HALLS 69 KV SWITCH HOUSE	TBD
JKT HARMON AUTOMOTIVE	TBD
JKT HAYWOOD CO PLASTIC PLANT	TBD
JKT HAYWOOD CO RUBBER PLANT	TBD
JKT HEBRON 161 KV SWITCH HOUSE	TBD
JKT HENDERSON 161 KV SWITCH HOUSE	TBD
JKT HENNING 69 KV SWITCH HOUSE	TBD
JKT HICKORY VALLEY 161 KV PUMP HOUSE	99
JKT HORNSBY 46 KV SWITCH HOUSE	TBD
JKT HUMBOLDT 161 KV SWITCH HOUSE	1,578
JKT HUMBOLDT DISTRICT 69 KV SWITCH HOUSE	TBD
JKT HWY 412 161 KV SWITCH HOUSE	TBD
JKT JACKS CREEK 46 KV SWITCH HOUSE	TBD
JKT JACKSON 161 KV SWITCH HOUSE	TBD
JKT JACKSON 500 KV SWITCH HOUSE	6,448
JKT JACKSON APPLIANCE CO.	TBD
JKT JACKSON REGION OFFICE	TBD
JKT LEXINGTON 69 KV SWITCH HOUSE	TBD
JKT MAGNETEK CENTURY	TBD
JKT MEDINA 161 KV SWITCH HOUSE	TBD
JKT MIDDALE 69 KV SWITCH HOUSE	80
JKT MILAN 161 KV SWITCH HOUSE	3,552

JKT MILAN DISTRICT 69 KV SWITCH HOUSE	TBD
JKT MILLEDGEVILLE 69 KV SWITCH HOUSE	TBD
JKT MONTGOMERY DISTRICT 69 KV SWITCH HOUSE	TBD
JKT MORRIS 69 KV SWITCH HOUSE	TBD
JKT MT. PETER	TBD
JKT NATIONAL GUARD	TBD
JKT NEWCASTLE MICROWAVE	TBD
JKT NIXON 69 KV SWITCH HOUSE	TBD
JKT NORTH ADAMSVILLE 161 KV SWITCH HOUSE	TBD
JKT NORTH IND PARK 69 KV SWITCH HOUSE	TBD
JKT NORTH LEXINGTON 161 KV SWITCH HOUSE	TBD
JKT NORTON HILL MICROWAVE	352
JKT PARNELL 161 KV SWITCH HOUSE	TBD
JKT PARSONS 69 KV SWITCH HOUSE	TBD
JKT PICKWICK HYDRO PLANT 161 KV SWITCH HOUSE	TBD
JKT PICKWICK MICROWAVE	336
JKT PORTER CABLE CO.	TBD
JKT QUAKER OAKS COMPANY	TBD
JKT RAMER 161 KV SWITCH HOUSE	TBD
JKT RICHWOOD 69 KV SWITCH HOUSE	TBD
JKT RIPLEY 161 KV SWITCH HOUSE	TBD
JKT ROLLINS 46 KV SWITCH HOUSE	300
JKT SAULSBURY 46 KV SWITCH HOUSE	200
JKT SELMER DISTRICT 69 KV SWITCH HOUSE	TBD
JKT SELMER TELE	TBD
JKT SOUTH JACKSON 161 KV SWITCH HOUSE	7,368
JKT SOUTH JACKSON MICROWAVE	TBD
JKT SOUTH MILAN 69 KV SWITCH HOUSE	TBD
JKT TOONE 46 KV SWITCH HOUSE	TBD
JKT TRENTON 69 KV SWITCH HOUSE	TBD
JKT TULU 69 KV SWITCH HOUSE	TBD
JKT VULCAN MATERIALS, JACK	TBD
JKT WEST DYERSBURG 69 KV SWITCH HOUSE	TBD
JKT WEST LEXINGTON 161 KV SWITCH HOUSE	TBD
JKT WHITEVILLE 46 KV SWITCH HOUSE	TBD
JKT WORLD COLOR PRESS (EAST)	TBD
JKT WORLD COLOR PRESS (WEST)	TBD
JOF 500 KV SWITCHGEAR HOUSE	150
JOF 500KV SWITCHGEAR HOUSE	150
JOF BARGE UNLOADER 1	2,720
JOF BARGE UNLOADER 2	2,720
JOF CENTRAL ELECTRIC CONTROL	6,340
JOF CHLORINE PLANT	12,012
JOF COAL SAMPLING CREW BLDG.	1,134
JOF COGEN TURBINE BLDG	3,500
JOF CONVEYOR BC-1	900
JOF CONVEYOR BC-11	1,200
JOF CONVEYOR BC-12	1,200
JOF CONVEYOR BC-13	1,900
JOF CONVEYOR BC-16	1,000

JOF CONVEYOR BC-17	2,400
JOF CONVEYOR BC-2,9,10,14	28,000
JOF CONVEYOR BC-3,8,15	4,000
JOF CONVEYOR BC-4,20	4,700
JOF CONVEYOR BC-6	550
JOF CONVEYOR BC-7	550
JOF CONVEYOR SWITCHYARD	160
JOF CRUSHER BLDG.	14,434
JOF DENVER 69 KV SWITCH HOUSE	TBD
JOF DRAFT SYS. CONTROL BLDG	6,027
JOF DRY CREEK PRIMARY 161 KV SWITCH HOUSE	240
JOF DUPONT 69 KV SWITCH HOUSE	85
JOF EMISSIONS CONTROL BLDG.	120
JOF GRAY BLDG.	396
JOF HUSTBURG 161 KV SWITCH HOUSE(CHEM METAL)	TBD
JOF HYDROGEN PORTAL A	594
JOF HYDROGEN PORTAL B	700
JOF JOHNSONVILLE FOSSIL PLANT 500 KV SWITCH H	TBD
JOF MCEWEN - ENG GEN	TBD
JOF MCEWEN 69 KV SWITCH HOUSE	TBD
JOF MCEWEN MICROWAVE	352
JOF NEW JOHNSONVILLE 69 KV SWITCH HOUSE	TBD
JOF NEW JOHNSONVILLE ENG GEN	TBD
JOF NEW JOHNSONVILLE MICROWAVE	391
JOF NORTH WAVERLY 69 KV SWITCH HOUSE	TBD
JOF POWER HOUSE	1,069,704
JOF RR HOPPER BLDG (ABANDONED)	3,380
JOF SMOKE STACK	4,453
JOF TRACE CREEK 161 KV SWITCH HOUSE	TBD
JOF WATER TREATMENT PLANT	11,518
JOF WAVERLY 69 KV SWITCH HOUSE	TBD
JOT ACE PRODUCTS	TBD
JOT ADVANCED ANCHORS, INC	TBD
JOT ALLADIN PLASTICS, INC	TBD
JOT AMERICAN LIMESTONE CO.	TBD
JOT ANCHOR ADVANCED PRODUCTS	TBD
JOT ARCATA GRAPHICS	TBD
JOT BANNER ELK 69 KV SWITCH HOUSE	TBD
JOT BARNES 69 KV SWITCH HOUSE	TBD
JOT BEAN STATION 69 KV SWITCH HOUSE	TBD
JOT BEECH MOUNTAIN 161 KV SWITCH HOUSE	TBD
JOT BLOUNTVILLE 161 KV SWITCH HOUSE	TBD
JOT BLOUNTVILLE 69 KV SWITCH HOUSE	TBD
JOT BLUFF CITY 161 KV PUMP HOUSE	56
JOT BLUFF CITY 161 KV SWITCH HOUSE	1,800
JOT BOONE HYDRO PLANT 161 KV	TBD
JOT BOONES CREEK 69 KV SWITCH HOUSE	TBD
JOT BRISTOL COMPRESSOR	TBD
JOT BRISTOL METALS CORP.	TBD
JOT BULLS GAP 69 KV SWITCH HOUSE	TBD

JOT BUNKER HILL - GEN	TBD
JOT BUNKER HILL MICROWAVE	375
JOT C E MINERALS/TATEHO SUB	TBD
JOT CAMAC CORP.	TBD
JOT CHURCH HILL 69 KV SWITCH HOUSE	TBD
JOT CHURCH HILL MICROWAVE	360
JOT CLINCH VALLEY MINING	TBD
JOT COLONIAL HEIGHTS 69 KV SWITCH HOUSE	TBD
JOT COPPER RIDGE 69 KV SWITCH HOUSE	TBD
JOT COSBY 161 KV SWITCH HOUSE	TBD
JOT CRANBERRY 161 KV SWITCH HOUSE	320
JOT DANDRIDGE 69 KV SWITCH HOUSE	TBD
JOT DAVY CROCKETT PKWY 69 KV SWITCH HOUSE	TBD
JOT DOE 69 KV SWITCH HOUSE	TBD
JOT DOEHLER JARVIS LIMITED	TBD
JOT EAST NEWPORT 69 KV SWITCH HOUSE	TBD
JOT ELECTROLUX CORP.	TBD
JOT ELIZABETHTON 161 KV SWITCH HOUSE	885
JOT ELIZABETHTON DISTRICT 69 KV SWITCH HOUSE	TBD
JOT ELIZABETHTON TELE	TBD
JOT ERWIN 69 KV SWITCH HOUSE	TBD
JOT EXIDE CORPORATION	TBD
JOT FITTS GAP 69 KV SWITCH HOUSE	TBD
JOT FORDTOWN 161 KV SWITCH HOUSE	TBD
JOT FPH 69 KV SWITCH HOUSE	TBD
JOT GORDON'S, INC-CKT	TBD
JOT GRAY 69 KV SWITCH HOUSE	TBD
JOT GREENEVILLE IND PARK 161 KV SWITCH HOUSE	86
JOT GREENLAND 69 KV SWITCH HOUSE	TBD
JOT GREENLAND-AFG IND.	TBD
JOT HAMPTON 161 KV SWITCH HOUSE	TBD
JOT HARROGATE 69 KV SWITCH HOUSE	TBD
JOT HOLSTON HIGH POINT RADIO	TBD
JOT HOLSTON MOUNTAIN LOAD	87
JOT HOLSTON MOUNTAIN MICROWAVE	128
JOT HURD LOCK & MFG CO.	TBD
JOT IND PARK 69 KV SWITCH HOUSE	TBD
JOT INTERNATIONAL PLAYING CARD	TBD
JOT JARL	TBD
JOT JESSEE STONE CO.	TBD
JOT JOHN SEVIER FOSSIL PLANT 161 KV SWITCH HO	TBD
JOT JONESBORO 69 KV SWITCH HOUSE	TBD
JOT JUG 69 KV SWITCH HOUSE	TBD
JOT KING COLLEGE 69 KV SWITCH HOUSE	TBD
JOT KINGSTON-WARREN CORP.	TBD
JOT KYLES FORD 69 KV SWITCH HOUSE	TBD
JOT LEON FARENBACH, INC	TBD
JOT LIN PAC	TBD
JOT LOCUST SPRINGS 69 KV SWITCH HOUSE	TBD
JOT LOWLAND 69 KV SWITCH HOUSE	1,320

JOT MAHLE INC	TBD
JOT MAID 69 KV SWITCH HOUSE	TBD
JOT MECO CORP.	TBD
JOT MICROPORUS PRODUCTS, INC	TBD
JOT MILLIGAN COLLEGE 69 KV SWITCH HOUSE	TBD
JOT MINCO INC.	TBD
JOT MITCHELL 69 KV SWITCH HOUSE	TBD
JOT MODERN FORGE	TBD
JOT MOORESBURG (TEMP INTER)	TBD
JOT MOORESBURG 161 KV SWITCH HOUSE	TBD
JOT MORRISON MOLDED FIBERGLASS	TBD
JOT MORRISTOWN 161 KV SWITCH HOUSE	405
JOT MORRISTOWN DISTRICT 69 KV SWITCH HOUSE	384
JOT MORRISTOWN IND PARK 69 KV SWITCH HOUSE	TBD
JOT MORRISTOWN IND PK EAST 69 KV SWITCH HOUSE	TBD
JOT MORRISTOWN MICROWAVE	390
JOT MOUNTAIN CITY 69 KV SWITCH HOUSE	TBD
JOT NAGEL 500 KV SWITCH HOUSE	TBD
JOT NEWLAND 69 KV SWITCH HOUSE	TBD
JOT NEWPORT 161 KV SWITCH HOUSE	806
JOT NEWPORT DISTRICT 69 KV SWITCH HOUSE	TBD
JOT NOLICHUCKY HYDRO PLANT 69 KV SWITCH HOUSE	TBD
JOT NORTH AMERICAN RAYON 69 KV SWITCH HOUSE	TBD
JOT NORTH BRISTOL 161 KV SWITCH HOUSE	1,820
JOT NORTHEAST JOHNSON CITY 161 KV SWITCH HOUS	5,375
JOT NORTHEAST SUBSTATION	4,500
JOT NORTHWEST BALL & ROLLER INC.	TBD
JOT OAK GROVE 69 KV SWITCH HOUSE	TBD
JOT OKOLONA 69 KV SWITCH HOUSE	TBD
JOT PANDORA 69 KV SWITCH HOUSE	TBD
JOT PATTONSVILLE 69 KV SWITCH HOUSE	TBD
JOT PEMBERTON 69 KV SWITCH HOUSE	TBD
JOT PHILIPS CONSUMER ELECTRONICS	TBD
JOT PHIPPS BEND 500 KV SWITCH HOUSE	7,150
JOT PHIPPS BEND IND PARK 69 KV SWITCH HOUSE	TBD
JOT PINEY FLATS 69 KV SWITCH HOUSE	TBD
JOT PLUSMARK, INC.	TBD
JOT POWER STORES - JCTY	TBD
JOT RAYTHEON 69 KV SWITCH HOUSE	TBD
JOT RELIANCE ELECTRIC INDUSTRIAL	TBD
JOT ROCKWELL INTERNATIONAL CORP	TBD
JOT ROGERSVILLE 69 KV SWITCH HOUSE	TBD
JOT ROGERSVILLE MICROWAVE	416
JOT RSR INDUSTRIES	TBD
JOT RUTHTON 69 KV SWITCH HOUSE	TBD
JOT RUTLEDGE 69 KV SWITCH HOUSE	TBD
JOT SANDVIK ROCK TOOLS, INC	TBD
JOT SARA LEE	TBD
JOT SHELBY STREET 69 KV SWITCH HOUSE	TBD
JOT SHORT MOUNTAIN SILICA CO.	TBD

JOT SHOUNS 69 KV SWITCH HOUSE	TBD
JOT SIEMENS	TBD
JOT SIGMOND COAL CO.	TBD
JOT SOUTH HOLSTON HYDRO PLANT 69 KV SWITCH HO	TBD
JOT SOUTH MORRISTOWN 69 KV SWITCH HOUSE	TBD
JOT SOUTHEAST JOHNSON CITY 69 KV SWITCH HOUSE	TBD
JOT STONE CREEK 69 KV SWITCH HOUSE	TBD
JOT STONE MOUNTAIN 69 KV SWITCH HOUSE	TBD
JOT SULLIVAN 500 KV PUMP HOUSE	572
JOT SULLIVAN 500 KV SWITCH HOUSE	3,593
JOT SULLIVAN COMM	TBD
JOT SULLIVAN STATIC CONDENSOR	4,500
JOT SURGOINSVILLE 69 KV SWITCH HOUSE	TBD
JOT TANGLEWOOD 69 KV SWITCH HOUSE	TBD
JOT TAYLOR, ROY L. 69 KV SWITCH HOUSE	TBD
JOT TAZEWELL 161 KV SWITCH HOUSE	TBD
JOT TELFORD 69 KV SWITCH HOUSE	TBD
JOT TRW, INC	TBD
JOT TUSCULUM 161 KV SWITCH HOUSE	864
JOT TUSCULUM TELE	TBD
JOT U. S. TEXTILE CORP.	TBD
JOT WASHINGTON COLLEGE 69 KV SWITCH HOUSE	TBD
JOT WATAUGA HYDRO PLANT 69 KV SWITCH HOUSE	TBD
JOT WEST ELIZABETHTON 69 KV SWITCH HOUSE	TBD
JOT WEST JOHNSON CITY 161 KV SWITCH HOUSE	TBD
JOT WEST JOHNSON CITY DISTRICT 69 KV SWITCH H	TBD
JOT WEST MORRISTOWN 69 KV SWITCH HOUSE	TBD
JOT WHITE PINE 161 KV SWITCH HOUSE	3,220
JOT WILBUR HYDRO PLANT 69 KV SWITCH HOUSE	TBD
JOT WINNER 69 KV SWITCH HOUSE	TBD
JOT ZINC PRODUCTS CO.	TBD
JSF ASH SILO	600
JSF ASH SILO SHED	132
JSF BREAKER BUILDING VALVE HOUSE	240
JSF BREAKERS	2,030
JSF COAL SAMPLE BUILDING	387
JSF CONTROL BLDG	5,886
JSF CONVEYOR BC-1	2,400
JSF CONVEYOR BC-2&3	6,600
JSF CONVEYOR BC-7	1,200
JSF CONVEYOR CONTROL BUILDING	784
JSF CONVEYOR SWITCHGEAR BUILDING	2,946
JSF ELECTRONIC EQUIPMENT BUILDING	96
JSF FLY ASH BUILDING	36
JSF HOPPER BUILDING	852
JSF HYDROGEN TRAILER PORT 1	612
JSF HYDROGEN TRAILER PORT 2	680
JSF POWERHOUSE	836,722
JSF SAMPLE BLDG.	1,449
JSF SAMPLE PREP BLDG	1,410

JSF SILO EQUIPMENT BUILDING	2,402
JSF SMOKE STACK #1	1,017
JSF SMOKE STACK #2	1,017
JSF SPUD HUT #1	128
JSF SPUD HUT #2	128
JSF SPUD HUT CONTROL #1	198
JSF SPUD HUT CONTROL #2	198
JSF SPUD HUT CONTROL #3	198
JSF SURGE BIN EQUIPMENT BUILDING #1	11,159
JSF SURGE BIN EQUIPMENT BUILDING #2	3,034
JSF TRANSFER STATION B	3,340
JSF TRANSFER STATION C	1,209
JSF WATER TREATMENT PLANT	7,389
JTN AFP 161 KV SWITCH HOUSE	TBD
JTN ATOKA 161 KV SWITCH HOUSE	TBD
JTN BYHALIA 161 KV SWITCH HOUSE	TBD
JTN BYHALIA 46 KV SWITCH HOUSE	TBD
JTN CANADAVILLE 161 KV SWITCH HOUSE	TBD
JTN CARGILL	TBD
JTN COLLIERVILLE PS 161 KV SWITCH HOUSE	TBD
JTN CORDOVA 500 KV PUMP HOUSE	572
JTN COVINGTON COMM	TBD
JTN DANCYVILLE 161 KV SWITCH HOUSE	TBD
JTN DESOTO RD 161 KV SWITCH HOUSE	TBD
JTN DRUMMONDS 161 KV SWITCH HOUSE	TBD
JTN FREEPORT 500 KV SWITCH HOUSE	6,582
JTN MASON 69 KV SWITCH HOUSE	TBD
JTN MEMPHIS HARDWOOD FLOORING	TBD
JTN MILLER 161 KV SWITCH HOUSE	TBD
JTN MILLER DISTRICT 46 KV SWITCH HOUSE	TBD
JTN MILLINGTON NAVAL AIR STA	TBD
JTN MLGWD SUBS	TBD
JTN NORTH COLLIERVILLE (TEMP) 161 KV SWITCH H	TBD
JTN NORTH COVINGTON 69 KV SWITCH HOUSE	TBD
JTN OAKLAND 161 KV SWITCH HOUSE	TBD
JTN PLEASANT HILL 46 KV SWITCH HOUSE	TBD
JTN RIALTO 69 KV SWITCH HOUSE	TBD
JTN ROSSVILLE 161 KV SWITCH HOUSE	TBD
JTN SHELBY 500 KV PUMP HOUSE	572
JTN SHELBY 500 KV SWITCH HOUSE	4,088
JTN SHELBY TELE	TBD
JTN SOMERVILLE 161 KV SWITCH HOUSE	TBD
JTN SOUTH MEMPHIS 161 KV SWITCH HOUSE	TBD
JTN WEST MEMPHISR 500 KV SWITCH HOUSE	TBD
KCT CONTROL BUILDING	3,750
KCT DEMIN WATER BLDG	715
KCT FIRE PUMP BUILDING	800
KCT MAINTENANCE BUILDING	6,200
KCT UNIT 1 PEECC BLDG	280
KCT UNIT 2 PEECC BLDG	280

KCT UNIT 3 PEECC BLDG	280
KCT UNIT 4 PEECC BLDG	280
KIF ASBESTOS CHANGE FACILITY	4,000
KIF CENTRAL ELECTRICAL CONTROL BLDG	14,656
KIF COAL BLENDING ELECTRICAL EQUIP BLDG	1,800
KIF COAL EMPTYING STATION	4,876
KIF COAL LABORATORY	2,098
KIF CONTROL EMISSIONS LAB 1	160
KIF CONTROL EMISSIONS LAB 2	160
KIF CONTROL EMISSIONS LAB 3	160
KIF CONVEYOR BC-1	1,100
KIF CONVEYOR BC-13	800
KIF CONVEYOR BC-14	2,280
KIF CONVEYOR BC-17	800
KIF CONVEYOR BC-2	1,100
KIF CONVEYOR BC-3&4	7,000
KIF CONVEYOR BC-5&6	700
KIF CONVEYOR CONTROL AND CRUSHER BLDG	5,090
KIF EPRI OFFICE	4,848
KIF GUBMK BUILDINGS	8,320
KIF HOPPER BUILDING 1	4,600
KIF HOPPER BUILDING 2	3,900
KIF HYDROGEN STORAGE PORT 1	350
KIF HYDROGEN STORAGE PORT 2	350
KIF POWERHOUSE	1,255,721
KIF PPTR CONTROL BLDG 1	2,048
KIF PPTR CONTROL BLDG 2	2,048
KIF PPTR CONTROL BLDG 3	2,048
KIF PUMP BUILDING	427
KIF TRAIN STORAGE SHED	7,123
KIF TRANSFER STATION A	1,200
KIF TRANSFER STATION B	600
KIF TRANSFER STATION C	1,800
KIF TRANSFER STATION D	120
KIF WATER TREATMENT PLANT	14,847
KXT ALCOA 161 KV SWITCH HOUSE	4,389
KXT ALCOA TELE	TBD
KXT ANDERSONVILLE 161 KV SWITCH HOUSE	TBD
KXT ANDERSONVILLE MICROWAVE	TBD
KXT ASARCO, INC (BEAVER CRK)	TBD
KXT ASARCO, INC (IMMEL RD)	TBD
KXT BEAR CREEK IND PK SWITCH HOUSE	TBD
KXT BEE COVE	TBD
KXT BLAIR ROAD 161 KV SWITCH HOUSE	TBD
KXT BLOCKHOUSE 69 KV SWITCH HOUSE	TBD
KXT CALDERWOOD HYDRO	TBD
KXT CARDIFF VALLEY 69 KV SWITCH HOUSE	TBD
KXT CARYVILLE 161 KV SWITCH HOUSE	TBD
KXT CHANDLER 161 KV SWITCH HOUSE	TBD
KXT CHEOAH HYDRO PLANT 161 KV SWITCH HOUSE	TBD

KXT CHEROKEE HYDRO PLANT 161 KV SWITCH HOUSE	TBD
KXT CHILHOWEE HYDRO 161 KV SWITCH HOUSE	TBD
KXT COMBS KNOB MICROWAVE	360
KXT DIXIE CEMENT	TBD
KXT DOUGLAS HYDRO PLANT 161 KV SWITCH HOUSE	TBD
KXT DUNCAN 69 KV SWITCH HOUSE	TBD
KXT EAST SEVIERVILLE 69 KV SWITCH HOUSE	TBD
KXT FNH 161 KV SWITCH HOUSE	TBD
KXT FNH FONTANA RADIO	TBD
KXT FTL PLANT 161 KV SWITCH HOUSE	1,008
KXT GREEN TOP MOUNTAIN MICROWAVE	300
KXT HARMON AUTOMOTIVE	TBD
KXT HARRIMAN 161 KV SWITCH HOUSE	TBD
KXT HARRIMAN DISTRICT 69 KV SWITCH HOUSE	TBD
KXT HARRIMAN PAPERBOARD CORP. 69 KV SWITCH HO	TBD
KXT HEISKELL 161 KV SWITCH HOUSE	TBD
KXT HUNTSVILLE 161 KV STORAGE	240
KXT HWY 411 161 KV SWITCH HOUSE	TBD
KXT JEFFERSON CITY 69 KV SWITCH HOUSE	TBD
KXT JEFFERSON CITY ZINC	TBD
KXT KINGSTON 69 KV SWITCH HOUSE	TBD
KXT KINGSTON FOSSIL PLANT 161 KV SWITCH HOUSE	TBD
KXT KINGSTON PUMPING STA 69 KV SWITCH HOUSE	TBD
KXT KNOXVILLE 161 KV SWITCH HOUSE	1,066
KXT KUB SUBS	TBD
KXT LAFOLLETTE 161 KV SWITCH HOUSE	TBD
KXT LAFOLLETTE DISTRICT 69 KV SWITCH HOUSE	TBD
KXT LAFOLLETTE TELE	TBD
KXT LENOIR CITY 69 KV SWITCH HOUSE	TBD
KXT LONSDALE 161 KV SWITCH HOUSE	7,128
KXT LONSDALE COMM	TBD
KXT LOST CREEK 161 KV SWITCH HOUSE	TBD
KXT MARYVILLE 69 KV SWITCH HOUSE	TBD
KXT MOSSY GROVE 69 KV SWITCH HOUSE	TBD
KXT NEW CHEROKEE CORP.	TBD
KXT NIPPONDENSO 161 KV SWITCH HOUSE	TBD
KXT NIXON ROAD 161 KV SWITCH HOUSE	918
KXT NORRIS HYDRO PLANT 161 KV SWITCH HOUSE	TBD
KXT NORTH GATLINBURG 161 KV SWITCH HOUSE	TBD
KXT NORTH KNOXVILLE 161 KV SWITCH HOUSE	2,448
KXT NORTH PIGEON FORGE 161 KV SWITCH HOUSE	1,152
KXT NORTH VIEW 161 KV SWITCH HOUSE	TBD
KXT NORTHEAST HARRIMAN 69 KV SWITCH HOUSE	TBD
KXT ONEIDA 69 KV SWITCH HOUSE	TBD
KXT PIGEON FORGE 161 KV SWITCH HOUSE	882
KXT PINEVILLE 161 KV SWITCH HOUSE	TBD
KXT PORTER, H. K. 69 KV SWITCH HOUSE	TBD
KXT POWER STORES - KNOX	TBD
KXT ROANE 500 KV SWITCH HOUSE	4,760
KXT ROANE HOSIERY MILL	TBD

KXT ROANE MOUNTAIN 161 KV SWITCH HOUSE	88
KXT ROANE MOUNTAIN MICROWAVE	88
KXT ROCKFORD 161 KV SWITCH HOUSE	TBD
KXT ROCKFORD MANUFACTURING CO.	TBD
KXT SANTEETLAH HYDRO 161 KV SWITCH HOUSE	TBD
KXT SCEINTIFIC ECOLOGY GROUP	TBD
KXT SEVIERVILLE 69 KV SWITCH HOUSE	TBD
KXT SHARPS RIDGE ENG GEN	TBD
KXT SHARPS RIDGE MICROWAVE	375
KXT SHOOKES GAP	TBD
KXT SKI MOUNTAIN 69 KV SWITCH HOUSE	TBD
KXT SOUTH GATLINBURG 69 KV SWITCH HOUSE	TBD
KXT SPEEDWELL 69 KV SWITCH HOUSE	TBD
KXT SPEEDWELL DISTRICT 69 KV SWITCH HOUSE	TBD
KXT SUNBRIGHT 69 KV SWITCH HOUSE	TBD
KXT THE BURRUSS CO.	TBD
KXT TN EMERGENCY MGMT ASSOC	TBD
KXT TN LUTTRELL CO.	TBD
KXT TN VALLEY STEEL CORP 69 KV SWITCH HOUSE	TBD
KXT TWIN TOWERS MICROWAVE	TBD
KXT VOLUNTEER COMM	TBD
KXT VULCAN MATERIALS, KNOX	TBD
KXT WALTERS HYDRO PLANT 161 KV SWITCH HOUSE	TBD
KXT WARTBURG 69 KV SWITCH HOUSE	TBD
KXT WESTBOURNE 69 KV SWITCH HOUSE	TBD
KXT WILDWOOD 69 KV SWITCH HOUSE	TBD
KXT YOUNG MINE 69 KV SWITCH HOUSE	TBD
KYH POWERHOUSE/DAM	67,400
LCT DEMIN WATER BLDG	1,089
LCT FIRE PUMP BLDG	1,246
LCT OPERATIONS BUILDING	3,960
LCT UNIT 1 PEECC BLDG	282
LCT UNIT 10 PEECC BLDG	282
LCT UNIT 11 PEECC BLDG	282
LCT UNIT 12 PEECC BLDG	282
LCT UNIT 2 PEECC BLDG	282
LCT UNIT 3 PEECC BLDG	282
LCT UNIT 4 PEECC BLDG	282
LCT UNIT 5 PEECC BLDG	282
LCT UNIT 6 PEECC BLDG	282
LCT UNIT 7 PEECC BLDG	282
LCT UNIT 8 PEECC BLDG	282
LCT UNIT 9 PEECC BLDG	282
LCT WHSE & SHOP BLDG	10,710
MFK ASHLAND OIL 69 KV SWITCH HOUSE	TBD
MFK BENTON 161 KV SWITCH HOUSE	TBD
MFK BENTON CITY 69 KV SWITCH HOUSE	TBD
MFK CALVERT 161 KV SWITCH HOUSE	2,043
MFK CALVERT TELE	TBD
MFK CAMDEN CASTING, INC	TBD

MFK CARBON GRAPHITE	TBD
MFK CLINTON 161 KV SWITCH HOUSE	400
MFK COLDWATER 69 KV SWITCH HOUSE	TBD
MFK COLEMAN ROAD 161 KV SWITCH HOUSE	TBD
MFK CRUTCHFIELD	TBD
MFK EAST MURRAY 69 KV SWITCH HOUSE	TBD
MFK FULTON 69 KV SWITCH HOUSE	TBD
MFK GRAND RIVER RADIO/MICROWAVE	416
MFK GREAT LAKES 69 KV SWITCH HOUSE	TBD
MFK HARDIN 69 KV SWITCH HOUSE	TBD
MFK HICKMAN 69 KV SWITCH HOUSE	TBD
MFK HICKMAN CITY 69 KV SWITCH HOUSE	TBD
MFK HICKMAN MICROWAVE	288
MFK HICKORY GROVE 69 KV SWITCH HOUSE	TBD
MFK HORNBEAK RADIO/MICROWAVE	80
MFK INGERSOLL-RAND 69 KV SWITCH HOUSE	TBD
MFK KENTUCKY-TENN CLAY CO.	TBD
MFK LYNN GROVE MICROWAVE	312
MFK MARSHALL 500 KV SWITCH HOUSE	8,418
MFK MARTIN 161 KV SWITCH HOUSE	1,691
MFK MARTIN RADIO	84
MFK MARTIN STEAM PLANT	TBD
MFK MAYFIELD 161 KV SWITCH HOUSE	1,925
MFK MAYFIELD DISTRICT 69 KV SWITCH HOUSE	TBD
MFK MAYFIELD PSC RADIO	TBD
MFK MILBURN 69 KV SWITCH HOUSE	TBD
MFK MOSCOW 161 KV SWITCH HOUSE	240
MFK MURRAY 161 KV SWITCH HOUSE	TBD
MFK MURRAY DISTRICT 69 KV SWITCH HOUSE	TBD
MFK MURRAY TELE	TBD
MFK NATIONAL CARBIDE 161 KV SWITCH HOUSE	1,400
MFK PADUCAH 161 KV SWITCH HOUSE	3,080
MFK PADUCAH TELE	TBD
MFK PALMERSVILLE HWY 69 KV SWITCH HOUSE	TBD
MFK PILOT OAK 69 KV SWITCH HOUSE	TBD
MFK PLUMLEY CO.	TBD
MFK SHAWNEE REPEATER STATION	288
MFK SOUTH CALVERT 161 KV SWITCH HOUSE	80
MFK STELLA 161 KV SWITCH HOUSE	TBD
MFK WEST MURRAY 69 KV SWITCH HOUSE	TBD
MFT BATESVILLE CASKET CO.	TBD
MFT BEECH GROVE MICROWAVE	341
MFT BRIDGESTONE TIRE CO. 161 KV SWITCH HOUSE	TBD
MFT CALSONIC	TBD
MFT CARRIER CORP.	TBD
MFT CARTHAGE COMM	TBD
MFT CENTER HILL HYDRO PLANT 161 KV SWITCH HOU	TBD
MFT CORDELL HULL HYDRO PLANT 161 KV SWITCH HO	TBD
MFT CUMBERLAND MFG CO.	TBD
MFT CUSTOM FORREST PRODUCTS	TBD

MFT DEZURIK CORP.	TBD
MFT EAST MCMINNVILLE 161 KV SWITCH HOUSE	1,290
MFT EAST MURFREESBORO 161 KV SWITCH HOUSE	TBD
MFT EAST SHELBYVILLE 161 KV SWITCH HOUSE	1,092
MFT EAST SHELBYVILLE 46 KV SWITCH HOUSE	TBD
MFT ELK RIVER 46 KV SWITCH HOUSE	TBD
MFT ESSEX	TBD
MFT FLEETGUARD, INC	TBD
MFT FLORENCE 161 KV SWITCH HOUSE	TBD
MFT FRANKLIN 500 KV SWITCH HOUSE	1,660
MFT GLADEVILLE 46 KV SWITCH HOUSE	TBD
MFT GLADEVILLE PS 161 KV SWITCH HOUSE	TBD
MFT GREAT FALLS HYDRO PLANT 161 KV SWITCH HOU	TBD
MFT HAMILTON 161 KV SWITCH HOUSE	TBD
MFT JACK DANIELS-NORTH PLANT	TBD
MFT JACK DANIELS-SOUTH PLANT	TBD
MFT JONES BLVD 46 KV SWITCH HOUSE	TBD
MFT LEBANON 161 KV PUMP HOUSE	80
MFT LEBANON 161 KV SWITCH HOUSE	1,939
MFT LEBANON CITY 46 KV SWITCH HOUSE	TBD
MFT LEBANON INDL PARK 161 KV	TBD
MFT LIVINGSTON 161 KV SWITCH HOUSE	288
MFT MAGNETEK CENTURY ELECTRIC	TBD
MFT MANCHESTER 161 KV SWITCH HOUSE	600
MFT MANCHESTER COMM	TBD
MFT MCBURG 161 KV SWITCH HOUSE	TBD
MFT MCMINNVILLE 161 KV SWITCH HOUSE	1,290
MFT MOBILE TRANSFORMER NO. 6 69 KV SWITCH HOU	TBD
MFT MORRISON 161 KV SWITCH HOUSE	TBD
MFT MURFFESSBORO IND PARK 161 KV SWITCH HOUSE	4,468
MFT MURFREESBORO 161 KV SWITCH HOUSE	1,184
MFT MURFREESBORO MAINTENANCE BUILDING	1,632
MFT MURFREESBORO RADIO	TBD
MFT NISSAN MOTORS 161 KV SWITCH HOUSE	TBD
MFT OSTER CORP.	TBD
MFT PITTS LANE 46 KV SWITCH HOUSE	TBD
MFT ROGERS GROUP INC-COWAN PLT	TBD
MFT RUSSELL HILL MICROWAVE	312
MFT SAMSONITE FURNITURE CO.	TBD
MFT SHELBYVILLE 46 KV SWITCH HOUSE	768
MFT SMITHVILLE 161 KV SWITCH HOUSE	1,945
MFT SMITHVILLE RADIO	328
MFT SMYRNA 161 KV SWITCH HOUSE	1,008
MFT SMYRNA TELE	TBD
MFT SOUTH CHURCH STREET 46 KV SWITCH HOUSE	TBD
MFT SOUTH JACKSON 161 KV GENERATOR BLDG	165
MFT SPARTA 46 KV SWITCH HOUSE	TBD
MFT SPENCER 46 KV SWITCH HOUSE	TBD
MFT STANLEY TOOLS	TBD
MFT STONE MAN	TBD

MFT TRIUNE 161 KV SWITCH HOUSE	TBD
MFT TULLAHOMA 46 KV SWITCH HOUSE	TBD
MFT UNIONVILLE 46 KV SWITCH HOUSE	48
MFT WARTRACE 161 KV SWITCH HOUSE	2,928
MFT WATERTOWN 161 KV SWITCH HOUSE	TBD
MFT WEST COOKEVILLE TELE	TBD
MFT WEST SPARTA 161 KV SWITCH HOUSE	TBD
MFT WILSON 500 KV SWITCH HOUSE	5,297
MFT WINCHESTER 161 KV SWITCH HOUSE	4,032
MFT WOODBURY 161 KV SWITCH HOUSE	TBD
MHH DIESEL GENERATOR BLDG	220
MHH POWERHOUSE/DAM	44,400
NHD NTH COMPRESSOR AND BLOWER BUILDING	600
NHD NTH POWERHOUSE	5,800
NJH DIESEL GENERATOR BUILDING	220
NJH POWERHOUSE/DAM	63,900
NLC POWERHOUSE	7,200
NO BLDG - JSF ASH SILO	600
NO BLDG - JSF CRUSHER BUILDING	4,340
NO BLDG - JSF MCC BUILDING	400
NO BLDG - JSF PUMP HOUSE	1,148
NO BLDG - JSF RETARDER HOUSE	120
NO BLDG - JSF SCALE HOUSE	90
NO BLDG - JSF TRANSFER STATION 6	195
NO BLDG - JSF TRANSFER STATION D	1,680
NOH POWERHOUSE/DAM	73,900
NSC ADAMS 69 KV SWITCH HOUSE	TBD
NSC AIRCO 161 KV SWITCH HOUSE	TBD
NSC ARMSTRONG TIRE	TBD
NSC ASHLAND CITY 69 KV SWITCH HOUSE	TBD
NSC ASHLAND CITY IND PARK 69 KV SWITCH HOUSE	TBD
NSC ASPEN GROVE 161 KV SWITCH HOUSE	TBD
NSC AVCO	TBD
NSC BEARWALLOW 161 KV SWITCH HOUSE	TBD
NSC BIFFLE ROAD 161 KV SWITCH HOUSE	TBD
NSC BOGOTA 69 KV SWITCH HOUSE	TBD
NSC BRENTWOOD 161 KV SWITCH HOUSE	TBD
NSC BRUCETON 69 KV SWITCH HOUSE	TBD
NSC BURNS STONE CO.	TBD
NSC CAMDEN 161 KV SWITCH HOUSE	TBD
NSC CANE RIDGE 161 KV SWITCH HOUSE	TBD
NSC CENTRAL PIKE 161 KV SWITCH HOUSE	TBD
NSC CHARLOTTE 69 KV SWITCH HOUSE	85
NSC CHEATHAM HYDRO PLANT 69 KV	TBD
NSC CHICKEN ROAD (DRESDEN IND) 69 KV SWITCH H	TBD
NSC CLARKSVILLE 161 KV SWITCH HOUSE	3,074
NSC CLARKSVILLE DISTRICT 69 KV SWITCH HOUSE	TBD
NSC CLARKSVILLE WATER TOWER/COMM	80
NSC CRAIGHEAD 161 KV SWITCH HOUSE	TBD
NSC CUMBERLAND CITY 69 KV SWITCH HOUSE	TBD

NSC CUMBERLAND FOSSIL PLANT 500 KV SWITCH HOU	TBD
NSC CUMBERLAND FURNACE 69 KV SWITCH HOUSE	TBD
NSC CURD LANE 161 KV SWITCH HOUSE	TBD
NSC DAVID LIPSCOMB UNIVERSITY	TBD
NSC DAVIDSON 500 KV PUMP HOUSE	480
NSC DAVIDSON 500 KV SWITCH HOUSE	3,439
NSC DAVIDSON 500 KV TELE	TBD
NSC DAVIDSON ROAD 161 KV SWITCH HOUSE	TBD
NSC DICKSON 161 KV SWITCH HOUSE	1,056
NSC DICKSON 161 KV TELE	TBD
NSC DICKSON DISTRICT 69 KV SWITCH HOUSE	TBD
NSC DONELSON 161 KV SWITCH HOUSE	TBD
NSC DONELSON MICROWAVE	341
NSC DOVER 69 KV SWITCH HOUSE	TBD
NSC DRESDEN 69 KV SWITCH HOUSE	TBD
NSC DUNBAR CAVE 161 KV SWITCH HOUSE	TBD
NSC DUPONT 161 KV SWITCH HOUSE	TBD
NSC EAST CAMDEN 161 KV SWITCH HOUSE	TBD
NSC EAST CLARKSVILLE 69 KV SWITCH HOUSE	TBD
NSC ELYSIAN FIELDS 161 KV SWITCH HOUSE	TBD
NSC EMERSON ELECTRIC CO.	TBD
NSC ERIN 161 KV SWITCH HOUSE	288
NSC FORD GLASS CO.	TBD
NSC FOUNTAINHEAD 161 KV SWITCH HOUSE	TBD
NSC FRANKLIN 161 KV SWITCH HOUSE	3,273
NSC GAF #1 & #2	TBD
NSC GERMANTOWN MICROWAVE	428
NSC GLEASON 69 KV SWITCH HOUSE	TBD
NSC GOODLETTSVILLE 161 KV SWITCH HOUSE	TBD
NSC GOODYEAR TIRE & RUBBER CO. 69 KV SWITCH H	TBD
NSC GRASSLAND 161 KV SWITCH HOUSE	TBD
NSC GREEN BRIER 69 KV SWITCH HOUSE	TBD
NSC GREENFIELD 69 KV SWITCH HOUSE	TBD
NSC HAWKES RD 69 KV SWITCH HOUSE	TBD
NSC HENDERSONVILLE 161 KV SWITCH HOUSE	85
NSC HERMITAGE 161 KV SWITCH HOUSE	TBD
NSC HUNTINGDON 161 KV SWITCH HOUSE	TBD
NSC HUNTINGDON DISTRICT 69 KV SWITCH HOUSE	TBD
NSC HURRICANE CREEK 161 KV SWITCH HOUSE	TBD
NSC J. PERCY PRIEST HYDRO PLANT 69 KV	TBD
NSC JERSEY MINIERE ZINC CO 161 KV SWITCH HOUS	85
NSC KENTON 69 KV SWITCH HOUSE	TBD
NSC KINGSTON SPRINGS 161 KV SWITCH HOUSE	TBD
NSC KY-TENN CLAY CO.	TBD
NSC LADD W G 69 KV SWITCH HOUSE	TBD
NSC LONE OAK 69 KV SWITCH HOUSE	TBD
NSC MCCRORY 161 KV SWITCH HOUSE	TBD
NSC MCKENZIE 69 KV SWITCH HOUSE	TBD
NSC MODEL MICROWAVE	432
NSC MONTGOMERY 500-KV RADIO	TBD

NSC MONTGOMERY 500-KV-PUMP HOUSE	572
NSC MORIE	TBD
NSC MTD PRODUCTS, INC 69 KV SWITCH HOUSE	TBD
NSC NASHVILLE THERMAL PLT 69 KV SWITCH HOUSE	TBD
NSC NEW MADRID 161 KV SWITCH HOUSE	TBD
NSC NEW PROVIDENCE 69 KV SWITCH HOUSE	TBD
NSC NEW TIPTONVILLE 161 KV SWITCH HOUSE	TBD
NSC NEWBERN 161 KV SWITCH HOUSE	TBD
NSC NOLENSVILLE ROAD 161 KV SWITCH HOUSE	TBD
NSC NORANDAL INC 161 KV SWITCH HOUSE	TBD
NSC NORTH MARTIN 69 KV SWITCH HOUSE	TBD
NSC NORTH NASHVILLE 161 KV SWITCH HOUSE	3,109
NSC NORTH NASHVILLE TELE	TBD
NSC NORTHEAST SUBS	TBD
NSC OBION 69 KV SWITCH HOUSE	TBD
NSC OBION PS 161 KV SWITCH HOUSE	TBD
NSC OCANA 161 KV SWITCH HOUSE	TBD
NSC OLD HICKORY CLAY CO.	TBD
NSC OLD HICKORY HYDRO PLANT 69 KV SWITCH HOUS	TBD
NSC ORLINDA	TBD
NSC PARIS 161 KV SWITCH HOUSE	TBD
NSC PIN HOOK 500 KV SWITCH HOUSE	1,008
NSC PIN HOOK COMM	TBD
NSC PLEASANT VIEW 69 KV SWITCH HOUSE	TBD
NSC POMONA 161 KV SWITCH HOUSE	TBD
NSC QUEBECOR PRINTING	TBD
NSC RADNOR 161 KV SWITCH HOUSE	7,290
NSC RIDGELY 69 KV SWITCH HOUSE	TBD
NSC RIDGEVALE 69 KV SWITCH HOUSE	TBD
NSC ROBERT ORR SYSCO	TBD
NSC RODGERS GROUP	TBD
NSC ROUND POND 161 KV SWITCH HOUSE	TBD
NSC RUTHERFORD 161 KV SWITCH HOUSE	TBD
NSC RUTHERFORD 500 KV SWITCH HOUSE	TBD
NSC SAUNDERSVILLE 161 KV SWITCH HOUSE	TBD
NSC SHADY GROVE 69 KV SWITCH HOUSE	TBD
NSC SLEEPY HOLLOW 69 KV SWITCH HOUSE	TBD
NSC SOUTH MCKENZIE 69 KV SWITCH HOUSE	TBD
NSC SOUTH NASHVILLE 161 KV SWITCH HOUSE/NASH	14,649
NSC SOUTH NASHVILLE MICROWAVE	TBD
NSC SOUTH NASHVILLE TELE	TBD
NSC SPINKS CLAY COY CO.	TBD
NSC SPRINGFIELD 161 KV SWITCH HOUSE	864
NSC SPRINGFIELD COMM	TBD
NSC SPRINGFIELD DISTRICT 69 KV SWITCH HOUSE	TBD
NSC ST BETHLEHEM 161 KV SWITCH HOUSE	TBD
NSC STATE STOVE 69 KV SWITCH HOUSE	TBD
NSC STEEL PLACE 69 KV SWITCH HOUSE	TBD
NSC TN EMERGENCY MGMT ASSOC	TBD
NSC TRANE CO.	TBD

NSC TREZEVANT 69 KV SWITCH HOUSE	TBD
NSC TROY 69 KV SWITCH HOUSE	TBD
NSC TRW ROSS GEAR	TBD
NSC UNION CARBIDE 161 KV SWITCH HOUSE	TBD
NSC UNION CITY 161 KV SWITCH HOUSE	1,360
NSC UNION CITY MICROWAVE	TBD
NSC UNITED CLAY CO.	TBD
NSC VANLEER MICROWAVE	411
NSC VULCAN MATERIALS, MAYF	TBD
NSC VULCAN MATERIALS, NASH	TBD
NSC WARTRACE DISTRICT 69 KV SWITCH HOUSE	TBD
NSC WEAKLEY 500 KV SWITCH HOUSE	4,536
NSC WEAKLEY MICROWAVE	TBD
NSC WEST NASHVILLE 161 KV SWITCH HOUSE	4,228
NSC WESTLAKE	TBD
NSC WHITE BLUFF 69 KV SWITCH HOUSE	TBD
NSC WHITE HOUSE 69 KV SWITCH HOUSE	TBD
NSC WHITES CREEK 161 KV SWITCH HOUSE	TBD
NSC WOODLAWN 161 KV SWITCH HOUSE	TBD
OC1 O1H DIESEL GENERATOR BUILDING	144
OC1 O1H POWERHOUSE/DAM	22,926
OC2 O2H OIL PURIFICATION BUILDING	300
OC2 O2H PENSTOCK VALVE HOUSE	200
OC2 O2H POWERHOUSE/DAM	12,000
OC2 O2H TRASH RACK HOUSE	160
OC2 O2H WATER LEVEL GAUGE HOUSE	16
OC2 O2H WATER TREATMENT PLANT	160
OC2 O2H WELL PUMP HOUSE	230
OC3 O3H DAM/GALLERY	3,700
OC3 O3H POWERHOUSE/CONTROL BAY	14,900
OC3 O3H VALVE HOUSE	720
PAF 500 KV MAINT BLDG	4,800
PAF AMMONIA UNLOADING CONTROL	200
PAF BARGE UNLOADER	4,094
PAF BC-4 SAMPLE BUILDING	462
PAF BC-46 RECLAIM HOPPER	264
PAF BREAKER A	3,150
PAF BREAKER B	900
PAF CEMS 1	136
PAF CEMS 2	136
PAF CEMS 3	180
PAF CLORINATION BLDG	1,300
PAF COAL WASH EQUIP. BLDG. #2	990
PAF COAL WASH FIRE PROTECTION ROOM	180
PAF COAL WASH FIRE PUMP HOUSE	72
PAF COAL WASH PLANT	39,280
PAF COAL WASH POND EQUIP. BLDG. #1	990
PAF COAL WASH PUMP BUILDING	2,520
PAF COAL WASH SAMPLE BLDG	1,248
PAF CONAC BLDG.	1,020

PAF CONDITIONER BLDG #1	10,126
PAF CONDITIONER BLDG #2	5,888
PAF CONVEYOR BC-1	5,888
PAF CONVEYOR BC-10	6,000
PAF CONVEYOR BC-12	4,000
PAF CONVEYOR BC-13,14	8,000
PAF CONVEYOR BC-14A	1,500
PAF CONVEYOR BC-14B	1,500
PAF CONVEYOR BC-18	2,500
PAF CONVEYOR BC-19	4,400
PAF CONVEYOR BC-2	5,800
PAF CONVEYOR BC-20	1,600
PAF CONVEYOR BC-28,29,30	6,200
PAF CONVEYOR BC-3	2,000
PAF CONVEYOR BC-31,44	1,000
PAF CONVEYOR BC-32	10,000
PAF CONVEYOR BC-33,34	8,700
PAF CONVEYOR BC-35	2,500
PAF CONVEYOR BC-36,37	10,000
PAF CONVEYOR BC-4	5,400
PAF CONVEYOR BC-42	7,800
PAF CONVEYOR BC-42A	6,000
PAF CONVEYOR BC-42B	6,000
PAF CONVEYOR BC-43	11,000
PAF CONVEYOR BC-45	1,000
PAF CONVEYOR BC-46	2,500
PAF CONVEYOR BC-47	8,500
PAF CONVEYOR BC-49	6,000
PAF CONVEYOR BC-50	3,500
PAF CONVEYOR BC-51	3,500
PAF CONVEYOR BC-52, 53	12,000
PAF CONVEYOR BC-54	6,000
PAF CONVEYOR BC-55	6,000
PAF CONVEYOR BC-9,11	5,500
PAF CONVEYOR RC-1	300
PAF EMERGENCY POND PUMP	144
PAF FEH 10	72
PAF FEH 2	72
PAF FEH 6	72
PAF FEH 7	72
PAF FEH 8	72
PAF FEH 9	72
PAF FGD COMPRESSOR BLDG.	320
PAF FGD CONTROL BLDG	1,614
PAF FGD MCC BLDG.	3,240
PAF FGD PUMP BLDG	1,800
PAF FGD SLURRY KIOSK1	230
PAF FGD SLURRY KIOSK2	230
PAF FPV ROOM	180
PAF FUEL OIL BOOSTER PUMP	165

PAF HOPPER TRAIN BLDG.	7,700
PAF HYDROGEN PORTAL	1,295
PAF INSTRUMENT SHOP	1,070
PAF LIMESTONE CONV. CNTR.	1,260
PAF LIMESTONE KIOSK	126
PAF LIMESTONE PREP BLDG.	8,880
PAF NEW SMOKE STACK	4,778
PAF OLD SMOKE STACK 1	2,375
PAF OLD SMOKE STACK 2	2,375
PAF POWER HOUSE	1,823,203
PAF PPTR CONTROL BLDG.	3,519
PAF PPTR UNIT 3A	21,600
PAF PPTR UNIT 3B	21,600
PAF SAMPLE BLDG. BC-32	210
PAF SCRUBBER #1	4,800
PAF SCRUBBER #2	4,752
PAF SILO	1,810
PAF SILO 6 (2 SILOS)	3,620
PAF SILO 6 EQUIP. BLDG.	250
PAF SURGE HOPPER BLDG.	4,900
PAF SWITCH GEAR CONTROL ROOM	225
PAF TRANSFER B	4,080
PAF TRANSFER G	6,888
PAF TRANSFER STATION A	11,573
PAF TRANSFER STATION H	6,200
PAF TRANSFER STATION J	1,948
PAF TRANSFER STATION M	1,350
PAF TRANSFER STATION N	41,640
PAF TRANSFER STATION P	11,500
PAF TRANSFORMER BLDG.	140
PAF VACUUM FILTER BUILDING	5,750
PAF VALVE STATION #1	90
PAF VALVE STATION #2	195
PAF WATER TEST BLDG.	96
PHM ACKERMAN 69 KV SWITCH HOUSE	TBD
PHM BOND 46 KV SWITCH HOUSE	TBD
PHM CHOCTAW MAID FARMS, INC	TBD
PHM HANDLE 46 KV SWITCH HOUSE	TBD
PHM KOSCIUSKO 46 KV SWITCH HOUSE	TBD
PHM LAKE 46 KV SWITCH HOUSE	TBD
PHM LANGFORD 161 KV SWITCH HOUSE	TBD
PHM LOUISVILLE 161 KV SWITCH HOUSE	625
PHM MACON 161 KV SWITCH HOUSE	TBD
PHM NORTH LOUISVILLE, MS 161 KV SWITCH HOUSE	TBD
PHM NORTH PHILADELPHIA 161 KV SWITCH HOUSE	TBD
PHM NOXAPATER 161 KV SWITCH HOUSE	TBD
PHM PHILADELPHIA 161 KV SWITCH HOUSE	1,834
PHM PHILADELPHIA MICROWAVE	TBD
PHM PHILADELPHIA WAREHOUSE RADIO	TBD
PHM SCOOBA 46 KV SWITCH HOUSE	TBD

PHM SEBASTOPOLE 161 KV SWITCH HOUSE	TBD
PHM SINGLETON 46 KV SWITCH HOUSE	TBD
PHM STURGIS DISTRICT 69 KV SWITCH HOUSE	TBD
PHM TWIN CITY 161 KV SWITCH HOUSE	TBD
PKH POWERHOUSE/DAM	177,200
RAC ALTAMONT 69 KV SWITCH HOUSE	TBD
RAC BEAULIEU 161 KV SWITCH HOUSE	TBD
RAC COALMONT 161 KV SWITCH HOUSE	TBD
RAC COLONIAL PIPELINE 69 KV SWITCH HOUSE	TBD
RAC DUNLAP 69 KV SWITCH HOUSE	TBD
RAC H. R. INTERNATIONAL 161 KV SWITCH HOUSE	TBD
RAC JASPER 161 KV SWITCH HOUSE	TBD
RAC KIMBALL 161 KV SWITCH HOUSE	TBD
RAC KIMBALL 69 KV SWITCH HOUSE	TBD
RAC MONTEAGLE 69 KV SWITCH HOUSE	TBD
RAC NICKAJACK HYDRO PLANT 161 KV SWITCH HOUSE	TBD
RAC PALMER 69 KV SWITCH HOUSE	TBD
RAC PIKEVILLE 161 KV SWITCH HOUSE	TBD
RAC POWELL 69 KV SWITCH HOUSE	TBD
RAC REESE FERRY 161 KV SWITCH HOUSE	TBD
RAC RPS DISCHARGE STRUCTURE PUMPING STATION	140
RAC RPS POWER STORAGE BUILDING	6,230
RAC RPS POWERPLANT CHAMBER AND TUNNELS	244,200
RAC RPS SERVICE EQUIPMENT BUILDING	6,200
RAC RPS SURGE CHAMBER AND TUNNEL	28,500
RAC RPS SWITCHYARD CONTROL BUILDING	10,700
RAC RPS VENTILATION FAN BUILDING	2,800
RAC SIXTH STREET 69 KV SWITCH HOUSE	TBD
RAC SKYLINE 161 KV SWITCH HOUSE	TBD
RAC SOUTH PITTSBURG 69 KV SWITCH HOUSE	TBD
RAC SUMMERFIELD 69 KV SWITCH HOUSE	TBD
RAC TRACY CITY 69 KV SWITCH HOUSE	TBD
RAC WHITWELL 69 KV SWITCH HOUSE	TBD
RACCOON MTN PS PLANT 500 KV (161 KV)	10,123
RACCOON MTN PUMP HOUSE	806
SHF 500 KV	TBD
SHF AFBC BOILER BLDG	120,000
SHF AFBC CONTROL BLDG	2,400
SHF AFBC PILOT PLANT 161 KV SWITCH HOUSE	TBD
SHF BAG HOUSE U1	8,000
SHF BAG HOUSE U10	8,000
SHF BAG HOUSE U2	8,000
SHF BAG HOUSE U3	8,000
SHF BAG HOUSE U4	8,000
SHF BAG HOUSE U5	8,000
SHF BAG HOUSE U6	8,000
SHF BAG HOUSE U7	8,000
SHF BAG HOUSE U8	8,000
SHF BAG HOUSE U9	8,000
SHF BLOWER BLDG	6,176

SHF CEMS 1&2	160
SHF CEMS 3&4	160
SHF CEMS 5&6	160
SHF CEMS 7&8	160
SHF CEMS 9&10	160
SHF CHEMICAL LAB	1,380
SHF COAL BARGE UNLOADER 1	1,000
SHF COAL BARGE UNLOADER 2	1,000
SHF COAL YD. CONVEYOR CNTRL. BLDG. 2	720
SHF COMPRESSOR BLDG.	1,200
SHF CONTROL BLDG	10,216
SHF CONVEYOR BC-1	2,600
SHF CONVEYOR BC-11	2,000
SHF CONVEYOR BC-12	3,000
SHF CONVEYOR BC-13	10,000
SHF CONVEYOR BC-14	6,500
SHF CONVEYOR BC-2	33,000
SHF CONVEYOR BC-3&4	5,000
SHF CONVEYOR BC-5	1,200
SHF CONVEYOR BC-6&7	14,950
SHF CONVEYOR BC-L1	18,000
SHF CONVEYOR BC-L2	10,000
SHF CONVEYOR BC-L3	12,000
SHF CONVEYOR BC-L4	30,000
SHF CONVEYOR CNTRL 2	600
SHF CRUSHER BLDG	1,860
SHF DEMINERALIZATION BLDG 1	3,150
SHF DEMINERALIZATION BLDG 2	4,500
SHF DOE-PADUCAH C-31 161 KV SWITCH HOUSE	TBD
SHF DOE-PADUCAH C-35 161 KV SWITCH HOUSE	TBD
SHF DOE-PADUCAH C-37 161 KV SWITCH HOUSE	TBD
SHF DOE-PADUCHA C-33 161 KV SWITCH HOUSE	TBD
SHF DUST CONTAINMENT BLDG.	3,810
SHF FIRE AND RESCUE BLDG	1,500
SHF HOPPER BLDG.	5,160
SHF LARGE SMOKE STACK #1	5,024
SHF LARGE SMOKE STACK #2	5,024
SHF LIMESTONE COND. BLDG	22,050
SHF MET BLDG	80
SHF OLD SMOKE STACK 1	380
SHF OLD SMOKE STACK 10	380
SHF OLD SMOKE STACK 2	380
SHF OLD SMOKE STACK 3	380
SHF OLD SMOKE STACK 4	380
SHF OLD SMOKE STACK 5	380
SHF OLD SMOKE STACK 6	380
SHF OLD SMOKE STACK 7	380
SHF OLD SMOKE STACK 8	380
SHF OLD SMOKE STACK 9	380
SHF POWERHOUSE	929,764

SHF SAMPLE PREP BUILDING	1,750
SHF STORAGE TANK CNTRL BLDG.	40
SHF STORAGE TANK PUMP HOUSE	56
SHF SURGE HOPPER BUILDING 1	1,000
SHF SURGE HOPPER BUILDING 2	968
SHF SWITCHGEAR CNTRL BLDG.	1,125
SHF TRANSFER STATION 6&7	3,000
SHF W.T.P. SWITCHGEAR 1	80
SHF W.T.P. SWITCHGEAR 2	80
SHF WASTE SILOS	17,100
SHF WATER TREATMENT PLANT	12,000
SHH INTAKE AND ACCESS TUNNEL	2,360
SHH POWERHOUSE	11,130
SQN 500 KV	TBD
SQN AUX.BLDG	217,500
SQN CONTROL BLDG.	39,200
SQN DIESEL GEN. BLDG.	11,200
SQN INTAKE PUMP.STAT.	3,000
SQN REACTOR BLDG.	45,000
SQN TURBINE BLDG.	325,542
TFH AERATION AND COMPRESSOR BUILDING	560
TFH DIESEL GENERATOR BUILDING	210
TFH INTAKE STRUCTURE	1,200
TFH POWERHOUSE/DAM	12,200
TFH SPILLWAY EMERGENCY GENERATOR BUILDING	100
TLH DAM	4,160
TLH EMERGENCY GENERATOR BUILDING	240
TPM ABBEVILLE IND 46 KV SWITCH HOUSE	TBD
TPM AMORY 161 KV SWITCH HOUSE	TBD
TPM AMORY DISTRICT 46 KV SWITCH HOUSE	TBD
TPM ASHLAND 46 KV SWITCH HOUSE	TBD
TPM BALDWYN 161 KV SWITCH HOUSE	TBD
TPM BANKHEAD 161 KV SWITCH HOUSE	TBD
TPM BARNES CROSSING 46 KV SWITCH HOUSE	TBD
TPM BATESVILLE 161 KV SWITCH HOUSE	1,584
TPM BATESVILLE CASKET CO.	TBD
TPM BAY SPRINGS 161 KV SWITCH HOUSE	TBD
TPM BELDEN 46 KV SWITCH HOUSE	TBD
TPM BELMONT 46 KV SWITCH HOUSE	TBD
TPM BISSELL 161 KV SWITCH HOUSE	TBD
TPM BLUE MOUNTAIN 46 KV SWITCH HOUSE	TBD
TPM BLUE SPRINGS 161 KV SWITCH HOUSE	TBD
TPM BOONEVILLE 161 KV SWITCH HOUSE	756
TPM BOONEVILLE DISTRICT 46 KV SWITCH HOUSE	96
TPM BRUCE 161 KV SWITCH HOUSE	TBD
TPM BRUCE 69 KV SWITCH HOUSE	TBD
TPM BRUCE RADIO STATION	80
TPM BURNSVILLE 161 KV SWITCH HOUSE	1,200
TPM CAROLINA 46 KV SWITCH HOUSE	TBD
TPM CHARLESTON 26 KV SWITCH HOUSE	TBD

TPM COFFEEVILLE 161 KV SWITCH HOUSE	640
TPM COLLEGE HILL	TBD
TPM COOPER TIRE 46 KV SWITCH HOUSE	TBD
TPM CORINTH 161 KV SWITCH HOUSE	1,008
TPM CORINTH DISTRICT 46 KV SWITCH HOUSE	TBD
TPM CORNERSVILLE 46 KV SWITCH HOUSE	TBD
TPM CRENSHAW	TBD
TPM EAST RIPLEY 161 KV SWITCH HOUSE	TBD
TPM EAST TUPELO 46 KV SWITCH HOUSE	TBD
TPM ECRU 46 KV SWITCH HOUSE	TBD
TPM ENTERPRISE 46 KV SWITCH HOUSE	TBD
TPM FAIRVIEW 26 KV SWITCH HOUSE	TBD
TPM FALKNER 46 KV SWITCH HOUSE	TBD
TPM FULTON 161 KV SWITCH HOUSE	TBD
TPM FULTON DISTRICT 46 KV SWITCH HOUSE	TBD
TPM GLEN 161 KV SWITCH HOUSE	TBD
TPM GRAHAM - KIE 255	TBD
TPM GRAHAM MICROWAVE	381
TPM GUNTOWN 161 KV SWITCH HOUSE	240
TPM HICKORY FLAT 46 KV SWITCH HOUSE	TBD
TPM HILLS CHAPEL 161 KV SWITCH HOUSE	TBD
TPM HOLCUT 46 KV SWITCH HOUSE	TBD
TPM HOLLY SPRINGS 161 KV SWITCH HOUSE	864
TPM HOLLY SPRINGS TELE	TBD
TPM KIMBERLY-CLARK 161 KV SWITCH HOUSE	TBD
TPM KIRKVILLE 46 KV SWITCH HOUSE	85
TPM KOSSUTH 161 KV SWITCH HOUSE	TBD
TPM LAFAYETTE SPRINGS 161 KV SWITCH HOUSE	TBD
TPM LAMAR ENG GEN	TBD
TPM LAMAR KIE 241	TBD
TPM LAMAR MICROWAVE	381
TPM MEDICAL CENTER 161 KV SWITCH HOUSE	TBD
TPM MOOREVILLE 161 KV SWITCH HOUSE	TBD
TPM NASA 161 KV SWITCH HOUSE	1,008
TPM NETTLETON 46 KV SWITCH HOUSE	TBD
TPM NEW ALBANY 161 KV SWITCH HOUSE	3,109
TPM NEW ALBANY TELE	TBD
TPM NEWSPRINT SOUTH, INC 161 KV SWITCH HOUSE	TBD
TPM NORTH BOONEVILLE 46 KV SWITCH HOUSE	TBD
TPM NORTH CROSSROADS, MS 161 KV SWITCH HOUSE	TBD
TPM NORTH LEE 161 KV SWITCH HOUSE	TBD
TPM NORTH OXFORD 161 KV SWITCH HOUSE	TBD
TPM NORTH SARDIS 161 KV SWITCH HOUSE	92
TPM NORTH SHANNON 161 KV SWITCH HOUSE	TBD
TPM NORTHEAST CORINTH 161 KV SWITCH HOUSE	TBD
TPM NORTHWEST NEW ALBANY 161 KV SWITCH HOUSE	TBD
TPM NORTHWEST TUPELO 46 KV SWITCH HOUSE	TBD
TPM O. W. BALL 46 KV SWITCH HOUSE	TBD
TPM OAKLAND 115 KV	TBD
TPM OKOLONA 161 KV SWITCH HOUSE	2,714

TPM OKOLONA DISTRICT 46 KV SWITCH HOUSE	TBD
TPM OXFORD 161 KV SWITCH HOUSE	1,056
TPM OXFORD TELE	TBD
TPM PIPER IMPACT 46 KV SWITCH HOUSE	TBD
TPM PONTOTOC 161 KV SWITCH HOUSE	TBD
TPM RIENZI 46 SWITCH HOUSE	55
TPM RIPLEY 161 KV SWITCH HOUSE	TBD
TPM SARDIS 161 KV SWITCH HOUSE	240
TPM SHANNON 46 KV SWITCH HOUSE	TBD
TPM SLAYDEN 46 KV SWITCH HOUSE	TBD
TPM SOUTH BALDWYN 161 KV SWITCH HOUSE	TBD
TPM SOUTH FULTON 161 KV SWITCH HOUSE	TBD
TPM SOUTH TUPELO 46 KV SWITCH HOUSE	TBD
TPM SOUTHWEST TUPELO 161 KV SWITCH HOUSE	TBD
TPM STATELINE 161 KV SWITCH HOUSE	TBD
TPM TECUMSEH PRODUCTS CO.	TBD
TPM TENNECO 161 KV SWITCH HOUSE	TBD
TPM TERRAPIN MTN RADIO	96
TPM TISHOMINGO 46 KV SWITCH HOUSE	TBD
TPM TUPELO 161 KV SWITCH HOUSE	2,000
TPM TUPELO COMM	TBD
TPM TURNER IND PARK 46 KV SWITCH HOUSE	TBD
TPM UNION 500 KV SWITCH HOUSE	4,816
TPM UNION COMM	TBD
TPM WALKERS STORE 161 KV SWITCH HOUSE	TBD
TPM WALNUT 46 KV SWITCH HOUSE	TBD
TPM WATER VALLEY 161 KV SWITCH HOUSE	280
TPM WATERFORD	TBD
TPM WOLVERING TUBING	TBD
TPM WOODALL MOUNTAIN MICROWAVE	381
TPM WOODSON RIDGE 161 KV SWITCH HOUSE	TBD
TPM YELLOW CREEK NP CONST 161 KV SWITCH HOUSE	TBD
WAH WTH CONTROL BUILDING	9,827
WAH WTH ELECTRICAL EQUIPMENT BUILDING	114
WAH WTH OIL PURIFICATION BUILDING	576
WAH WTH POWERHOUSE	19,854
WBF FUEL HANDLING	6,000
WBF HOPPER BLDG	3,600
WBH CONTROL BLDG	20,370
WBH POWERHOUSE/DAM	68,970
WBN AUXILLARY BUILDING AUX	217,500
WBN CONTROL BUILDING CB	23,000
WBN DIESEL GENERATOR BUILDING DG-1	13,400
WBN DIESEL GENERATOR BUILDING DG-2	700
WBN INTAKE PUMPING STATION-INTAKE	8,200
WBN MAKEUP WATER TREATMENT PLANT MWP	16,000
WBN NEW FIRE HALL	15,000
WBN REACTOR BUILDING REAC	20,000
WBN TURBINE BUILDING TB	112,500
WCF ABANDONED LOOKING WAREHOUSE	3,920

WCF ABANDONED SCALE HOUSE	150
WCF AMMONIA CONTROL ROOM	165
WCF BALL MILL BLDG	3,400
WCF BALL MILL BLDG ADDITION	2,700
WCF BARGE UNLOADER 1	961
WCF BARGE UNLOADER 2	460
WCF BC-1	2,000
WCF BC-10&11	4,400
WCF BC-12&13	13,000
WCF BC-2	6,300
WCF BC-3&4	4,800
WCF BC-5	1,300
WCF BC-L1 & L3	5,000
WCF BC-L2	1,200
WCF BC-L4	1,000
WCF BC-L5 & L6	2,000
WCF BREAKER BLDG	2,173
WCF BRIDGEPORT 69 KV SWITCH HOUSE	TBD
WCF CEMS A-1	200
WCF CENTRAL ELECTRIC CONTROL	13,698
WCF COAL SAMPLE BLDG	310
WCF CONVEYOR CONTROL & CRUSH	1,581
WCF CRANE OPERATOR BLDG	49
WCF ELECTRICAL EQUIPMENT BLDG	1,838
WCF EMISSIONS CONTROL	160
WCF FABIUS MINE #1 26 KV SWITCH HOUSE	TBD
WCF FABIUS MINE #2 26 KV SWITCH HOUSE	TBD
WCF FABIUS MINE #3 46 KV SWITCH HOUSE	TBD
WCF FEH (NEW)	78
WCF FEH 1	85
WCF FEH 11	85
WCF FEH 2	72
WCF FEH 3	85
WCF FEH 4	72
WCF FEH 5	85
WCF FEH 7	85
WCF FEH 8	85
WCF FEH 9	279
WCF FLAT ROCK 46 KV SWITCH HOUSE	TBD
WCF HOPPER BLDG	4,700
WCF INTAKE DUCTS U1	1,600
WCF INTAKE DUCTS U2	1,600
WCF INTAKE DUCTS U3	1,600
WCF INTAKE DUCTS U4	1,600
WCF INTAKE DUCTS U5	1,600
WCF INTAKE DUCTS U6	1,600
WCF INTAKE DUCTS U7	1,600
WCF INTAKE DUCTS U8	1,600
WCF LIVE STORAGE SILO	31,416
WCF MAINTENANCE BLDG U-7	500
WCF MAINTENANCE BLDG UNIT 8 SCRUBBER	1,320

WCF MEAD 161 KV SWITCH HOUSE	TBD
WCF OXYGEN BLOWER BLDG	2,200
WCF PLANT A POWERHOUSE	949,877
WCF PLANT B POWERHOUSE	804,096
WCF PRECIPITATOR CONTROL BLDG 1	1,280
WCF PRECIPITATOR CONTROL BLDG 2	1,280
WCF PUMP HOUSE	102
WCF SAMPLE PREP BLDG 2	627
WCF SCALE HOUSE 2	104
WCF SCRUBBER EQUIP BLDG U-8	1,700
WCF SECURITY PORTAL B	300
WCF SHAW INDUSTRIES 69 KV SWITCH HOUSE	TBD
WCF SMOKE STACK	5,542
WCF SMOKE STACK PLANT A	5,542
WCF SMOKE STACK UNIT 7	5,542
WCF SMOKE STACK UNIT 8	5,542
WCF STEVENSON 69 KV SWITCH HOUSE	TBD
WCF SWITCHYARD CONTROL BLDG	13,698
WCF TRANSFER STATION 13	1,028
WCF TRANSFER STATION B	1,300
WCF TRANSFER STATION LA	990
WCF TRANSFER STATION LB	670
WCF TRANSFER STATION LC	765
WCF UNIT 7 SCRUBBER MAINT	1,198
WCF UNIT 7 SCRUBBER MAINTENANCE	1,198
WCF VALLEY HEAD 46 KV SWITCH HOUSE	TBD
WCF WATER TREATMENT PLANT	15,520
WCF WELL CONTROL BLDG	96
WCF WIDOWS CREEK FOSSIL PLANT 500 KV	TBD
WEH OIL PURIFICATION BUILDING	680
WEH POWERHOUSE/DAM	200,200
WEH SWITCHYARD FIRE EQUIPMENT BUILDING	130
WIH POWERHOUSE/DAM	10,040
WLH CHEMICAL PLANT PS 46 KV SWITCH HOUSE	TBD
WLH FLORENCE 46 KV SWITCH HOUSE	TBD
WLH FORD MOTOR CO.	TBD
WLH IND PARK 46 KV SWITCH HOUSE	TBD
WLH LEIGHTON 46 KV SWITCH HOUSE	TBD
WLH LEXINGTON RADIO	TBD
WLH LOCK	TBD
WLH OCCIDENTAL CHEMICAL CORP. 161 KV SWITCH H	TBD
WLH PLANT 161 KV SWITCH HOUSE	TBD
WLH PWR SERVICE BLDG 46 KV SWITCH HOUSE	TBD
WLH PWR SERVICE SHOP #4 46 KV SWITCH HOUSE	TBD
WLH REYNOLDS RIVER ROAD 46 KV SWITCH HOUSE	TBD
WLH STATE LINE MICROWAVE	640
WLH STATE STREET 46 KV SWITCH HOUSE	TBD
WLH TUSCUMBIA MICROWAVE	64
WLH WASHINGTON AVE 46 KV SWITCH HOUSE	TBD
WPM ABERDEEN	275
WPM ABERDEEN 161 KV SWITCH HOUSE	287
WPM ABERDEEN DISTRICT 46 KV SWITCH HOUSE	TBD
WPM ADATON 161 KV SWITCH HOUSE	TBD

WPM ARTESIA 46 KV SWITCH HOUSE	TBD
WPM BENT TREE 46 KV SWITCH HOUSE	TBD
WPM BOLIVAR	400
WPM BONICORD	225
WPM BORAL BRICKS	TBD
WPM BROOKSVILLE 161 KV SWITCH HOUSE	TBD
WPM BRYAN FOODS 46 KV SWITCH HOUSE	TBD
WPM CALEDONIA 46 KV SWITCH HOUSE	TBD
WPM CALHOUN CITY 161 KV SWITCH HOUSE	1,008
WPM CARBONIC 161 KV SWITCH HOUSE	TBD
WPM CHESTERFIELD 161 KV SWITCH HOUSE	3,109
WPM CLARKSBURG 161 KV SWITCH HOUSE	80
WPM COLUMBUS 161 KV SWITCH HOUSE	3,090
WPM COLUMBUS AIR FORCE BASE 46 KV SWITCH HOUS	80
WPM COLUMBUS DISTRICT 46 KV SWITCH HOUSE	1,018
WPM COLUMBUS MODIFIED FLUFF 161 KV SWITCH HOU	TBD
WPM COUNCE 161 KV SWITCH HOUSE	1,800
WPM COVINGTON 161 KV SWITCH HOUSE	3,304
WPM DEKALB 161 KV SWITCH HOUSE	735
WPM EAST COLUMBUS 161 KV SWITCH HOUSE	TBD
WPM EGYPT PS 161 KV SWITCH HOUSE	TBD
WPM EKA NOBEL, INC 161 KV SWITCH HOUSE	TBD
WPM EUPORA 161 KV SWITCH HOUSE	TBD
WPM GATTMAN 161 KV SWITCH HOUSE	TBD
WPM HACKNEY, INC	TBD
WPM HANDLE 161 KV SWITCH HOUSE	TBD
WPM HICKORY VALLEY 161KV SWITCH HOUSE	3,360
WPM HINZE RADIO/MICROWAVE	112
WPM HOOKER 46 KV SWITCH HOUSE	TBD
WPM HOUSE 46 KV SWITCH HOUSE	TBD
WPM HOUSTON 161 KV SWITCH HOUSE	TBD
WPM KERR-MCGEE INC. 161 KV SWITCH HOUSE	143
WPM LAKESIDE 161 KV SWITCH HOUSE	TBD
WPM LANGFORD 46 KV SWITCH HOUSE	TBD
WPM LEAKE 161 KV SWITCH HOUSE	740
WPM LENA RADIO/MICROWAVE	80
WPM LONGINO DELIVERY POINT 46 KV SWITCH HOUSE	TBD
WPM LOUISVILLE 161 KV SWITCH HOUSE	576
WPM LOWNDES 500 KV SWITCH HOUSE	5,720
WPM LUDLOW 46 KV SWITCH HOUSE	96
WPM MABEN 46 KV SWITCH HOUSE	TBD
WPM MAGBEE 161 KV SWITCH HOUSE	TBD
WPM MIDWAY 161 KV SWITCH HOUSE	3,368
WPM MISS STATE UNIVERSITY 46 KV SWITCH HOUSE	TBD
WPM MONROE COUNTY 46 KV SWITCH HOUSE	TBD
WPM NEW HAMILTON 46 KV SWITCH HOUSE	TBD
WPM NEW HOPE 161 KV SWITCH HOUSE	TBD
WPM NORTHWEST COLUMBUS 46 KV SWITCH HOUSE	TBD
WPM OLIVE BRANCH 161 KV SWITCH HOUSE	480
WPM PEARL RIVER 46 KV SWITCH HOUSE	TBD
WPM PHILADELPHIA	1,834
WPM PRAIRIE 46 KV SWITCH HOUSE	TBD
WPM SAND HILL MICROWAVE	TBD

WPM SANDERSON PLUMBING PRODUCTS	TBD
WPM SCOTT 115 KV SWITCH HOUSE	294
WPM SHELL OIL CO 161 KV SWITCH HOUSE	TBD
WPM SHUQUALAK LUMBER CO	TBD
WPM SMITHVILLE 161 KV SWITCH HOUSE	TBD
WPM SOUTH MACON 161 KV SWITCH HOUSE	80
WPM SOUTH WEST POINT 46 KV SWITCH HOUSE	TBD
WPM SOUTHEAST COLUMBUS 69 KV SWITCH HOUSE	TBD
WPM SOUTHWEST STARKVILLE 46 KV SWITCH HOUSE	TBD
WPM SOUTHWIRE STARKVILLE	TBD
WPM STARKVILLE (NEW) 161 KV SWITCH HOUSE	320
WPM STARKVILLE (OLD) 161 KV SWITCH HOUSE	1,578
WPM STARKVILLE DISTRICT 46 KV SWITCH HOUSE	TBD
WPM STURGIS 161 KV SWITCH HOUSE	540
WPM TMA FOREST PRODUCTS	TBD
WPM U. S. ELECTRICAL MOTORS	TBD
WPM UNITED CEMENT CO. 161 KV SWITCH HOUSE	TBD
WPM UNITED TECHNOLOGIES MOTOR SY	TBD
WPM VAN VLEET RADIO/MICROWAVE	375
WPM VISTA CHEMICAL CO.	TBD
WPM WEST POINT 500 KV PUMP HOUSE	169
WPM WEST POINT 500 KV SWITCH HOUSE	4,345
WPM WEST POINT DISTRICT 46 KV SWITCH HOUSE	TBD
WPM WEST POINT PSC RADIO	TBD
WPM WEYERHAEUSER CO. 161 KV SWITCH HOUSE	80
WPM WEYERHAUSER 161 KV SWITCH HOUSE	80

Attachment 6

Guidance for Preparing the Federal Agency Energy Management Implementation Plan for FY 2004

The Implementation Plan should be formatted as described below. The format generally follows the outline for the Annual Report. Although the Implementation Plan will be submitted as an attachment to the Annual Report, the Plan should be considered a stand-alone document. Therefore, please do not refer to the Annual Report for Section I, Part A, or for any other part of the Plan that you feel may be redundant with the Annual Report. This Plan should be brief and should describe only activities planned for the next fiscal year.

I. Management and Administration. This section will describe (1) the agency's establishment of an energy management infrastructure and (2) the agency's plans to use management tools in implementing Executive Order 13123.

The TVA Energy Policy (Policy) was approved by the TVA Board on April 19, 1995. The Policy describes TVA's commitment to achieving leadership in efficient and environmentally sound energy management. The Policy also facilitates TVA's compliance with legal and regulatory energy use reduction policies and associated environmental goals and procedures. TVA's Energy Plan (Attachment 8) was written to implement the Policy. TVA develops, evaluates, and updates performance goals and measures in strategic plans such as the Energy Plan.

TVA formed the Agency Energy Management Committee (AEMC) to facilitate compliance with Federal statutes, Executive Orders, Federal regulations, TVA energy and related environmental management objectives, and obligations under the Environmental Protection Agency (EPA) Green Lights Program (GL), EPA Energy Star Buildings Program (ESB), and Energy Star Program (ES). The AEMC is comprised of representatives from each TVA organization responsible for energy management and associated environmental considerations in facility and general operations inside the agency. The AEMC will continue to provide an avenue for sharing lessons learned and replicating success. The AEMC will continue to meet every other month during FY 2004.

TVA will continue to evaluate energy efficiency in its facilities through assessments and surveys carried out through each responsible organization and under the strategy of the Energy Plan. TVA has developed an evaluation sheet to record energy conservation measures. These measures are then loaded into the agency energy management database for automated retrieval and analysis. During FY 2004 TVA plans to evaluate facilities, when necessary, in accordance with Executive Order 13123.

A. Energy Management Infrastructure

1. **Senior Agency Official.** Identify the agency's senior energy official and describe the official's role and responsibilities.

   LeAnne Stribley is the designated senior energy official and Executive Vice President of Administration.

   Stephen L. Brothers manages the TVA Internal Energy Management Program (IEMP) and is the senior manager of Energy Legislation and Management located within Facilities Management under Administration.

   David R. Zimmerman is the manager of Sustainable Design located within Energy Legislation and Management.

2. **Agency Energy Team.** Identify the members of the team and describe the team's responsibilities.

   TVA formed the AEMC to facilitate compliance with federal statutes, Executive Orders, federal regulations, TVA energy and related environmental management objectives, and obligations under the EPA's GL program, EPA's ESB program and EPA's ES program. The AEMC serves as the agency energy team. This committee is comprised of representatives from each TVA organization responsible for energy management and associated environmental considerations in facility and general operations inside the agency. The AEMC provides an avenue for sharing lessons learned and replicating success. The members are:

   - **Stephen L. Brothers, chairperson for the AEMC;**
   - **William H. Lehman, Fleet Management;**
   - **David R. Zimmerman, Sustainable Design;**
   - **David W. Stewart, Fossil;**
   - **Aaron B. Nix, Facilities Management Environmental;**
   - **William R. McNabb, Facilities Management O&M;**
   - **Jay T. Grafton, Nuclear;**
   - **Terry L. Rutledge, Nuclear alternate;**
   - **Teresa S. Wampler, River System Operations and Environment;**
   - **David R. Dinse, Public Power Institute;**
   - **Tommy K. McEntyre, River Operations;**
   - **Bryan H. Jones, Information Services;**
   - **Carolyn B. Marvel, Fossil alternate;**
   - **David A. Gordon, Heavy Equipment;**
   - **Judy G. Driggans, Chief Financial Officer representative;**
   - **Bryan D. Singleton, Chief Financial Officer alternate;**
   - **Barry M. Gore, Transmission and Power Supply;**
   - **V. Edward Hudson, Demand Side Management Program;**
   - **David R. Chamberlain, Customer Service and Marketing;**
   - **Tina I. Broyles, Transmission and Power Supply alternate;**
   - **Mary H. Moore, General Counsel; and**
   - **Sherri R. Collins, General Counsel.**

B. Management Tools

1. **Awards (Employee Incentive Programs).** Describe the agency's plans to use employee incentive programs to reward exceptional performance in implementing Executive Order 13123.

   TVA utilizes pay for performance as one method to reward employees' efforts toward meeting agency goals. One of the benefits to TVA's agency goals is savings attributed to the implementation of cost effective energy and related environmental projects. An example of one pay for performance goal is reduction in cost per square foot for building operation which includes energy consumption.

2. **Performance Evaluations.** Describe agency plans to include successful implementation of provisions of Executive Order 13123 in the position descriptions and performance evaluations of members of the agency energy team and facility/energy mangers.

   To the extent employees are responsible for activities that are related to the objectives of Executive Order 13123, their job descriptions contain reflective line items and their performance is evaluated in terms of the extent to which they accomplish such goals.

3. **Training and Education.** Describe plans to ensure that all appropriate personnel receive training for energy management requirements. Describe plans to develop and implement agency outreach programs that include education, training, and promotion of ENERGY STAR[7] and other energy efficient products for Federal purchase card users.

   The AEMC continues to work on ways to inform TVA employees of how their daily activities influence energy and associated environmental impacts in TVA. The AEMC had its annual employee awareness display on tour during October. In conjunction with the tour, an energy-related article was published in TVA's newspaper, "Inside TVA."

   TVA trains employees to accomplish objectives of the IEMP. Updates are provided on current federal requirements and regulations to employees, managers, and TVA customers when requested. Energy management and associated environmental training is provided to managers and employees as needed. Employee awareness activities are used to educate employees on how they impact energy and the environment through their daily activities at work and home. TVA also educates staff in both energy and environmental related topics through the TVA University.

4. **Showcase Facilities.** Describe plans to construct or renovate exemplary facilities that the agency plans to designate as Showcase Facilities. Discuss why the facilities will be considered Showcase Facilities (i.e., discuss the facility design, the improvements made in energy or water efficiency, the use of renewable energy, etc.).

   The TVA Chattanooga Office Complex (COC) continues to be TVA's designated showcase facility. The COC was completed in 1986 and encloses approximately 1.2 million square feet of floor area. It integrates the use of passive energy strategies, energy management practices, and environmental programs and activities. Occupants' daily activities have been recognized as a major component in facility performance. Energy and environmental awareness programs have been established to inform the occupants of the impacts their actions have on this performance. The combinations of original design elements, energy and environmental activities, and aggressive energy reduction operation and maintenance efforts have resulted in the COC becoming a model facility. TVA plans to continue with the COC as its designated showcase facility for FY 2004.

II. Implementation Strategies. The purpose of this section is to describe plans to use strategies to reduce energy consumption and improve energy efficiency. It is not expected that each agency will employ every strategy; rather, each strategy identified in Executive Order 13123 is listed as a subsection to remind agency officials of the existence of these strategies and to encourage their use where practical and life-cycle cost effective. If certain strategies will not be used, please explain why not.

TVA has implemented numerous energy management measures through its operation and maintenance activities and building retrofits. Through operations, maintenance and renovation, controls are placed on lighting and other energy consuming equipment, and inefficient lighting is replaced when these actions are determined to be life-cycle cost effective. TVA has also installed energy management control systems (EMCSs) in the majority of its corporate facility space and considers the use of EMCSs for all facilities when their use is life-cycle cost effective. Energy management measures will continue to be implemented through operations and maintenance activities and through the capital budget process during FY 2004.

As part of its operations and maintenance function, TVA has an emergency curtailment procedure which facilitates the reduction of energy use in its buildings during energy emergencies.

A. Life-Cycle Cost Analysis. Outline plans to institute procedures to ensure the use of life-cycle cost analysis in making investment decisions about in products, services, construction, and other projects to lower the Federal Government's costs and to reduce energy and water consumption. Report on plans to implement the 10-Year Simple Payback Rule. (Under EPACT, energy conservation projects that will pay back investment costs within 10 years must be undertaken).

TVA's Energy Plan provides that life-cycle analysis will be used in making investment decisions regarding energy conservation measures.

B. Facility Energy Audits. Describe the number/percentage of agency facilities that will be audited for energy and water efficiency during the next fiscal year. (Approximately 10% of facilities should be audited each year). Describe the prioritization criteria for audits (e.g., oldest facilities, most energy intensive facilities, etc.).

TVA has evaluated its building inventory for potential energy conservation measures. These facilities will be re-evaluated in accordance with the Executive Order 13123 and TVA's Memorandum of Understanding with the EPA. Ongoing energy surveys and building assessments are planned for FY 2004.

C. Financing Mechanisms. Provide narrative information related to the planned use of Energy-Savings Performance Contracts (ESPCs) and Utility Energy Services Contracts (UESCs).

Funding procedures for energy management and related environmental projects are reviewed through the IEMP and the AEMC. Recommendations and comments are submitted to the proper organizations. Projects for facilities are primarily funded through renovation, operation, maintenance, and modernization efforts. Projects covered under general operations are ranked for economic benefit compared to other TVA projects to determine funding availability and implementation status and are funded mainly through the capital budgeting process.

D. ENERGY STAR[7] and Other Energy-Efficient Products. Describe steps to be taken to promote the purchase of ENERGY STAR[7] products and/or products that are in the upper 25 percent of energy efficiency as designated by FEMP. Note whether energy efficient criteria will be incorporated into all guide specifications and product specifications developed for new construction and renovation. Also note whether such criteria will be incorporated into product specification language. (See the ENERGY STAR[7] products and Agreen@ products web sites by GSA [www.fss.gsa.gov/environ], DOE [www.eren.doe.gov/femp/procurement/begin.html], and EPA [www.epa.gov/uiseerko/index.html])

TVA's Energy Plan provides that TVA will strive, when cost-effective, to meet the Energy Star Building criteria for energy performance and indoor environmental quality in its eligible facilities to the maximum extent practicable, as described by section 403(c) of Executive Order 13123. This necessarily includes purchasing Energy Star and other energy efficient products whenever feasible. TVA continues its efforts to buy materials that have positive environmental qualities.

E. ENERGY STAR[7] Buildings. Report the number and percentage of buildings that, in the next fiscal year, are expected to meet the ENERGY STAR[7] Building criteria and to be officially designated ENERGY STAR[7] Buildings. (Buildings must rank in the top 25 percent in energy efficiency relative to comparable commercial and Federal buildings to be eligible for the ENERGY STAR[7] Buildings designation. See www.epa.gov/buildings/label).

TVA will continue to evaluate its buildings for compliance with Energy Star Building criteria. During FY 2004, TVA has plans to evaluate multiple facilities for energy efficiency and, where applicable, compliance with Energy Star Building criteria.

F. Sustainable Building Design. Report whether sustainable building design principles will be incorporated into the siting, design, and construction of new facilities. (See www.wbdg.org for a description of sustainable building design principles).

TVA is building on past sustainable efforts by incorporating sustainable design criteria into renovation and new construction efforts. A "Sustainable Check List" and "Sustainable Design Guideline" have been drafted. All of these efforts are being incorporated into an agency sustainable program under TVA's IEMP. The guideline as part of an overall TVA energy process is expected to be completed during late FY 2004.

G. Energy Efficiency in Lease Provisions. Describe how energy and water efficiency will be considered when agencies enter into new leases or renegotiate/extend existing leases (e.g., preference for buildings with sustainable design and development, preference for certified ENERGY STAR[7] Buildings, etc.)

Where applicable, TVA will use model lease provisions based on those recommended by the GSA, and such provisions will be incorporated into new and renewed leases provided they are cost-effective. The model lease provisions address energy and water efficiency.

H. Industrial Facility Efficiency Improvements. Highlight planned activities to explore efficiency opportunities in energy-intensive facilities. This may include activity in the following areas: steam systems, boiler operation, air compressor systems, industrial processes, fuel switching, cogeneration, and other efficiency and renewable energy technologies.

TVA will continue its current activities to investigate areas for improvement in industrial facility efficiency during FY 2004.

I. Highly Efficient Systems. Describe plans for new construction and/or retrofit projects for which combined cooling, heating, and power systems will be installed. Report whether local natural resources will be surveyed to optimize use of available biomass, geothermal, or other naturally occurring energy sources.

TVA will continue to investigate ways to improve system efficiency and will look for options which include biomass through FY 2004.

J. Off-Grid Generation. Describe plans for installing new solar hot water, solar electric, solar outdoor lighting, small wind turbines, fuel cells, and other off-grid alternatives.

TVA is a utility; hence, it generally does not engage in off-grid generation. However, TVA does consider such facilities when life-cycle cost effective.

K. Renewable Energy Purchases. Describe agency plans to encourage the purchase of electricity and thermal energy generated from renewable sources.

TVA purchases renewable energy from the TVA GPS program for use in its Knoxville Office Complex, Chattanooga Office Complex and Huntsville office. TVA will continue these efforts through FY 2004.

L. Electrical Load Reduction Measures. Describe agency plans for implementing electrical load reduction measures to be taken during power emergencies to cut electricity consumption in buildings and facilities. (See www.eren.doe.gov/femp/resources/presidential_direct.html for information on electrical load reduction measures.)

As part of its operation and maintenance function, TVA has an emergency curtailment procedure which facilitates the reduction of energy use in its buildings during energy emergencies.

M. Water Conservation. Highlight activities to be undertaken to improve water efficiency. Discuss plans to develop and implement Water Management Plans and Best Management Practices for efficient use of water (Note: See the guidance document entitled *Water Efficiency Improvement Goal for Federal Agencies* on FEMP's Web site [www.eren.doe.gov/femp/resources/guidances.html]).

TVA will continue to implement best management practices in FY 2004 when life-cycle cost effective. Some of the buildings not yet surveyed for the application of best management practices will be evaluated in FY 2004.

Attachment 7

REPORTING UNITS AND CONVERSION FACTORS FOR FEDERAL ENERGY MANAGEMENT REPORTING

Standard Buildings/Facilities
Industrial, Laboratory, and Other Energy-Intensive Facilities
Exempt Facilities

Fuel Type	*Reporting Units*	*BTUs per Reporting Unit*	*Joules per Reporting Unit*	*GigaJoules (GJ) per Reporting Unit*
Electricity	Megawatt Hour (MWH)	3,412,000	3,599,660,000	3.59966
Fuel Oil	1,000 Gallons	138,700,000	146,328,500,000	146.3285
Natural Gas	1,000 Cubic Feet	1,031,000	1,087,705,000	1.087705
LPG/Propane	1,000 Gallons	95,500,000	100,752,500,000	100.7525
Coal	Short Ton	24,580,000	25,931,900,000	25.9319
Purchased Steam	Billion Btu (BBtu)	1,000,000,000	1,055,000,000,000	1,055.0
Other	Billion Btu (BBtu)	1,000,000,000	1,055,000,000,000	1,055.0

Vehicles/Equipment

Fuel Type	*Reporting Units*	*BTUs per Reporting Unit*	*Joules per Reporting Unit*	*GigaJoules (GJ) per Reporting Unit*
Auto Gas	1,000 Gallons	125,000,000	131,875,000,000	131.875
Diesel	1,000 Gallons	138,700,000	146,328,500,000	146.3285
LPG/Propane	1,000 Gallons	95,500,000	100,752,500,000	100.7525
Aviation Gas	1,000 Gallons	125,000,000	131,875,000,000	131.875
Jet Fuel	1,000 Gallons	130,000,000	137,150,000,000	137.150
Navy Special	1,000 Gallons	138,700,000	146,328,500,000	146.3285
Other	Billion Btu (BBtu)	1,000,000,000	1,055,000,000,000	1,055.0

Other Conversion Factors

100 Cubic Feet (Ccf) = 748 Gallons
1 Acre-Foot = 325,851 Gallons
1 Liter = 0.264 Gallons
1 Cubic Meter = 264 Gallons

Attachment 8

12/23/03

TVA ENERGY POLICY

TVA is committed to being a leader in the efficient and environmentally sound use of energy. Through the adoption of an energy plan TVA facilitates compliance with legally and regulatorily required energy reduction goals and procedures. Delegation of authority is given to the Chief Operating Officer or that official's designee to develop a plan to achieve the objectives of this Policy and subsequently to modify the Plan when necessary.

COVER PAGE FOR THE TVA AGENCY ENERGY PLAN

This Plan is coordinated through TVA's Internal Energy Management Program (IEMP).

Contact:

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REVISIONS, DATES and REASON:

Revision 1, May 27, 1997. Revisions were made to incorporate new regulations, the joining of the Energy Star Building Program and the Motor Challenge, and to facilitate the move of the IEMP from Customer Group under the COO to Facilities Services under the CAO.

Revision 2, September 10, 1998. Revisions were made to incorporate changes in organizational names and changes to regulations.

Revision 3, December 15, 1999. Revisions were made to incorporate changes in regulations.

Revision 4, October 23, 2000. Revisions were made to incorporate changes in regulations including Executive Order 13123 and Executive Order 13149.

Revision 5, December 26, 2001. Revisions were made to incorporate changes in organizational names and changes to regulations.

Revision 6, December 20, 2002. Revisions were made to incorporate changes in organizational names and changes to regulations including Executive Order 13221.

Revision 7, December 23, 2003. Revisions were made to incorporate changes in organizational names and updates to the Plan.

TABLE OF CONTENTS

TVA AGENCY ENERGY PLAN (revised 12/03)

ENERGY PLAN

I. Introduction/Background

The following plan (hereafter "the Plan") has been established to meet Federal statutory and regulatory requirements and the requirements of TVA's Green Lights agreement with the Environmental Protection Agency (hereafter "the EPA"), the Energy Star Building Program, the DOE Motor Challenge, and to comply with the annual implementation plan requirements of section 302 of Executive Order (E.O.) 13123, 13221 and 13149. Our intention is to make TVA a Federal agency role model and leader in the wise management and use of energy. This Plan will be implemented by Chief Officers and Vice presidents (heads of TVA major groups). The TVA Senior Energy Official, through the IEMP, will coordinate the implementation of the Plan. This Plan promotes, recommends, and outlines the wise use of energy in TVA's operations and in energy intensive equipment purchased for use inside the Agency. The Plan covers all organizations which are responsible for use of energy or purchase of energy consuming equipment. The Plan and supporting organizational energy management plans are intended to meet or exceed the energy reduction goals required under Federal law, regulations, executive orders, and the voluntary goals TVA has established as a participant in EPA's Green Lights, Energy Star Buildings, Energy Star and DOE's Motor and Compressor Challenge Programs.

II. Organization

A. Implementation of Plan and Dissemination of Information

The Agency Energy Management Committee (AEMC), under the sponsorship of the TVA Senior Energy Official, will be responsible for implementing this Plan and the clearing house for information regarding energy responsibility to the various TVA Groups. The AEMC shall be the team described in section 305 of E.O. 13123.

B. Organizational Plans

Each Group shall establish its own plan, when appropriate, to meet or exceed the goals and objectives described under the Plan. These plans shall be updated and maintained to show how each organization intends to accomplish its goals and objectives. Plans and updates will be submitted to the IEMP through organization's representatives on the AEMC at least annually, or when revisions are made, for reporting to DOE. Reports will be made to the EPA and other federal agencies as requested or required.

III. Major Plan Components

A. Strategy

TVA has established the following goals and schedule to comply with Federal laws, memorandums of understanding (MOU), regulations, and executive orders to make TVA a more energy efficient and environmentally friendly agency:

A. Strategy (continued)

1. Goals and Schedule

a) Through life-cycle cost-effective energy measures, reduce its greenhouse gas emissions attributed to subject facility energy use by thirty percent by FY 2010, as discussed in section 201 of Executive Order 13123.

b) Reduce overall energy consumption in TVA owned and leased buildings subject to the National Energy Conservation Policy Act, as amended and implementing Executive Orders and regulations from FY 1985 to FY 2005 by 30 percent (BTU/SQ FT/YR), and thirty-five percent by the year FY 2010 to the extent to which this reduction by FY 2005 and FY 2010 is cost effective. Implement all cost-effective energy and water Energy Conservation Opportunities (ECOs) with a less than 10-year payback by the year FY 2005 for all subject TVA-owned buildings. A building is defined as: "any enclosed structure that consumes energy and is not on wheels."

c) Reduce energy consumption of subject industrial and laboratory facilities by at least twenty percent by the year FY 2005 and 25 percent by FY 2010, as compared with FY 1990, to the extent that those measures are cost-effective, as noted by E.O. 13123 section 203.

d) Design all new TVA buildings (those designed after July 31, 1989) to be energy efficient, sustainable, and in compliance with 10 C.F.R. Part 435. Have new buildings designs meet Energy Star standards where practicable and life cycle cost effective. Have acquired buildings comply with 10 C.F.R. 435/434, if cost effective.

e) Conduct lighting surveys on all TVA buildings and reduce lighting energy use at least fifty percent without compromising lighting quality as part of the EPA Green Lights Program. Implement appropriate lighting upgrades, with a 10-year payback or less, covering one-hundred percent of TVA's surveyed gross square footage by FY 2005. This will not apply to those parts of TVA buildings which are exempt from the TVA/Green Lights agreement pursuant to Addendum 1 Section 1.B of the agreement.

f) Strive to extend the use of renewable energy within its subject facilities and in its activities by implementing renewable energy projects and by obtaining electricity from renewable sources, as described in E.O. 13123 section 204. Utilize TVA renewable and green programs to achieve E.O. requirements.

g) Through life-cycle cost-effective measures, reduce energy consumption and associated environmental impacts within its subject facilities, as described in E.O.13123 section 205.

h) Strive to reduce total energy use and associated greenhouse gas and other air emissions, as measured at the source, as described in E.O. 13123 section 206.

A. Strategy (continued)

1. Goals and Schedule

   i) Implement best management practices to reduce water consumption and associated energy use in subject facilities to reach goals to be established under E.O. 13123 section 503 (f), to the extent that these measures are cost-effective, as described in E.O. 13123 section 207.

   j) Annually report progress in meeting the goals and requirements of E.O. 13123 to the President, as described in section 303 of the E.O.

   k) Applicable to those facilities which are covered by the National Energy Conservation Policy Act, as amended and E.O. 13123, enter and participate in a Federal Energy Star Program Partnership Memorandum of Understanding (MOU) as an attachment to the current Federal Energy Star Buildings Program and Green Lights MOU with the Department of Energy and Environmental Protection Agency. Under the Federal Energy Star Buildings Program Partnership MOU, TVA will generally agree aggressively to pursue all life-cycle cost-effective energy efficient building systems upgrades in its existing facilities and will generally agree to design all new facilities in compliance with applicable codes and regulations, particularly 10 C.F.R. Part 435/434, subpart A or its successor.

   l) Participate in the DOE Motor and Compressor Challenge programs under which TVA will participate in a coordinated effort to encourage increased market penetration of more efficient electric motor and compressor systems. This will include TVA receiving reliable product and system information from DOE, customers and other Federal Agencies, helping develop new information based on communication with other organizations and experience in TVA facilities, and may entail TVA being recognized for developing more efficient and effective motor and compressor systems.

   m) Obtain, where applicable, alternative fuel vehicles (AFVs) and or hybrid vehicles as provided by the Energy Policy Act of 1992 (EPAct 92) and, to the extent to which it applies, E.O. 13149.

   n) Continue to conduct energy and water audits for its subject facilities each year, either independently or through Energy Savings Performance Contracts or utility energy-efficiency service contracts, as described in section 402 of E.O. 13123.

   o) When entering and/or renewing leases, as provided by section 403 (e) of E.O. 13123, to the extent wherever life-cycle cost-effective and legally permitted, TVA will seek to incorporate provisions in each lease that promote sustainability and minimize the cost of energy and water. Consideration shall be given to providing cost-effective preferences to buildings carrying the Energy Star Building label.

A. Strategy (continued)

p) Designate exemplary new and existing facilities with significant public access and exposure as showcase facilities to highlight energy or water efficiency and renewable energy improvements, as described in section 406 (e) of the E O.

1. Goals and Schedule

q) In accordance with section 304 of E.O. 13123, designate a senior official to be responsible for achieving the goals of this policy. Such official shall be appointed to the Interagency Energy Policy Committee (656 Committee/Senior Officials).

r) Strive, where cost-effective, to meet the Energy Star criteria for energy performance and indoor environmental quality in its eligible facilities to the maximum extent practicable by the end of FY 2002, as described by E.O. 13123 section 403 (c).

s) Re-survey appropriate buildings every five years.

t) Explore efficiency opportunities in its subject industrial facilities for steam systems, boiler operation, air compressor systems, industrial processes, and fuel switching, including cogeneration and other efficiency and renewable energy technologies, as described in E.O. 13123 section 403 (f).

u) Implement district energy systems, and other highly efficient systems, in new construction or retrofit projects when life-cycle cost-effective, as described in section 403 (g) of E.O. 13123.

v) Strive to improve the design, construction, and operation of its mobile equipment and implement all life-cycle cost-effective energy efficiency measures that result in cost savings while improving mission performance, as discussed in section 405 of E.O. 13123.

w) Strive to use management strategies, such as employee incentive programs, as described in section 406 of E.O. 13123, to achieve the objectives of the E.O.

x) In accordance with E.O. 13221 purchase standby power equipment which meets the standards of the E.O. where life cycle cost effective and when practical.

2. Building Design and Renovation

a) Sustainable Building Design. Apply sustainable design principles developed by DOD and GSA pursuant to section 403 (d) of E.O. 13123 to the siting, design, and construction of its subject new facilities. Apply these and other cost effective principals through the TVA Sustainable Design Program.

A. Strategy (continued)

b) New Building Design. All design firms doing building design work on TVA buildings must certify compliance at the contract execution. This statement shows that the firm will adhere as required to 10 C.F.R. 434/435 and any other energy regulation applicable to the particular building type under design. At the conclusion of the design, the responsible design organization will complete, sign, and submit a 10 C.F.R. Part 435 Compliance Form to the IEMP.

2. Building Design and Renovation

c) Existing Building Renovation. Energy and water surveys will be conducted to discover potential energy conservation opportunities (ECOs) and best management practices (BMPs) for water. The life-cycle cost-effective recommendations from these surveys will be implemented in existing buildings. Also, buildings will be evaluated for cost effective sustainable options.

B. Implementation

ECOs, BMPs, and sustainable options will be considered for implementation if after completion of the life-cycle cost analysis the project is shown to be cost effective and has a less than 10-year payback.

To ensure effective Policy implementation, reports on progress toward energy reduction goals, BMPs, and sustainable options achieved are required to be submitted to the IEMP by all TVA organizations affected at least annually.

TVA will use all practical means to ensure its programs, projects, and activities protect and enhance the quality of the human and natural environment. At the earliest practicable time, when a proposed project has environmental impacts, the office proposing an action under this plan will initiate environmental review.

C. Identify and Prioritize Projects

Life-Cycle-Cost effective ECOs, BMPs, and sustainable options will be reviewed and ranked for implementation based on their Savings to Investment Ratio (SIR), their Internal Rate of Return (IRR), and their impact on TVA's mission. The projects will be prioritized for implementation based on best return on investment and necessity to support TVA's mission and responsibility to its customers.

D. Funding Strategy

All ECOs, BMPs, and sustainable options analyzed shall be evaluated using the guideline of NIST Handbook 135, Life-Cycle-Costing Manual for the Federal Energy Management Program. Those cost-effective ECOs, BMPs and sustainable options having a 10-year or less payback and a savings to investment ratio greater than one will be budgeted for and implemented contingent on their support to TVA's mission and responsibility to its customers. For ECOs on TVA buildings not covered under EPAct 92, but considered under Green Lights, cost effectiveness shall be based on current TVA financial standards and business practices.

D. Funding Strategy (continued)

The following funding options will be considered when implementing ECOs, BMPs, and sustainable options:

1. Direct funding from TVA operating capital,

2. Utility sponsored demand side management programs,

3. Energy Savings Performance Contracts and Shared Savings Agreements, and

4. Federal Energy Efficiency Fund.

E. Other Activities

TVA will consider implementation of all cost-effective operation and maintenance energy management projects in its day-to-day energy management activities. Water flow restriction devices and other activities which would conserve and preserve our water resources will be considered for implementation. TVA will demonstrate and implement energy efficient electrical equipment in its internal operations where appropriate and will promote their use to its customers. TVA will implement an energy awareness campaign annually to obtain employee assistance in reducing energy use. TVA will also continue its sustainable design efforts through the direction of the Sustainable Design Program.

IV. Tracking and Reporting

A. Implementation Procedures

If an ECO has a less than five-year payback and meets TVA's IRR, as defined by TVA's CFO, this ECO will be considered for implementation during the next budget cycle. Water conservation objectives and sustainable options will be considered for implementation when, after life-cycle-cost analysis, their payback is less than ten years.

B. Progress Toward Meeting Objectives

All TVA organizations which have responsibility for energy and water consumption in buildings or operations will report this usage to the IEMP.

1. Quarterly Reporting

a) On a quarterly basis, unless otherwise specified, organizations which have identified or implemented ECOs, BMPs, and/or sustainable options will report this information to the IEMP.

2. Annual Reporting

a) On an annual basis, all organizations which have responsibilities over energy and/or water use in operations or buildings will describe energy management or conservation programs, projects, or operations performed during that fiscal year and those projects, programs, and operations planned for the next fiscal year. The date for submission for this information will be no later than 60 calendar days after the end of the fiscal year.

3. Other Reporting

a) Individual organizations may implement reporting requirements within their organizations in order to monitor usage in an effort to enhance performance.

b) Organizations may receive copies of the reports sent to DOE upon request. All other reports generated to assist TVA in its effort to be a leader in energy management and conservation will be available upon request.

C. General

All TVA employees and organizations are encouraged to reduce energy and water waste. New and innovative ideas and techniques for the reduction of energy and water waste and better energy management should be communicated to the IEMP so the information can be shared throughout TVA. In selection of equipment, electrical alternatives shall be chosen whenever cost-effective and whenever possible. TVA buildings will be used to demonstrate the application of innovative energy and water efficient technologies.

V. Special Problems

Organizations having special problems meeting The Plan should submit a description of those problems to the IEMP for review. Any problems needing DOE attention will be communicated annually in TVA's annual report to DOE.

VI. Additional Provisions

A. TVA FLEET EFFICIENCY STRATEGY (see attached)

Background:

This strategy defines TVA’s commitment to vehicle fleet and transportation efficiencies as described in EPAct 92 and Executive Order 13149. The strategy is an internal part of the decision making process for fleet purchases and operations for TVA.

Responsibilities:

Administration: Program administrator and owner of the fleet efficiency strategy; goal setting, etc. Transportation Services will coordinate the implementation of the strategy in TVA through the Agency Energy Management Committee. Committee members representing this program include Fleet Management, Michael Metcalf and Heavy Equipment, David Gordon:

a) LeAnne Stribley is the designated Senior Energy Official and Executive Vice President of Administration.
b) Stephen L. Brothers manages the TVA Internal Energy Management Program (IEMP) and is chairperson for the Agency Energy Management Committee.
c) David R. Zimmerman is the manager of the TVA Sustainable Design Program.

Attachment 9

Tennessee Valley Authority
Compliance Strategy
For E.O. 13149

October 4, 2002
Revised: December 23, 2003

Tennessee Valley Authority Compliance Strategy for E.O. 13149

Executive Summary

TVA's mission includes generating and transmitting electric power to fulfill the needs of almost eight million users throughout TVA's seven-state service territory, and specifically includes the major objective of selling the power at rates as low as feasible. All TVA operations (including but not limited to 29 hydroelectric plants, 15 fossil-fueled plants, three nuclear plants, and 17,000 miles of transmission lines and facilities) are independently funded by power sales and by power revenue bonds (which are not obligations of, nor backed by, the United States); TVA receives no appropriated funds. Consistent with its mission requirements and its independent corporate status, TVA intends to comply with EO 13149 to the extent feasible. TVA has a long history of demonstrating stewardship toward energy reduction and fuel efficiency and will continue to work toward meeting fuel reduction and vehicle efficiency.

TVA's fleet strategy is to examine current vehicle use and where possible when vehicles need replacement, choose those that are more efficient. TVA being a major provider of electricity will continue to make use of alternative fueled vehicles that use electric power and acquire additional vehicles to meet requirements under EPAct92. TVA has also recognized the value of hybrid electric vehicle technology in reducing fuel consumption, increasing versatility, and promoting electric propulsion. TVA has added hybrid vehicles and AFVs to its fleet and will continue to do so. During FY 2003 TVA added eleven hybrid vehicles and twenty-three AFVs.

In FY 2003 TVA reported in its "Federal Agency Annual Report on Energy Management" the following data:

- Annual MPG Sedans – 27.4
- Annual MPG Light Trucks (4x2) – 14.0
- Annual MPG Light Trucks (4x4) – 12.7

I-1. TVA Petroleum Use

Petroleum use for covered vehicles will continue to be reported in FAST however, gasoline and diesel fuel usage for FY 2003 and associated cost is listed below. This data includes fuel used by light duty, medium duty and heavy duty vehicles. The source of this data is the "TVA Energy Management Annual Report for FY 2003"

- Auto Gas – 2,422,600 gallons. Cost: $2,713,300
- Diesel Fuel – 1,204,400 gallons. Cost: $1,397,100

To increase MPG for FY 2004 TVA plans to purchase higher mileage vehicles including additional hybrid vehicles. Fuel saving activities will be reported each year in the TVA Energy Management Annual Report.

I-2. TVA Fleet Characteristics and AFVs

TVA vehicles are spread across its seven-state service area. Due to the nature of TVA operations, such as the facts that TVA power plants and transmission facilities are generally located in rural areas and that much TVA travel originating in urban areas is to distant areas (for example, between Knoxville, TN, and Muscle Shoals, AL), most TVA vehicles are used primarily outside of metropolitan statistical areas as described in EPAct92. Also, significantly for purposes of EPAct92 Alternative Fueled Vehicle requirements, TVA has no central fueling facilities in metropolitan statistical areas. Further, as coordinated with DOE, TVA vehicles used in maintaining the reliable operation of the power system appear to be within the intent of EPAct92 exemptions such as for emergency or off-road vehicles. Based on these facts, EPAct92 does not impose significant AFV purchase requirements on TVA but, TVA nonetheless does intend to continue to add to its current fleet of AFVs. Annual fleet characteristics for vehicles covered under EPAct92 will be reported in FAST.

I-3. TVA Fleet Strategy to Reduce Fuel Use and Increase Efficiency

TVA's fleet strategy is to replace vehicles with those that are more efficient where practical. To facilitate this effort TVA has produced several guides accessible to employees as needed, which graphically compare the fuel use and operating costs of existing TVA fleet vehicles.

TVA will continue to utilize various transportation options related to increasing efficiency including the use of personal vehicles, short term rental cars, short term leases and assigned vehicles. This information will also be made available to employees to determine the best method of transportation based on trip duration and miles driven.

TVA examines current vehicle use and where possible, when vehicles need replacement, chooses those that are more efficient. TVA being a major provider of electricity will continue to make use of alternative fueled vehicles that use electric power and acquire additional vehicles to meet requirements under EPAct92. TVA recognizes the value of hybrid electric vehicle technology in reducing fuel consumption, increasing versatility, and promoting electric propulsion. TVA has added hybrid vehicles to its fleet and will continue to do so.

TVA's Agency Energy Management Committee (AEMC) facilitates compliance with federal statutes, Executive Orders, federal regulations, TVA energy and related environmental management objectives, and obligations under the Environmental Protection Agency's (EPA) Green Lights Program (GL), EPA's Energy Star Buildings Program (ESB) and EPA's Energy Star Program (ESP). The AEMC serves as the agency energy team. This committee is comprised of representatives from each TVA organization responsible for energy management and associated environmental considerations in facility and general operations inside the agency. The AEMC provides an avenue for sharing lessons learned and replicating success, including fuel use and increased vehicle efficiency. This committee meets every other month.

I. Recognition and Awards

As part of its strategy, TVA is considering special recognition or awards for its personnel that exceed the strategy's requirements or exhibit leadership in attaining its objectives. The nature of this recognition is being developed.