SAVANNAH RIVER SITE
FY 2021 SITE SUSTAINABILITY PLAN

December 2020

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Executive Summary

Source: SRNS-RP-2020-00077, Rev 0

Savannah River Site (SRS) is a multi-program site with primary missions overseen by DOE Environmental Management (EM) and the National Nuclear Security Administration (NNSA). The Site borders the Savannah River and is approximately 15 miles south of Aiken, SC and 15 miles southeast of Augusta, GA. Though constructed in the 1950s during the Cold War by the Atomic Energy Commission to produce materials for nuclear weapons, the main activities today involve treating and processing nuclear waste, supplying tritium, environmental cleanup and remediation, supporting the nuclear weapons stockpile, and protecting nuclear material. Primary contractors are Savannah River Nuclear Solutions (SRNS) (M&O contractor that also manages the Savannah River National Laboratory (SRNL)), and Savannah River Remediation (SRR) (Liquid Waste contractor). SRNL supports Site missions and provides complex-wide technology support for DOE, NNSA and other national security programs. Other entities on Site include Centerra (security), Ameresco (biomass operations), University of Georgia, University of South Carolina, Dominion Energy of South Carolina (DESC), and the US Forest Services (USFS). Mission responsibilities include:

- EM – management of nuclear materials, disposition of waste, and environmental cleanup
- NNSA – national defense programs and nuclear nonproliferation
- SRNL – technology development for site missions and national security requirements.

Core missions at SRS are expected to continue for decades, some enduring beyond Fiscal Year 2065 (FY65). The SRS portfolio of land, facilities and other assets is the foundation of the DOE's ability to conduct these missions. SRNS, as the M&O contractor, has responsibility to manage infrastructure systems that stretch over 198,000 acres (310 square miles) and serve the diverse missions. Much of the Site's core missions (including NNSA) is dependent on infrastructure and systems to achieve success. Investment in the infrastructure is essential to continue to provide the services needed to conduct Site missions in a safe, reliable, sustainable, compliant and cost-effective manner. SRS shall prioritize actions that reduce waste, cut costs, enhance the resilience of Federal infrastructure and operations and enable more effective accomplishment of its mission.

Efficient Federal Operations allows for continued improvements on sustainability work that provides for the implementation of energy conservation opportunities, water conservation initiatives, greenhouse gas (GHG) emission reductions, and waste minimization/pollution prevention programs. Through leadership in cost-effective continuing operations, construction activities, and innovative clean-up activities, SRS remains a leader in the reduction of greenhouse gases and energy usage through effective contractor partnerships and collaboration efforts. The Savannah River Site continues as a leader in climate change identification methods. These successes have built on past performance in various areas of sustainability-related endeavors, including the following examples:• Major energy intensity reductions.• Significant water consumption reductions.• Pursuing mandatory use of alternative fuel (E85) in site transportation programs.• Advancing renewable energy through the large-scale use of biomass in steam and electricity generating stations, and developing cutting edge technology for uses of other alternative energy sources.• Establishing highly successful and beneficial waste minimization and pollution prevention programs. Challenges remain for meeting future goals that include early successes, technological issues and funding shortfalls. SRS will carry into 2021 and future years cost effective and tailored approaches that will allow for the greatest positive impacts with the available resources.

SRS continues to invest in equipment upgrades to improve efficiency and reduce energy consumption. The Site Sustainability Program is a multifaceted process for the overall long-term site planning and management vision. Sustainability items are considered early in the process with the management team in planning and scheduling documents, such as the 5-year plan and the annual common reliability maintenance schedule. The status of site sustainability planning and progress is reviewed in the monthly DOE customer meeting.

Executive Summary Table

Prior DOE Goal	Current Performance Status	Planned Actions & Contribution	Overall Risk of Non-Attainment
Energy Management			
30% energy intensity (Btu per gross square foot) reduction in goal-subject buildings by FY 2015 from a FY 2003 baseline and 1.0% YOY thereafter.	17% reduction	Continue using the Biomass plant to generate electricity which reduces purchased electricity	
EISA Section 432 continuous (4-year cycle) energy and water evaluations.	Completed the first year's audit (25%) of the covered buildings for the current 4-year cycle	Funding has been approved for the 2nd year's cycle	
Meter all individual buildings for electricity, natural gas, steam, and water, where cost-effective and appropriate.	One new meter was added for SRNL. The site currently has 234 electrical meters	- Install 2 meters to isolate SRNL - Install a process flow meter for H-Canyon cooling water	
Water Management			
20% potable water intensity (Gal per gross square foot) reduction by FY 2015 from a FY 2007 baseline and 0.5% YOY thereafter.	10.8% reduction	- Continue to replace degraded piping to reduce leaks. - Install low flow toilets where feasible	
Non-potable freshwater consumption (Gal) reduction of industrial, landscaping, and agricultural (ILA). YOY reduction; no set target.	74% reduction	Continue to replace degraded piping to reduce leaks	
Waste Management			
Reduce at least 50% of non-hazardous solid waste, excluding construction and demolition debris, sent to treatment and disposal facilities.	48% reduction	SRS will continue to use the North Augusta Material Recovery Facility (NA-MRF) for routine waste (typical office and municipal-type waste) recycle services	
Reduce construction and demolition materials and debris sent to treatment and disposal facilities. YOY reduction; no set target.	2.8% reduction	Low cost of on-site C&D Landfill services and limited cost-effective reuse options for scrap debris significantly challenge cost-effective recycle options for this debris waste stream	
Fleet Management			
20% reduction in annual petroleum consumption by FY 2015 relative to a FY		Provide means for virtual meetings where possible to reduce onsite transportation requirements	

Prior DOE Goal	Current Performance Status	Planned Actions & Contribution	Overall Risk of Non-Attainment
2005 baseline and 2.0 % YOY thereafter.			
10% increase in annual alternative fuel consumption by FY 2015 relative to a FY 2005 baseline; maintain 10% increase thereafter.		SRS will continue to work with GSA to obtain low greenhouse gas emission vehicles when available and SRS will continue to replace vehicles with Alternate Fuel Vehicles (AFV's) (E85)	
75% of light duty vehicle acquisitions must consist of alternative fuel vehicles (AFV).		SRS will continue to replace vehicles with Alternate Fuel Vehicles (AFV's) (E85)	
Clean & Renewable Energy			
"Renewable Electric Energy" requires that renewable electric energy account for not less than 7.5% of a total agency electric consumption by FY 2013 and each year thereafter.	375.8% for Renewable Energy 401% for Clean Energy	Continue to utilize the four Biomass plants that use wood chips as a primary fuel source. Review the feasibility of a utility size solar panel farm as technology improves and costs are reduced	
Continue to increase non-electric thermal usage. YOY increase; no set target but an indicator in the OMB scorecard.	401%	Continue to use the four Biomass plants which use wood chips as a primary fuel source	
Sustainable Buildings			
At least 15% (by count) of owned existing buildings to be compliant with the *revised* Guiding Principles for Sustainable Buildings by FY 2021, with annual progress thereafter.	1.4% building compliance	Review the buildings at Savannah River Plutonium Processing Facility (SRPPF) (formerly MOX) for potential Sustainable Building requirements	
Acquisition & Procurement			
Promote sustainable acquisition and procurement to the maximum extent practicable, ensuring BioPreferred and biobased provisions and clauses are	Per DEAR 970.5223-7 all service and construction contract actions are applicable to sustainable acquisition requirements without exception.	SRNS Procurement will continue, as applicable, to review policies and procedures to ensure appropriate contract language requirements are incorporated relative to the Sustainability Plan	

Prior DOE Goal	Current Performance Status	Planned Actions & Contribution	Overall Risk of Non-Attainment
included in all applicable contracts.	Biobased Products report identified 7,718 contractual actions meeting the definition of biopreferred	It is estimated that SRNS will maintain current levels of contractual actions for FY 2021	
Measures, Funding, & Training			
Site set annual targets for sustainability investment with appropriated funds and/or financed contracts for implementation.	n/a	SRS will continue to use a graded approach to determine the feasibility for LED upgrades, HVAC upgrades and rightsizing of equipment	
Electronic Stewardship			
End of Life: 100% of used electronics are reused or recycled using environmentally sound disposition options each year.	100% end of life electronics were recycled for a total of 65.3 metric tons	Continue to use a certified recycler	
Data Center Efficiency: Establish a power usage effectiveness target for new and existing data centers; discuss efforts to meet targets.	PUE as follows: Central Computing facility = 2.10 Backup Computing facility = 1.61	Upgrade to more efficient equipment where cost effective	
Organizational Resilience			
Discuss overall integration of climate resilience in emergency response, workforce, and operations procedures and protocols.	SRS utilizes Active Risk Manager (ARM) and SRS Infectious Disease Response Team (IDRT) manage and respond to risks	Continue to use ARM & IDRT and upgrade as risks change	
Multiple Categories			
YOY scope 1 & 2 GHG emissions reduction from a FY 2008 baseline.	82.6% reduction	Continue to utilize the four Biomass plants for steam and electricity production. Continue to monitor fugitive emissions with CHMEMS software	
YOY scope 3 GHG emissions reduction from a FY 2008 baseline.	89.4% reduction	Utilize Microsoft Teams for teleconferences to reduce travel requirements. Review telework options to reduce commuting mileage	

Mission Changes

The existing Metal Oxide MOX facility is now managed by SRNS and will be repurposed for potential plutonium pit processing. Efficient Federal Operations will be observed for this facility and will be reviewed for potential EISA audits requirements.

Potential New Missions
Source: SRNS-RP-2020-00077, Rev 0

Savannah River Plutonium Processing Facility (SRPPF): To better meet stockpile requirements, NNSA has recommended repurposing and modifying the partially completed Mixed Oxide (MOX) Fuel Fabrication facility at SRS to enable production of 50 plutonium pits per year to supplement the 30 pits per year to be produced at the Los Alamos National Laboratory (LANL). Activities are underway to prepare the CD-1 package to further the establishment of the SRPPF mission.

Nuclear Nonproliferation-Surplus Plutonium Disposition (SPD): A project is underway to transition to dilute and dispose in lieu of the MOX approach to disposition 34 metric tons (MT) of surplus plutonium in K-Area.

MK-18 Mission: The MK-18A program is designed to recover Pu-244 from 65 MK-18A target assemblies that are currently stored in L-Basin. The targets were irradiated in K-Reactor in the late 1960s and early 1970s and contain the world's only unrecovered Pu-244. Pu-244 is not produced in any normal nuclear reactor or process facility. SRS is on target to start processing as early as FY21, pending funding. Processing this campaign will take at least eight years.
Foreign Research Reactor Fuel: It is anticipated that over the next several years, SRS will be receiving and processing spent nuclear fuel from foreign research reactors. Initiatives of this type help reduce the global threat of material being obtained by hostile entities by consolidating in a secure location.

Accelerated Basin Deinventory: This mission, if approved, will transition H-Canyon from dissolution and separation/recovery for blend-down of Low Enriched Uranium (LEU) to dissolve, store and transfer to a Sludge Batch for vitrification. DOE authorization and NEPA approval is required. This effort reduces the date for deinventory of L-Basin from 2056 to 2033 by increasing the number of dissolution batches from 6 to 18 by bypassing Solvent Extraction and LEU blend-down. This also facilitates the early layup of unrequired systems. To accomplish this cost-effective new mission, substantial investment in the H-Area infrastructure is required to achieve the increased throughput for H-Canyon.

Energy Management

Performance Status

Energy Consumption

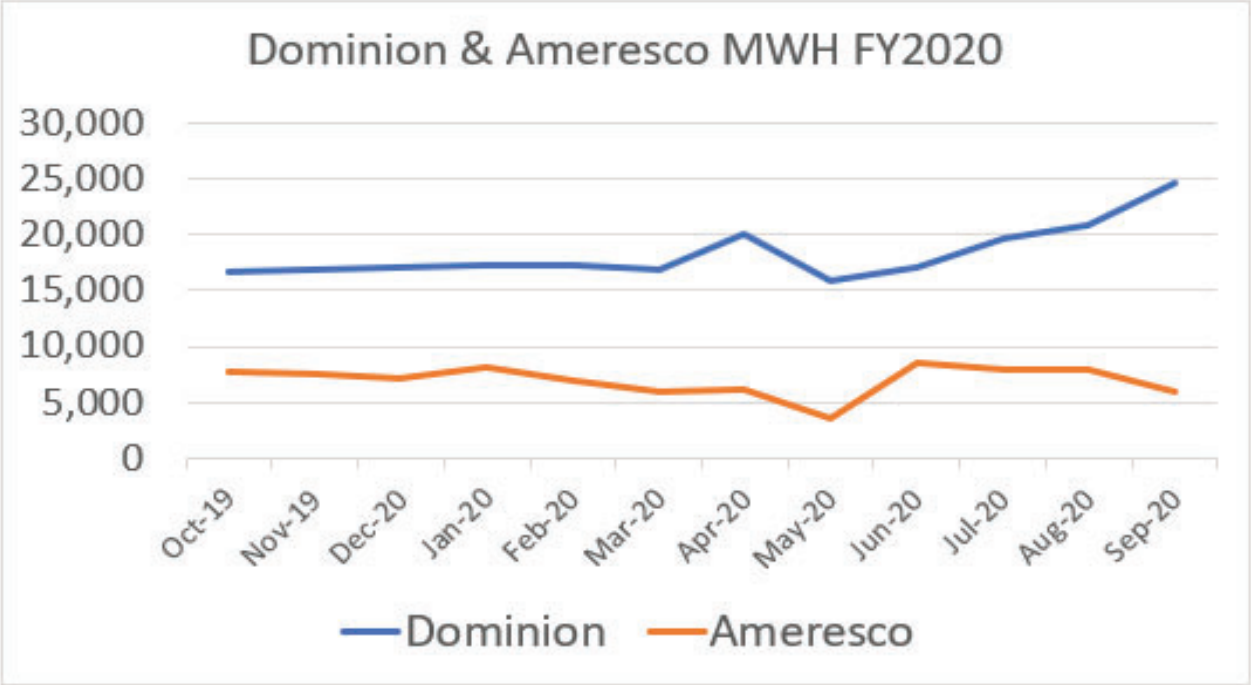
Electricity:

SRS purchased 220,352 MWH (751,843 MMBtu) of electrical energy and generated 83,257 MWH (284,071 MMBtu) of renewable electrical energy for a total consumption of 303,609 MWH (1,035,914 MMBtu) in FY2020. This is a reduction of 14,130 MWH (48,212 MMBtu) from FY2019. The on-site renewable electrical energy was 34.4% of the total electrical energy consumption and the primary fuel was wood chips.

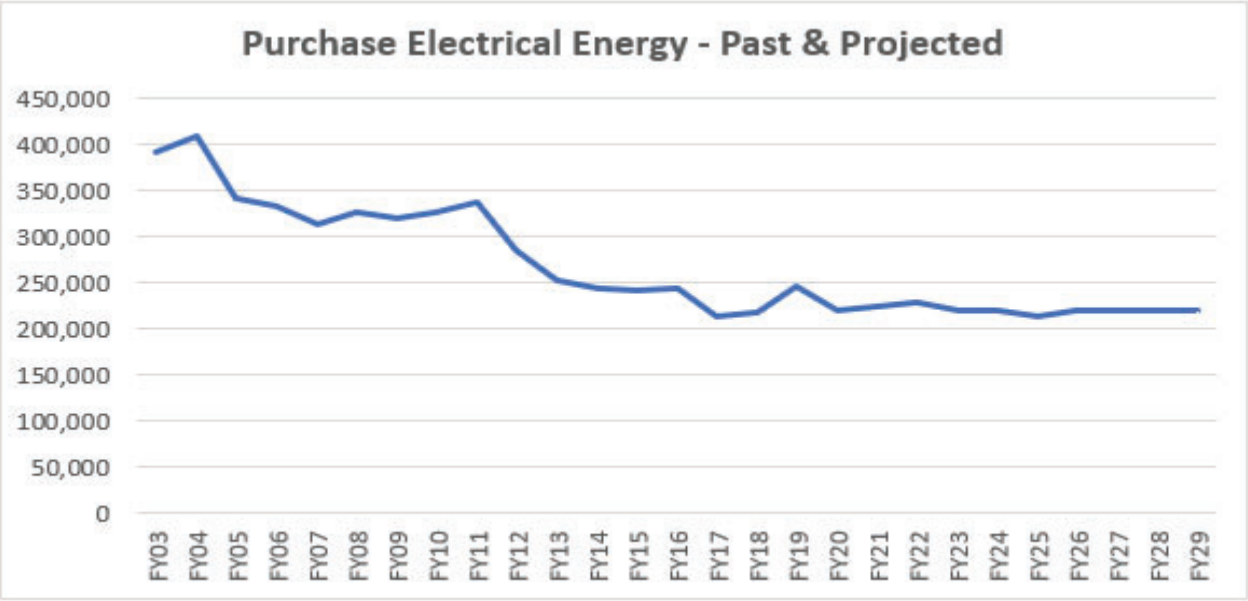
FY 2020								
ELECTRICITY	Oct-19	Nov-19	Dec-20	Qtr Total	Jan-20	Feb-20	Mar-20	Qtr Total
Purchased Power								
Purchased Power MWH	16,621	16,845	17,147	50,613	17,187	17,278	16,928	51,392
Cost of Purchased Electricity	$1,472,892	$1,460,930	$1,472,993	$4,406,815	$1,474,660	$1,478,445	$1,464,437	$4,417,541
BCF (Ameresco)								
BCF Exported Electricity MWH	7,788	7,485	7,195	22,468	8,116	6,904	5,911	20,931
Cost of BCF Exported Electricity	$1,244,164	$1,273,266	$1,215,061	$3,732,491	$1,244,164	$1,244,164	$1,244,164	$3,732,492

ELECTRICITY	Apr-20	May-20	Jun-20	Qtr Total	Jul-20	Aug-20	Sep-20	Qtr Total	FY 2020
Purchased Power									
Purchased Power MWH	20,089	15,837	17,156	53,083	19,661	20,936	24,668	65,264	220,352
Cost of Purchased Electricity	$1,591,089	$1,382,665	$1,441,456	$4,415,210	$1,534,829	$1,526,518	$1,790,261	$4,851,608	18,091,174
BCF (Ameresco)									
BCF Exported Electricity MWH	6,215	3,518	8,451	18,184	7,884	7,902	5,888	21,674	83,257
Cost of BCF Exported Electricity	$1,244,164	$849,580	$1,269,251	$3,362,995	$1,269,251	$1,269,251	$1,269,251	$3,807,753	14,635,731

The chart below shows the Purchase Power (Dominion) and onsite generation (Ameresco) for FY2020.



The chart below shows the actual purchased electrical energy consumption from FY2003 to FY2020 and the projected purchase through FY2029.



Steam:

SRS exported 828,026 MMBtu of steam in FY2020 across four Biomass plants. Of the total steam exported, 284,071 MMBtu was used to generate electricity. 543,955 MMBtu of steam was exported for process and heating use.

Exported Steam for FY2020

Plant	MMBtu of Steam
BCF	487,719
A-Area Biomass	47,413
K-Area Biomass	3,560
L-Area Biomass	5,263
Total	543,955

Energy Intensity

SRS has reduced the energy intensity (Btu/GSF) from the FY2015 baseline of 111,287 to 92,316 for FY2020. This represents a 17% reduction. This reduction was aided by implementing improved chiller plant efficiencies, 82 HVAC upgrades, administrative control of HVAC setpoints, 37 cool roof installations and >2,000 LED lighting upgrades. Additional reductions were noticed due to many employees teleworking.

SRS did not install any cool roofs in FY2020 based on an initial cost study which yielded a Return on Investment (ROI) that exceeded the roof's design life. A new contract bidding process was implemented which reduced the cost difference between a conventional and cool roof which improved the ROI. Based on this new study, each new roof will be reviewed to determine if a cool roof is cost effective to install.

GHG

Scope 1 and 2 GHG emissions are currently generated from the following source types at SRS which are inventoried:

- Purchased electricity
- Wood (biomass)
- Fuel Oil
- Propane
- Gasoline & E85
- Diesel
- Jet fuel
- Fugitive emissions

SRS continues to significantly reduce GHG emissions via the four biomass plants located on site. This is a continuing benefit of transferring to a biomass-based energy supply versus the previous coal-based supply.

SRS has reduced Scope 1 and Scope 2 GHG by 82.7% in FY2020 as compared to FY2008 baseline.

SRS has reduced Scope 3 GHG by 90% reduction in FY2020 compared to FY2008 baseline.

EISA Audits

SRS has identified 63 covered buildings that require auditing. The first cycle of audits was completed in FY19. SRS began the second cycle of audits and completed 25% of the covered buildings for in FY2020. 21 ECMs were identified from auditing the 16 buildings which includes LED lighting upgrades and HVAC replacements.

Metering

SRS has 38 buildings that are individually electrically metered. All energy use is metered for proper billing purposes by using shared meters and calculating each building's consumption based on the size, function and staffing.

Metering Summary:

- SRS has in place an existing extensive metering program, including 236 electrical meters and 16 steam meters providing energy use data.
- Meter data is used for the comprehensive billing/cost allocation system.

Energy Saving Feasibility Studies

SRS completed four feasibility studies for energy conservation:

- Two cool roof studies which resulted in potential cost savings using a new contract bidding process
- LED lighting upgrades for 31 Administrative buildings which resulted in an ROI in less than 10 years
- Solar Panel and energy storage resulted in an undesirable ROI due to equipment costs and dept service costs
- Thermostat temperature setting impact on HVAC units resulted in a potential energy & demand savings of $8,824 for cooling months for each degree of setpoint increase

Currently SRS is performing feasibility studies for the following projects:

- Chiller Plant Optimization
- Chilled water storage for peak demand mitigation

Plans and Projected Performance

SRS plans to continue to improve energy efficiency by investing in equipment upgrades to reduce energy consumption as follows:

- LED lighting upgrades
- Replace older HVAC units with higher efficient units
- Reduce cooling consumption by controlling the temperature setpoints
- Reduce personal office heaters
- Install cool roofs where cost effective
- Right-sizing projects

Water Management

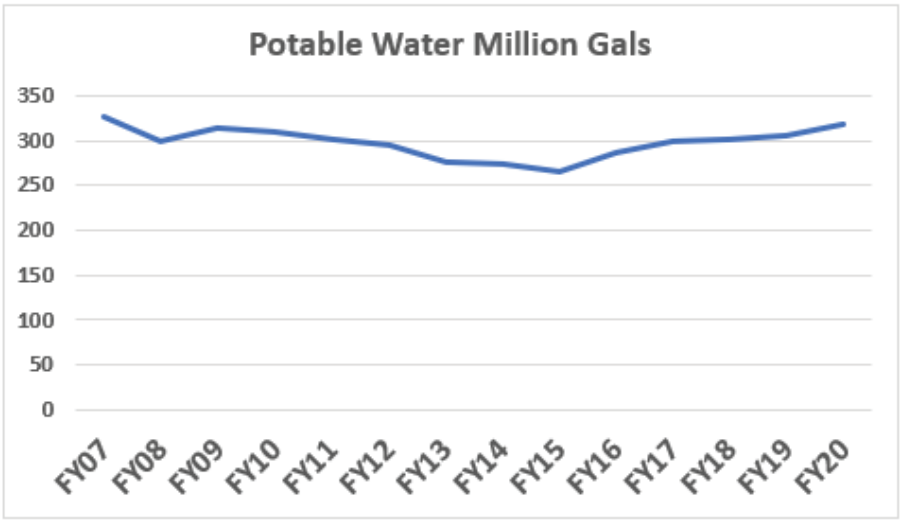
Performance Status

Potable Water

As compared to the current baseline (FY 2007), SRS has reduced potable water consumption through FY2020 by 2.5% and a water intensity decrease by 10.8%. The annual consumption in FY2020 was reduced by 8M gallons compared to consumption in FY2007 which equates to a savings of $98,671. Further reductions will be more difficult due to the large decreases already achieved. Usage fluctuates from year to year based on various factors such as the number of employees and the amount of potable water used for non-potable uses (e.g. converting to process water after a backflow preventer).

The table and chart below show potable water consumption. Current performance is at a reduction of 10-8%. Future projections are expected to be similar to FY2020.

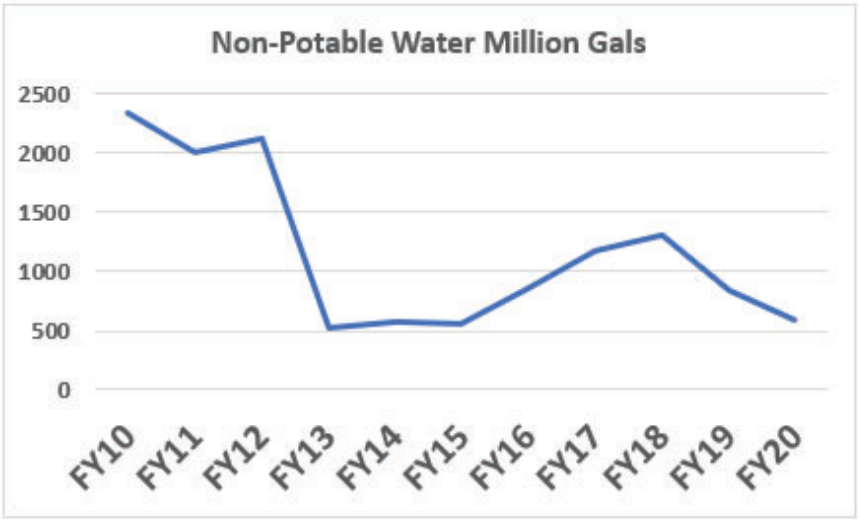
Potable Water	
Year	Million Gals
FY07	326.4
FY08	299.8
FY09	313.7
FY10	308.7
FY11	300.2
FY12	295.3
FY13	275.6
FY14	273.3
FY15	266.3
FY16	287.2
FY17	299
FY18	302
FY19	304.7
FY20	318.5



Non-Potable Water (ILA)

The table and chart below show non-potable water consumption. Current performance is at a reduction of 74.6% (no set target).

Non-Potable Water	
Year	Million Gals
FY10	2340.8
FY11	2007.2
FY12	2122
FY13	526.1
FY14	577.2
FY15	565.1
FY16	864.7
FY17	1169.5
FY18	1313.2
FY19	845.9
FY20	595.6



Plans and Projected Performance

No appreciable percentage change in potable water intensity is projected for FY2021. This is due to previous large decreases, the fact that water fixture retrofits are not cost effective (unless the retrofit is in response to a repair), and budget limitations.

Where feasible, SRS will continue to install low-flow toilet flush valves, low-flow urinal flush valves, and low-flow faucets as part of routine maintenance practices as fixtures require replacement.

SRS should see a significant reduction in A-Service water due to a tank that has been bypassed. Previously the tank was left in an overflow configuration for several years to ensure that it was always full to satisfy Fire Water Needs. This modification will also reduce electrical consumption as the SW pumps were removed from service.

SRS will develop a scope of work, obtain permits, and initiate procurement for replacement of underground water commodities. This is to start replacing aged water system piping that have had issues with leaks.

Waste Management

Performance Status

SRS diverts nearly 50 percent of non-hazardous solid waste, excluding construction and demolition debris. SRS uses the North Augusta Material Recovery Facility (NA-MRF) for routine waste (typical office and municipal-type waste) recycle services. For FY2020, about 48% of this stream, 278 metric tons from 579 shipped. The SRS worked with NA-MRF subcontractor to support process and program improvements for attainment of a 50% recovery rate. Other efforts include initiation of a vendor contract to purchase plastic waste bags and operations procedure revisions to improve recovery rates. SRS recycles most of the wastes from its area cafeterias and building kitchenettes through the Municipal Recycle Facility. The main cafeteria's waste is segregated since there is very little material suitable for recovery or for composting. SRS continues to monitor this waste stream for opportunities to recycle materials.

In FY2020 SRS has diverted about 278 metric tons of materials through a subcontracted Material Recovery Facility (MRF) and a subcontracted paper shredding company. These efforts represent recovery of 48% of the SRS Municipal Solid Waste Stream. This is close to the FY2020 goal of 50%. The amount of waste diverted through paper shredding decreased dramatically, likely due to increased teleworking. SRS utilizes various services to recover debris-type materials for scrap value. In FY2020 Site Salvage Operations has recovered about 1,095 metric tons of materials,

including all non-radioactive scrap metals, scrap furniture, and used drums. SRS was not able to implement concrete and asphalt recovery or reuse in FY2020. Total C&D diverted waste is 2.8%. Low cost of on-site C&D Landfill services and limited cost-effective reuse options for scrap debris significantly challenge cost-effective recycle options for this debris waste stream. Viable candidate materials, e.g. – recoverable property and scrap metals that are recyclable through the Site's Asset Management Excess and Salvage Programs are removed from the C&D stream by generators.

SRS shipped $64.2 million usable assets (equipment and supplies) through Site Excess Operations for reuse and recovery (see table below). Asset management and recovery is based on property acquisition values and not included as SRS waste diversion operation although if this service was unavailable, a significant increase in waste management cost would be incurred.

Excess and Salvage Monthly Activity Report SEPTEMBER FY20

		Line Items	Items
Total Excess Inventory	$19,484,341	4601	825429

Excess Activity

	Acquisition Value	Line Items	YTD Value	YTD Line Items
Receipts	**$1,667,736**	**516**	**$64,184,257**	**6998**

Dispositions	Acquisition Value	Line Items	YTD Value	YTD Line Items
Re-Issue	$0	0	$352,578	11
Computers for Learning	$0	0	$0	0
DOE Transfer	$0	0	$40,011	1
ERLE/LEDP	$53,643	4	$315,927	16
Federal Transfers	$0	0	$60,000	36
State Donation	$0	0	$12	1
Excess Sales	$6,076	5	$4,211,275	3899
SRSCRO	$318,568	111	$5,519,801	1986
SRSCRO - AFS	$237,707	21	$2,075,935	86
SRSCRO - Chemical	$0	0	$9,368	2
AMIS Inventory Loss	$0	0	$1,162	5
Chemical Disposal	$0	0	$0	0
Destroyed	$0	0	$3,140,686	267
Inventory Adjustment	$0	0	$0	0
Scrap	$0	0	$19,906	47
Mox Auction Sale	$0	0	$9,285	1
Disposal Activities	**$615,994**	**141**	**$15,746,661**	**6357**

Revenues Generated	Value	LBS.	YTD Value	YTD LBS.
Contract Sales - ADP/Electronics	$0	0	$0	0
Contract Sales - Battery/Lead Metal	$0	0	$4,119	37444
Contract Sales - Brass Cassings	$0	0	$0	0
Contract Sales - Scrap Metal	$3,598	58,700	$50,100	829350
TOTAL	**$3,598**	**58,700**	**$54,219**	**866794**

Commodity	Received In	Shipped Out	YTD Shipped Out	Unit of Measure
Batteries	241	0	3,247	In/ea, Out /lbs
Lead	0	0	0	lbs.
Drums - Metal	0	0	0	ea.
Drums - Poly	0	0	0	ea.
Heavy Metal	120,520	52,420	288,780	lbs.
Furniture	30,388	6,280	241,980	lbs.
Metal Total	**150,908**	**58,700**	**534,007**	**lbs.**

Recycling Used Oil

SRS continues to partner with Santee Cooper (a local electric co-op) to process used oil for recycling.

Cleanup and Removal

DOE Honors SRNS Team with Excellence Award for Coal Ash Cleanup

Before-and-after photos of the Savannah River Site ash basin cleanup project. Crews remediated over 90 acres of Site property.

The project team remediated and closed the D Area coal ash landfill, two coal ash basins, and a coal pile runoff basin. It's an area consisting of over 90 acres at SRS used to manage ashes from the D-Area Powerhouse, which provided steam and electricity for SRS missions for more than 59 years.

The powerhouse was closed in 2012, and DOE-Savannah River (DOE-SR) and SRNS undertook cleanup in 2014.

An award citation signed by Energy Secretary Dan Brouillette noted the project team built a strong relationship with the South Carolina Department of Health and Environmental Control and the U.S. Environmental Protection Agency (EPA) to negotiate a cleanup schedule.

The award was announced at an Environmental Management (EM) workforce meeting on July 14.

Coal Yard Legacy of Mammoth Cold War Powerhouse Creatively Cleaned Up at SRS

Until recently, the yard held huge piles of coal used to continuously feed an enormous powerhouse built in the 1950s. The once impressive powerhouse is now cold and dark awaiting demolition.

Plans call for using approximately 1,000 tons of fine grade limestone over a period of six months to complete the project. The material was purchased from a quarry in Eastern South Carolina.

SRNS Construction personnel will work on only one acre at a time to control erosion and ensure no sediment enters nearby creeks and streams as a result of soil excavation. The construction workers will operate an excavator, dump trucks, a road scraper and a large industrial mixer to treat each section of the Coal Yard. Gigantic piles of unused coal were removed from the Coal Storage Yard in 2012 and the surface scraped to reveal a layer of red clay.

The sprawling Coal Storage Yard will change from red to gray over the next six months, as the final covering, normally sodded grass, will now consist of a layer of limestone gravel. This innovative approach is expected to shorten the project schedule by one month and significantly reduce the overall cost.

Batteries Weighing Over 90 Tons Successfully Removed from SRS Ahead of Schedule

The room containing battery modules before they were removed from SRS, and the room after they were removed from SRS.

Four battery banks consisting of 260 individual battery modules weighing more than 90 tons were successfully transported from the Savannah River Site (SRS) and will have opportunity for a new life in the future. The National Nuclear Security Administration (NNSA) and Savannah

River Nuclear Solutions (SRNS) selected the Savannah River Site Community Reuse Organization (SRSCRO) to remove the batteries from the Site for final disposition. This process was completed weeks ahead of schedule in March.

Removing the batteries was a significant undertaking. The four battery banks have 840 battery cells combined. The two larger banks each have 360 cells and can supply up to 3,000 amps per hour continuously for three hours. For comparison, a microwave typically runs up to 15 amps. These high capacity batteries were originally intended to be used as a backup power source in the canceled Mixed Oxide Fuel Fabrication (MOX) Facility project and were installed early in the facility's construction for circuit breaker testing.

This dispositioning process is part of NNSA's strategy for obtaining the greatest benefit from materials no longer needed for the canceled MOX Facility project. NNSA and SRNS are working together to apply a rigorous review process to determine potential uses for the excess material and equipment, giving top priority to the agency's projects at SRS and elsewhere.

The batteries were determined to be unneeded by NNSA or U.S. Department of Energy programs at SRS or elsewhere. SRSCRO will be responsible for the potential reuse or final disposition of the batteries.

Repurpose

Surplus SRS Construction Materials Repurposed to Support NNSA Missions

Materials are loaded for transport from SRS to Oak Ridge.

Since August, excess construction materials from the Savannah River Site have been finding new life supporting vital National Nuclear Security Administration (NNSA) missions. Some will be used for NNSA missions at SRS, while others are travelling to NNSA sites across the country.

This repurposing is part of a strategy for obtaining the greatest benefit from materials no longer needed for the Mixed Oxide Fuel Fabrication (MOX) Facility. Work on that facility was halted when NNSA identified a better approach for carrying out its plutonium disposition mission.

As part of the MOX facility construction termination activities, NNSA and Savannah River Nuclear Solutions (SRNS) are working to use all excess equipment and materials from the MOX project across the NNSA enterprise. Together, they have a rigorous review process to determine potential uses for equipment in order to get the best value out of what has been purchased.

The first to leave the site was two truckloads shipped to Oak Ridge, Tennessee. These materials will support construction of the Uranium Processing Facility (UPF), designed to ensure the long-term viability, safety, and security of enriched uranium capabilities in the United States.

The initial crates of bolts and fasteners were joined by welding systems, plasma cutters, and a variety of other items large and small. All are owned by NNSA but are not needed for its missions at SRS. NNSA's UPF construction project at the Y-12 Plant in Oak Ridge, on the other hand, identified an immediate need for these items.

SRNS is dispositioning the equipment, tools and other materials, under NNSA's disposition plan, which gives top priority to the agency's projects at SRS and elsewhere. For material and equipment not needed for NNSA missions, there will be opportunities to support local schools and community reuse organizations with excess property.

Plans and Projected Performance

SRS will continue to implement strategies and operations to increase sanitary waste recycle rates using a long-term graded approach. A long-term graded approach provides a cost-effective methodology for addressing these associated goals and allows SRS the ability to reshape selected business practices and incorporate costs into annual budgets as necessary.

SRS operates bio-mass steam and power plants replacing all coal-fired plants on site. These units burn forest debris (wood chips) from the local area. The South Carolina Tire Processing Center located in Jackson, S.C. just outside the Site boundary, avoids the previous requirement for SRS to reduce oversized truck and off-road vehicles prior to disposition for recycle. The Tire Processing Center produces crumb rubber which is blended with bio-mass in the BCF boilers.

The Three Rivers Landfill is utilized for municipal-type waste and other waste that cannot be disposed at the site-operated Construction & Demolition Landfill. The Three Rivers Landfill has a landfill gas recovery system and sells the gas to local industry for energy recovery. No additional advances in waste-to-energy utilization are projected for the near term.

SRS recognizes source reduction of printing paper as a component of its waste source reduction program and business effectiveness programs. SRS has not established a performance measure for the reduction of printing paper. SRS has adopted and encouraged electronic document management and routing to the extent practical for Site operations. Essentially all Site procedure manuals and commonly used forms are maintained, accessed and routed through Site computer servers. Site organizations are encouraged to utilize electronic procedures and round sheets when practical and employees are encouraged to print only when needed. SRS procures printing and writing paper through the GSA procurement program. Paper typically meets or exceeds criteria for post-consumer fiber content. Collected paper from various areas across the Site is safely and securely reduced and removed by a subcontractor who is responsible for shredding and disposing of unwanted paper in an environmentally sound manner.

Fleet Management

Performance Status

SRS ordered 65 replacement vehicles for FY 2020 for SRNS, SRR, and DOE (these are vehicles in BOAC). An additional 70 vehicles were approved to order by DOE due to the increased scope of work and the increase of new personnel. This includes continued retention of 60 leased vehicles that were to be returned to GSA and 10 additional vehicles. Therefore, a total of 135 vehicles were ordered for FY 2020. Due to COVID-19, the orders were delayed and at this time only 12 have arrived on site. Of those ordered, 11 ethanol and 1 unleaded have been received. Of the 123 remaining vehicles, 109 were ordered as ethanol and 14 were ordered as diesel. There were no electric vehicles or hybrids ordered in FY 2020.

SRS currently has the following vehicles on-site: 1 electric vehicle, 21 hybrids, 813 ethanol, 48 unleaded, and 72 diesel vehicles within the BOAC.

Plans and Projected Performance

SRS will continue to work with GSA to obtain low greenhouse gas emission vehicles when available and SRS will continue to replace vehicles with Alternate Fuel Vehicles (AFV's) (E85).

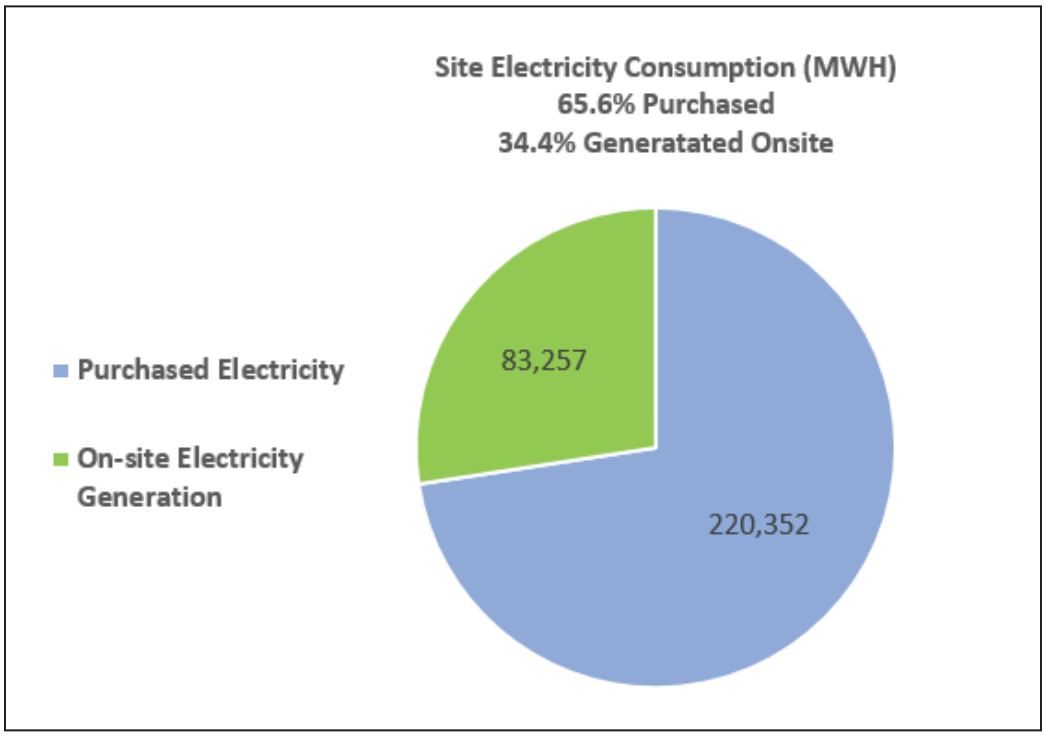
SRS will continue to work with GSA to obtain zero-emission or plug-in hybrid electric vehicles as they become more affordable and available.

Clean & Renewable Energy

Performance Status

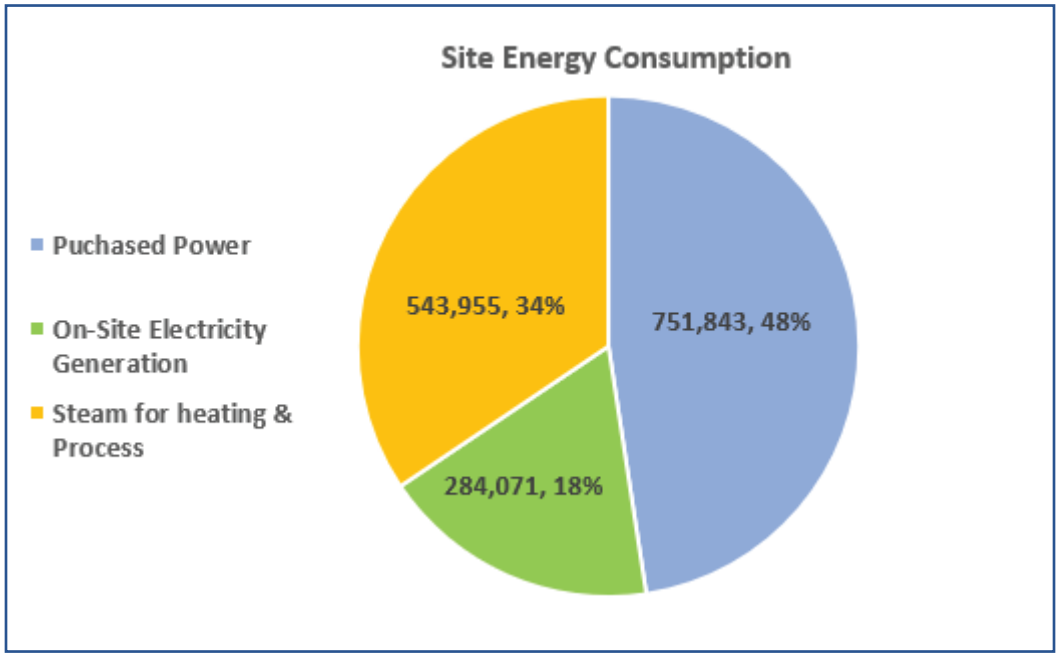
Electricity

SRS generated 34.4% of the electrical energy consumed onsite. The source of generation was from a Biomass plant which used wood chips as a primary fuel source and fuel oil & tires as a secondary fuel source. The Biomass plant utilized excess steam to generate 83,257 MWH of electrical energy for onsite consumption in FY2020. This was an increase from FY2019 of 12,361 MWH.



Steam

SRS produces all steam from four Biomass plants which used wood chips as a primary fuel source and fuel oil & tires as a secondary fuel source. A total of 828,026 MMBtu of steam was produced. 284,071 MMBtu of steam was used for power generation and 543,955 MMBtu was exported for heating and process.



Renewable Electricity

Goal:"Renewable Electric Energy" requires that renewable electric energy account for not less than 7.5% of a total agency electric consumption by FY 2013 and each year thereafter.
Interim Target (FY 2020): 30.5%

Current Performance: 375.8%

Renewable Energy Studies

- The SRS study used historical data from 2015 to present to determine the savings that would have been possible with the 10 MW solar farm. The study concluded that the cost of installing a solar panel farm was cost prohibited with current technology. The data from the study will be reviewed when solar panel equipment costs decrease.
- Lithium Battery Energy Storage: The concept is to charge the batteries during off peak hours using purchase power or from the solar panel farm. The stored energy will be used to mitigate peak demand. The study revealed this was not cost effective.
- Chilled water Storage: The concept is to produce and store chilled water at night during off-peak hours and use the chilled water during peak demand hours. The feasibility study is still ongoing.

Plans and Projected Performance

SRS will continue to operate the four Biomass plants to produce steam for heating, process and power generation using renewable fuels as a primary source. In addition, SRS will continue to review the feasibility of solar power generation.

Sustainable Buildings

Performance Status

At the close of FY2020, SRS has two buildings (246-H and 246-1H) which have met this requirement. SRS has achieved about 1.4% of the goal. This was due to aging buildings that are not cost effective to upgrade. Focus has been placed on maintenance/repairs and ECMs to reduce energy consumption.

No Net Zero Buildings have been achieved to date due to type of construction (process facilities) and budget constraints to modify existing facilities.

Plans and Projected Performance

Although funding and a backlog of infrastructure and facility maintenance priorities have impacted the ability to update the facilities to meet the Guiding Principles, SRS has implemented Energy Conservation Measures where cost effective and funding availability.

SRS will review the buildings at Savannah River Plutonium Processing Facility (SRPPF) (formerly MOX) for potential Sustainable Building requirements.

Acquisition & Procurement

SRNS has established a Sustainable Acquisition Monthly Team meeting. This meeting allows for information exchange across disciplines and the development of new ideas.

Sustainable Acquisition Strategies

A. Per DEAR 970.5223-7 all service and construction contract actions are applicable to sustainable acquisition requirements without exception.
B. SRNS Procurement maximizes acquisition opportunities of designated products by the following means:
    a. Chemical acquisitions are reviewed and approved by the SRS Chemical Management Center (CMC). This review monitors usage of hazardous chemicals and, where appropriate, recommends EPP's.
    b. Electronic stewardship has yielded the procurement/leasing of desktops, laptops and monitors that meet Electronic Product Environmental Assessment Tool (EPEAT) standards and copiers that are Energy Star compliant.
    c. EPP substitutions have been procured under various new and existing contracts, including bulk janitorial supplies (e.g., cleaners, paper products) and safety items (e.g., ear plugs, filters).
    d. Procurement will continue to support the subsequent actions and initiatives of other SRS entities (i.e., engineering, maintenance and infrastructure organizations) by procuring EPP alternatives as recommended for site utilization.
    e. Inclusion of Sustainable Acquisition Clauses in subcontract types beyond service and construction contracts. DEAR 952.223-78 language is included as a standard in all General Provisions for subcontracts over $100,000.00 with the exclusion of Commercial Purchasing, Software License Agreements and the Sale of Government Property.

f. Inclusion of FAR 52.223-2, Affirmative Procurement of Biobased Products Under Service and Construction Contracts in all subcontract types with the exception of Software License Agreements and the Sale of Government Property.
g. Inclusion of FAR 52.223-15, Energy Efficiency in Energy-Consuming Products in all subcontract types with the exception of Software License Agreements and the Sale of Government Property.
h. Inclusion of FAR 52.223-16, IEEE 1680 Standard for the Environmental Assessment of Personal Computer Products in all subcontract types with the exception of Software License Agreements and the Sale of Government Property.
i. Inclusion of FAR 52.223-17, Affirmative Procurement of EPA-designated Items in Service and Construction Contracts in all subcontract types with the exception of Software License Agreements and the Sale of Government Property.
j. Inclusion of FAR 52.223-19, Compliance with Environmental Management Systems in all subcontract types with the exception of Software License Agreements and the Sale of Government Property.
k. Inclusion of the following language in ***all*** material and service solicitations,
    i. "In accordance with Executive Order 13423, entitled "Strengthening Federal Environmental, Energy, and Transportation Management", SRNS is committed to purchase items that contain recycled materials, as designated by the Environmental Protection Agency in the Comprehensive Procurement Guidelines (CPG).
        1. If the item(s) requested in this solicitation are available or can be made with recovered (recycled) materials, the Offeror should identify those items in a separate attachment to the proposal as an alternate proposal. The Offeror should include a full description of the alternate item, the percent of recycled content or the reason the item is environmentally preferred, the price and the delivery availability of the item.
        2. SRNS reserves the right to give preference to environmentally preferred products regardless of price and delivery if it is determined to be in the best interest of SRNS, the DOE and the Government."

C. Item B above outlines SRNS' efforts to include biobased clauses in eligible contract actions. SRNS Procurement tracks biobased products by reviewing purchase order line descriptions to determine if the product meets the definition of biopreferred. Although SRS reviewed the purchase order descriptions during the year, product information available was not adequate to effectively determine bio-based content as described in the USDA bio-based preferred catalog. SRNS FY 2020 Biobased Products report identified 7,718 contractual actions meeting the definition of biopreferred. It is estimated that SRNS will maintain current levels of contractual actions for FY 2021.

D. SRNS Procurement will continue, as applicable, to review policies and procedures to ensure appropriate contract language requirements are incorporated relative to the Sustainability Plan. In FY 2020 SRNS established monthly meetings with Environmental Management, Site Sustainability & Energy Management Program and Supply Chain Management Subject Matter Experts to expand SRNS ability to meet Sustainability Program initiatives. A review and implementation of EPA's recommendations is an action item for FY 2021 for this team.
E. SRNS has a point of contact (POC) for sustainable acquisition contracts and biobased products. Contact information for the POC was provided on both Excel workbooks. SRNS Procurement exports data from an internal system for analysis for sustainable acquisition contracts and biobased data. A comparison of current practices compared to proposed practices would have to be conducted to determine if integration of Sustainable Acquisition Contracts and Biobased Products Excel workbooks into the Dashboard would be helpful. It has been more efficient uploading Excel workbooks to the Dashboard in FY 2020 versus prior years submission through FPDS or SAM. SRNS experienced difficulties with FPDS and SAM uploads in the past and instead submitted biobased product reporting through Contracting Officer letter.

Plans and Projected Performance

SRNS Procurement will continue, as applicable, to review policies and procedures to ensure appropriate contract language requirements are incorporated relative to the Sustainability Plan. Procurement will focus on low emitting materials, recycled content and bio-based content. In addition, Procurement will encourage suppliers to manage and reduce greenhouse gas emissions.

Measures, Funding, & Training

Performance Status

SRS continues to overcome challenges for meeting future goals which include technological issues, aging infrastructure and funding shortfalls. SRS is very active in taking a graded approach toward improving sustainability and energy management by performing feasibility studies on ECMs to ensure the most cost-effective ones are funded.

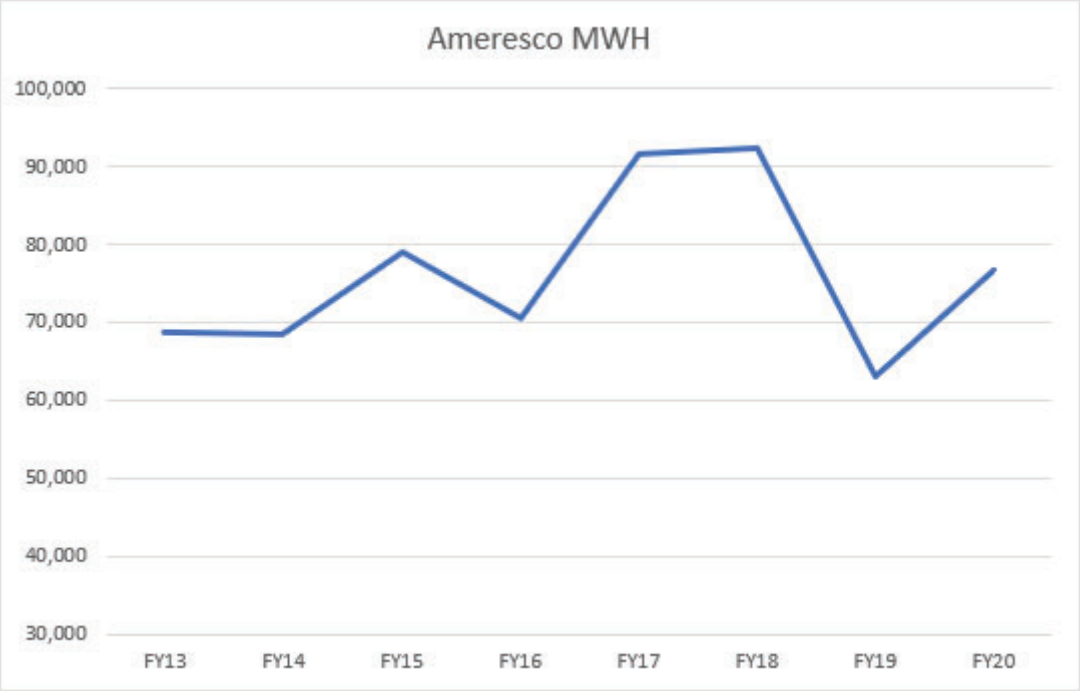
Efficiency & Conservation Measures

SRS implemented 28 Energy Conservation Measures (ECM) identified in previous audits and/or newly identified in FY2020. These ECMs included 320 LED lighting upgrades, 23 efficient HVACs installations and four right-sizing projects.

Performance Contracts

SRS has one active ESPC which is the Ameresco plant and has entered the ninth year of an energy saving performance contract (ESPC) for BCF, K & L Biomass plants. No new ESPCs were introduced as SRS in FY2020.

The Ameresco plant was constructed and completed in 2012 and replaced the 50+ year old 484-D coal fired steam plant and electrical generating plant. The Plant is in the ninth year of a 21-year ESPC. Most of the savings will start after year 21 when the facility has been paid off. The energy (MWH) output is shown in the chart below.



Appropriations/Direct Obligations

- The first year of the 2nd cycle EISA audits were performed for 16 covered buildings. This is approximately 25% of the 63 covered buildings. Funding was approved to perform audits for 25% of the covered buildings in FY2021.
- 23 end-of-life HVAC units were replaced in FY2020 with more efficient units (SEER rating of 13 or greater). SRS projects approximately 20 upgrades in FY2021.
- Over 2,000 LED lighting upgrades have been performed since 2015. SRS plans to install approximately 500 LED upgrades in FY2021 in Administration buildings.
- Right Sizing / Footprint Reduction:
  - A-SW System to remove tank and pumps
  - CSWTF Soda Ash Pumps
  - Transformers at 152-C Substation
  - Removal of one section of Abandoned 115kV Lines
  - Removal of 500 ft of Abandoned Steam Lines
  - Procure New Locomotive & right-size exiting fleet

Training & Education

SRS will monitor training opportunities for Sustainability training. The requirements for the Personnel Training Act of 2010 (FBPTA) will be reviewed annually.

Plans and Projected Performance

SRS will continue to use a graded approach to determine the feasibility for LED upgrades, HVAC upgrades and rightsizing of equipment. The EISA audit performed in FY2020 yielded potentially 21 ECMs. SRS will continue to review the progress on funded ECMs monthly with DOE-SR.

Travel & Commute

Performance Status

Employees are encouraged to be efficient and deliberate in travel decisions by combining trips or shuttles as alternative methods. SRS considers the availability of webinars, conference calls,

Microsoft Teams, when possible to effectively conduct business. Due to the COVID-19 virus, SRS invested in additional laptops to provide the opportunity for capable employees to telework at home. In addition to reducing on-site exposure to the virus, teleworking has reduced the commuting mileage for many employees.

SRS provides alternative 4-day work schedules which reduces commute trips. These alternative schedules are 4x10 (four 10-hour days) which offers 4 days of commuting and 9/80 which offers 4 days of commuting every other week. SRS provides access to online applications for assistance with carpooling.

Plans and Projected Performance

SRS will review the benefits of teleworking opportunities for employees that can conduct business from home. Microsoft Teams will continue to be utilized to reduce the need to travel for on-site meetings thus reducing fuel consumption and travel time.

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Fugitives & Refrigerants

Performance Status

Fugitives, Fluorinated Gases and Mixed Refrigerants emissions can contribute to air pollution and climate change by increasing Green House Gases. There are 61 Fugitives, 45 Fluorinated Gases and 79 Mixed Refrigerants listed in the Consolidated Energy Data Report (CEDR) but SRS tracks and reports ALL Fugitives, Fluorinated Gases and Mixed Refrigerants which are purchased by the Savannah River Site (SRS) M&O contractor. Those which are not listed in CEDR are added and reported as “OTHER” in the CEDR. Consumption is generated based on the SRS Inventory of pertinent chemicals (Mixed Refrigerants, Fluorinated Gases and Fugitives) by CAS# where applicable, or by the product for Mixed Refrigerants that contributes in the products in any shape or form.

Normally, all products are barcoded and documented in SRNS commercial-off-the-shelf software called CHMEMS (Chemical Environment Management System) when received at the Warehouse. In turn, CHMEMS is capable of generating an Adhoc Report for all pertinent purchases of products bearing fugitives, fluorinated gases and mixed refrigerants for the required period called “Received Dates”.

The exceptions are the Mixed Refrigerant Cylinders which are purchased under a blanket contract and they are directly delivered to the requestor and do not receive barcodes at present time. These exceptions are considered as "Direct Deliveries" and searched by another acquisition software "PeopleSoft" then added to the barcoded inventory generated by CHMEMS.

Below is the FY2020 Reporting:

FY-2020 DOE Sustainability Report															
			FY-2020 (Oct-Nov-Dec)			FY-2020 (Jan-Feb-Mar)			FY-2020 (Apr-May-Jun)			FY-2020 (Jul-Aug-Sept)			
	Constituents	CAS#	CHMEMS (lbs.)	Direct deliveries of Cylinders (lbs.)	Total (Lbs.)	CHMEMS (lbs.)	Direct deliveries of Cylinders (lbs.)	Total (Lbs.)	CHMEMS (lbs.)	Direct deliveries of Cylinders (lbs.)	Total (Lbs.)	CHMEMS (lbs.)	Direct deliveries of Cylinders (lbs.)	Total (Lbs.)	Grand Total (FY-2020)
1	Nitrous Oxide	10024-97-2	0.04		0.04			0.00			0.00	0.16	0.16	0.32	0.36
2	Butane	106-97-8	153.30		153.30	283		283.00	411.9		411.90	969.72		969.72	1817.92
3	Pentane	109-66-0	0.04	1.72	1.76	0.72	98	98.72	0.01		0.01	6.53		6.53	107.02
4	Methyl Ether	115-10-6	27.37		27.37	1.76		1.76	5.58		5.58	3.18		3.18	37.89
5	Carbon Dioxide	124-38-9	46.61	132.3	178.91	51.12	153	204.12	33.24	300	333.24	83.66		83.66	799.93
6	1,1,1,2,2,3,4,5,5,5-DECAFLUOROPENTANE	138495-42-8	0.16		0.16	0.34		0.34	2.2		2.20	16.3		16.30	19.00
7	2-(Difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane	163702-08-7	0.15		0.15	0.2		0.20			0.00	0		0.00	0.35
8	2-(ETHOXYDIFLUOROMETHYL)-1,1,1,2,3,3,3-HEPTAFLUOROPROPANE	163702-06-5							0.84		0.84	0		0.00	0.84
9	1,1-DICHLORO-1FLUOROETHANE	1717-00-6							1.33		1.33	0.65		0.65	1.98
10	PERFLUOROHEPTANE	335-57-9							0.21		0.21	0		0.00	0.21
11	DIFLUOROMETHANE	75-10-5							37.5		37.50	0		0.00	37.50
12	2,2-Dichloro-1,1,1-trifluoroethane	306-83-2	1.60		1.60	4.61		4.61			0.00	0		0.00	6.21
13	1,1-DIFLUOROETHANE	75-37-6				249.96		249.96	48.1		48.10	16.46		16.46	314.52
14	Pentafluoroethane	354-33-6	154.70		154.70			0.00	37.5		37.50	0		0.00	192.20
15	Decafluorobutane	355-25-9	0.06		0.06			0.00			0.00	0		0.00	0.06
16	1,1,1,3,3-Pentafluorobutane	406-58-6	0.11		0.11	0.24		0.24			0.00	0.38		0.38	0.73
17	Methane	74-82-8		780.45	780.45	70	892	962.00	46.01	823.45	869.46	5.25	645	650.25	3262.16
18	Propane	74-98-6		4184	4184.00	238.96	2914	3152.96	256.17	5489	5745.17	528	2000	2528.00	15610.13
19	Acetylene	74-86-2		14.96	14.96		79	79.00		142.32	142.32	0		0.00	236.28
20	1,1,1,3,3-Pentafluoropropane	460-73-1				39		39.00			0.00	0		0.00	39.00
21	Trichloroethane	71-55-6				14.7		14.70	24.38		24.38	11.87		11.87	50.95
22	Isobutane	75-28-5				85.05		85.05	43.28		43.28	20.26		20.26	148.59
24	DICHLORODIFLUOROMETHANE	75-71-8				0.63		0.63			0.00	0		0.00	0.63
25	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE	76-13-1				0.83		0.83	60		60.00	0		0.00	60.83
26	ISOPENTANE	78-78-4							11.52		11.52			0.00	11.52
27	1,1,1,2-TETRAFLUOROETHANE	811-97-2				302.11		302.11	149.39		149.39	342.43		342.43	793.93
28	R-507	Mixed Refrigerant				475	425	900.00			0.00	400		400.00	1300.00
29	R-410A	Mixed Refrigerant		125	125.00	4	100	104.00			0.00	303	375	678.00	907.00
30	R-22	Mixed Refrigerant		60	60.00	8760	750	9510.00	1		1.00	420		420.00	9991.00
31	R-23	Mixed Refrigerant				26950		53.70			0.00			0.00	53.70
32	R-404A	Mixed Refrigerant		96	96.00					75	75.00			0.00	171.00
33	R407C	Mixed Refrigerant		50	50.00	50	50	100.00			0.00			0.00	150.00
34	R-134A	Mixed Refrigerant								100	100.00	209.7	240	449.70	549.70
35	R-123	Mixed Refrigerant									0.00	3753		3753.00	3753.00

Plans and Projected Performance

SRS will continue to track and report purchases by the method described before using data generated based on the SRS inventory via "CHMEMS" and Direct Deliveries by "PeopleSoft" for ALL pertinent chemicals (Mixed Refrigerants, Fluorinated Gases and Fugitives) by CAS# where applicable or by name for the Mixed Refrigerants that contributes in the products in any shape or form using a new software CHMEMS. It includes ALL Mixed Refrigerants, Fluorinated Gases and Fugitives that could be a part of the products in any percentages or purchased as 100% (Pure form). The weight (LBS.) calculations are performed based on the percentage contribution in the product. In addition, compressed gas cylinder management program changes will adopt barcoding of this class of commodity some time in 2021.

The SRS will continue to comply with the regulatory requires contained in 40 CFR 82 Subpart F (Protection of Stratospheric Ozone – recycling and emissions reduction). A portion of these regulations that became effective 1/1/2019 will require the site to report to the EPA any appliance with 50 pound or greater full charge of refrigerant that has leaked 125% or more of its full charge in CY2019. This report to the EPA will include a description of efforts to identify leaks and repair the appliance. The site also performs and documents periodic leak inspections, as required by 40 CFR 82.157(g), for any appliance with 50 pound or greater charge that exceeded it regulatory leak rate thresholds.

Electronic Stewardship

Performance Status

Acquisition

SRS acquired 3,725 Desktops and Laptops in FY2020. A total of 1,717 PC's were excessed from this program. The accelerated replacement effort which was to be completed in FY2020 to decrease the number of older PCs in service was affected by our needed response to SRS's COVID-19 teleworking needs.

Electronics Acquisition

Goal: 100 percent of eligible electronics procurements must be environmentally sustainable (e.g. EPEAT)
Interim Target (FY 2020): 95.0%

Current Performance: 99.2%

	EPEAT Acquired	Total Acquired	%
Monitors	2,877	2,904	99.1%
Computers	4,127	4,130	99.9%
Imaging Equipment	674	689	97.8%
Televisions	991	1,020	97.2%
Total Acquired	**9,329**	**9,403**	**99.2%**

Power Management

Power management is 100% for electronic acquisition of eligible computers (PCs and laptops) and monitors. SRS has a total of 11,798 computers (PCs and laptops), 17,925 monitors and 534 printers which also has a power management of 100% for all eligible.

Printer Duplex

Duplex printing current performance is 100% of eligible printers. SRS utilizes a subcontract with Xerox for Printer/Copier/Scanner multi-function devices and are required to use a baseline that requires duplex and all other purchased printers are required to be duplex capable.

Electronic Recycle (End-of-Life)

The SRS recycled 100% of used electronics reused (donated to schools or non-profit organizations) or recycled using authorized recycling companies. A total of 65.3 metric tons of scrap electronics was recycled to UNICOR.

SRS donated miscellaneous computer parts (monitors, mice, stands, power strips, speakers, keyboards – 7,542 units) to several local schools with an estimated value $552,660.

Servers

Establish a power usage effectiveness target in the range of 1.2 - 1.4 for new data centers and less than 1.5 for existing data centers. A total of 9 data centers have been identified. The two (2) primary site data centers that are reported, the power usage effectiveness are as follows: Central Computing Facility (CCF) 2.10 PUE and the Backup Computing Facility (BCF) 1.61 PUE. The nine (9) data centers (building / facilities) do not have electrical meters; therefore, determining the actual power consumption (PUE) isn't viable at the time.

Plans and Projected Performance

The site will continue an effort to move from a 80%/20% desktop/laptop to a 20%/80% desktop/laptop ratio over the next five years. This will enable more telework enabled employees to support any other issues that would require teleworking to be the primary method of work.

SRS will continue acquire EPEAT Gold where available, utilize power management where applicable and recycle 100% of end-of-life electronics

Resilience

Performance Status

SRS utilizes the Active Risk Manager (ARM) tool to manage the risks and opportunities of each organization using strategic portfolio views and configurations. Using ARM, the site prioritizes risks and opportunities against a pre-determined scoring criterion. Once these risks and opportunities have been prioritized, appropriate strategies and executable plans are put into place to manage them.

This year, the COVID-19 pandemic has given rise to many new risks and opportunities. By utilizing the ARM tool, SRS has been able to implement strategies to aid with the challenges brought on by the pandemic, such as implementing teleworking practices and establishing a dedicated response team.

The SRS Infectious Disease Response Team (IDRT) "War room" was established as the primary contact and resource to provide the latest updates and guidance regarding the COVID-19 pandemic and how it is affecting operations at the site. Operations have been reduced as a result of the pandemic and will continue to be for the foreseeable future. The IDRT provides the latest updates to the site status with regards to the pandemic and is the primary contact for potentially infected employees to contact for guidance and direction.

SRS provides support to emergency situations through the Emergency Response Organization (ERO). The ERO is responsible for providing an immediate response to any emergencies and supporting the emergency response efforts that may arise in the facilities.

Plans and Projected Performance

SRS will continue to utilize the ARM program to strategically adjust to the continuing challenges caused by the COVID-19 pandemic, as well as other organization-specific challenges. The site will continue an effort to move from a 80%/20% desktop/laptop to a 20%/80% desktop/laptop ratio over the next five years. This will enable more telework enabled employees to support any other issues that would require teleworking to be the primary method of work. This effort will reduce the number of employees working on site and thus help reduce the possibility of an outbreak occurring in the facilities. The IDRT will remain the primary contact for employees to utilize for more information and guidance with the changing COVID-19 updates.

SRS will continue to utilize the ERO to provide support when emergencies arise. The ERO will remain adequately staffed to ensure proper responses and actions can occur for any given emergency that may arise. The site maintains several Emergency Planning manuals containing more than 30 procedures. The manuals deal with hazardous material releases, weather events,

earthquakes, etc., and the proper responses to those specific events. These procedures are frequently updated to incorporate new information and Lessons Learned from drills and actual events. SRS will continue to be pro-active in maintaining these emergency procedures and conducting drills to measure their effectiveness.