



Virginia Department of Corrections

Infrastructure and Environmental Management

Operating Procedure 302.3

Sustainability Plan

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REVIEW

The Content Owner will review this operating procedure annually and re-write it no later than three years after the effective date.

COMPLIANCE

This operating procedure applies to all units operated by the Virginia Department of Corrections (DOC). Practices and procedures must comply with applicable State and Federal laws and regulations, American Correctional Association (ACA) standards, Prison Rape Elimination Act (PREA) standards, and DOC directives and operating procedures.

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DEFINITIONS

B2 - A blend of 2% biodiesel and 98% petro-diesel.

Biodiesel - A domestic, renewable fuel for diesel engines derived from natural oils like soybean oil.

Biofuel - A fuel that is derived from a renewable source, such as crops, animal waste, etc. Biodiesel is a biofuel.

Construction and Debris Waste (C&D waste) - Building and demolition waste.

Cooling and Heating Seasons - Summer months that require cooling are typically those that fall between June and September. The months that require heating are usually between October and May. During transitional or “shoulder” periods, there will be days when air-conditioning or heating is not provided to buildings even if the outside air temperature may require it. HVAC systems do not allow facilities and offices to alternate between cooling and heating on a daily basis. However, during these “shoulder periods”, the outside air temperature is usually mild, and space temperatures are expected to be within an acceptable range.

Department of Environmental Quality (DEQ) - Virginia state agency tasked to protect human health and the environment; this agency oversees the implementation of Virginia’s Solid Waste Management regulations.

Disposable - Products designed to be cost effective and provide short-term convenience rather than medium to long-term durability; something meant to be thrown away after a single use, such as a paper cup, plate, or napkin.

E85 - A blend of 85% ethanol and 15% gasoline that is the most commonly available blended fuel for use in flex-fuel vehicles; ethanol is a corrosive alcohol that will degrade common steel and rubber fuel system parts on conventional vehicles. Flex-fuel vehicles are manufactured with synthetic and/or composite fuel system parts that can tolerate high levels of alcohol.

Energy Star Rated Appliance - An appliance with an electronic rating for superior energy efficiency.

Environmentally Friendly Inks - Inks that are made from renewable raw materials, contain minimal volatile organic compounds, are non-toxic, and allow for recycling of the products they are printed on.

Facilities - For the purposes of this Sustainability Plan, the term facilities is all encompassing, and includes all institutions, offices, and buildings that are under the purview of the DOC.

Green Diesel Fuel - Fuel made from agricultural plants or the waste or residue from the production, processing, or marketing of agricultural products.

Grey Water - Waste water generated from domestic activities such as laundry, dishwashing, and bathing, which can be recycled on-site for uses such as landscape irrigation. This wastewater contains no fecal matter (human feces) and differs from toilet water, which is designated as sewage or black water to indicate it contains human waste.

High Pressure Sodium Lamp (HPS) - A gas discharge lamp that uses sodium in an excited state to produce light; HPS lamps are widely used for streetlights and security lighting.

LED (light-emitting diode) - Type of lamp or bulb with a lifespan and efficiency several times greater than incandescent and fluorescent lights.

LEED (Leadership in Energy and Environmental Design) - An internationally recognized certification system designed to determine whether or not buildings are considered green or sustainable. Put forth by the U.S. Green Building Council, LEED uses strategies aimed at improving performance across all the metrics including energy savings, water efficiency, CO2 emissions reduction, improved indoor environmental quality, and stewardship of resources and sensitivity to their impacts. The ratings are broken down into Certified, Silver, Gold, and Platinum on a multiple point scale. Within the rating system, buildings and institutions are graded on sustainable sites, water efficiency, energy & atmosphere, materials & resources, indoor environmental quality, and innovation & design process.

Rain Barrel - A barrel used as a cistern to hold rainwater.

Sustainability Administrator - The employee appointed or assigned the duties and responsibilities to implement and enforce the Department of Corrections Sustainability Plan; the DOC Sustainability Administrator has the authority to enforce the plan.

“Virginia Green” - Virginia’s statewide program that encourages green practices throughout the state’s tourism industry to work to reduce the environmental impact of Virginia’s tourism industry, whereby participating tourism-related business are actively reducing their environmental footprint by meeting green core activities designed to reduce harmful impacts on the environment.

Volatile Organic Compound (VOC) - Organic chemical compounds which have significant vapor pressures and can affect human health and the environment.



PURPOSE

This operating procedure establishes a sustainability plan to promote conservation and efficiency in Department of Corrections (DOC) operations while reducing environmental impact and dependence on imported fossil fuels and other non-renewable resources. This operating procedure will also serve to meet the energy reduction and reliance goals set by the State Legislature.

PROCEDURE

- I. Sustainability Initiatives
 - A. DOC has examined its operations and the available strategies and technologies that promote recycling, energy and water conservation, pollution reduction and prevention, and utilization of renewable energy as an alternative to fossil fuel use and for independence from the energy grid. This operating procedure provides strategies for accomplishing these goals. (5-ACI-1A-04; 4-ACRS-7D-01-1; 4-APPFS-3D-05-1; 2-CO-1A-06-1; 1-CTA-1A-02-1)
 - B. Using forms provided by the Sustainability Administrator, all institutions and Community Corrections facilities must submit a quarterly Sustainability Report by the last day of the month following the end of the quarter. This report collects energy, water, waste, compost, and recycling data which is used to make informed decisions regarding sustainability initiatives within each location. The report will be filed in the digital Master Environmental Health and Safety folder (Master EHS) located on the facility shared drive and referenced in Operating Procedure 302.2 *Environmental Management Plans*.
 - C. Each facility must enroll in the ENERGY STAR Portfolio Manager by January 1, 2025. Solar and wind operations will be installed at department facilities, as appropriate and approved. Overall, the DOC must reduce the agency wide energy/natural gas/LP usage by 15% compared to 2006 levels by January 1, 2026.
- II. Energy Use Requirements (See Attachment 1, *Energy Conservation Plan*, & Attachment 3, *VADOC 5-Year Strategic Energy Management Plan* (EnMP)).
 - A. DOC will reduce overall agency wide energy/natural gas/LP usage by 15% compared to 2006 levels by January 1, 2026.
 - B. DOC will develop a grassroots energy savings approach for all facilities and offices that requires the following:
 1. When not in use, computers will be put in “stand-by” mode to allow installation of network downloads and updates. Monitors, scanners, non-network printers, and other peripherals will be turned off when not in use.
 2. The addition of controls to automatically turn off or dim fixtures to appropriate levels.
 3. Education of employees, visitors, inmates, and CCAP probationers/parolees about the importance of energy use reductions.
 4. Where security allows, interior and exterior lights should be turned off when not needed.
 5. Where security allows, persons must turn off lights when leaving their work areas and when offices are closed.
 - C. The Infrastructure and Environmental Management Unit (IEMU) will ensure compliance with the VADOC 5-Year Strategic Energy Management Plan to ensure adherence to all requirements within the:
 1. Energy Plan
 2. Executive Order 43 (2019)
 3. Virginia Clean Economy Act (VCEA, 2020)
 4. Executive Order 31 (2014)



5. VA Code Section 2.2-604.2, *Designation of officials; energy manager*
 6. ACA Standard (5-ACI-1A-04)
- D. Heating and cooling systems, whether in leased space or in state owned buildings should always be actively managed in a manner that minimizes energy consumption and will be retro commissioned as needed.
1. Space temperatures at all facilities, offices, and other locations will be targeted ($\pm 2^\circ$) for 68° F through the heating season, typically October through May, and 76° F through the cooling season, typically June through September, during occupied hours. This is an 8° F dead band where PLU would be neither heating nor cooling the building, thus saving energy. The target temperatures are within the range that is acceptable to 80 percent of the building occupants per ANSI/ASHRAE Standard 55, Thermal Environmental Conditions for Human Occupancy. This is also the recommended range of temperature control as provided by OSHA and the U.S. Department of Labor.
 2. The unoccupied heating set point will be 55° F through the heating season and the unoccupied cooling set point will be 82° F through the cooling season.
 3. During off-hours and weekends, the temperatures will be adjusted to be as low as 55° F during winter and as high as 82° F during summer. The central fan systems may be shut off or cycled on and off to maintain these adjusted setback temperatures and conserve energy. Each building will be unique as to the time required to bring a building back to the occupied hours' set point. Cooperation is required of building occupants to accurately predict and adjust this time to maintain comfort levels. This is achieved based on active input to Facilities.
 4. Space heaters and portable A/C units are prohibited due to fire code, safety considerations, and energy conservation mandates. Facility Management can provide (where deemed necessary) approved space heaters only in those limited instances where the building systems cannot provide temperatures within acceptable variation of the ranges stated above. Employee-owned energy efficient table or pedestal fans are permitted and considered acceptable solutions to increase a sense of comfort by improving air movement (must have factory Energy Star sticker and rating posted on the item).
 5. Critical locations such as computer centers, laboratories, and other areas with sensitive equipment are exempt from this procedure. Areas that are served by the same system as the exempt spaces will be affected and will experience similar temperatures.
- E. DOC will remain committed to constructing new facilities and renovating existing facilities in an energy and environmentally efficient manner. All remodels and new construction will have energy efficient design in all new construction and renovation. IEMU will:
1. Obtain Leadership in Energy and Environmental Design (LEED) certifications where feasible during construction and renovation projects of departmental facilities by working through the IEMU.
 2. Provide, as part of bidding and contracting by all unit's minimum efficiency standards for frequently purchased items such as HVAC units.
 3. Project Managers and Buildings and Grounds staff will review all designs to ensure energy efficiency and low lifecycle costs.
 4. Publicize green building practices to staff, inmates, CCAP probationers/parolees, and the community.
 5. Install solar panels for hot water generation or electric generation where feasible and work with utility companies to take advantage of programs offered to assist with energy efficiency improvements.
- F. Review energy intensive operations within the department, VCE, and Agribusiness to identify operations where new energy reducing equipment investment can have its greatest impacts as per the EnMP.
- G. Require Building and Grounds staff to conduct informal annual energy reviews of facilities and share with both institutional leadership and IEMU with low-cost recommendations to improve facility energy efficiencies.

- H. Energy usage will be reported to IEMU monthly from institutions. IEMU staff will audit energy usage monthly and will report all variances to Wardens, Regional Administrators (RAs) and IEMU leadership for investigation and prioritization.
- I. Incandescent and fluorescent light bulbs must NOT be purchased by DOC facilities. All light bulbs will be replaced with LED light bulbs (including high-mast and pole lighting) and/or units converted to LED compatible units.
- J. Reducing excess light at night is encouraged. The following are suggested lighting guidelines from the International Dark-Sky Association:
 - 1. All pole mounted lights should be shielded so that no light is emitted beyond the horizontal plane.
 - 2. All wall mounted lights should be shielded whenever possible.
 - 3. High mast lights should be limited to 40-60 feet tall, and all fixtures should be fully shielded with flat horizontal lenses with no tilt.
 - 4. Building mounted lights at egress points should be equipped with energy efficient LED bulbs with cut off fixtures to illuminate the ground.
- K. Installation of alternative energy sources is encouraged, such as solar panels, geothermal, wind turbines, biomass, etc. The department will look at facilities at which land or rooftop space can be dedicated for renewable sources and procure those sources through outright purchase or Power Purchase Agreements (PPOs) or Public Private Partnerships (PPPs). All energy provided to DOC should be net zero emissions by 2045.
- L. The Energy & Environmental Administrator, Sustainability Administrator, and Utility Plant Administrator will conduct quarterly meetings with stakeholders to review conservation initiative projects and compliance.

III. Water Use Requirements (See Attachment 2, *Water Conservation and Management Plan*)

- A. Plumbing leaks must be repaired immediately.
- B. Water saving devices will be installed when possible or determined to meet the business need of the Department by IEMU personnel.
- C. Low flow toilets and shower heads will be installed when possible and where security is not jeopardized.
- D. Minimize use of water for irrigation through reduced frequency of watering, timing of watering, and the selection of low water-use landscaping such as drought resistant grass, plants, shrubs, and trees.
- E. Utilization of rain barrels and grey water for irrigation, vehicle washing, etc. is encouraged.

IV. Recycling and Waste Reduction Requirements - Executive Order 17 (2022), *Recognizing the Value of Recycling and Waste Reduction*

- A. Facilities and their concessioners must develop means to increase awareness of the importance of recycling, better methods to capture recyclable materials, and encourage the use of post-consumer recycled (PCR) products and biodegradable materials.
- B. The agency is to work with Department of General Services (DGS), building property owners, and waste management or recycling companies to ensure access to recycling programs for collected materials.
- C. Facilities must notify employees of recyclable material collection areas through clearly visible signage posted in collection areas. The signage must also include information related to the value of waste diversion.
- D. Facilities must recycle used motor oil and kitchen grease. Motor oil and kitchen grease must be clean and free of debris and hazardous materials. The facility will train inmates and personnel on proper procedures



for disposing of these to ensure compatibility with recycling requirements.

E. Food Waste

1. Facilities are required to compost kitchen and food waste or dehydrate this waste in a commercial food dehydrator.
2. Landscape maintenance waste should be composted as practicable.
3. Additional food waste diversion initiatives are encouraged, particularly in conjunction with community partners and neighboring institutions.

F. All facilities must establish a “Household” Recycling Program.

1. To include but not limited to the following:
 - a. Paper - office, printer, mixed, news, magazines, phone books, books, manuals
 - b. Plastic - bottles, pails, jugs (#1 and #2)
 - c. Aluminum cans, foil
 - d. Cardboard
 - e. Stretch Film
 - f. Tin/steel cans
2. Collection containers must be provided for all recyclable and compostable materials for inmates or CCAP probationers/parolees, employees, and all others who must use them. These containers will be placed in areas that are frequented by these individuals and are easily accessible and labeled for the ease of use.

G. All facilities and offices must adhere to their written and executed Environmental Management Plan for the disposal of batteries, printer cartridges, pallets, scrap metal, and tires. Refer to OP 302.2, *Control of Hazardous Materials*.

H. Facilities, Capital Construction, VCE, Agribusiness, IEMU, and DOE must recycle construction and debris waste when applicable from new construction, demolition, renovations, or instructional programs.

I. Facilities and offices must recycle the following equipment in accordance with Operating Procedure 260.2, *Surplus Property*. Any device capable of storing data must have all data removed from all electronic media resources in accordance with Operating Procedure 310.2, *Information Technology Security*.

1. Computers, monitors
2. Computer keyboards, mice, speakers
3. VCR, CD, DVD players
4. Stereos, radios, electric clocks
5. Printers, copiers, scanners, fax machines
6. Televisions
7. Home and office phones
8. Cell phones and PDAs
9. Small appliances (microwaves, toasters, etc.)
10. CDs and DVDs
11. Medical equipment

J. Institutions and Community Corrections facilities will establish recycling positions for inmate or CCAP probationer/parolee workers to separate and sort recycled materials to ensure the greatest volume, cleanest



stream, and highest financial return for the program.

V. Travel Requirements

- A. See Operating Procedure 240.1, *Travel* for a complete review of travel procedures and restrictions.
- B. Video conferencing and conference calls must be used in lieu of in-person meetings when effectiveness is not compromised.
- C. Alternative fuels should be purchased where available and as acceptable for the type and fuel requirements for the vehicle you are driving.
- D. Telecommuting should be encouraged, wherever possible, to the fullest extent possible in accordance with - COV §2.2-2817.1, *State agencies to establish alternative work schedules; reporting requirement* which requires each state agency to pursue a goal of not less than 20 percent of its eligible workforce telecommuting.
- E. Citizens and businesses should be able and encouraged to engage in electronic transactions with the Commonwealth rather than having to travel to state offices.

VI. Building Construction and Location

- A. See the VADOC 5-Year Strategic Energy Management Plan for additional information on new and renovated building energy and conservation considerations.
- B. Construction of a new building greater than 5,000 gross square feet in size, or renovating such a building where the cost of renovation exceeds 50 percent of the value of the building, must meet Department of General Services (DGS), Division of Engineering and Buildings “*Virginia Energy Conservation and Environmental Standards*” for energy performance and water conservation.
- C. The construction of any new building or renovation of any existing building, to include the installation or upgrading of HVAC must take into consideration the VADOC 5-Year Strategic Energy Management Plan as well as mitigation measures in the *Statewide Watershed Implementation Plan* during project planning, budgeting, and construction. Cost of implementation of energy saving features, innovate design, water runoff reduction, water conservation, or other energy savings measures will not be considered a barrier to their use or implementation.
- D. When leasing space, DOC must consider access to public transportation. When practicable, new offices and facilities should be located within a quarter mile of public transportation access and in locations that are pedestrian and bicycle accessible.
- E. When leasing space, DOC must actively seek buildings that meet energy Star, LEED, or Green Globe standards.
- F. All building activities, and those activities that result in increased impermeable surfaces on DOC property, must adhere the Virginia Watershed Implementation Plan. This requires project coordination with the Sustainability Administrator for recommendations on how to comply with this plan.
- G. DOC is committed to constructing new facilities and renovating existing facilities in an energy and environmentally efficient manner. DOC will:
 - 1. Obtain Leadership in Energy and Environmental Design (LEED) certifications during construction and renovation projects of departmental facilities where practicable.
 - 2. Project Managers and the Sustainability Administrator will review all project plans for new construction and/or major renovations to include budgets requests and designs to ensure energy efficiency and low lifecycle costs.
 - 3. Publicize green building practices to staff, inmates, CCAP probationers/parolees, and the community.
 - 4. Install solar panels and/or additional renewable energy sources for hot water generation or electric



generation where feasible.

5. Ensure that new construction, renovations, wastewater, and farm practices adhere to the Virginia *Watershed Implementation Plan*.

VII. Procurement Standards

- A. For additional information on procurement standards, see Operating Procedure 260.1, *Procurement of Goods and Services*
- B. All DOC units must utilize commodities and services that:
 1. Reduce or eliminate the health and environmental risks from the use or release of toxic substances.
 2. Minimize risks of the discharge of pollutants into the environment
 3. Minimize the volume and toxicity of packaging (purchase minimally packaged goods)
 4. Maximize the use of recycled content and materials composed of sustainably managed renewable resources (purchase reusable items over disposable ones and recycle that which cannot be reused)
 5. Maximize the use of equipment that is durable, and therefore, can be used for a long time without having to be replaced.
 6. Maximize the use of remanufactured components.
 7. Purchase products where feasible that are Green Seal approved and contain low or zero Volatile Organic Chemicals (VOCs) or chemicals known to cause cancer and/or reproductive harm where other viable alternative exist.
 8. Purchase or lease appliances with an approved Energy Star Rating (air purifiers, clothes dryers, clothes washers, commercial clothes washers, dehumidifiers, freezers, refrigerators and coolers, space heaters, fans, LED light bulbs, televisions, commercial kitchen products, ventilation fans, HVAC units, water heaters, etc. For a full list of items that can be Energy Star rated please see: <https://www.energystar.gov/products>).
 9. Meet the minimum energy efficiencies outlined by IEMU for procurement of common goods.
- C. DOC facilities and offices must no longer purchase any bulbs that are not LED and will convert all existing fixtures to LED as their life cycle wanes.
- D. DOC facilities and offices should purchase fuel-efficient, low-emission vehicles and lease compact, fuel-efficient, and low-emission vehicles (especially for Roving Patrol).
- E. Fleet vehicles should maximize biofuel use by utilizing E85 and B2 blends
 1. Facilities that independently purchase fuel must use E85 and B2 fuel sites to the maximum extent reasonably possible.
 2. DOC will procure diesel fuel containing, at a minimum, two percent, by volume, biodiesel fuel or green diesel fuel, as defined in COV §2.2-1111, *Purchases to be made in accordance with the Virginia Public Procurement Act (§ 2.2-4300 et seq.) and regulations of Division; exempt purchases*.
 3. This requirement will only apply to procurements of diesel fuel for use in on-road internal combustion engines and #2 fuel burned in a boiler, furnace, or stove for heating, and will not apply if the cost of such procurement exceeds the cost of unblended diesel fuel by five percent or more.
- F. Paper used by all new copiers, faxes, printers, and other such office equipment, purchased or leased, must be minimally 20% post-consumer recycled.
- G. Paper procured must be 100% recycled content except where equipment limitations or the nature of the document preclude the use of recycled paper.
- H. All efforts should be made to publish reports in electronic form only.



- I. If printing is necessary, staff will maximize the use of post-consumer recycled paper, environmentally friendly inks, and print on both sides of paper.

VIII. Conferences, Trainings and Meetings

- A. In selecting sites for conferences and other meetings that are to be held at places other than DOC facilities, after complying with procurement statutes and regulations, observe the following guidelines:
- B. Conferences and meetings not held in state owned offices, buildings or facilities should be held at “Virginia Green” certified facilities if such use will meet the needs for the meeting, will not increase travel distances, and is not cost-prohibitive.
- C. Agency employees will carpool to off-site trainings and meetings.
- D. Facilities will minimize the use of paper during conferences, trainings, and meetings.
 1. Avoid handouts or when handouts are necessary, they should be double-sided.
 2. Encourage electronic distribution of presentation materials or post them in an internal shared drive or website (iDOC).
- E. If disposable food containers are provided, they must be compostable or recyclable through an already established onsite recycling program.
- F. Recycling and food-waste diversion options must be considered at all events.

REFERENCES

COV §2.2-604.2, *Designation of officials; energy manager*

COV §2.2-1111, *Purchases to be made in accordance with the Virginia Public Procurement Act (§ 2.2-4300 et seq.) and regulations of Division; exempt purchases*

COV §2.2-2817.1, *State agencies to establish alternative work schedules; reporting requirement*

Operating Procedure 240.1, *Travel*

Operating Procedure 260.1, *Procurement of Goods and Services*

Operating Procedure 260.2, *Surplus Property*

Operating Procedure 302.2, *Control of Hazardous Materials*

Operating Procedure 310.2, *Information Technology Security*

Executive Order 17 (2022), *Recognizing the Value of Recycling and Waste Reduction*

Executive Order 31, *Conserving Energy and Reducing Consumption in the Commonwealth of Virginia*

Executive Order 43, *Expanding Access to Clean Energy and Growing the Clean Energy Jobs of the Future*

Department of General Services (DGS), Division of Engineering and Buildings “*Virginia Energy Conservation and Environmental Standards*”

ATTACHMENTS

Attachment 1, *Energy Conservation Plan*

Attachment 2, *Water Conservation and Management Plan*

Attachment 3, *VADOC 5-Year Strategic Energy Management Plan (EnMP)*

FORM CITATIONS

None

