Policy
Office of the Mayor
Title: Energy Management Policy for Municipal Operations
Policy Number: 7.8 **Effective Date:** 03/21/2025 Page **1** of **4**
Supersedes: x.x DATED: 3/20/2024

I. PURPOSE

The purpose of the Energy Management Policy for Municipal Operations is to reduce the consumption of energy in the City of Richmond and increase renewable energy sources, thereby reducing operating costs, improving energy resilience, mitigating climate impacts, reducing the city's vulnerability to climate change, and fostering a city culture that values environmental, social and economic sustainability as supported by the city's Office of Sustainability (OOS).

II. POLICY

The City of Richmond is dedicated to reducing energy consumption, energy costs, and greenhouse gases. Gains in efficiency and investment in renewable energy can yield significant financial and environmental benefits, and strategic management of these resources enables the cost-effective delivery of city services to the public. Per RVAgreen, the city is committed to achieving a 45% reduction in GHG emissions by 2030, below 2008 levels, and net-zero energy (i.e., total GHG emissions) by 2050. The Administrative Regulation Energy Conservation policy aligns with the goals of RVAgreen.

III. PROCEDURES

1. **Energy Use Setpoints in City Facilities.** The city shall develop and adhere to energy monitoring and analysis, lighting, heating, and cooling, and personal appliance standards to ensure setpoints are implemented throughout city facilities in accordance with Appendix A.
2. **Renewable Energy and Resilient Buildings Programs.** The city is committed to the transition of alternative and renewable energy sources for city facilities and vehicles. Similarly, the city values green construction measures in the design of new buildings and infrastructure as well as high performance in the ongoing operation and maintenance of existing facilities and assets through energy efficient retrofits. The city's Sustainable Design Standards and existing Sustainable Procurement Policy shall be adhered to.

IV. COMPLIANCE

1. See Appendix A for energy management procedures.
2. As necessary, departments are responsible for developing facility-specific Standard Operating Procedures (SOPs) and/or receiving approval for exceptions to Appendix A as applicable to implement the procedures outlined in this policy. Any requests for exceptions to this policy shall

be submitted in writing to a direct supervisor, the OOS, and the Facilities Manager. Exceptions may be granted due to unique operational considerations or infrastructure limitations.

V. RESPONSIBILITY

Every city department and employee have a responsibility to continually assess and pursue areas for municipal energy conservation in alignment with this policy.

1. Office of Sustainability (OOS)

- The OOS is responsible for managing the city's Municipal Energy Management Plan and collaborates with the Joint Energy Team (JET) to develop clean energy initiatives.
- The OOS is responsible for developing this policy and proposing revisions, setting municipal energy goals, supporting energy-related monitoring and implementation activities, and fostering a culture of innovation and resource stewardship.

2. Department Directors

- Ensure departmental participation and compliance with sustainability initiatives.
- Foster a culture of energy efficiency and sustainability.

3. Department of Human Resources (HR)

- Develop and execute trainings to inform city employees of this policy and associated procedures and roles during new hire orientation and on an annual basis for all employees. Track and enforce employee participation in trainings.
- HR, in consultation with Risk Management and through its safety manager, will support the enforcement of this policy as related to safety hazards.

4. Office of Strategic Communications and Civic Engagement (OSCCE)

- OSCCE will support energy conservation initiatives in the provision of strategic internal and, as applicable external, communications.

5. All Employees

- Participate in education and training to gain an understanding of the importance of energy reduction and this policy.
- Adhere to the standards set forth in this policy, in addition to related protocols and standard operating procedures.
- Participate in a culture of energy efficiency and sustainability.

VI. DEFINITIONS

Energy Conservation Policy Definitions	
Anti-Idling	Motor vehicle emissions make up a significant portion of most cities' emissions. Anti-idling laws aim to reduce these emissions by requiring motorists to turn off their engines when parked, stopped, or standing for more than a set amount of time.
Clean Energy	Clean energy is considered energy derived from renewable zero-emissions sources and energy saved through energy efficiency measures. Renewable energy comes from natural processes and energy efficiency reduces the amount of energy required. A clean energy economy

Energy Conservation Policy Definitions	
	powered by both renewables and energy efficiency is the most sustainable energy planning scenario.
Climate Impacts	Climate impacts include extreme heat, severe storms, and flooding.
Daylighting	Use of windows for indirect lighting.
Energy Efficient Retrofits	Retrofits for energy can include improvements or modifications that may improve energy efficiency or decrease energy demand. These have the potential to reduce operational costs and help meet market expectations for newer buildings.
Energy Performance	Energy performance Indicates the quality of a building's energy use referring to how well a building uses energy, the efficiency of the energy system, and the cost of the energy system and can be measured by Energy Use Intensity (EUI).
Energy Resilience	Energy resilience is the ability of the grid, buildings, and communities to withstand and rapidly recover from power outages and continue operating with electricity, heating, cooling, ventilation, and other energy-dependent services.
Greenhouse Gases	Greenhouse gasses are gases in the atmosphere that trap heat and warm the planet: carbon dioxide, methane, nitrous oxide, and fluorinated gases. The right proportion of GHGs keeps our planet warm enough to support life, however too many GHGs trap too much heat and temperature rises.
High-Performance Buildings	A high-performance building considers public building design, construction, and renovation programs that achieve certification using the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) green building rating standard or the Green Building Initiative's 'Green Globes' building standard or meets the requirements of VEES.
Joint Energy Team (JET)	The JET is the collaborating body for energy management for municipal operations. JET is facilitated by the city's Energy Manager. Membership in the JET includes DCAOs, Chiefs, and Department Directors or a designated Department representative(s). Independent agencies, authorities, and partnerships are welcomed and encouraged to join the JET.
LED	A light-emitting diode (LED) is a semiconductor device that glows when a voltage is applied to it. Light sources can be fluorescent tubes, optical fibers, or LEDs.
Life-cycle costing	Life-cycling costing is a method for determining the total cost of owning something over its entire life, including all costs associated with its acquisition, use, and disposal. It's also known as total cost of ownership.
Municipal Energy Management Plan	Municipal energy management plans aim to reduce their city's energy usage through a strategic plan for local government operations. The typical goal of these plans is to reduce energy consumption by practicing energy efficiency and environmental stewardship across city operations. Most of these plans work within a SMART framework.
Net-Zero Energy	Net-Zero Energy is a concept defined by the use of energy conservation, energy efficiency, and on-site renewable generation to account for 100% of a targeted building's or community's energy usage.
Non-renewable Energy	Non-renewable energy is energy that comes from natural resources that are finite and cannot be replaced quickly enough to keep up with consumption such as coal, oil, and natural gas.
Renewable Energy	Renewable energy is energy derived from natural sources that are replenished at a higher rate than they are consumed. Sunlight and wind are such sources that are constantly being replenished.
Resilient Infrastructure	Climate-resilient infrastructure is planned, designed, built, and operated in a way that anticipates, prepares for, and adapts to changing climate conditions. It can withstand disruptions caused by these climate conditions. It can include retrofits to existing infrastructure, new infrastructure, and new additional infrastructure such as sea walls.
RVAgreen	RVAgreen is the City of Richmond's equity-centered climate action and resilience planning initiative to reduce greenhouse gas emissions 45% by 2030, achieve net zero greenhouse gas emissions by 2050 and help the community adapt to climate impacts.

Energy Conservation Policy Definitions	
Social Cost of Carbon	SC-CO2 is a measure, in dollars, of the long-term damage done by a ton of carbon dioxide (CO2) emissions in a given year. This includes impacts on human health and the environment, as measured by the amount of damage done and the cost to remedy it. The US EPA estimates the current SC-CO2 to be $190 per metric ton of CO2.
Sustainable Design Standards	Sustainable design standards are adopted building construction guidelines that set projects up for significant emissions reductions, high performance, better indoor air quality, healthier and sustainable materials, and improved equity and accessibility across city-owned buildings, capital projects, planning, and ongoing building operations.
Transportation Demand Management	Transportation Demand Management (TDM) focuses on understanding how people make their transportation decisions and helping people use the infrastructure in place for transit, ridesharing, walking, biking, and telework. It seeks to ensure that the design of transportation and physical infrastructure naturally encourages alternatives to driving.
Triple Bottom Line Costs	Triple bottom line costs is a method of assigning financial values to financial, social, and environmental factors that do not have an assigned market value, such as service interruptions to customers, noise, pollution, traffic delays, community aesthetics, consumer confidence, environmental damage, public recreation impacts, decreased property values, expanded habitat, benefits to the community, and public health and safety risks.
Vacancy Sensor	A vacancy sensor is a light sensor set to vacancy mode requiring the light to manually be turned on and will automatically turn the light off after a set time without motion detected in the room.
Virginia Energy Conservation & Environmental Standards (VEES)	VEES are a series of conservation and environmental standards in place to guide construction and new development in Virginia.
Vulnerability to climate change	Vulnerability to climate change encompasses physical, ecological, and social aspects that stem from increased extreme weather events, rising temperatures, changing precipitation patterns, sea level rise, and other aspects of climate on which the environment and human systems depend.

I. REGULATION UPDATE

Modifications to this policy shall be the responsibility of the Department of Human Resources under the advisement of the Chief Administrative Officer.

Approval

INTERIM CHIEF ADMINISTRATIVE OFFICER	**MAYOR**
4/4/25	4/9/2025
Date	**Date**

Appendix A – Energy Management Policy

Each year the city uses significant amounts of energy to provide services to the community. Energy is used in the forms of electricity, natural gas, diesel fuel, and gasoline in the operations of municipal buildings and facilities, utility systems, vehicles, and equipment with significant financial and environmental ramifications. Annual expenditures for energy exceed $25 million per year[1] and the use of non-renewable energy results in the release of greenhouse gases (GHG), which contribute to climate change.

1. Energy Monitoring and Analysis

The city must be able to accurately measure and analyze its energy consumption to track progress in efficiencies and make informed decisions about how to meet long-term strategic goals. With a detailed understanding of the sources of energy being utilized, the nature of consumption, the timing of consumption, and the ability to alter that consumption, city leadership can make responsible decisions regarding energy procurement and consumption. Life-cycle costing, the social cost of carbon, and return on investment of physical improvements for energy consumption reduction will provide a more accurate cost analysis.

The implementation of the Joint Energy Team (JET) has provided the mechanism needed for all departments to share in the responsibility of energy management and partner in strategic planning for initiatives related to buildings, vehicles, and energy operations. This collaborative effort enables all employees to participate in the institutionalization of sustainability, to mirror the city values of efficiency, equity, and innovation, and to lead the community by example.

1.1 Tracking: The Office of Sustainability (OOS) will maintain accurate records of energy consumption, costs, and related greenhouse gas emissions (GHGs).

1.2 Analysis: The OOS in collaboration with the JET will track the efficiency and cost effectiveness of energy usage by government resources and provide the necessary analysis of triple bottom line costs and benefits of energy-saving measures to inform decision-making related to energy initiatives.

1.3 Informed Decision-Making: Continuous improvement of the energy performance of city buildings, facilities, infrastructure, utility systems, transportation, streetlighting, and traffic management systems, equipment, motors, and vehicles is integral to the city's culture. All departments, divisions, and agencies of the city will incorporate energy efficiency and renewable energy into facilities planning and management as well as the procurement of new equipment, materials, and supplies. This effort will provide a balanced approach to conserving energy with limited resources and competing priorities and will be practiced by all city employees through collaborative decision making, partnerships, and communications in the city's operations.

[1] Municipal energy expenditures for natural gas, electricity, generator fuel, diesel fuel, and gasoline usage exceeded $25M in 2024

2. Lighting

Lighting is an essential aspect of the municipal work and service delivery environment in and around city facilities; however, its use should be managed intentionally to serve its function while conserving energy to the greatest extent possible. Lights not only consume electricity, but also give off heat that places an additional load on the air conditioning equipment and thereby increases the use of electricity necessary to cool the room. Lighting efficiency can be achieved by following the below expectations:

2.1 Daylighting: Natural lighting should be used where appropriate and to the maximum extent practicable.

2.2 Employee Responsibility: Where manual light switches are in use, all employees must turn off lights when space is not in use and continuous lighting is not required for safety reasons.

2.3 LED Retrofits: As lights are replaced, they shall be replaced with LED bulbs by the department responsible for maintaining the lights.

2.4 Vacancy sensors: As lighting systems are installed, updated, or replaced, vacancy sensors shall be installed in occupied spaces except where continuous lighting is required. In spaces that are occupied sporadically, such as plant facilities and warehouses, vacancy sensors shall not be used and instead a manual on/off switch must be installed for safety reasons.

2.5 Lighting Adjustments: In larger common spaces, lighting systems shall be modified to automatically adjust brightness based on available ambient light.

2.6 Outdoor lighting: Departments responsible for operating and maintaining lighting in outdoor spaces, such as a ball field, street lighting, or exterior building lighting, shall develop SOPs regarding operating hours and other measures to conserve energy while meeting service and safety needs. Outside lighting should be off during daylight hours.

3. Heating and Cooling

3.1 Temperature Setpoints: All city facilities shall adhere to the heating and cooling setpoints outlined below.

	Occupied Hours		Unoccupied Hours	
	Cooling Season	**Heating Season**	**Cooling Season**	**Heating Season**
Min. temp (F)	72	68	77	60
Max. temp (F)	75	72	80	63

3.1.i *Seasonal Schedules* - The cooling season is March 15 through October 14 and the heating season is October 15 through March 14.

3.1.ii *Occupied/Unoccupied Hours* - Occupied hours are those regular hours of operation as determined by Department Directors and confirmed with the Facilities Maintenance Manager. Unoccupied hours are all hours outside of regular hours of operation. Heating,

ventilation, and air conditioning (HVAC) equipment shall be set to unoccupied settings when the space they condition are unoccupied.

3.1.ii *Exceptions* - Any facilities unable to adhere to the established setpoints shall be reported to the JET for prioritization of future enhancements. Any deviations from these settings must be approved by the Facilities Manager after consultation with the Department Director in order to better understand specific use cases and provide a consistent approach to energy management throughout city facilities.

3.2 Windows and Doors: Exterior windows and doors as well as interior windows and doors between conditioned and non-conditioned spaces shall remain closed when the HVAC system is operating except when they must remain open for safety reasons.

3.3 Fans: Ceiling fans should be operated in all areas that have them during occupied hours. All non-essential exhaust fans shall be turned off when the space they exhaust are unoccupied.

4. Personal Appliances

4.1 Space Heaters: Personal space heaters are not permitted in the workplace. The use of space heaters has created an excessive demand of electricity causing circuit breakers to trip and other unintended consequences. Heaters also create additional safety and fire hazards. city safety officers will inspect facilities periodically and will check for space heaters, which may be confiscated if posing a safety hazard. Employees will be held responsible for damages caused by space heaters in the workplace.

4.2 Other: All other personal appliances which use energy, including but not limited to fridges, toasters, microwaves, hot plates, and fans, shall be pre-approved by direct supervisors and Facilities Maintenance. After installation, Risk Management shall check for safety and may require the removal or modification of the appliance.

4.3 Office Equipment: All PCs, office equipment, and data centers will have appropriate energy saver settings enabled. Department of Information Technology is responsible for configuring devices and equipment.

- Work with the Energy Management Program to achieve Joint Energy Team approved annual energy goals.
- Review their respective energy consumption annually and bring concerns to the attention of the city's Energy Program Manager for resolution.
- Align the city's Annual Budget and Capital Improvement Plan with the city's renewable energy, Greenhouse Gas reduction, and energy efficiency goals.
- Facilitate collaboration between the city and external organizations that receive significant funding from the city for the construction or maintenance of facilities, equipment, and vehicles, to promote energy efficiency.