

## Introduction

The City of Alexandria has ambitious goals included in the Environmental Action Plan 2040<sup>1</sup>. Achieving those goals requires a shared commitment from the community, developers, builders, and design community. This update to the Green Building Policy is one more step on the pathway to a carbon-free, sustainable community.

The current Green Building Policy, adopted in 2019, established requirements that relied upon third-party certification programs. This policy was successful in elevating the sustainability of impacted developments. However, the use of third-party certifications introduced levels of uncertainty, and created a broad focus on sustainability, often at a higher cost while not meeting the key intent of reducing energy use and creating more resilient buildings.

The 2025 Policy Update provides a narrower set of requirements, focusing specifically on improving air quality, reducing environmental impact, and ensuring that developments add to, rather than negatively impact, the City's utility and community resilience. The Policy achieves this with a significant focus on Energy Use Intensity (EUI), renewable energy generation, and building electrification.

This update is intended to provide clear guidance on what outcomes the City expects in new developments, to create more regulatory certainty, and to reduce unnecessary costs for the sake of certification.

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<sup>1</sup> The City of Alexandria's Environmental Action Plan 2040: <https://www.alexandriava.gov/eco-city-alexandria/environmental-action-plan-2040>

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## ***I. Policy Application***

New private development and major renovations that require a Development Site Plan (DSP) or a Development Special Use Permit (DSUP) are subject to comply with the Green Building Policy. The 2019 Green Building Policy will be sunset on September 30, 2025. The 2025 Green Building Policy is in effect for DSP and DSUP applications submitted on or after October 01, 2025. DSP and DSUP applications submitted between June 30, 2025 and September 30, 2025 may opt to comply with either the 2019 Green Building Policy or the 2025 Green Building Policy.

For flexibility considerations, see **Section 5, Compliance Option 4: Flexibility Requests**.

## ***II. Compliance Option 1: Standard***

### **a. Energy Use Intensity**

Energy Use Intensity (EUI) is a metric used to measure the energy efficiency of a building. It represents the amount of energy consumed per unit of gross floor area over a specific time, typically expressed in energy use per square foot (sq. ft.) per year.

Buildings with lower EUIs increase grid resiliency, help lessen utility burden, and contribute to improved regional outdoor air quality for Alexandria's residents by avoiding fuel combustion required for increased electricity demand.

Site EUI targets by property type are shown in Table 1 below. Predictive modeling shall be used to calculate annual energy use in accordance with ASHRAE 90.1-2010, Appendix G. In lieu of 90.1-2010, ASHRAE 90.1-2019, Appendix G may be used. The annual energy use shall include all energy used for the building systems and its anticipated occupancies.

*Table 1. Site EUI by Property Type*

<b>Property Use</b>	<b>Site EUI Target</b>
Single unit residential	31
Multi-unit residential	38
Mixed use	Determined based on a ratio of the building's property use types
Commercial/office	40
Hotel	83
Retail	40
Restaurants	289

**For property types not listed in Table 1**, the project's Site EUI target should be determined using local benchmarked EUIs accessed using the Department of Energy's [Building Performance Database](#) (BPD).

Once a building type is identified, a filter may be created under the ‘Building Classification’ tab. The location should be limited to Maryland, the District of Columbia, and Virginia. If more data points are needed, the geography may be expanded to Climate Zone 4A (Baltimore, MD). Limit the ‘Year Built’ to 2010 and later. Once the desired building type and observations are identified, then find the median site EUI for the building type. The project should aim to demonstrate an EUI which is 15% lower than the median for that building type.

## **b. Renewable Energy**

Generating renewable energy locally promotes lower operating costs, local grid stability, job creation and skill training, energy independence, and greenhouse gas emission reductions, helping to mitigate climate change and reduce air pollution within the City of Alexandria.

All buildings shall be designed to be solar-ready and shall meet one of the following Options:

Option 1: Generate at least 3% of project’s anticipated total annual energy use with on-site renewable energy. Anticipated total annual energy use shall be estimated using the same methodology used to calculate EUI.

Option 2: Contribute to the City of Alexandria’s Clean Energy Fund an amount equal to at least 90 percent of the cost to meet Renewable Energy Option 1.

Option 3: Any combination of Option 1 and Option 2.

## **c. Electrification**

Building electrification improves indoor and outdoor air quality, building safety, and reduces greenhouse gas emissions from the built environment as the grid transitions toward more generation from renewable sources over time.

### ***i. Prohibited Combustion Uses.***

The following combustion uses are prohibited:

1. Gas cooktops and fireplaces in single unit and multi-unit residential projects,
2. Dedicated outdoor air systems (DOAS), Untimed/Uncontrolled Amenities (Fireplaces, firepits, or grilles) in multi-unit residential or hotel projects

## **d. Energy and Water Meters**

Install new or use existing building-level energy and water meters, or submeters that can be aggregated to provide building-level data representing total building energy consumption (e.g., electricity, natural gas, chilled water, steam, fuel oil, propane, biomass) and total building water consumption. Utility-owned meters capable of aggregating building-level resource use are acceptable.

### **e. Indoor Water Conservation**

All newly installed plumbing fixtures that are eligible for labeling must be WaterSense<sup>2</sup> labeled. Newly installed plumbing fixtures shall not exceed the following maximum flow/flush rates:

- Water closets (toilets): 1.28 gallons per flush (gpf)
- Urinals: 0.25 gpf
- Public lavatory faucets: 0.35 gallons per minute (gpm)
- Private lavatory faucets: 0.5 gpm
- Kitchen faucets: 1.5 gpm
- Showerheads: 2.0 gpm
- Prerinse spray valves: 1.3 gpm

### **f. Outdoor Water Conservation.**

Meet one of the following Options:

Option1: Do not install a permanent irrigation system.

Option 2: Reduce the project's landscape irrigation water requirement by at least 50% from the calculated baseline for the site's peak watering month. Reductions must be achieved through plant species selection and irrigation system efficiency, as calculated by the EPA's WaterSense Water Budget Tool.<sup>3</sup>

### **g. Energy-Efficient Appliances**

Newly installed appliances shall meet the following standards:

- Residential clothes washer: ENERGY STAR<sup>4</sup>
- Residential clothes dryer: ENERGY STAR
- Residential dishwasher: ENERGY STAR
- Residential refrigerators: ENERGY STAR
- Ice machines: ENERGY STAR
- Commercial clothes washers: CEE Tier 3A

### **h. Electric Vehicle (EV) Charging Infrastructure**

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<sup>2</sup> WaterSense Fixtures: <https://www.epa.gov/watersense/watersense-products>

<sup>3</sup> EPA's WaterSense Water Budget Tool can be accessed: <https://www.epa.gov/watersense/water-budget-tool>

<sup>4</sup> ENERGY STAR appliances: <https://www.energystar.gov/products>

***i. Townhouses, Duplexes, Stacked Townhouses, and Single-unit Residential Projects:***

Provide two empty slots in the electrical panel for future Level 2 charging and pull wire ready conduit from the electrical panel to the garaged parking spaces. Install and label the conduit outlet in each garage prior to receiving the Certificate of Occupancy.

Option 1 for All Other Project Types: Provide EV chargers for at least five percent of the required parking spaces, consisting of Level 2, Level 3 DC Fast Chargers (DCFCs), or a combination thereof, rounded up to the next whole number parking space. At least 25 of parking spaces shall be EV charger-ready.

Option 2 for All Other Project Types: Install at least one publicly accessible electric vehicle DCFC, prior to issuance of the final Certificate of Occupancy. The DCFC space(s) would not be in addition to the off-street parking required under the Zoning Ordinance.

**i. Low Emitting Materials**

Meet the requirements equivalent to earning at least 2 points for the LEED v4.1 BC+C New Construction – Low-Emitting Materials credit.<sup>5</sup> Three of the following building interior product categories may be pursued: paints and coatings, adhesives and sealants, flooring, wall panels, ceilings, insulation, and composite wood.

**j. Pre-Occupancy Flush or Indoor Air Quality Testing**

Meet one of the following options after construction and before occupancy:

Option 1: Flush building during and shortly after installing products that are known sources of contaminants (e.g., cabinets, carpet padding, painting) and for 48 hours prior to occupancy.

Option 2: Meet the requirements to earn at least 1 point for Option 2 of the LEED v4.1 BD+C New Construction: Indoor Air Quality Assessment credit.<sup>6</sup>

***III. Compliance Option 2: Certification***

Projects that pursue one of the following certifications are considered compliant with the Policy. Projects using this compliance option must use the current version of the certification or standard available at the time of DSP or DSUP submission: Phius Certification or Passive House

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<sup>5</sup> Reference the LEED Credit Library for specific requirements: <https://www.usgbc.org/credits/new-construction-core-and-shell-schools-new-construction-retail-new-construction-data-38?return=/credits/New%20Construction/v4.1/Indoor%20environmental%20quality>

<sup>6</sup> Reference the LEED Credit Library for specific requirements: <https://www.usgbc.org/credits/new-construction-schools-new-construction-retail-new-construction-healthcare-data-centers-17?return=/credits/New%20Construction/v4.1/Indoor%20environmental%20quality>

Certification, Living Building Challenge Certification, U.S. DOE Zero Emissions Building, or U.S. DOE Zero Energy Ready Home.

#### ***IV. Compliance Option 3: Affordable Housing Projects***

Projects which use this compliance option must comply with the current version of the rating system or standard available at the time of DSP or DSUP submission. Projects utilizing Virginia Housing Development Authority Low Income Housing Tax Credit financing or City of Alexandria Housing Opportunity Funds must be compliant with VHDA-required baseline energy performance requirements and obtain one additional green certification:

- Baseline energy performance requirement: HERS Rating or Energy Star Compliance
- Additional green certification: LEED, EarthCraft, National Green Building Standard or Enterprise

#### ***V. Compliance Option 4: Flexibility Requests***

##### **k. Adaptive Reuse**

The City strongly supports the conversion or "adaptive reuse" of existing buildings to achieve significant environmental benefit over the construction of new buildings. Proposals including adaptive reuse of existing buildings may seek waivers or reductions of the required EUI and renewable energy targets of the Green Building Policy. Waivers will be approved by the Director of Planning & Zoning and the Climate Action Officer.

##### **l. Interim Uses, Residential Projects with 4 or Fewer Units, or Projects <25k Gross Floor Area**

In lieu of Compliance Options 1, 2, or 3, meet the following:

**Water Conservation:** All newly installed plumbing fixtures that are eligible for labeling must be WaterSense<sup>7</sup> labeled. Newly installed plumbing fixtures shall not exceed the following maximum flow/flush rates:

- Water closets (toilets): 1.28 gallons per flush (gpf)
- Urinals: 0.25 gpf
- Public lavatory faucets: 0.35 gallons per minute (gpm)
- Private lavatory faucets: 0.5 gpm
- Kitchen faucets: 1.5 gpm
- Showerheads: 2.0 gpm

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<sup>7</sup> WaterSense Fixtures: <https://www.epa.gov/watersense/watersense-products>

- Prerinse spray valves: 1.3 gpm

**No or Low Flow Irrigation:** Use no permanently installed irrigation system. Or all newly installed irrigation systems must use drip, mist, or other low-impact irrigation methods.

**Energy-Efficient Appliances:** Newly installed appliances shall meet the following standards:

- Residential clothes washer: ENERGY STAR<sup>8</sup>
- Residential clothes dryer: ENERGY STAR
- Residential dishwasher: ENERGY STAR
- Residential refrigerators: ENERGY STAR
- Ice machines: ENERGY STAR
- Commercial clothes washers: CEE Tier 3A

**Electric Vehicle Charging Infrastructure:** Meet the requirements of Section 2,H as applicable.

**Solar-Ready Roof and Electrical Design:** Demonstrate that the roof(s) are solar ready, with the necessary conduit and available electrical panel area to enable future solar panel installation, on the project's Final Site Plan.

### **m.General Flexibility**

Additional flexibility from the Green Building Policy will be considered on a case-by-case basis. Other measures proposed by applicants which incorporate sustainable building design and construction significantly beyond commonly utilized design and construction techniques will be considered.

If additional flexibility is requested, the City's Climate Action Officer and Director of Planning and Zoning will consider the project size, proposed use, and the proposed green building practices by the applicant to determine if the request is justified.

## **VI.Public Projects**

The 2019 Green Building Policy requires public projects to be net zero energy through onsite renewable energy generation. If meeting net zero energy through onsite renewable energy generation is infeasible, the Climate Action Officer may provide flexibility to allow the project to meet net zero energy through renewable energy produced offsite.

## **VII.Submissions & Future Updates**

- The City's Office of Climate Action is directed to create a process for reviewing development submissions and periodically updating the Green Building Policy's application in the City's

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<sup>8</sup> ENERGY STAR appliances: <https://www.energystar.gov/products>



development process, administratively and as necessary, to accommodate swift, accurate, and effective submission review and Green Building Policy implementation.

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