Green Building Plan: New Chapter in Alexandria's Master Plan

City Council Public Hearing
January 24, 2026

Green Building Plan: Why?

- **Improving resilience** against climate impacts
- **Preserving affordability** through avoided energy costs
- Achieving the City's **climate goals**

Environmental Action Plan 2040 Goals

Summary of Goals and Targets

The EAP 2040 includes targets with metrics to indicate performance. Below is a summary of EAP 2040 targets and metrics. The complete descriptions of goals and targets are in the topic sections.

Metric	Short-term	Mid-term	Long-term
CLIMATE CHANGE			
Total GHG emission reduction over 2005 base year			50% by FY2030 and 80-100% by FY2050
ENERGY			
Renewable offset of City-owned facilities electrical use	100% by 2020		
Improve energy efficiency for City-owned facilities and affiliated transportation		Reduce by 25% by FY2027 over FY2018	
Reduce GHG emissions per capita	10 metric tons per capita by FY2022	6 metric tons per capita by FY2030	4 metric tons by FY2040 and 1-3 by FY2050
LAND USE AND OPEN SPACE			
Tree Canopy percent			40% by FY2035
Open Space Acres per 1,000 residents	7.3	7.3	7.3
SOLID WASTE			
Reduce GHG emissions from solid waste over a 2019 base year	By FY2023 reduce by 12%		
WATER RESOURCES			
Achieve stormwater phosphorus pollution reduction (MS4) target	By FY2023 to 70%	By FY2025 to 100%	
TRANSPORTATION			
Reduce vehicle miles traveled	By FY2023 reduce 1% per year		
Increase transit, walking, and biking	By FY2023 Increase by 15% over 2018		
Increase dedicated bus lanes			By FY2030, double to 1.5 miles
AIR QUALITY			
Reduce ozone	By FY2023, reduce to 70 ppb or lower		

Image: Summary of Goals and Targets, City of Alexandria Environmental Action Plan 2040, Page 10: https://media.alexandriava.gov/docs-archives/tes/eap2040v25.pdf

Climate Change & Community Resilience

- **GHG Emissions lead to climate change, which significantly impacts community resilience**
- **Heat:** # of days > 95° more than 4x by 2050
- **Increased storms & flooding**

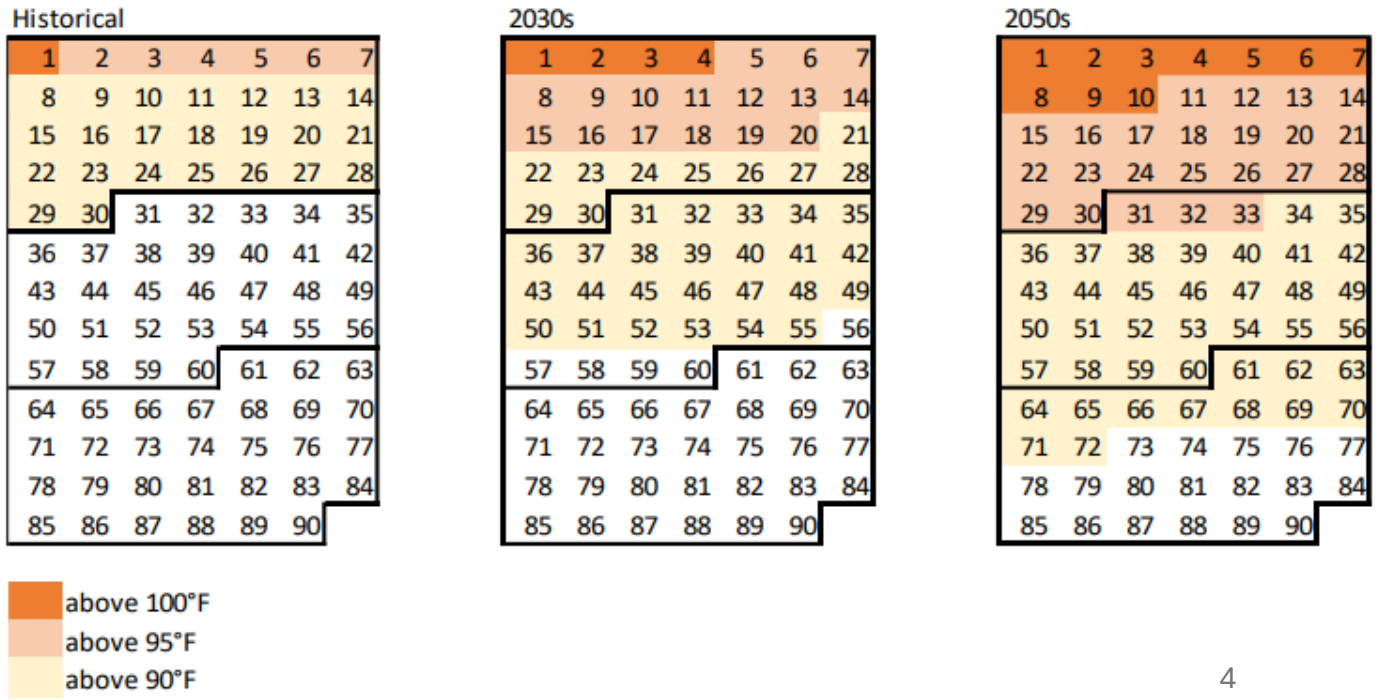


Image: Figure 21 Number of days per year in Alexandria with maximum temperatures exceeding 90°F, 95°F, and 100°F: City of Alexandria, Virginia Energy & Climate Change Action Plan, May 2023, Page 89: https://www.alexandriava.gov/sites/default/files/2023-07/ECCAP%20Final_07.2023.pdf

Climate Change & Utility Resilience

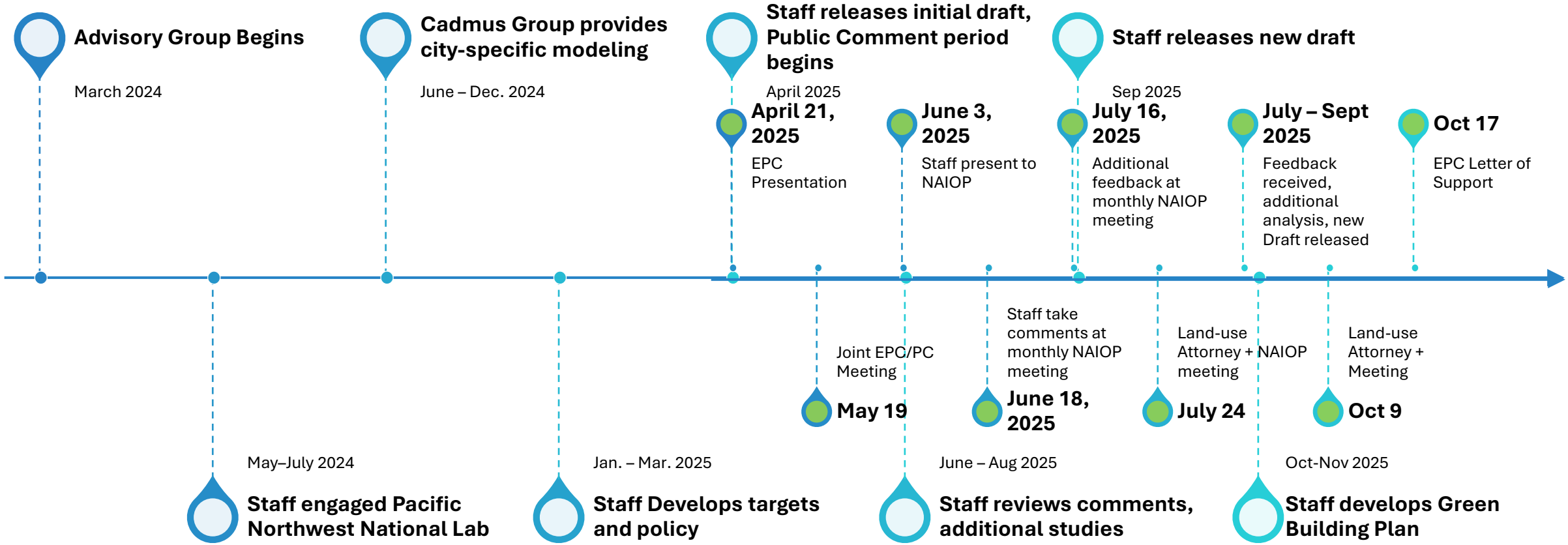
- Significant impacts to **grid reliability** from heat/storms and to utility costs from **increased demand**
- Dominion's latest Integrated Resource Plan shows need to **double generation** in 20 years
- **Reducing energy use contributes to grid reliability**

1. Natural Resources Defense Council (NRDC), Rising Demand from Data Centers Driving Reliability, Cost Concerns: https://www.nrdc.org/press-releases/rising-demand-data-centers-driving-reliability-cost-concerns
2. Dominion Energy's 2025 Integrated Resource Plan Update: https://cdn-dominionenergy-prd-001.azureedge.net/-/media/content/about/ourcompany/irp/pdfs/2025-integrated-resource-plan-update.pdf?rev=c656e4bd80184dbc80d4531cb6e9e975

Green Building Plan: Purpose

- Focus on **key metrics** that most impact the community: **Energy use, Air quality, & Resilience**
- Remove costly certification requirements
- Provide regulatory certainty and efficient development reviews

Plan Development Process



Green Building Plan: Key Components

- Energy Use Intensity (EUI)
- Renewable Energy
- Electrification
- Additional Resilience Provisions

Energy Use Intensity (EUI)

- Simple measure of **site energy use**
- Allows adjustments over time
- Focuses on what matters

$$\frac{\text{Energy Use (kBtu)}}{\text{Area (ft}^2\text{)}} = \text{EUI}$$

Property Use	Site EUI Target
Single-unit residential	31
Multi-unit residential – High-rise	38
Multi-unit residential – Other	38
Mixed use	Determined based on a ratio of the building's property use types
Commercial/office	40
Hotel	83
Retail	40

Developing EUI Targets

- **Pacific Northwest National Lab (PNNL) prototype models** and regional analysis
- **Cadmus models** for 10%, 15%, 25% reduction from code
- **Analysis of actual properties:**
  - **D.C.** (realized energy use)
  - **Alexandria** (code & development application submissions)

Alexandria Examples

Mark Center Apartments
4880 Mark Center Dr
413,400 sq ft (excl parking)
7 stories
403 units

30-35 EUI

Robinson Terminal North
500/501 North Union
192,160 sq ft (excl parking)
East: 6 stories, West: 5 stories
73 units

34 EUI

PRGS Block B
1300 N Royal
453,950 sq ft
16 stories above grade
321 units

35 - 40 EUI

5001 Eisenhower (Conversion)
5001 Eisenhower Ave
493,777 sq ft (excludes parking)
11 stories
377 units

30.8 EUI

PRGS Block C
1300 N Royal
663,593 sq ft
16 stories above grade
494 units

35 – 40 EUI

Goodwin House Senior Living
5000 Fairbanks
379,403 sq ft
16 stories
217 units

31 EUI

Alexandria Examples

Montgomery Center
312 Montgomery St

511,590 sq ft
8 stories
327 units

28 EUI (40 w/o Garage)

Eisenhower Block 20
2250 Dock Lane

482,200 sq ft
26 stories
443 units

40.1 EUI

South Peyton Mixed Use Building
220 S Peyton

10,540 sq ft
3 stories
8 units

33 EUI

North Potomac Yard

Block 15: 48 EUI

Block 19: 44 EUI

B/E Building: 42 EUI

West End (Landmark Mall Redevelopment)

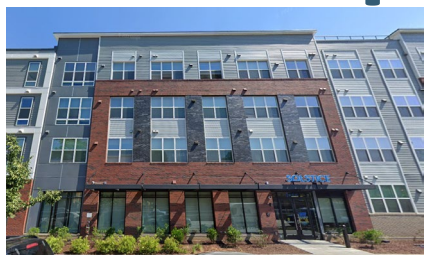
Block E/G: 49 EUI

Block I: 52 EUI

D.C. Examples

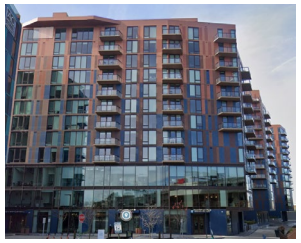
The Judd
1625 Eckington Pl NE
255,560 sq ft
6 stories
179 units

27.3 EUI



Solstice I & II
3500 East Capitol St NE
259,781 sq ft
4 stories
232 units

28.9 EUI

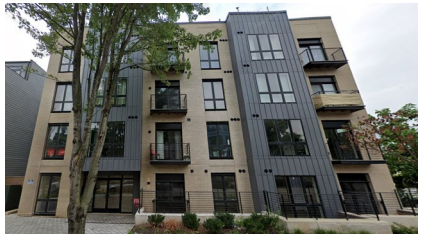


Illume
853 New Jersey Ave SE
749,058 sq ft
12 stories
756 units

35 EUI

Union Heights East
1676 Maryland Ave NE
325,215 sq ft
6 stories
325 units

24 EUI



The View Condos
1016 17th PL NE
37,049 sq ft
5 stories
47 units

24 EUI

The Lockwood
1339 E St SE
142,538 sq ft
4 stories
145 units

25 EUI

DC Benchmarking Data Analysis

- **Realized Energy Use:** 28 buildings
  - 6+ Story Buildings Properties built since 2019
  - In compliance with DC Benchmarking Law, 2023 data
- **Average EUI: 43.8**
- **Average of top 75%: 38.8**

Regional Policy Comparisons

- **Montgomery County, Maryland**
  - Applies to: Existing Buildings > 25k sq ft
  - Deadline: 2036
  - Final EUI Standards:
    - Retail: 48
    - Multi-Unit Residential: 37
- **Washington, D.C.**
  - Applies to: Buildings > 50k sq ft
  - Performance Path requires 20% energy efficiency improvement in Cycle 1

New Buildings Institute: Zero Energy Performance Targets

Building Type	Site Energy Use Intensity (EUI)
Low-Rise Apartment	21
Medium Office	22
Small Office	17
Standalone Retail	25
Mid-Rise Apartment	24
High-Rise Apartment	29
Small Hotel	36

Reference NBI Releases Zero Energy Performance Targets for New Construction Projects: https://newbuildings.org/nbi-releases-zero-energy-performance-targets-for-new-construction-projects/

Renewable Energy

- 3% energy produce on-site, OR
- Contribute to Clean Energy Fund, NTE $150,000

Term	Unit	Notes
Total Annual Energy Use	kWh	Modeled from Section II,A: *Energy Use Intensity*
Total Renewable Energy Requirement	3%	
Assumed Production-Size Ratio[21]	kWh per kW of renewable energy system installed	Assumed to be 1,332 kWh per kW in Alexandria
Installation Capacity Requirement	kW	
Solar Benchmark Price	$3.36 per watt	Cost per watt for U.S. National Average System Price for residential systems in Q2 2025, SEIA[22]
Clean Energy Fund	$	Contributions shall not exceed $150,000

Electrification

- Generally, requires non-combustion equipment
- Exceptions:
  - Amenities like fireplaces, grills
  - Commercial kitchens
  - Commercial/centralized laundry & hot water
  - Dedicated Outdoor Air Systems (DOAS)
  - Emergency Generators

Additional Green Building Provisions

- Energy & Water Meters
- Indoor & Outdoor Water Conservation
- Energy-Efficient Appliances
- EV Charging Infrastructure
  - 5% spaces w/ chargers, 15% “EV-ready”
- Indoor Air Quality (Materials, testing)
- Adaptive Reuse flexibility

Planning Commission Recommendation: Staff Supported

Item	Staff Recommendation	Planning Commission Recommendation
Small Projects	Projects ≤4 units or 25,000 sq ft exempt from Options 1, 2, and 3	Projects ≤4 units or ***10,000*** sq ft exempt from Options 1, 2, and 3
Development Review		The City's Office of Climate Action is directed to create a process for reviewing development submissions and periodically updating the Green Building Plan's application in the City's development process, administratively and as necessary, to accommodate swift, accurate, and effective submission review and GREEN BUILDING PLAN implementation.
Future Updates		The Office of Climate Action will, at least every two years, review the standards set in this policy, particularly Energy Use Intensity, Renewable Energy, and Permitted Combustion Uses, and recommend any changes to City Council.
Electrification		Add: Onsite combustion is prohibited unless included in (the list of) Permitted Combustion Uses.
EV Charging		OCA should consider the emergency management implications of EV charging infrastructure, including types of chargers, spacing, locations, emergency egress, and fire access.

Planning Commission Recommendation: Not Staff Supported

Item	Staff Recommendation	Planning Commission Recommendation
Multi-unit Residential EUI	38	30
Renewable Energy	3% on-site or Clean Energy Fund	5% on-site, eliminate Clean Energy Fund
Net-Zero Energy	Produce enough energy on-site or on other City-owned property to cover site energy use	Select and include industry recognized net-zero energy standard

Summary

- The built environment is a crucial **contributor to our economic, environmental, and community well-being;**
- The Plan is designed to ensure developments do not negatively impact the resilience of our community;
- Plan framework can be **adjusted through time**.