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

January 2026

Need for the Green Building Plan

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

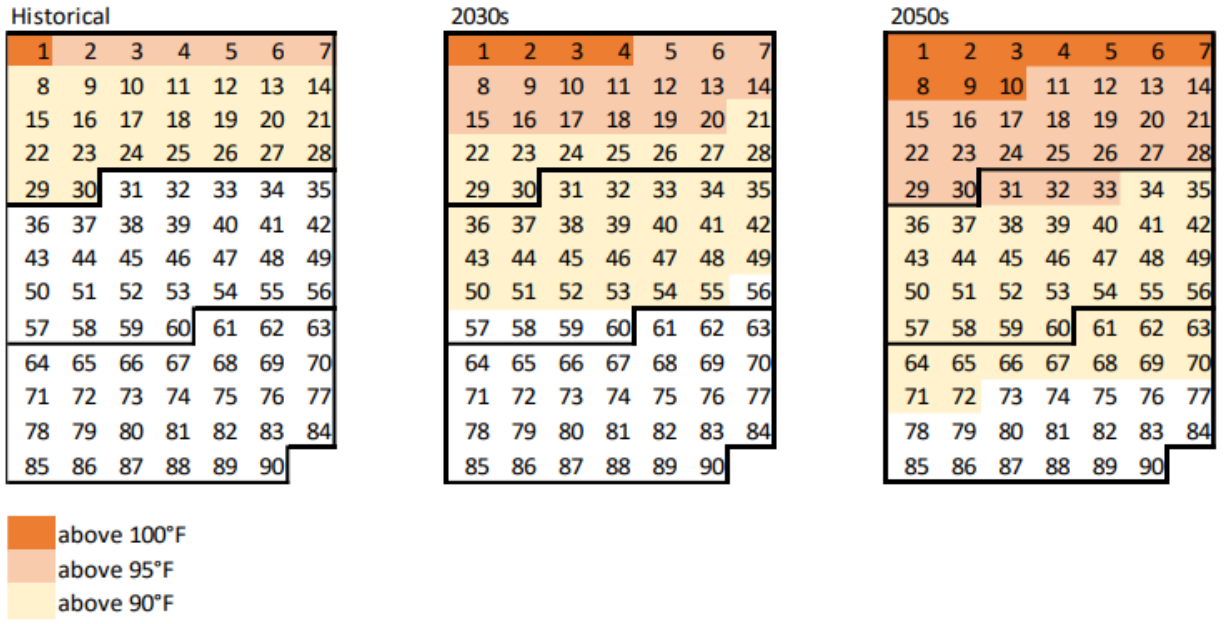
Summary of Goals and Targets

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		

Climate Change & Resilience

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



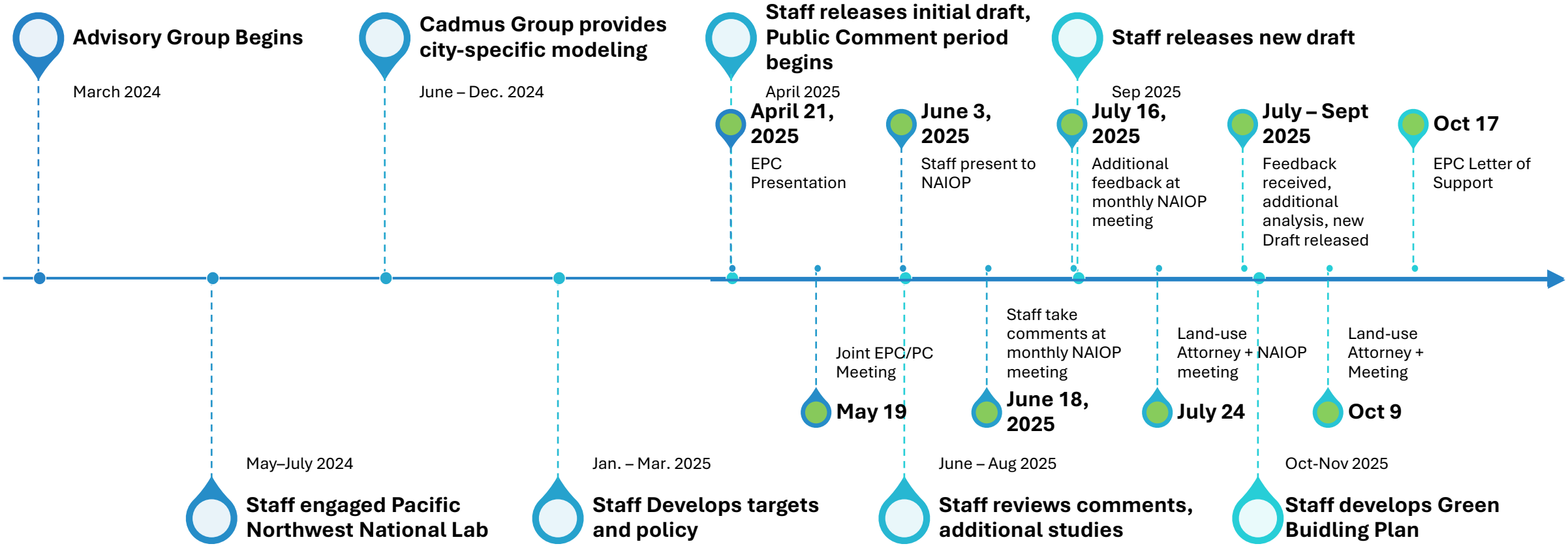
Climate Change & Utility Resilience

- Increasing heat and storms significantly impacts grid reliability
- Dominion's latest Integrated Resource Plan shows need to double generation in 20 years
- PJM, regional transmission operator, failing to procure enough energy to meet demand
- Reducing energy use is a significant contributor to grid reliability

Approach & Purpose

- Focus on key metrics that most impact the community (Energy use, air quality, resilience)
- Removes costly certification requirements
- Create regulatory certainty
- Expedite reviews

Policy Development Process



Components of the Green Building Plan

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

Energy Use Intensity (EUI)

- Simple measure of 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 the Target

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

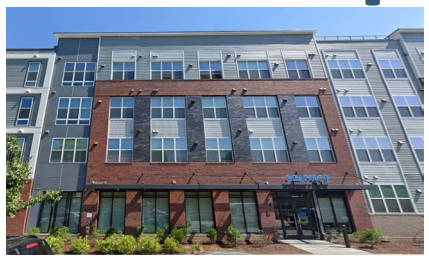
Block 19: 44 EUI

B/E Building: 42 EUI

D.C. Examples

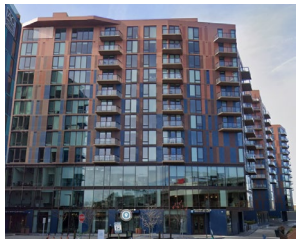
The Judd
1625 Eckington Pl NE
255,560 sq ft
6 stories
179 units

27.3 EUI



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

28.9 EUI

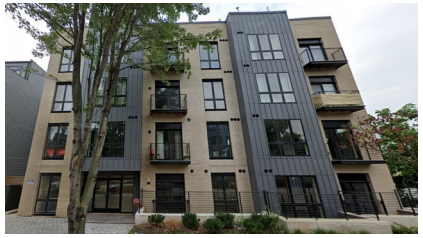


Illume
853 New Jersey Ave SE
749,058 sq ft
12 stories
756 units

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

- Properties built since 2019, in compliance with DC Benchmarking Law, 2023 data
- 6+ Story Buildings (28 buildings)
  - Average EUI: 43.8
  - Average of top 75%: 38.8

Regional Policy Comparisons

- **Montgomery County Maryland**
  Applies to: Bldgs > 25k sq ft
  Deadline: 2036
  Final EUI Standards:
    Retail: 48; Multifamily Housing: 37
- Washington, D.C.
  Applies to: Bldgs > 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

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 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

Summary

- The built environment is a crucial contributor to our economic, environmental, and community well-being
- The Green Building Plan is designed to ensure developments do not negatively impact the resilience of our community
- This framework allows additional adjustments through time