



**ALEXANDRIA PLANNING COMMISSION
ALEXANDRIA ENVIRONMENTAL POLICY COMMISSION**

Alexandriava.gov

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[DATE]

Dear Mr. Mayor, Madam Vice Mayor and City Council Members,

Following our February 2, 2022 joint letter to City Council on recommended actions to address Sustainable Developments and High Performance Buildings (see Attachment 1 – items 1 & 2), the Planning and Environmental Policy Commissions worked jointly to identify opportunities to better link the City’s Energy, Climate and Environmental plans and policies to the City’s entitlements approval process for new development. Our Commissions believe the items below are the best actions to “move the needle” for developments to combat the climate crisis. We needed, our Commissions urge Council to budget for permanent, ongoing support linking climate policy with the entitlements approval process for new development.

As highlighted in our earlier letter, we remain concerned that a rapid and effective update to our process for approving new development is necessary to meet *ALEXANDRIA’S 2019 DECLARATION OF A CLIMATE EMERGENCY* commitments and *EAP2040 targets*. In our opinion, the City presently lacks adequate policies to require or encourage new developments to meet current best practice building standards through its entitlements process.

Failure to address this now means for just one group: children - higher asthma rates, heat-related illnesses, mental health conditions, metabolic and renal disease, respiratory disease, trauma and other effects. (see Attachment 2 from the *New England Journal of Medicine*).

It is widely accepted that the most cost-efficient method to “move the needle” and reduce GHG emissions from new buildings is to create ones that use the current best practice on energy efficiency, i.e. make them airtight, thus reducing the fuel needed to heat/cool the buildings. An added benefit is it nearly eliminates or reduces the adverse health effects to children listed above along with improving countless other quality of life issues for all building residents. It also makes the buildings much more resilient in cases of power outages.

Like floor area ratio (FAR) or miles per gallon (MPG) standards, the best method to measure a building’s airtightness/energy efficiency is using Energy Use Intensity (EUI).¹ Buildings with an EUI of 20 or less are being designed, built and operated in Philadelphia and New York today. However, our current Green

¹ Energy Use Intensity is defined as a simple quotient of energy delivered to a building divided by its area (typically expressed in British Thermal Units (BTU) per square foot per year (BTU/sq.ft.-yr).

41 Building Policy (GBP) suggests an EUI of about 52² or higher for residential units and when passed in
42 2019 it was estimated by City staff to reduce GHG emissions by only 3 percent in Alexandria.³ No
43 achievable climate plan demonstrates how Alexandria could meet its pollution reduction targets without
44 amending the GBP to better address energy efficiency since adding to a problem never makes it better.

45
46 However, to ensure all parts of the entitlement process work smoothly together, we recommend the
47 use of a system's approach. As our entitlement process moves from general to specific and
48 recommendations to requirements, all must speak the same language without exceptions to avoid
49 confusion and unmet expectations. We trust that the following integrated refinements to strategically
50 selected aspects of our planning processes may serve as a framework for directly linking climate policy
51 with the entitlements approval process for new development.

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53 **REFINEMENTS TO PLANS, POLICIES, AND REGULATIONS**

54 **1. MASTER PLAN AND SMALL AREA PLANS**

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56 **The MASTER PLAN and most SMALL AREA PLANS do not adequately address or include reference to**
57 **Community environmental goals/targets.**

58 Proposed plan: Using the existing amendment process and current MASTER PLAN changes such as in the
59 West End and others to:

60 *A. Establish a mechanism by which ENVIRONMENTAL ACTION PLAN greenhouse gas (GHG) reduction targets*
61 *and Climate Emergency Declaration actions become binding on new development.*

62 *B. Require developers to submit an Action Plan⁴ for CARBON NEUTRAL BUILDINGS by 2030 and CARBON*
63 *NEUTRAL SITES by 2040 to achieve GHG emission targets and Climate Declaration commitments*
64 *including an analysis of funding streams available from the federal Inflation Reduction Act of 2022*
65 *and other funding streams.*

66 **2. GREEN BUILDING POLICY**

67 **The current voluntary GBP requirements do not adequately address energy, emissions, and resilience.**

68 Proposed plan: Using existing amendment processes for Master Plans (?) amend the GBP to set:

69 *A. A specific date by which all new buildings above 50,000 square feet must meet a NET ZERO ENERGY*
70 *performance standard. For example, like DC, Alexandria could amend its GBP to require all new*
71 *buildings meet a NET ZERO ENERGY standard defined as: 1) using the current best practice to*
72 *increase energy efficiency to the highest level, 2) require the most on-site renewable⁵ energy as*
73 *possible and 3) require the remaining energy needed from offsite renewable sources.*

74 *B. ENERGY USE INTENSITY requirements by building type, with progressive reductions in EUI targets over*
75 *time using authoritative sources such as ASHRAE, US Green Building Council and/or US*

² See Slide #20 on PRGS presentation to EPC on November 21, 2022

³ Reminder – the EAP2040 calls for a reduction of 50% GHG emissions by 2030 and 80-100% by 2050 based upon 2005 levels.

⁴ All Action Plans referenced in this letter must include specific, measurable, achievable, repeatable, time-bound measures

⁵ Renewable energy is one that does not require a cost for the energy such as solar, wind or water

76 Department of Energy for each building type. For example, Alexandria could follow the current
77 best practice recommended by the 2022 ASHRAE, American Institute of Architects, Illuminating
78 Engineering Society, US Green Building Council and US Dept. of Energy's "Achieving Zero Energy –
79 Advanced Energy Design Guide for Multifamily Buildings" that shows that in our climate zone (4A)
80 an EUI of 20.9 can be achieved for resident floors.

81 C. RENEWABLE ENERGY requirements for onsite energy generation and onsite electrical storage, with
82 progressive increases in requirements over time combining solar and green roof whenever
83 possible. For example, the GBP could require every new building include a minimum of 20 percent
84 on-site renewable energy with XX Kw amount of battery storage.
85

86 D. ANNUAL RECORDING (BENCHMARKING) OF ENERGY USAGE A requirement that every building must
87 input their fossil fuel and electric energy usage in the EPA's free Energy Star Portfolio Manager
88 software to enable the City to better track energy usage and changes.

89 3. COORDINATED DEVELOPMENT DISTRICTS

90 Current CONCEPT DESIGN requirements do not adequately address Energy, emissions, and resilience
91 Proposed Plan: Using our existing amendment process to require an ENERGY AND RESILIENCE CONCEPT
92 PLAN FOR EACH DEVELOPMENT like the one included for the former Landmark Mall site that includes
93 data necessary to evaluate these elements:

94 A. ENERGY USE INTENSITY FOR RESIDENTIAL UNITS AND OTHER SPACE (DO WE WANT TO ADD MORE CATEGORIES OR
95 INCLUDE A CATCHALL???)

96 B. SITE WIDE ENERGY DEMAND AND EMISSIONS

97 C. ON SITE DISTRICT ENERGY (CONSIDERATION OF OR USE OF ?)

98 D. ON SITE RENEWABLE ENERGY + ELECTRICAL STORAGE (IN KWS OR SOME OTHER VALUE)

99 E. BUILDING TO GRID INTEGRATION

100 F. EMBODIED CARBON⁶

101 4. DEVELOPMENT SPECIAL USE PERMITS

102 DSUP SUSTAINABILITY CONDITIONS are effective at incrementally improving project performance.

103 Proposed Plan: using the current City Staff iterative process: continue the purposeful evolution toward
104 more energy efficiency and the complete elimination of fossil fuels and thus request at the Concept
105 stage:

106 A. ALL ELECTRIC BUILDINGS: a SMART⁷ Plan that shows the elimination of all fossil fuels from the site

107 B. RENEWABLE ENERGY: a SMART Plan to determine when 'Solar Operational' replaces 'Solar Ready' on the
108 site

109 C. ENERGY USE INTENSITY: a SMART Plan for projected EUI performance and energy modeling

110 D. GREENHOUSE GAS EMISSIONS: Require projected GHG emissions

⁶ Embodied carbon refers to the greenhouse gas emissions arising from the manufacturing, transportation, installation, maintenance, and disposal of building materials.

⁷ SMART Plans – are Plan that include Specific, Measurable, Achievable, Repeatable, Time-bound actions

111 *E. OPERATIONAL PERFORMANCE: Expand reporting requirements (benchmarking) for actual energy use*
112 *after construction for the lifetime of the building.*

113 **IMPLEMENTATION NEEDS**

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116 Given the financial costs of delaying implementation of our recommendations, we urge the City to
117 follow a timeline of no longer than 6 months to implement our recommendations. We have already
118 watched the approval of over several major developments, each with hundreds of residential units in
119 the last 3 years, thus adding to the existing retrofit building stock required to eliminate GHG emissions
120 by 2050. Every new developmental permit issued today without our recommendations increases the
121 burden on future generations.

122

123 The Commissions believes that many of the above amendments can use existing staff resources given
124 the newly created and backfilling of current vacant positions within the new Office of Climate Action.
125 However, it is critical that sufficient staff and/or consultant resources be available to develop and
126 implement these concepts given the urgency of the climate crisis and its increasing costs.

127

128 For example, we recognize that some research to determine if all areas of Alexandria are similar to
129 Philadelphia and New York and can financially support EUI buildings of 21 or only some areas of the City.
130 This research could inform decision makers on when best to use optional financial incentives for
131 “catalyst” buildings or developments such as those used in Eisenhower East. In addition, attorneys must
132 inform us when and how Virginia energy efficiency standards such as VA 58.1-3221.2 CLASSIFICATION
133 OF CERTAIN ENERGY – EFFICIENT BUILDINGS FOR TAX PURPOSES⁸ can be required versus those that may
134 only be strongly encouraged/incentivized. However, if designed progressively to follow government
135 authoritative sources such as the ASHRAE standard cited, it is probable that this research will be one-
136 time costs with future changes made as part of an annual regular standards review process.

137

138 Our commissions believe that where necessary, the City must budget for permanent, ongoing support
139 linking climate policy with the entitlements approval process for new development as part of its equity,
140 environmental justice and transparency principles. The Office of Climate Action or Department of
141 Planning and Zoning could assume this role in coordination with the other, but regardless of who leads
142 the process, it should be a standing effort of the City’s Interdepartmental Long-Range Planning Work
143 Program.

144

145 We strongly encourage Council’s leadership to devote the necessary time and resources to support this
146 effort to address the climate emergency.

147

148 Sincerely,

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150

151 Nate Macek,

Kathie Hoekstra,

⁸ <https://law.lis.virginia.gov/vacode/title58.1/chapter32/section58.1-3221.2/>

152 Planning Commission Chair

Environmental Policy Commission Chair