ALEXANDRIA PLANNING COMMISSION
ALEXANDRIA ENVIRONMENTAL POLICY COMMISSION

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[DATE]

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

Following our February 2, 2022 joint letter to City Council with recommendations for Sustainable Developments and High Performance Buildings, the Planning and Environmental Policy Commissions worked jointly to identify opportunities to better link the City's climate plans and policies to the City's entitlements approval process for **new** development. Our Commissions agree that the immediate, short- and long-term strategies listed below are the most actionable, feasible, and impactful to engage development in the City to combat the climate crisis. Our Commissions urge Council to budget for permanent, ongoing support that links climate policy with the entitlements approval process for new development. We believe partial funding for these efforts can come from the $1.85M already reserved by the City Manager to take climate action in the short term.

According to the City's Draft Energy & Climate Change Action Plan, 91 percent of Alexandria's greenhouse gas emissions come from two sources: **community buildings** (new and existing), and **transportation**. Therefore, any mitigation strategies must address those two elements. The Draft Plan identifies the enormity of proposed solutions with limited implementation strategies including:

- 95% of all new buildings to be net zero ready by 2025;
- 32,835 (43%) of the City's current 76,361 existing residential units be retrofitted with energy efficiency and/or electrification by 2025;
- Rapid shift to electric vehicles with nearly all new vehicles sold in Alexandria in the near-term to be electric, a proposed solution with far more aggressive EV sales targets than in California.

We again express our concerns for rapid and effective updates to development approval processes to meet Alexandria's 2019 **Declaration of a Climate Emergency commitments** and **Environmental Action Plan (EAP) 2040.** In our opinion, the City presently lacks adequate policies to require or encourage new developments to exercise best practice building standards to meet these commitments and targets through the City's entitlements process.

The most cost-efficient method to "move the needle" and reduce greenhouse gas (GHG) emissions from new construction is to make buildings well insulated and airtight, with balanced ventilation, a current best practice on energy efficiency. In addition to reducing the fuel needed to heat/cool the buildings, this approach significantly improves air quality, reduces the adverse health effects to children and families, increases building resiliency in cases of power outages, and reduces the operating cost of buildings over time. Like floor area ratio (FAR) or miles per gallon (MPG) standards, **the best method to measure a building's airtightness/energy efficiency is Energy Use Intensity (EUI)**.[1] There are numerous examples of buildings across the northeast with an EUI of 20 or less that have been designed, built, and are being operated. The City's current Green Building Policy

[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).

(GBP) allows an EUI of about 52[2] or higher for residential units, more than double of what buildings in other cities are achieving. Staff estimated that the 2019 GBP would reduce GHG emission in Alexandria by **only 3 percent**.[3] No achievable climate plan demonstrates how Alexandria could meet its pollution reduction targets without amending the GBP to better address energy efficiency since adding to a problem never makes it better.

To ensure all parts of the entitlement process work smoothly together, we recommend the use of a systems approach. Our proposed recommendations aim to establish a common understanding of the issues and ensure we all speak the same language to avoid confusion. The proposed refinements below reflect the nuances of Alexandria's entitlements process, moving from general to specific, and recommending refinements within existing authorities, incentives, and new requirements through plans, policies, and development permit approvals. We trust that the following integrated refinements to strategically selected aspects of our planning processes may serve as a framework for directly linking climate policy with the entitlements process for new development.

Recommended Refinements to Plans, Policies and Requirements

We recommend addressing these needs through refinements to the City's existing Master Plan and Small Areas Plans; the Green Building Policy; Coordinated Development District plans; and Development Special Use Permit conditions. We recognize the City will need determine the specific targets and implementation approach for each refinement consistent with established entitlement processes, authorities, and budgets. However, we've referenced industry standard best practices throughout the recommendations to provide illustrative possible benchmarks that are feasible and have been implemented in other jurisdictions. Our specific suggestions appear below:

1. **Master Plan and Small Area Plans**

The Master Plan and most Small Area Plans do not adequately address or include reference to community environmental goals/targets. Use the existing amendment process and current planning process such as in the West End and others to:

- **A. Establish a mechanism** by which EAP GHG reduction targets and Climate Emergency Declaration commitments become binding on new development.
- **B. Require developers to submit an Action Plan** for Carbon Neutral Buildings by 2030 and Carbon Neutral Sites by 2040 to achieve GHG emission targets and Climate Declaration commitments. The plans should consider funding available from the federal Inflation Reduction Act of 2022 and other funding streams.

2. **Green Building Policy**

The current voluntary GBP guidance does not adequately address energy, emissions, and resilience. Amend the GBP to:

- **A. Set a specific date by which all new buildings** above 50,000 square feet **must meet a Net Zero Energy performance standard.** For example, like DC, Alexandria could amend its GBP to require new buildings to meet a Net Zero Energy standard defined as: 1) using the current best practice to increase energy efficiency to the highest level, 2) require the most on-site renewable[4] energy as possible and 3) require the remaining energy needed from offsite renewable sources.
- **B. Set Energy Use Intensity requirements by building type, with progressive reductions in EUI targets over time.** The City's requirements could be based on authoritative sources such as ASHRAE, US Green

[2] See Slide #20 on PRGS presentation to EPC on November 21, 2022 https://www.alexandriava.gov/sites/default/files/2022-11/20221121_EPC%20Meeting%20FINAL_G_compressed.pdf

[3] The EAP2040 calls for a reduction of 50% GHG emissions by 2030 and 80-100% by 2050 based upon 2005 levels.

[4] Renewable energy is one that does not require a cost for the energy source such as solar, wind or water

Building Council and/or US Department of Energy for each building type.[5] The City should determine the most appropriate performance target for the various sections of Alexandria, given differences in real estate markets across areas of the city.

C. **Set Renewable Energy requirements for onsite energy generation and onsite electrical storage, with progressive increases in requirements over time combining solar and green roof whenever possible.** For example, the GBP could require new buildings to include a minimum percentage of on-site renewable energy with a **suggested** amount of battery storage with a timeline to increase the storage until it can replace 1-for-1 backup fossil fuel emergency generators.

D. **Set annual recording (benchmarking) of energy usage.** This could include a requirement that new buildings over 50,000 square feet must input their fossil fuel and electric energy usage in the free EPA's Energy Star Portfolio Manager software **to** enable the City to better track energy usage and changes.

3. Coordinated Development Districts

Current CDD Concept Design requirements do not adequately address energy, emissions, and resilience. We recommend using our existing CDD approval process to require an **Energy and Resilience Concept Plan for each new development** like the one included for the former Landmark Mall site (now "WestEnd Alexandria") that includes data necessary to evaluate these elements:

A. **Energy Use Intensity for residential units and Other Building use types**

B. **Site Wide Energy Demand and Emissions**

C. **Consideration and/or use of On Site District Energy**

D. **On Site Renewable Energy in Kw + Electrical Storage in KW**

E. **Consideration and/or use of a Site-Wide Microgrid**

F. **Total Embodied Carbon[6]**

4. Development Special Use Permits

DSUP Sustainability Conditions are effective at incrementally improving project performance. Using the current iterative development review process by City staff, continue the purposeful evolution toward more energy efficiency and the complete elimination of fossil fuels by requesting at the Concept stage:

A. **All electric buildings:** A SMART[7] plan that shows the elimination of all fossil fuels from the site

B. **Renewable energy:** A SMART plan describing renewable energy features of the site, such as 'solar operational' infrastructure.

C. **Energy use intensity:** A SMART plan for projected EUI performance and energy modeling

D. **Greenhouse gas emissions:** Require a projection of estimated GHG emissions

E. **Operational performance:** Expand reporting requirements (benchmarking) for actual energy use after construction for the lifetime of the building.

Implementation Needs

Given the financial costs of delaying implementation of our recommendations, we urge the City to follow a timeline to complete full implement of our recommendations as soon as practical, but at a minimum no later

[5] See Achieving Zero Energy Advanced Energy Design Guide for Multifamily Buildings 2022 by ASHRAE, The American Institute of Architects, Illuminating Engineering Society, US Green Building Council and US Dept of Energy

[6] Embodied carbon could be addressed by using a carbon calculator like the one found at: https://www.buildingtransparency.org/

[7] SMART plans – are plans that include Specific, Measurable, Achievable, Repeatable, Time-bound actions

than by the end of FY2024. Over the past 3 years we have already watched the approval of several major developments, each with hundreds of residential units, thus adding to the existing retrofit building stock required to eliminate GHG emissions by 2050. Every new developmental permit issued today without meeting our recommended requirements increases the burden on future generations.

The Commissions believe that many of the above amendments can use existing staff resources given the newly created Office of Climate Action. However, it is critical that sufficient staff and/or consultant resources be available to develop and implement these concepts given the urgency of the climate crisis and its increasing costs.

We note with concern that the Interdepartmental Long-Range Planning Work Program proposal advanced by staff for FY24 does not propose to address these issues. Our commissions strongly believe we must remedy this deficiency through additional budget and staffing to support implementation of these objectives in FY24, and ongoing staffing for implementation in future years.

For example, we recognize that research is required to determine the financially viable EUI in specific small areas of the City. This research could inform decision makers on when best to use optional financial incentives for "catalyst" buildings such as those used in Eisenhower East. In addition, attorneys must inform when the City can use Virginia energy efficiency standards such as VA 58.1-3221.2 Classification of Certain Energy – Efficient Buildings for Tax Purposes[8]. However, if designed progressively to follow government authoritative sources such as the ASHRAE standard cited, it is probable that this research will involve one-time costs, with future changes made as part of an annual regular standards review process.

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

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

Sincerely,

Nathan M. Macek,
Planning Commission Chair

Kathie Hoekstra,
Environmental Policy Commission Chair

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