



August 10, 2020

Richard Lawrence  
Department of Planning and Zoning  
301 King Street  
Alexandria, Virginia

**Re: Environmental Policy Commission comments on draft North Potomac Yard Environmental Sustainability Master Plan (ESMP)**

Dear Mr Lawrence:

On behalf of the Environmental Policy Commission, I am writing to share our comments and priorities related to the draft North Potomac Yard Environmental Sustainability Master Plan (ESMP) which was shared with the EPC during our June 15, 2020 meeting.

The Environmental Policy Commission is pleased to see the degree of creativity and innovation in the possible strategies described in the ESMP. We look forward to seeing a revised draft of the ESMP in which:

1. The targets in Table 2 further align to the EAP 2040 and Green Building Policy;
2. The application of possible strategies (p.72-74) reflects the achievement of the targets; and
3. The ESMP targets are harmonized across topics and across the life cycle of the proposed buildings.

The EPC's highest priority in the Environmental Action Plan and its implementation are the EAP targets related to reducing community-wide greenhouse gas emissions 50% by 2030 and 80-100% by 2050. Addressing the questions below will help to make the three improvements listed above as they relate to community-wide GHGs.

- The ESMP Carbon Offsets target is to offset 30% of emissions with RECs, PPAs, or carbon offsets for DSUPs approved 0-5 years from 2020. How will the proposed buildings contribute to the EAP target of 50% community-wide greenhouse gas emissions by 2030?
- The buildings proposed in 2020-2025 are likely to operate in 2050, when the City and the Commonwealth are targeting net zero carbon emissions. How are the buildings developed in 2020-2025 proposed to be carbon neutral in 2050?
- The "possible strategies" defined to meet the carbon offset targets (RECs, PPAs, or carbon offsets) are not committed to be included in the current design (p.74), and they are only listed as "possible" (shaded in yellow) for three of the blocks. What is the purpose of the target if it is not driving design?
- The renewables toolkit (IV-3) describes PPA contracts as a mid-term strategy, which would classify it as a "fringe technology" (p.8). This classification is not aligned to the current market in which it is common for commercial energy users to use PPAs.

- The proposed buildings are planned to be LEED Silver office buildings and LEED Certified residential buildings (p.7). The 2019 Green Building Policy sets a minimum level of certification for private buildings at LEED Silver. When considering the contribution toward 2030 and 2050 community-wide GHG reduction targets, is a higher level of certification warranted?
- The mid-term operational carbon (IV-2) section proposes switching to electric heat and heat pump hot water after a certain degree of decarbonization occurs in the electricity supply – 450 lbs/MWh. When is this expected to occur, given the implementation of the Clean Economy Act? If it is achieved earlier by the applicant pursuing renewable purchasing on their own, would this suggest committing to electric heating and hot water from the start rather than leaving it up to potentially expensive future retrofits?

Addressing the questions above will improve the ESMP along one topic area – reducing community-wide greenhouse gas emissions. The EPC recommends the same type of thinking be applied across the other topic areas to improve the ESMP. Enclosed is additional feedback provided by EPC members across all areas of the ESMP.

The EPC appreciates the consideration of our input and looks forward to further collaborating to achieve the vision of Eco-City Alexandria.

Thank you for your consideration.

Praveen H. Kathpal  
Chair, Environmental Policy Commission

## Comments compiled from EPC members

### **General Points**

- Provide a clear schedule and process for monitoring of NPY performance regarding targets and goals. The timing should allow for a regular schedule or performance reporting and make sure that recent performance reporting will be available to inform new development phases as they enter the planning, design and review process.
- Provide timeline for review and update of the ESMP to incorporate advances in best management practices, technologies, and costs so medium- and long-term toolkits can be updated accordingly. The review and update should also be informed by the performance monitoring.
- Provide the plan around the “further discussion” that will take place and parameters for inclusion in Phase 1 for each item in Appendix 1 that is highlighted in yellow
- We applaud the plan for a geothermal field to support the heating and air conditioning needs of the Virginia Tech building, something that must be done. We would have liked to see more of this kind of long-term thinking applied to more of the building sites, as opposed to being the exclusive purview of only the VT Building. If we are looking for long term impacts these fields are easier to incorporate into the early design phase as opposed to retrofitting at a future date.

### **Targets for Advancement of Sustainability (page 5)**

- In addition to the summary Table 2 on page 5, the Targets should be clearly stated in each section (perhaps right below the “Goals”). For example, the Operational Carbon targets should be stated in Section IV-2 on page 45
- Targets that are “reductions” or “savings” should state what the baseline is
- Include how the targets in this document related to helping the City achieve the benchmarks listed in the EAP

### **I. Site**

- I-1 Stormwater – Goals seem to be basic elements of what is already required by Alexandria ordinances for new development. These should be more specific and robust in line with the forward-thinking toolkit strategies that are proposed.
- I-2 Open Space – Add and incorporate environmental benefits of open space to the definition. The current definition for Open Space you provided does not reference the environment or positive environmental impacts of open space at all, as it reads as if open space is only used for recreational activities, that should be fixed.
  - This point is also missing from the goals section, the environment and its benefits to/from open space should be embedded within this section
- Appendix: Phase 1 Strategies – Tree canopy coverage is not listed as a strategy for every block, that seems to be a mistake when factoring in the EAP’s goal of 40% canopy coverage for the City, we should be leveraging every square inch of the system for possible ways to hit that target

### **II. Waste**

- II-1 Construction – Section should explicitly discuss the plans for the demolition of the movie theater and its parking lot.
- II-3 Ongoing Operations – Food scrap separation by residential and commercial tenants for composting needs to be facilitated. This can be a challenge for tenants/owners in dense, urban developments, but property managers can help make food scrap collection programs feasible. Since food waste is such a significant percentage of trash, best practices to facilitate food scrap collection and/or composting by residential and commercial uses should be in the toolkit.

- Appendix: Phase 1 Strategies – Composting should be moved to “Included in current design” for all districts

### III. Water

- III-2 Reuse Opportunities – The language here suggests a possible, future SWEE system, there absolutely should be at least one, if not more, SWEE system(s) built and operated in the Short or Medium term
- Appendix: Phase 1 Strategies – Why are “Greywater reuse for toilet flushing”, “rainwater reuse for irrigation”, and “wastewater reduction or reuse” all labeled as “possible.” Those all represent major water reduction efforts that appear on this chart as currently being ignored or discounted, they all should be moved to “included”

### IV. Carbon

- General section – Carbon section should restate up front the NPYSAP goal of carbon neutrality: “Strive to achieve carbon neutrality by 2040 and to strive to achieve carbon neutral buildings by 2030.”
- General section – Unclear how the Targets (Table 2, page 5) map to reaching the overall goal of carbon neutrality and carbon neutral buildings. The NPYSAP page 21 implies that the interim goals need to lead up to this: “The ESMP should integrate long-term progressive goals in successive phases with the ultimate goal of carbon neutrality for the entire Plan area.”
- General Section – One building in Phase 1 should be designed as a Net Zero Energy building
- General Section – Consider pursuing a Living Building Certification on one building
- IV-2 Operation Carbon – This should be These should be All-Electric Buildings – no gas is needed. The whole Phase I should be an all-electric district.
- IV -2 Operation Carbon – Submeter each individual tenant space to enable utility data sharing for whole-building energy analyses. As base building loads only account for part of the building usage; understanding individual tenant space energy usage is critical for operational carbon optimization.
- IV -2 Operation Carbon – Recommend following at least ASHRAE 90.1-2016 at a minimum, 2019 standards if possible
- IV-3 Renewables – while the plan includes some innovative and impressive on-site renewable proposals (SWEE and VTech Academic Building I “solar power plant”), the overall plan for onsite renewables is very limited and puts off too much in later phases. We are surprised designers did not integrate more solar into the planned development. Biosolar roofs - a combination of solar panels with green roofs - are being implemented throughout Europe, Asia, and North America, and could be an option here. The only mention of solar PV in the ESMP is for building-integrated photovoltaics in Blocks 4 & 7. BIPV is both significantly more expensive and less proven than rooftop solar. It is interesting to see an experimental technology with notably lower benefit-cost implemented while an established technology is omitted. If capital cost is an issue, a solar power purchase agreement would allow the developers to build more solar without incurring the costs. **The EPC is requesting to see the analysis that was conducted which lead the developer of this plan to conclude renewable energy was “unfeasible”**
  - Why are solar PV proposed only on academic buildings? Plan should be looking at this on residential and commercial buildings as well, and not just making PV-ready roofs for installing PVs sometime beyond the medium-term.
  - The VA State Legislature’s recently passed Clean Energy Bill should help renewables and net metering become more realistic more quickly. Please review and see if it can help move some of the Mid-Term items into the Short-term category.

- C-PACE financing also should be considered to help advance the schedule for on-site renewables. The City is planning to adopt this.
- Overall, there is too much reliance on RECs, especially for dubious sources like Dominion Energy, which we know are not being generated from truly renewable/clean sources
- IV-4 Transportation – Toolkit seems to list many items that new developments in Alexandria are required to provide anyway. Should elaborate on what is being proposed above those elements already required for similar dense mixed-use developments in the City.
- IV-4 Transportation – Should remove all parking minimums throughout this development
- IV-4 Transportation – Regular shuttle service to transportation and civic hubs are unnecessary given the Metro station, Metroway stops and other local bus routes that serve North Potomac Yard. The private shuttle services would also draw some riders from these other services.
- IV-4 Transportation – Should Incorporate pedestrian zones which are off limits to vehicle traffic all the time or for substantial portions of the day

#### **V. Health & Wellness**

- General section – This site should have some sort of healthy building certification. WELL, Fitwel and RESET

#### **General – Document Organization, Formatting, etc.**

- Page numbers in top right corner often hard to see.
- Please add PDF Bookmarks and linked table of contents to make navigation easier