ALEXANDRIA
Environmental Policy Commission

June 3, 2022

Nathan Macek,
Chair
Alexandria Planning Commission
301 King Street
Alexandria, Virginia

Re: Environmental Policy Commission (EPC) Comments and Recommendations on the PRGS CDD and its Carbon Neutral Analysis

Dear Mr. Macek:

On behalf of the EPC, I am writing to share our comments and recommendations on the proposed Potomac River Generating Station (PRGS) Coordinated Development District (CDD) that is to come before you on June 23, 2022. For the past year a small group of City staff and Commissioners from the EPC and Planning Commission (PC) have worked with those directly involved with PRGS, to discuss how PRGS would adequately address the target of carbon neutrality found in the Old Town North Small Area Plan. In addition, the highlights of the Hilco Redevelopment Partners' (Developer) sustainability approach were presented and discussed with the EPC during our April 18, 2022 meeting. We appreciate the discussions and willingness of the Developer to answer our questions and address our issues during our meetings. The EPC is excited by the redevelopment of the former coal plant as a high-quality mixed-use development, with great urban design and publicly accessible open space along the Potomac.

Summary of Comments & EPC Recommendations

In order for this Development to be consistent with the City's target of reducing community-wide greenhouse gas (GHG) emissions by 50% by 2030 with continued rapid elimination of emissions after that date, the EPC recommends the following be included in the CDD:

1) The EPC urges the PC to require the Developer to provide adequate information to evaluate their proposals to achieve GHG emission neutrality (carbon neutrality) by 2030. This should include specific, measurable, time-bound actions demonstrating their good faith, best efforts to achieve:
    a. higher energy efficiency such as an EUI[i] of 25 for residential, 40 for commercial and 50 for hotel space,
    b. more on-site renewable energy than the current 3% and working toward a goal of net zero from on-site renewable energy, and
    c. only use Power Purchase Agreements (not Renewable Energy Certificates, offsets, etc.) for their off-site renewable energy purchases used to achieve their carbon neutrality target for that which cannot be secured on-site.
2) meet the carbon neutral targets identified in the Old Town North Small Area Plan which

they committed to verbally to the EPC during our April 18, 2022 meeting;
3) commit to producing their Coordinated Sustainability Strategy (CSS) (former referred to as the Environmental Sustainability Master Plan) with specific, measurable, time bound details to which they can be held accountable,
4) return to the EPC no later than 90 days before they bring their Infrastructure Development Site Plan for review by the Planning Commission and/or provide their Coordinated Sustainability Strategy to the PC or City staff. The date to be determined when they have more data that were specifically requested by the EPC on overall EUI values for the various use types in their buildings and answer questions on this document.

The EPC notes that the Architect for this project, Gensler Architects clearly has the knowledge and ability to create a carbon neutral development since they were an early signer of the Architecture 2030 pledge in 2009, making the commitment that all their buildings would achieve carbon neutrality by 2030.[ii] Thus, if the Developer undertakes a good faith, best effort to achieve the above requirements, review and approval of this CDD and their future DSUPs, etc. for this Development could support a major marketing opportunity for them.

Before we look forward, the EPC notes that the last letter we sent to the Planning Commission two years ago (see attached) urged the PC to take a variety of actions. However, little specific, measurable, time bound actions have changed with this PRGS site plan except the increased urgency to undertake meaningful actions to address the climate crisis. The "code red" declared by the Intergovernmental Panel on Climate Change requires our City to use its **good faith**, **best efforts** to effect change. We cannot continue to add to the problem with buildings which are predicted to last 50-75 years but which do not use the best available, financially viable technology to reduce carbon emissions.

Background
In 2019, the City declared a Climate Emergency and also adopted its Environmental Action Plan 2040 which established a target of reducing greenhouse gas (GHG) emissions by 50% by 2030 (based upon 2005 levels), and by 80-100% by 2050. The Climate Emergency Declaration clearly states, "the costs of addressing this climate emergency are far less than the costs of not addressing the climate crisis". In 2022, the City moved both climate change and environmental justice from a priority to a guiding principle and elevating addressing the climate crisis to one that is integrated across all areas, projects and plans for the City and community.

To address these principles and targets, the City of Alexandria has taken great strides over the last several years to address the crisis including with the three largest contributors:

1) new buildings - requiring all new ***public*** buildings to be net zero energy,
2) transportation – supporting the addition of a new Metro station, a fare-free bus system as well as a plan to replace all buses with electric ones, adoption of its Mobility Plan that especially improves options for non-auto travel, and
3) existing buildings – adoption and support of a Commercial Property Assessed Clean Energy (C-PACE) system that supports low-cost loans to modernize and reduce the energy burden of business owners, thus enhancing their bottom line so they can thrive.

However, since the City contributes only 4% to the problem, while 96% comes from the

Community, it will be impossible for the City to achieve real results if the Community does not contribute its fair share to address this crisis. In addition, while the City is not permitted to mandate higher sustainability requirements than the current law allows, it **IS** permitted and has exchanged Developer requested increased density or building height for important City and Community priorities. Therefore, if the Developer Community does not accept its obligation to address the crisis by changing its "business as usual" practices, it is incumbent that the City force change by setting higher energy efficiency standards in return for higher density/height requested by the Developer. To do otherwise sets the City (residents, businesses and government) on an unnecessarily costly path of paying high utility costs and retrofitting buildings after the fact – as well as dealing with their climate consequences.

Energy Efficiency

Today, it is a well-accepted, science-based fact that creating more energy efficient buildings is more cost-effective than employing "business as usual" building practices and thus having to supply their energy needs by creating a new energy source, no matter its type.[iii] The US Department of Energy's Office of Energy Efficiency and Renewable Energy states "Energy-efficiency programs improve community resilience and address energy equity by bringing efficient, cost-effective technologies and infrastructure to underserved communities, including communities of color. These communities are disproportionately affected by air pollution and have a higher energy burden, which is the percentage of gross household income spent on energy costs." The City clearly supported these facts when in April 2022 it established environmental justice as one of the City's core principles.[iv] Setting high-energy efficiency standards up front, where possible, for new housing and mixed-use developments will help improve the affordability of living in Alexandria over time.

Thus, it is clear "business as usual" is no longer acceptable, nor are small incremental changes for buildings expected to last 50-70+ years. Equally clear is that making buildings much more energy efficient is NOT an issue of choosing between other City strategic priorities such as affordable housing, flooding vs. addressing environmental justice and the climate crisis. The technology is available and has been demonstrated in multiple small, medium and large buildings over the last 10 years in financially sound ways. Passive House certifications and other methods to increase dramatically energy efficiency as well as other innovations have created thousands of more comfortable and healthy units across the country that result in reducing resident's energy usage by 75 to 90%. The EPC concludes there is no impediment in Alexandria that prevents these types of buildings from being built here when paired with the Developer's request for higher density or increased height.

PRGS Proposal

The Developer has offered:

1) A proposal to increase energy efficiency by 25% above 2010 Building Code levels with 14% improvement coming from residential and 11% from commercial.
   a. to study district-wide HVAC system
   b. and to double the target of energy efficiency in the GBP
2) A proposal of a 10% reduction of embodied carbon
3) A proposal to "Explore" the extent to which on-site combustion can be reduced
4) A proposal for a 3% on-site renewable energy target

5) A proposal to purchase off-site renewables to increase the level of renewables

Thus, the Developer has offered only proposals, (along with their pros and cons), explorations and studies, but wants a final approval of its CDD from the City – ***essentially - a Developer proposal for a City commitment.***

In response to questions from the EPC, the Developer has indicated that some of the technologies are not yet viable, not financially viable (their cost cannot be recouped easily), or it's too early to provide a more committed carbon neutral plan since they have yet to work out the financing for the project, and its percentage of commercial vs. residential square footage, etc.

EPC's Response:
The EPC is excited that a former coal plant is being redeveloped as a high-quality mixed-use development, with great urban design and publicly accessible open space along the Potomac. We appreciate the higher bar for sustainability compared to past developments in the city; however, we think the Developer can and should do more at this time. Specifically, we question these elements:

- First, prior to the Developer's presentation during the EPC's April 2022 meeting, we shared with them a 35-minute Webinar which can be viewed at https://www.youtube.com/watch?v=oHYQkvEBSyA. In it, Tim McDonald, President and CEO of Onion Flats, LLC showed how his company has built hundreds of affordable housing units in Philadelphia that are net zero requiring NO off-site purchase of renewable energy. His buildings are so energy efficient they cut their energy bills by 75-90 percent. This is achieved largely by providing a much tighter skin or coat on the building during construction, making that coat as airtight as possible - something that is much easier and less costly if done during the initial construction of the building versus later (virtually impossible). Hundreds of other units in larger buildings across the world that are also net zero **can** be found at: https://passivehouse-database.org/ Based upon all of this information, the EPC believes the Developer could construct net zero buildings that are financially viable, if they chose.

- Second, the EPC is greatly concerned that none of the Developer's proposals in their presentation or carbon neutral plan demonstrates a true commitment to a carbon neutral process for the site by 2040 or for buildings by 2030. There is no real commitment – no true accountability is possible. The EPC cannot evaluate a plan, which does not have specific, measurable, time-bound requirements, and therefore they cannot be held accountable.

- Third, the EPC remains confused about the energy efficiency of this Development.

    - For instance, the Developer states that they propose to double the energy efficiency of the Green Building Policy (GBP) with no additional information. Given that the City's GBP (and the Developer) uses a LEED point system across a variety of performance measures including: energy use reduction, water efficiency and indoor air quality, we do not have enough information to verify the

Developer's proposal. (For example, if 5 points are earned under the GBP for energy use reduction, does this mean the Developer is offering to earn 10 points since this is double the value?)
    - Further, the Developer stated their current EUI goal is 45 for the Development, but how does this square with their "double the energy efficiency of the GBP and/or to increase by 25% the energy efficiency of the ASHRAE 2010 standard?

- Fourth, the EPC is concerned about the use of natural gas in the development. We are fine with the availability of fossil fuel for back-up power generators since these are used infrequently. However, the use of natural gas in residential properties is unnecessary; buyers seldom avoid a property simply because they want gas appliances or fireplaces.[v] Similarly, it is unclear whether gas is necessary in commercial establishments such as restaurants since viable options (induction burners and ranges) exist.

To address these concerns and questions, the EPC recommends the following be included in the CDD:

1) The EPC urges the Planning Commission to require the Developer to provide adequate information to evaluate their proposals to achieve GHG emission neutrality (carbon neutrality) by 2030. This should include specific, measurable, time-bound actions demonstrating their good faith, best efforts to achieve:
    a. higher energy efficiency such as an EUI of 25 for residential, 40 for commercial and 50 for hotel space,
    b. more on-site renewable energy than the current 3% and working toward a goal of net zero energy, and
    c. only use Power Purchase Agreements (not Renewable Energy Certificates, offsets, etc.) for their off-site renewable energy purchases used to achieve their carbon neutrality target for that which cannot be secured on-site.
2) meet the carbon neutral targets in the Old Town North Small Area Plan which they committed to verbally to during the EPC's April 18, 2022 meeting;
3) commit to producing their Coordinated Sustainability Strategy (CSS) (former referred to as the Environmental Sustainability Master Plan), with specific, measurable, time bound details to which they can be held accountable, and
4) return to the EPC no later than 90 days before they bring their Infrastructure Development Site Plan for review by the Planning Commission and/or provide their Coordinated Sustainability Strategy to the PC or City staff. The date to be determined when they have more data that were specifically requested by the EPC on overall EUI values for the various use types in their buildings and answer questions on this document.

As we said in our joint letter to City Council earlier this year, the climate crisis is the single largest threat to the long-term health and prosperity of the City of Alexandria. There is a lot of talk about zero emissions, decarbonization and green energy. However, builders cannot just rely on decarbonizing the grid to meet the City's carbon reduction targets. We must significantly improve the energy performance of our buildings. This is because the national electric grid has limits. While the energy offered by wind, solar and the tide is almost infinite, our capacity to harvest that energy is not - there is a financial and carbon cost to all renewable technology. Thus, the Developer must design their carbon neutral buildings today, and not pass the added

energy burden on to residents even if it comes from renewable energy sources.

It will not be possible to be the caring, kind, compassionate, fair, just, and equitable city that is an affordable, livable community for all if we do not implement effective actions to address this climate emergency. But since the City represents only 4% of the carbon emissions and has taken sizable steps to fight the crisis, we must push those responsible for the other 96% to do their part as well. How will we demonstrate why people should want to live here, if we are not leading by employing proven, cost-effective measures to fight the climate crisis along with our neighbors?

Sincerely,

Kathie Hoekstra

Kathie Hoekstra
EPC Chair

CC: Melissa Schrock,
Mary Catherine Gibbs, Esq.
Mike Babcock,
Karl Moritz,
Catherine Milaras,
Jeff Farner,
Richard Lawrence
Bill Skrabak,
Khoa Tran

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[i] EUI: Energy use intensity expresses a building's energy use as a function of its size, typically in energy per square foot per year (kBtu/sf/yr). It's calculated by dividing the total energy consumed by the building in one year (often measured in kBtu) by the total floor area of the building (often measured in square feet), and can be useful for comparing performance of buildings across sizes, types, and locations. When used before EUI, the letter "p" indicates that the data is predicted, based upon an energy model. The lack of a "p" indicates actual measured EUI. Examples. Energy intensive homes and buildings might have an EUI between 100 and 200 kBtu/sf/yr, while high performance homes and buildings might have an EUI of 25 kBtu/sf/yr or less. The Passive House standard requires less than 14.6 kBtu/sf/yr. For more info on Passive House see: https://www.mhp.net/writable/resources/documents/Passive_HouseMA_explainer.PDF

[ii] To that end they created the Gensler Cities Climate Challenge to by 2030 "eliminate all net emissions associated with our work". Their Climate Action through design Website page states: "Renewables by themselves don't achieve NZE status for a space; buildings must also be designed to operate far more efficiently. In many cases, this starts in the early design phase, but older buildings can be retrofit to be more efficient."

[iii] https://www.energy.gov/eere/energy-efficiency

[iv] See https://legistar.granicus.com/alexandria/meetings/2022/3/2249_M_City_Council_Legislative_Meeting_22-03-22_Action_Docket.pdf

[v] Providing costly gas lines and their additional requirements for venting, etc. adds additional unnecessary costs and may become stranded assets in a future carbon neutral environment.