



DEPARTMENT OF PLANNING AND ZONING

Sent via E-mail

November 21, 2022

Ms. Mary Catherine Gibbs
Wire Gill, LLP
700 N. Fairfax Street, Suite 600
Alexandria, VA 22314

Re: Potomac River Generating Station Coordinated Sustainability Strategy – Submission # 1
Staff Comments

Dear Ms. Gibbs:

This letter is to inform you that City staff has completed a review of the first submission of the Coordinated Sustainability Strategy (CSS) for the Potomac River Generating Station (PRGS) site, based on compliance with the conditions of the CDD approval for the site (Attachment # 1). The attached comments are based upon the submitted draft received on October 6, 2022. To ensure continued collaboration on this effort, staff requests a meeting with the applicant and their sustainability team to further discuss items prior to the next submission

Generally, the Strategy has provided topical information about various sustainability elements, however, does not clearly describe how each requirement could be implemented or the overall impact as part of the sustainability toolkit and how it will comply with the CDD conditions. While more detailed comments are included below, staff's main concerns with the current draft are as follows:

1. **Document how all of the site improvements collectively improve the sustainability of the site.** For example, the document should describe how improvements on the site such as tree canopy, increased impervious areas, transit use (and many others) all contribute collectively to making this site more sustainable.
2. In addition, the document needs to document how the site will comply with the CDD requirements that consist of the following:
 - a. **25% reduction in operational carbon.** It is unclear how this goal is to be achieved. Provide documentation and a description how this will be achieved.
 - b. **Minimum 3% one-site renewable energy and more will be evaluated.** The 3% is documented and described within the document for Phase 1 buildings. However, strategies to increase the 3% are minimally discussed and not documented.

- c. **10% reduction in embodied carbon.** Unclear how this will be achieved.
- d. **Purchase of Credits.** To the extent that targets above from the CDD do not achieve the goal of carbon neutrality, tools such as Power Purchase Agreements (PPAs), Renewable Energy Credits (RECs), or other comparable offsets would be purchased. The document does not acknowledge or describe how this will be achieved.

The CSS is anticipated to be discussed with the Environmental Policy Commission, Planning Commission, and City Council in upcoming work session which may provide additional comments. To set up a meeting to discuss these comments, please contact me at 703.746.3849 or Richard.lawrence@alexandriava.gov.

Sincerely,

Richard A. Lawrence, Jr., AICP
Principal Planner, Neighborhood Planning & Community Development Division

Cc: Jeff Farner, Deputy Director, P&Z
Rob Kerns, Development Division Chief, P&Z
William Skrabak, Deputy Director, T&ES
Catherine Miliaris, Principal Planner, P&Z
Dustin Smith, LEED AP, Green Building Manager, P&Z

Below are comments from staff followed by section/topic specific comments to address and incorporate for consideration in the revised draft of the CSS. Address by providing written response to staff comments and questions. The revised draft is expected to be provided to staff following discussions with staff and scheduled work sessions. The revised CSS must be submitted prior to the Completeness submission of the Infrastructure Development Site Plan (IDSP).

General Comments:

1. The overall structure of the document needs to identify the collective environmental benefits of all of the site improvements. For example, open space increases the amount of pervious surface from x to y and enables the tree canopy to increase from x to y, etc. In addition, all of the elements need to clear how they collectively improving the environmental sustainability of the site.
2. The current draft of the CSS does not clearly define specific strategies that inform actionable infrastructure necessary to achieve any of the CSS elements (energy, site, stormwater, lighting, smart technology, etc.)
3. Identify professionals who drafted the report and their contributions/qualifications.
4. The CSS indicates that short term strategies are deemed viable if the payback period is 8 years or less. How was this time horizon determined. The 8-year payback time for sustainability-related investments seems arbitrary and not in keeping with the intent to look longer-term at how the site can achieve sustainability goals. A longer payback period should be considered to ensure additional strategies could be integrated throughout the development over time.
5. Many of the strategies included in the CSS don't provide actionable items staff can use in the review of subsequent DSP/DSUP submissions. The CSS offers further study, analysis, and coordination with no direction on when those would be completed and how they could be applied. While regular re-evaluation and analysis is necessary, the CSS must also clearly articulate specific actions that both staff and the applicant can evaluate as part of each DSP/DSUP to determine whether the action has been satisfied.
6. CSS lists compliance with several standard development conditions as part of the strategy – note that these are not new or additional strategies. Many of these standard conditions are also Zoning Ordinance requirements. For example, meeting the requirements of the Landscape Guidelines is not necessarily a CSS item. The CSS should focus on and highlight site-specific sustainability that goes beyond standard condition requirements.

CDD Conditions:

7. The CSS needs to describe how each of the requirements of the CDD as outlined above will be implemented/achieved. The CSS refers to, and in some cases sites, the CDD conditions, however, the strategies in the CSS aren't showing clear alignment with how the targets in the CDD will be achieved.
 - a. While the scorecard appendix references Condition 139a, the CSS (pg. 22-23) references the Green Building Policy 11% and 14% energy reduction instead of the establishing the minimum 25% reduction target for all new buildings, as required by the CDD.

- i. As building use breakdowns become known, leverage the 25% reduction requirement to define EUI values or estimated EUI values.
- b. Condition 139b and 144 indicates that as part of the CSS, an analysis related to onsite generation would be conducted to evaluate strategies to increase on site generation beyond 3% through the potential use of adjacent sites (PEPCO) and open spaces (including the Rail corridor park). The CSS provides a specific exploration of Phase 1 buildings but does not include any additional analysis of areas identified in 139b. Additionally, the CSS indicates PV that could be used as part of building architecture has less efficiency. Has any solar modeling been conducted to arrive at this conclusion or to inform the capture potential for integrated PV systems?
- c. Condition 139c refers to a 10% embodied carbon reduction for buildings, however, does not reference how reductions can be achieved incorporated as a measure for infrastructure and open space related approvals.
- d. Condition 139e refers to the use of off-site renewable as a tool, in the event 139a-d do not achieve the goal of carbon neutrality, however, the CSS makes does not describe how this will be included in the CSS strategy to achieve carbon neutrality. In fact, the CSS states the PRGS project will rely on existing and future municipal, state, and federal policy to incentivize the gap to reach carbon neutrality, primarily through efforts to green the existing grid. Dominion Energy programs are outlined, but no further information on how they apply are considered. Moreover, while PPAs are discussed, there is no further information on their applicability in context of PRGS and the CSS to meet carbon neutrality.
 - i. The statement “PPAs are currently limited to large-scale projects and entities that use >10MW of energy” is counter to staff understanding.

District Systems:

- 8. During the CDD process, the applicant indicated a range of studies and analysis being conducted related to district systems (pg. 23-24). The CSS provides an abridged summary of the findings but does not provide any supporting documentation to verify the analysis. Provide staff with the analysis conducted for review and consideration.
- 9. Geothermal heat exchange systems - the CSS indicates the costs exceeds the financial feasibility threshold of 8 years; however, new projects are utilizing heat pump technology. Provide more information on the analysis conducted. As noted above, staff is unclear as to the justification of the 8-year feasibility threshold.

Energy:

- 10. Short-term on-site renewable energy strategies should include solar modeling at concept stage for each block to evaluate as part of DSUP process.
- 11. Identify other areas on site to be evaluated for renewable energy per CDD Condition 139/144—can the screening of the PEPCO substation or other potential open space structures include PV?
- 12. Clearly identify what limited exceptions from full electrification may be requested (related to commercial, amenity and life-safety systems).

13. Limited discussion on how electrification will be implemented at the building level, including HVAC, hot water heating, kitchen appliances, etc. is provided. It would be helpful to communicate how electrification and electrical system design will impact energy use, design requirements, etc.

Climate Resilience Strategies:

14. When is the evaluation of battery storage and critical life support systems anticipated to be conducted? How will the findings of the evaluation inform the CSS and integration into building designs?
15. Any known climate hazards should be included in the CSS and identify mitigation measures that can be implemented in the short, mid, long term to address any known hazards.
16. Indicate when the resilience management program would be created.

Transportation & Circulation:

17. Include additional background about how urban transportation leads to GHG emissions and why the proposed strategies are important to preventing it.

Short Term

18. Provide additional TDM measures—Coordinate with City TDM team on what could be implemented
19. Provide specific infrastructure goals. (e.g. increasing bike lanes from X to Y, where is the mobility hub)
20. Why is the garage a sustainability strategy?

Mid Term

21. Related to the shuttle indicated in the CSS - provide more details; this is the first staff is hearing about it.
22. Specify transportation technologies to be implemented around the site.

Stormwater:

23. The current strategy indicates the minimum stormwater requirements that are being completed as a result of the conditions of approval. Please include more information on how this strategy will achieve greater sustainability beyond just what is required.
24. Indicate potential strategies that can be integrated in building design, streetscapes, and open spaces across the site to achieve a comprehensive stormwater approach.

Implementation & Evaluation:

25. Explain how the CSS will be updated regularly and where information in strategies will be incorporated in the future. For example, when will the Resilience Management Program be created, how will it be reviewed and shared, and when will it be regularly updated (identified as the 4th short term strategy under Climate Resilience)
26. How will long-term strategies be evaluated and achieved?

Misc. Comments:

27. Provide more examples of innovative green infrastructure management in the rights-of-way and open space areas.
28. Discussion on meeting the LEED-ND Silver requirement should be considered throughout the CSS. Additionally, The LEED-ND scorecard at the very end is blank. Include a preliminary scorecard that staff can assume will be used as a guide to their site design and approach.

Attachment #1 – CDD Concept Plan 2021-0004 Sustainability Conditions

District Carbon Neutrality:

139. The site and each building(s) shall seek to achieve carbon neutrality in compliance with the Old Town North Small Area Plan through application of the targets identified in the Carbon Neutrality Analysis (CNA), dated April 7, 2022, as outlined below:

Site & Building Targets

Target 1

a. Each building(s) shall achieve a minimum 25% reduction in operational carbon emission based on the ASHRAE Standard 90.1-2010 Appendix G – Performance Rating Method baseline established by 2019 Alexandria’s Green Building Policy; or achieve an EUI target based the International Energy Conservation Code (IECC) for climate zone 4A based on building type (e.g. table CC103.1of the 2021 IECC);. Each building shall comply with the Green Building Policy at time of DSUP submission.

Target 2

b. The site shall achieve a minimum 3% annual on-site renewable energy generation across the CDD area. Prior to the approval of the infrastructure development site plan (DSP), the applicant shall evaluate strategies to increase the targeted 3% on- site energy generation through approaches such as use of public open space, adjoining properties, or other comparable approaches as part of the Coordinated Sustainability Strategy (CSS). These strategies and analysis will be reviewed as part of the infrastructure DSP. As part of each block’s Development Special Use Permit (DSUP) review, the applicant will evaluate strategies to increase the on-site energy generation above 3%.

Target 3

c. Each newly constructed building(s) shall achieve a 10% reduction in embodied carbon compared to industry standard construction practices. With each preliminary DSUP submission, the Applicant shall provide an estimate of the Embodied Carbon Intensity (ECI) [kgCO₂/m² or lbCO₂/sf], as identified in the CNA, for the proposed redevelopment as part of the development review process. As part of each block’s DSUP, the applicant will evaluate reductions in embodied carbon for associated site improvements.

Target 4

d. Each building(s) and all land use(s) permitted herein shall be solely electric with limited exceptions for allowances for natural gas where electric is not feasible. Natural gas shall be prohibited with limited exceptions for: restaurants and retail uses, emergency generators, common area amenities such as common space grilles and common space fireplaces. For these limited accessory elements, the buildings shall be designed to support low cost and available conversion from fossil fuels to electricity in the future. These limited exceptions shall be re-evaluated with each DSUP submission.

Target 5

e. Off-site renewables shall be utilized towards achieving carbon neutrality, to the extent needed in addition to the targets outlined above, by phase. Off-site renewables may include Power Purchase Agreements (PPAs), Renewable Energy Credits (RECs), and/or other comparable approaches as recommended by staff and approved by the City Council. Generally, the Applicant shall design buildings, infrastructure, and open spaces in a manner to maximize on-site carbon reduction targets and minimize the use of off-site renewables, to the extent feasible. (P&Z) (T&ES) (PC)

140. The applicant shall make all good faith efforts to document and achieve the targets outlined above. The efforts to achieve these targets shall be documented by the applicant and evaluated by staff as part of the development review process. If determined that good faith and reasonable efforts have been made by the applicant to achieve these targets, including consideration of technical and financial feasibility, modifications to these targets may be approved by Planning Commission and City Council as part of the development review process. (P&Z) (T&ES)

141. The applicant, property management entity, BID, or comparable entity shall oversee tracking the targets outlined above. The tools, strategies, and techniques to achieve the targets outlined above shall be submitted with each development special use permit (DSUP) application for each park(s) and/or building(s). (P&Z) (T&ES)

LEED Certification:

142. Achieve LEED for Neighborhood Development (LEED-ND) Silver Certification or comparable certification for the neighborhood. (P&Z) (T&ES)

Green Building:

143. Comply with the City's Green Building Policy in effect at the time of DSUP **submission**. Applicants may use LEED, or equivalent rating systems as identified in the Green Building Policy. (PC)

Coordinated Sustainability Strategy (Sustainability Master Plan):

144. Prior to the 2nd concept submission of the Infrastructure Development Site Plan (Infrastructure DSP), the Applicant shall develop and submit the Coordinated Sustainability Strategy (CSS) and include the evaluation of approaches for on-site energy generation as part of the review of the Infrastructure DSP. This CSS shall be reviewed and endorsed by City Council prior to or concurrent with the approval of the Infrastructure DSP and implemented through DSP/DSUP approvals. If the Council does not endorse the CSS, the applicant shall revise and resubmit the CSS to Council for review and endorsement.

145. The CSS shall outline short-, mid-, and long-term strategies to achieve the five Site and Building performance targets outlined above in addition to other sustainability considerations including:

- a. Energy & Resilience Planning/Carbon Reduction strategies as identified in the CNA, including:
 - i. District systems
 - ii. Building efficiency through energy reduction/EUI targets
 - iii. Embodied carbon reduction targets
 - iv. On-site/adjoining site energy generation
 - v. Electrification strategy
 - vi. Off-site renewable/offsets
- b. Indoor Environmental Quality
 - i. Health
 - ii. Ventilation treatment
 - iii. Materials
- c. Site:
 - i. Open Space
 - ii. Stormwater Management
- d. Public Realm/Streetscapes
- e. Water Use Management
- f. Waste Management
- g. Resilience
- h. Reporting & Tracking

146. With each conceptual DSUP submission, the applicant shall demonstrate how the building(s) and site area(s) within that DSUP submission are consistent with the CSS. With each phase, the CSS may be updated to confirm best practices and strategies to achieve the targets to the satisfaction of the Directors of T&ES and P&Z. (P&Z) (T&ES)

147. Prior to the release of the Final Site Plan, the applicant shall provide a draft sustainability strategy scorecard for each DSP/DSUP. The scorecard will demonstrate how the building(s) and site area(s) within that DSP/DSUP submission is consistent with the CSS. (P&Z) (T&ES)

148. Prior to issuance of a building permit for each permitted DSUP, the Applicant shall provide a scorecard reflecting the final design of the building(s) and site area(s) within that permitted DSUP demonstrating consistency with the CSS. A final scorecard of the as-built building(s) and site area(s) within that permitted DSUP shall be provided within the first year from the date of issuance of the certificate of occupancy and shall include information verifying any offsite renewable strategies used.

Electrification:

149. The CSS shall demonstrate consistency with the Environmental Action Plan 2040 targets, goals, and actions to show how electrification is being implemented with limited exceptions for: restaurants and retail uses, emergency generators, common area amenities such as common space grilles and common space fireplaces. For these limited accessory elements, the buildings shall be designed to support low cost and available conversion from fossil fuels to electricity in the future.

150. All new off-street parking shall provide EV (Level II) stations or consistent with City policies which shall be identified and determined during the time of each DSUP submission. (P&Z) (T&ES)

On-site Energy Generation:

151. Rooftops and/or the building facades for each newly constructed building(s) shall be utilized to provide on-site energy generation to the extent feasible and in alignment with the performance targets as outlined above. All buildings shall be designed to be solar ready to be able to handle the equipment after construction. Pull-wire ready

conduit shall be provided for potential future rooftop photovoltaic systems. Space shall be provided for solar related electric panel in or near a building electrical closet. Future installation of solar panels and associated infrastructure, beyond the conduit described in this condition, shall be at the sole discretion of the owner. (P&Z) (T&ES)

Recycling/Construction Waste:

152. With each final site plan in the CDD Conceptual Design Plan area, provide information in the plan drawings for the regional construction recycling guidance and certified resources to the extent possible, <https://www.mwcog.org/environment/planning-areas/recyclingand-solid-waste/builders-recycling-guide/buildersrecycling/> and/or reuse of the existing building materials as part of the demolition process, including leftover, unused, and/or discarded building materials. (T&ES) (P&Z)

Report & Monitoring:

153. The applicant, owner, property management entity, master HOA, BID or comparable entity shall be responsible for tracking and reporting site-wide sustainability performance as developed and outlined in the Coordinated Sustainability Strategy. The responsible party shall aggregate and verify individual building data annually to demonstrate sitewide performance for the CDD Conceptual Design Plan area as outlined in the Coordinated Sustainability Strategy as buildings within the CDP are constructed.

a. Reporting shall include:

- i. Annual LEED scorecards for each building for the first five years of occupancy;
- ii. An aggregate summary demonstrating the combined building achievements that contribute to achieving the goal of carbon neutrality for the site;
- iii. Sitewide progress towards achieving carbon neutrality by 2040 for buildings and site targets as identified in the CNA and CSS; and
- iv. Any additional updates on sitewide sustainability efforts identified in the CSS. (P&Z) (T&ES).

154. Public benchmarking results for each new building(s) within the CDD plan area will be made available to the City through the ENERGY STAR® Portfolio Manager® platform (or other equivalent systems. This shall be submitted to the satisfaction of the Directors of PZ and T&ES.

155. Monitor the energy usage, report sustainability target performance as outlined in the CSS, and provide tracking documentation following the occupancy of each building(s) system for the first 5 years of occupancy. (P&Z) (T&ES).

156. The applicant may propose additional strategies to the sustainability conditions outlined and these additional sustainability strategies may be incorporated administratively to the satisfaction of the Directors of T&ES and P&Z. (P&Z) (T&ES)