NORTHERN VIRGINIA
BIRD ALLIANCE
FORMERLY AUDUBON SOCIETY OF NORTHERN VIRGINIA
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November 14, 2024

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Re: 2024-25 Green Building Incentive Policy

Ladies and Gentlemen:

We write on behalf of the Northern Virginia Bird Alliance (NVBA, formerly Audubon Society of Northern Virginia). We are pleased that Arlington County is updating its Green Building Incentive Policy, particularly the improved standards for bird-friendly materials and Dark Sky lighting in a variety of Arlington County projects. Arlington County's renewed emphasis on reducing bird collisions and reducing light pollution is consistent with the goals of the Bird Safe NOVA campaign by NVBA and eight other local environmental organizations. We applaud the proposed standards, but want to forward a few suggestions, outlined below.

More than one billion birds die from collisions with windows in the United States each year.[1] Birds don't recognize glass. They mistake the reflection of trees and vegetation in a window for open space and fly into it. One to three story buildings, including homes, cause 44% of the deaths, and buildings four to eleven stories high cause 56% of the deaths.

Particularly during migration, birds also die from light pollution. More than 100 million birds migrate through northern Virginia each spring and 160 million birds, their numbers swelled by a successful breeding season, migrate south through northern Virginia each fall. Most birds migrate at night to take advantage of calmer winds and lower temperatures, relying on the moon and the stars to help them navigate. The birds can be disoriented by bright lights from tall buildings and sky glow from light pollution, crashing into buildings[2] or exhausting themselves as the fly around the lights. Even if the birds escape the lights and fly on, they have squandered the energy they need to make their demanding journeys, making it less likely that they survive to reach their intended destinations.

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[1] https://abcbirds.org/news/bird-building-collisions-study-2024/#:~:text=A%20groundbreaking%20research%20study%20published,in%20the%20United%20States%20alone

[2] https://www.allaboutbirds.org/news/a-single-night-of-bird-collisions-in-chicago-points-to-the-need-for-window-safety/

We offer a few suggestions which, we believe, could provide even more robust protections for resident and migrating birds.

- We approve the revised standard for new construction in the traditional pathway, also applicable to adaptive reuse buildings, with respect to the area of the building envelope using bird-friendly materials. The current policy does not apply to the ground level, notwithstanding that collisions are highly likely there because of reflections of ground-level vegetation. We also support the increased area of applicability from ground level to 75 feet above ground level, which should address reflection of tall trees as well as ground-level plantings. ***We suggest, however, that the County consider decreasing the applicable maximum Threat Factor for reflective surfaces from 30 to 25.*** We recognize that the American Bird Conservancy considers a surface with a Threat Factor of 30 to be "bird friendly." However, a Threat Factor of 30 is expected to result in a reduction in bird collisions of only 50%. Given the increasing body of research showing that bird-window collisions result in the deaths of more than one billion birds per year in the United States, we believe that the County should provide incentives to reduce bird collisions by more than 50%.

- We are pleased that the climate adaptation pathway would require bird-friendly materials in a larger area of the building envelope (up to 100 feet above grade); however, we believe that the lack of a defined maximum threat level for those materials is an issue. ***We suggest that the pathway include the same maximum threat level for the materials that is required in the traditional pathway. We also suggest adding provisions clarifying that bird-friendly materials be used on surfaces adjacent to landscaped areas above ground level, including such features as vertical gardens.*** It is the reflection of plantings that can confuse the birds and result in collisions.

- We appreciate the County's inclusion of standards for shielded lighting for the traditional pathway for new construction, the adaptive reuse standards, and the climate adaptation pathway. ***We suggest that the County consider adding similar Dark Sky lighting standards for the certification of existing buildings, particularly because building changes to reduce energy use can easily include replacing energy-inefficient lighting.***

- ***We also suggest the adoption of a 2,200 Kelvin color temperature standard in place of 3,000 Kelvin, to further reduce light pollution.*** Higher color temperature lights have adverse effects on the circadian rhythms of humans, animals and plants, and they cause more light pollution and sky glow because blue light scatters more than warmer color lights. When the County's Green Building Incentive Program was adopted in 2020, lighting with color temperatures of less than 3000K was difficult to find and more expensive. In the past five years, the price for lower color temperature lighting has dropped and the availability of such lighting has improved dramatically. In 2021, DarkSky International adopted a policy recommending outdoor lighting temperatures of no more than 2,200K whenever possible.[3]

[3] https://darksky.org/resources/guides-and-how-tos/values-centered-outdoor-lighting/

Again, we appreciate the County's proposed changes to update and improve the standards to protect our resident and migrating birds.

If you have questions or need additional information, please contact us atadvocacy@nvbirdalliance.org.

Sincerely,

Libby Lyons
NVBC President and Arlington County Resident

Tom Blackburn
NVBC Advocacy Committee Chair

/s/
Connie Ericson
NVBC Advocacy Committee Member and Arlington County Resident

Cc: Members, Arlington County Board
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Nov. 16, 2024

Arlington County Green Building Program
2100 Clarendon Blvd.
Arlington, VA 22201

Re. Proposed Updates to Arlington County Green Building Incentive Policy

The Southern Environmental Law Center applauds Arlington County's ongoing leadership to advance sustainability and address climate change, and we appreciate the opportunity to provide feedback on proposed updates to the Green Building Incentive Policy (GBIP). We strongly support the proposal to provide additional pathways to incentivize adaptive reuse for housing and to incorporate energy efficient features into existing buildings, in addition to existing incentives for new construction. We do, however, encourage Arlington to pursue more ambitious and clearly defined electric vehicle (EV) charging standards to accelerate the purchase of cleaner vehicles. Arlington has taken the lead on green building and serves as a model for communities across the Commonwealth. This policy update is a key opportunity for the County to make EV ownership more accessible and equitable.

The vast majority of EV charging occurs at home,[1] so providing low cost, convenient EV charging to more people is one of the most effective ways to spur EV adoption. However, today, most multifamily housing residents do not have adequate access to charging infrastructure where they park. Robust "EV readiness" incentives are essential to begin to close this critical gap for new construction and major building retrofits. Housing stock is designed to last for decades between major retrofits, and if the County hopes to meet its climate targets, most new cars registered in Arlington should be EVs by the end of the decade.

While we acknowledge that EV infrastructure requirements pose costs for developers, providing adequate infrastructure during construction saves significant costs over the long term, both in terms of retrofit costs to install charging in the future and avoided fueling costs for drivers that would otherwise pay for public charging or gasoline. The least expensive time to install charging infrastructure is at the time of construction,[2] and the second least expensive time

[1] *See* National Renewable Energy Laboratory, *There's No Place Like Home: Residential Parking, Electrical Access, and Implications for the Future of Electric Vehicle Charging Infrastructure* (2021), https://www.nrel.gov/docs/fy22osti/81065.pdf.

[2] According to the EV Charging for All Coalition, adding EV charging through a retrofit can cost between four and ten times as much as installation during the original construction. EV Charging for All Coalition, *Electric Vehicle Building Codes Toolkit A Guide for Adopting Equitable US Codes* at 3 (2023) https://pluginamerica.org/wp-content/uploads/2023/10/EVCAC-Model-Codes-Toolkit.pdf.

to install charging is during a retrofit or where some infrastructure (e.g., electrical panel capacity and wiring) has already been provided.

Recommendations:

1. **Align definitions with consensus standards**

At the outset, Arlington should clearly define terminology relating to EV charging within the GBIP, seeking consistency with consensus EV Ready codes, such as the 2024 International Energy Conservation Code (IECC) or CALGreen.[3] The proposed GBIP requires that participants in the Traditional and Adaptive Reuse Pathways incorporate certain EV charging measures as part of the Baseline Prerequisites list. The proposed GBIP also includes an EV charging measure in the Extra List. Both lists refer ambiguously to "electric vehicle infrastructure" without clearly defining that phrase. Across the country, states and localities that have implemented EV charging policies have aligned around shared terminology describing three essential levels of EV charging infrastructure:

- **Electric Vehicle Capable Space ("EV Capable Space")** – A designated automobile parking space that is provided with electrical infrastructure such as, but not limited to, raceways, cables, electrical capacity, a panelboard, or other electrical distribution equipment space necessary for the future installation of electric vehicle supply equipment (EVSE; defined below).
- **Electric Vehicle Ready Space ("EV Ready Space")** – An automobile parking space that is provided with a branch circuit and an outlet, junction box, or receptacle that will support an installed EVSE.
- **Electric Vehicle Supply Equipment Installed Space ("EVSE Space")** – An automobile parking space that is provided with a dedicated EVSE connection. EVSE is equipment for plug-in power transfer, including ungrounded, grounded, and equipment grounding conductors; electric vehicle connectors; attached plugs; any personal protection system; and all other fittings, devices, power outlets, or apparatus installed specifically for the purpose of transferring energy between the premises wiring and the electric vehicle.[4]

No matter which substantive standards Arlington adopts, the County should ensure that the GBIP employs precise, clearly defined terminology that is consistent across compliance pathways and makes clear what is required of developers.

[3] *See* 2024 International Energy Conservation Code; *see* also https://codes.iccsafe.org/content/IECC2024P1; CALGreen, https://www.hcd.ca.gov/building-standards/calgreen

[4] *See* 2024 International Energy Conservation Code, Sec. RE101.1, https://codes.iccsafe.org/content/IECC2024P1/appendix-re-electric-vehicle-charging-infrastructure

2. Establish a unified EV charging standard for new construction

The proposed GBIP provides two separate pathways for compliance for new construction. While we appreciate that developers may want to rely upon a single certification to comply, the diverging EV charging standards between LEED and PHIUS could lead to confusion for residents, utility partners, subcontractors, and EVSE providers. We recommend a single EV charging standard for new construction, consistent with standards adopted by other high-ambition jurisdictions. Specific recommendations for this standard are outlined below.

3. Provide at least one EV Ready space per unit or parking space, whichever is less

As to the substance of the EV charging measures in the Baseline Prerequisites list and the Extra List, Arlington can and should opt for more ambitious standards than those outlined in LEED version 4.1. The LEED credit referenced in the GBIP requires only that a developer install EVSE in 5% of all parking spaces or at least two spaces, whichever is greater, and that the developer ensure 10% of all parking spaces or at least six spaces, whichever is greater, include a dedicated electrical circuit with conduit, ending at an electrical box or enclosure. As proposed, these targets are far too low to make sufficient progress toward EV charging availability. LEED and PHIUS EV charging standards now lag behind many of the standards that states and localities across the country are adopting.

We urge Arlington to consider replacing the EV charging standards outlined in the Baseline Prerequisites list and Extra List with more ambitious targets. Arlington should consider California's proposed updates to the CALGreen green building standards, which are scheduled for publication July 2025 with an effective date of January 1, 2026. For new multifamily construction, CALGreen will require at least one EVSE or low power level 2 EV receptacle per dwelling unit, or, in the case that less parking is required, at least one low power EV receptacle for each dwelling unit with an assigned space. In addition, at least 25% of unassigned or common parking spaces must be equipped with EVSE. New nonresidential construction must include EVSE for 15% of office/retail parking and for 10% of other occupancy parking.[5]

EV charging requirements could scale up over time. For example, the CALGreen code currently requires that 40% of the total number of parking spaces at multifamily dwellings be equipped with low power Level 2 EV charging receptacles, but will scale up to the more expansive requirement described above by 2026.[6]

In addition to requiring EVSE or EV Ready spaces, the County should require that not less than one parking space per unit be required to be EV Capable (see definition above) for new construction and major retrofits. Or, if fewer than one parking space is required or provided per

[5] Cal. Bldg. Standards Comm'n, *GREEN PEME Combined 45-day Public Comment Period*, BSC and HCD Express Terms, https://www.dgs.ca.gov/BSC/Rulemaking/2024-Triennial-Cycle/Public-Comments/GREEN-PEME-45
[6] Cal. Code Regs., tit. 24, pt. 11, 4.106.4.2.2. (2024).

unit, all spaces provided should be at least EV Capable. This would at least preserve the opportunity for owners to upgrade parking for EV charging at a future time without incurring significant additional cost. This is the approach that Illinois has taken. Illinois now requires that 100% of parking spaces at newly constructed or renovated market rate multifamily dwellings be EV Capable.[7]

4. Allow Low-Power Level 2 (LPL2) charging to meet EV Ready standards

LPL2 EV Ready spaces (20 amps at the breaker) provide cost savings for developers compared to full power Level 2 (40 amps). LPL2 allows for approximately 13 miles per hour of charging, which is appropriate for long-term residential EV charging. LPL2 reduces the electrical capacity needed per space. A higher percentage of LPL2 spaces can ensure full coverage for residents while limiting both electrical infrastructure upgrade costs and overall electrical loads. Both the current version of and proposed updates to CALGreen permit LPL2 charging at residential dwellings, hotels, and motels.[8] We suggest that Arlington take the same approach in its GBIP EV charging standards.

Thank you for your consideration of these comments. Again, we greatly appreciate the County's efforts to update and improve upon this important policy.

Respectfully submitted,

Garrett Gee
Senior Attorney

Christina Libre
Associate Attorney

Southern Environmental Law Center

[7] 765 Ill. Comp. Stat. 1085/25 (2024).
[8] Cal. Bldg. Standards Comm'n, *GREEN PEME Combined 45-day Public Comment Period*, BSC and HCD Express Terms, https://www.dgs.ca.gov/BSC/Rulemaking/2024-Triennial-Cycle/Public-Comments/GREEN-PEME-45; *see* also Cal. Code Regs., tit. 24, pt. 11, 4.106.4.2.2. (2024).

SIERRA CLUB
POTOMAC RIVER GROUP

November 17, 2024

Dear Chair Garvey and Members of the County Board:

The Sierra Club's Potomac River Group has several serious concerns about the proposed update to the County's Green Building Incentive Policy (GBIP). We believe our concerns can be addressed, but that it will require additional time. Therefore, for reasons detailed below, we urge the Board to defer consideration of the GBIP update until early 2025.

1. **The proposed GBIP update allows developers to choose to use an obsolete LEED v4 framework originally introduced in 2013. A new framework, v5, better matches Arlington's goals and values and should replace LEED v4 in the GBIP.**

LEED's parent organization, the U.S. Green Building Council (USGBC), has long acknowledged the need for a more climate-oriented sustainable building framework and has spent the past several years developing one. In early 2025 the USGBC will finally approve LEED v5, which shares Arlington's priorities of **decarbonization, quality of life and ecological conservation**.[1] LEED v5 is intended for use on projects from 2025-2030, matching the timeframe of this GBIP update exactly.

Instead of adopting LEED v5, the proposed GBIP update allows developers to choose whichever standard they find more favorable to their project. Under this approach, Arlington County will be approving projects under the obsolete LEED v4 framework indefinitely.

A better approach would be to ensure that, after LEED v5 receives final approval from the USGBC in early 2025, it becomes the only LEED framework accepted by the GBIP.

2. **Building electrification is an essential requirement for new site plan projects.**

Building electrification involves using highly efficient electric heat pumps in place of fossil gas-fueled air and water heating systems. Electrification brings countless climate, health and comfort benefits and results in buildings whose GHG emissions fall over time as the grid is decarbonized. It is the single most important design step in achieving carbon neutral buildings.

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[1] For an overview of LEED v5 by the U.S. Green Building Council, see: https://www.usgbc.org/leed/v5.

Community engagement at the time of the GBIP's 2020 update found a high level of interest in incorporating building electrification as a baseline requirement. The County staff's assessment at that time was that developers were not yet confident enough in heat pump technology, but that electrification requirements were highly likely to be included in the next GBIP update – the one we are considering now.

Fast forward to today. Heat pump technology has advanced remarkably, tax credits are available, and multi-family projects in Arlington are beginning to go all-electric. Developers have gained confidence in the technology, though they need incentives due to slightly higher upfront costs, estimated at 2-5% of project cost. Building electrification is mandated by numerous state and city codes, including Washington, D.C., and is a foundation of "stretch codes" across the country. It also features prominently in LEED v5.

Despite all this, the proposed GBIP includes no baseline electrification requirements at all for site plan projects. Baseline requirements are especially important because most site plan projects participate at or near the GBIP's baseline level. Baseline requirements are where the GBIP has its greatest impact on GHG emissions.

Drafting an effective electrification requirement for new site plan projects will require research and dialogue that staff have not yet conducted. Fortunately, there are many model provisions already in use in other jurisdictions, and in LEED v5, that can be adapted for use in Arlington.

3. **The proposed update does not require meaningful EV charging readiness in new multi-family buildings.**

Electric vehicle (EV) parking is another area where additional research and dialogue are needed. The underlying problem is that current market forces do not provide developers with sufficient incentives to provide essential "EV capable" or "EV ready" wiring[2] in parking garages. Installing wiring later can be prohibitively expensive. People who cannot charge an EV at home overwhelmingly choose gasoline-powered alternatives. This outcome does not cost the developer or the tenant much but is devastating to Arlington's climate goals. The GBIP is the most powerful tool available to counter this market failure.

Unfortunately, the approach taken by the GBIP update is to ***reduce*** the amount of "EV ready" parking required from 15% in the current GBIP to 10%, to align with a woefully inadequate LEED standard. The 2024 International Energy Conservation Code includes an optional EV parking requirement, developed with industry input, worth careful consideration. It calls for 100% of all parking spaces in new apartment buildings, hotels, and similar developments to be at least EV

[2] "EV ready" and "EV capable" are similar concepts. Both approaches require electrical capacity (allowing for use of load management software), panels, raceways, and conduit to be installed in advance. "EV ready" also requires a branch circuit and junction box or plug near each parking spot, while "EV capable" does not, according to definitions adopted by the International Energy Conservation Code (IECC).

capable, with exceptions allowed where the cost of compliance is shown to be unreasonable.

While Arlington requires very little in this area, Falls Church routinely asks for, and receives, 50% EV-capable parking from developers in its special exception project negotiations.

4. **Many other questions need to be resolved before this proposal is considered for adoption.**

Examples of issues that have not been adequately addressed in our view include:

- Why is the PHIUS standard rewarded with the minimum level of bonus density (.25)? Isn't this the commitment we would most like to see for site plan buildings?
- Are the cash incentives provided for existing buildings high enough to change behavior? If not, the County would be making large cash payments to building owners to do what they would have done anyway.
- A successful feature of the current GBIP is the mid-course automatic update that occurred in 2023, delivering significant GHG benefits. Given that success, why is there no mid-course update as part of the revised policy?
- Why is there no baseline requirement for a reduction in embodied carbon?
- Why is the diversion rate for construction and demolition waste set at only 65% when many construction firms already deliver 75% diversion?
- Where are the provisions related to bond requirements?
- Some form of expedited permitting would be a reasonable way to recognize and offset the significant administrative time and expense involved in participating in the GBIP. We recommend adoption of this approach in the revised draft.

5. **We urge the Board to defer consideration of the GBIP update to early 2025.**

The proposed update is unusually complex and raises many significant questions. Our assessment of the response from the public interest and private sectors (based on our conversations) is that this initial draft requires significant additional work before it should be considered for approval by the Board.

Our sense is that despite traditional staff-led briefings, engagement has been muted. Stakeholders shown the early draft raised many questions and intended to engage more fully on the next draft. However, the early draft seems to have become the "final" draft without incorporating input from any stakeholder.

Late-stage engagement seems rushed and unlikely to result in needed improvements to the draft. Due to the compressed timeline, the Board Report will be largely drafted prior to closing the public comment period, not the usual order of business. The Long Range Planning Committee will consider this extremely complex issue at a single meeting on the Tuesday night before Thanksgiving, timing that seems guaranteed to minimize participation.

For the reasons discussed above, there is much to gain, and little to lose, by deferring consideration of the GBIP update until early 2025.

As always, we would be happy to discuss any of the issues raised in greater detail.

Sincerely,

Dean Amel, Chair
Sierra Club -- Potomac River Group

cc: Mark Schwartz, County Manager
Jennifer Fioretti, Assistant County Manager for Climate Policy
Demetra McBride, Office of Sustainability and Environmental Management

CLIMATE CHANGE, ENERGY AND ENVIRONMENT COMMISSION
c/o Department of Environmental Services
2100 Clarendon Blvd., Suite 705, Arlington, VA 22201

November 18, 2024

The Honorable Libby Garvey
Chair, Arlington County Board
2100 Clarendon Blvd.
Arlington, VA 22201

Re: Proposed Update to the Green Building Incentive Program

Dear Chair Garvey:

The Climate Change, Energy and Environment Commission commends the County AIRE team for proposing an expansion to the current Green Building Incentive Program (GBIP) to include existing buildings, address adaptive reuse of older commercial properties, and promote the rigorous climate adaptive pathway that incorporates green infrastructure. These are bold and exciting ideas, and C2E2 strongly supports the general approach.

For the County to meet its carbon neutrality goals, buildings must be a key focus as they account for almost 60 percent of Arlington's greenhouse gas emissions. This expanded GBIP has the potential to spearhead the needed transformation for both new and existing buildings, but we believe that the standards must be strengthened in certain areas.

In particular, electrification must be required for all new construction and for new systems in Adaptive Reuse projects to receive incentives and should be encouraged for all other existing buildings. Eliminating the use of onsite fossil fuel consumption is essential to meeting the County's greenhouse gas emissions goal and continuing to install systems that use onsite fossil fuels will lock in greenhouse gas emissions for another 40 or 50 years. The program should also set higher energy efficiency targets to align with county goals.

We recognize the challenge that the County faces in offering persuasive incentives for developers and building owners with varying circumstances while not limiting participation due to fiscal constraints, but believe improvements to the proposed baseline requirements can be made now while still attracting many participants. Initial outreach and engagement with the building sector will allow for refinement in incentives in the next 6-12 months and continued modification as appropriate as technology, building practices, and other external factors evolve.

Proposed GBIP Update

The proposed update has four components, two for new buildings and two for existing buildings:

1. The **Traditional Pathway** has four tiers. The 0.45 and 0.55 FAR tiers based on International Future Living Certifications would meet the most rigorous criteria for sustainable and zero energy and low carbon construction and operations, and we support

them. However, the lower two tiers, which almost all projects over the last few years have opted for, would only slightly increase the rigor of the existing energy efficiency and other requirements for new buildings to obtain bonus density and would score only marginally better against C2E2's checklist. Electrification is not mandated, and energy performance and several other key criteria remain too low.

2. The **Climate Adaptation Pathway**, a new option offering new buildings bonus density and cash payments, as well as the higher tiers of the Traditional Pathway, would achieve the highest level of energy performance, full electrification, and a host of other desirable environmental benefits. Although more challenging, the required certifications could be applied to existing buildings undergoing substantial renovation or adaptive reuse. The County should seek to structure incentives to lure as many participants as possible to this pathway.
3. The **Existing Buildings Pathway**, also new, would provide cash payments for energy efficiency upgrades for existing buildings. While we recognize that electrification of these buildings can be challenging technically, the requirements should encourage, at a minimum, a future pathway to full electrification as existing systems age out and technologies improve.
4. The **Adaptive Reuse Pathway** would make existing commercial building owners eligible for cash payments if the building is converted to housing and meets specified sustainability criteria, tied to the baseline criteria defined in the Traditional Pathway although somewhat less demanding. The savings in carbon emissions would be substantial compared with demolition and new construction but we believe that such conversions present an excellent opportunity for meeting higher standards for energy savings and full electrification for all new building systems. If existing fossil systems are to be reused in the renovation, than participants should be required to provide an electrification plan once systems age out.

Making Building Decarbonization Attractive

We understand the concern that setting more rigorous standards that align with the County's GHG emission goals for the Traditional, Existing Building, and Adaptive Reuse pathways would be seen as too costly by developers and discourage participation. However, County presentations indicate that for buildings certified under PHIUS Zero, required for the Climate Adaptive Pathway, as well as higher Traditional Pathway tiers, additional upfront costs are only about 3-5 percent over conventional construction. Lifecycle costs of operating these buildings will be much lower, helping make up for that initial cost, as will the incentives offered by the County. The County's encouragement of full electrification and higher energy performance for all participants under these circumstances would be very reasonable, in our view. (Where absolutely necessary, the County could make exceptions for minor fossil fuel uses, such as a back-up gas generator in the rare cases where battery back-up, as discussed in the appendix, is infeasible.)

Introduction of cash incentives is an innovative approach and initial uptake by developers should provide feedback on how well they are working to encourage adoption of the Climate Adaptive

Pathway for new and some existing buildings. However, C2E2 is concerned that funding sources have yet to be identified for this program and thus that budget constraints could limit the number of participants. The County can enhance the attractiveness of the proposed GBIP by combining the GBIP cash incentives with other benefits, such as expedited permitting as is being proposed for the Commercial Market Resiliency Initiative, special branding for participating buildings, and technical assistance to help building owners and developers access other financing such as through green banks and federal and state grants and tax incentives.

We have attached **an appendix with the key changes we believe should be included in a mature GBIP program**. At a minimum, requirements should include higher energy performance for all participants, full electrification of new and adaptive reuse buildings, and installation of EV charging infrastructure to support the transition to electric vehicles. We recognize that it may take some time to strike the right balance of incentives and other benefits without compromising on minimum sustainability criteria to attract robust participation for both new construction and renovation of existing buildings. Developer feedback is important and piloting the program once minimum requirements are strengthened and ideally starting early next year as staff has proposed, will help fine tune incentives and identify opportunities to simplify requirements for participants over the next 6-12 months such that developers will utilize the most sustainable pathways.

Requiring buildings to meet strong sustainability standards will not only advance the County's stated climate goals but will create more resilience in the face of extreme heat, intensive storms, and disruptions to the electric grid. Further, it will keep Arlington buildings competitive in attracting tenants for decades to come, as other nearby jurisdictions, especially Washington, DC, are already moving forward to make their own buildings more sustainable. If the County allows the development of new buildings that are technologically behind those already being built in the District and Maryland, we will wind up with an outdated, unwanted inventory of buildings in ten years.

Thank you for your consideration. We are available to discuss further at any time.

Sincerely,

Cindy Lewin
Chair, Climate Change, Energy, and Environment Commission

cc:

Demetra McBride, OSEM

Paul Roman, AIRE

Victoria Kiechel, CADMUS

Appendix
Potential Framework for a Revised Green Building Incentive Program

For a revised Green Building Incentive Program to serve as a highly effective vehicle driving building decarbonization, it needs to meet three criteria: 1) Establish baseline requirements for all participants regardless of pathway that align with the County's decarbonization goals, 2) Offer an attractive package of incentives that encourages participants to go beyond minimum requirements, using standards and a structure that is relatively simple for them to assess costs and benefits to make an informed decision, and 3) Be feasible within the County's fiscal constraints while allowing for broad participation of developers and building owners.

A. Rigorous Baseline Requirements

Mandate electrification.

The proposed update would allow participants in the lower tiers of the Traditional Pathway and the Adaptive Reuse Pathway to continue to install systems using fossil gas and excludes electrification from the Existing Buildings Pathway. Baseline requirements for the Traditional and Adaptive Reuse pathways should include electrification of HVAC and hot water systems, and participation in the Existing Buildings pathway should at a minimum provide an electrification plan for replacement of fossil systems as they reach end of life.

Since the last update of the GBIP, technology has continued to mature and with early and careful design, full electrification can readily be attained. Energy models for projects going through the SPRC process typically identify a pathway to full electrification, highlighting its feasibility even though too many projects continue to opt for some fossil gas systems. Moreover, electrification will be required for all buildings in DC starting in 2026 and is being phased in over the next few years in Montgomery County, ensuring that regional contractors and developers are familiar with these technologies.

Developers and building owners should be encouraged at minimum to include necessary wiring to accommodate backup batteries for emergency power. Battery backup, especially when combined with solar panels, would not only replace noisy and polluting diesel generators for emergency power but would facilitate greater energy resilience and help balance the electricity grid during peak demand periods.

Set high standards for energy performance.

Proposed energy use requirements have not changed from the current GBIP at a time when buildings need to be achieving even greater energy savings to meet Arlington's greenhouse gas goals. C2E2 recommends that a minimum energy performance baseline requirement for the Traditional, Existing Buildings, and Adaptive Reuse pathways be set at EnergyStar 80 or 85 or an equivalent energy use intensity measure to drive more ambitious energy savings. A number of recent SPRC projects have opted for an EnergyStar of 80 or 85, indicating that meeting such targets is easily achievable. County staff should focus incentives on encouraging even higher energy performance. Based on data provided by County staff, PHIUS certified buildings have an

average energy use intensity (EUI) of 25 kBTUs per square foot per year and APS zero energy schools have demonstrated similar levels of EUI.

Set more ambitious targets for reducing embodied carbon.
C2E2 applauds the County for incorporating adaptive reuse of buildings, which will sharply reduce the overall carbon emissions compared to demolition and new construction, and including under the baseline requirements in the Traditional Pathway a whole building life cycle assessment for carbon emissions and setting a target for reduction of embodied carbon. The carbon embodied in the materials used in a building, especially for concrete and steel, accounts for a sizable portion of carbon emissions over the life of a building, so reducing the embodied carbon during construction has a more immediate impact on greenhouse gas reductions. We consider that this baseline target is too small and recommend that it be replaced with either a specific quantitative target of 20 percent or higher or the more rigorous life cycle reduction included as an extra item. In addition, the proposed required waste diversion of 65 percent is too low and should be raised to at least 75 percent. Most recent projects participating in the GBIP have opted for a 75 percent diversion in their LEED targets. According to its developers, the Douglas in Washington, DC, the first large multi-family project building to pursue ILFI Zero Carbon certification, is on target to reduce its embodied carbon by at least 30 percent and 90 percent of waste will be diverted to recycling or reuse.

Require EV charging-ready parking.
Disappointingly, the proposed GBIP Traditional Pathway calls for reducing the number of parking spaces required to be EV-ready from 15 percent to 10 percent. C2E2 has consistently recommended that buildings include the necessary conduits and other infrastructure that would be needed for installation of EV chargers for at least 50 percent of the parking spaces. While ownership of electric vehicles today is still small, sales are rapidly increasing, automakers are ramping up their manufacturing capacity, prices are coming down, and federal and other rebate programs are further reducing costs. Including the essential infrastructure for EV charging will save money in the long run as retrofitting can be costly and will help accelerate the transition to cleaner, zero emission vehicles.

Strengthen biophilia requirements.
The green infrastructure requirements built into the Climate Adaptation Pathway are impressive and C2E2 recommends that some portions of those requirements be included as part of the baseline requirements of the Traditional Pathway. In particular, minimum requirements for tree canopy coverage should be set to align with the Forestry and Natural Resources Plan and relevant sector plans. Plan Langston Boulevard calls for a 20 percent tree canopy coverage for most projects and 35 percent for the hubs.

B. Attractive and Fiscally Feasible Incentive Practice

C2E2 recommends that the County expand the incentive package to leverage available federal and state programs, green financing mechanisms, and incentives with only a limited direct impact on the budget.

- Most projects should be eligible for tax credits and other funding under the Inflation Reduction Act (IRA) and other federal and state programs.[1] The County is already closely tracking these federal opportunities and can offer technical assistance in identifying and evaluating the savings from these programs.
- The update to the C-PACE program as well as emerging green banks offer additional avenues to traditional financing that could help some program participants.
- County staff could reconsider property tax incentives. While the review of such incentives in jurisdictions such as Montgomery County and Baltimore are apparently not applicable under Virginia law, Charlottesville does offer a one-year 50 percent property tax reduction for buildings achieving a defined energy use reduction target and Fairfax City's proposed green building program provides similar tax-based incentives. The key for Arlington would be to set the target to qualify to align with the County's goals for reducing energy consumption in buildings.
- The Commercial Market Resiliency Initiative, which the Adaptive Reuse Pathway is designed to support, calls for expedited permitting processes, which could be extended to the most rigorous projects utilizing the expanded GBIP, as saving time also saves developers money. The County could also consider accelerating the Site Plan Review Process for projects that agree to the most rigorous sustainability commitments under the Climate Adaptive Pathway and might also be combined with commitments to meet desired affordable housing targets.
- Consideration should be given to including potential cash payouts targeted to the early stages of planning under the Climate Adaptation Pathway to encourage building in rigorous sustainability elements during the initial planning stage and for projects that meet the most rigorous standards.

The planned outreach and education to developers, contractors, and building owners to advance the advantages of building decarbonization and assist them in taking actions best suited to their circumstances is perhaps the most important part of the GBIP update. C2E2 welcomes County staff's proposed six-month period for dynamic education and engagement prior to the launch of the new policy and the new requirement that all participants meet with County staff during all stages of project development, starting at the crucial early conceptual stage. Such ongoing outreach and engagement would play a key role in modernizing new and existing buildings for the 21st century and ensure that older multifamily buildings in Arlington offering more affordable housing are not left behind.

[1] See, for example, info on the 179D tax credit for efficient commercial buildings https://www.irs.gov/credits-deductions/energy-efficient-commercial-buildings-deduction
and the 45L tax credit, which provides up to $5,000 per unit for efficient multifamily housing.
https://www.energy.gov/eere/buildings/section-45l-tax-credits-zero-energy-ready-homes

November 21, 2024

The Honorable Libby Garvey, Chair
Arlington County Board
2100 Clarendon Boulevard, Suite 300
Arlington, VA 22201

Re. Green Building Incentives Policy

Dear Chair Garvey and members of the County Board:

EcoAction Arlington applauds your initiative in updating the Green Building Incentive Policy (GBIP), particularly its expansion to existing buildings and support for adaptive reuse for aging commercial buildings. Nevertheless, we think the minimum requirements for participation and related incentives, should be stronger. We live at a time of environmental crisis, and the County's Policy should reflect this. The most recent UN climate report foresees "debilitating impacts to people, planet and economies" unless nations take a "quantum leap" in emissions reduction (see: UN Environment Programme, Emissions Gap Report: https://www.unep.org/resources/emissions-gap-report-2024).

To address this urgency and realize the County's goal of carbon neutrality by 2050, we need to do much more to reduce greenhouse gas (GHG) emissions from buildings. The way to get there is to encourage increased energy efficiency in buildings and the use of high-efficiency electric systems and appliances to displace fossil fuel combustion in buildings and transportation (e.g., Energy Star cold climate heat pumps, geothermal heat pumps, electric induction stoves, heat pump water heaters, electric vehicle charging). Accordingly, we recommend that minimum requirements be strengthened in all participants in the program, regardless of pathway.

We are most excited about the Climate Adaptation Pathway and the higher tiers for the Traditional Pathway that focus on certification from the Passive House Institute and International Living Futures Institute and hope that the County will make these pathways the centerpiece of the updated GBIP. Both of these certification programs require high energy performance building designs, be all electric, rely on renewable energy, and prioritize low carbon and environmentally safe materials. Buildings meeting these standards will also be more resilient in the face of extreme heat, severe weather, and extended power outages. Existing buildings depending on the extent of renovations could also qualify for these certifications, especially the projects under the Adaptive Reuse Pathway given the extent of the renovations required.

For the other pathways—Traditional, Existing Buildings, and Adaptive Reuse-- participants in the program should advance full electrification and achieve energy performance targets that align with the County's Community Energy Plan target of a 38 percent reduction in energy use by 2050. As currently proposed, electrification is not required for the Traditional, Existing Buildings, and Adaptive Reuse pathways and energy efficiency targets are unimpressive. We recommend that a common energy performance

standard be required across all pathways, either based on an EnergyStar score of 85 or higher or an energy use intensity measure aligned with the County's target. Full electrification for new construction and adaptive reuse should be required and participants in the Existing Buildings Pathway should at minimum be required to develop an electrification plan to provide a pathway to operating with zero GHG emissions once systems need to be replaced. We also recommend that buildings under the Traditional and Adaptive Reuse pathways comply with LEED v5 Gold level when it is published next year. (LEED V5 just completed it 2nd public review on October 28.)

EcoAction Arlington urges the County to create an incentive and outreach package that will make the program accessible and attractive to developers and building owners and serves as a catalyst driving rapid building decarbonization across the County. At present the proposed incentives outside of the traditional bonus density rely largely on cash payments, which given perennial budget constraints would likely limit participation in the new pathways to only a handful of projects as projected by the County Staff. A combination of tax incentives, cash payments, expedited permitting, and technical assistance structured to favor the Climate Adaptation Pathway while still encouraging less ambitious but still important decarbonization measures. Furthermore, extensive outreach to building owners, developers and contractors to provide information about current technologies and available incentive programs and assistance in calculating the cost/benefits of building decarbonization. The County's presentation indicates that the upfront costs for the Climate Adaptation Pathway is less than 5 percent more than traditional construction. The lifetime savings in energy use is almost certainly much greater.

The County should also consider enhancing other requirements for participation in the program:

- Strengthen the requirements for green infrastructure, as appropriate. The Climate Adaptation Pathway notably includes impressive requirements, specifically accessible vegetated roofs and/or landscaped areas equal to 35 percent of lot area. The County should establish more specific targets for tree canopy coverage that aligns with the County's Forestry and Natural Resources Plan goals, with minimum targets for all new construction and higher targets for construction under the Climate Adaptation Pathway.
- Require EV charging infrastructure for new construction and as feasible existing building renovations sufficient to support a rapid transition to electric vehicles over the next decade or so.
- Strengthen requirements to reduce embodied carbon in building materials and during construction. The Traditional Pathway has added a life-cycle carbon analysis requirement but targets for reducing embodied carbon are minimal. In addition, the waste diversion target is too low.
- Incorporate County affordable housing goals as part of the requirements for getting the maximum incentives under the program under the Climate Adaptative Pathway similar to the Adaptive Reuse Pathway. Meeting the County's environmental justice goals will depend on making sure that all of the County's diverse members benefit from building decarbonization and are not left behind or displaced.
- Look for ways to simplify the program requirements without compromising on the baseline requirements and in consultation with developers, contractors, and building owners.

It's time to get aggressive about the efficiency and decarbonization requirements for new construction and major renovations in Arlington. The District of Columbia and Montgomery County Maryland have done so. Arlington should join these jurisdictions in leading the way on our needed energy transition.

Thank you for your continued leadership on these issues, and the opportunity to comment.

Sincerely,

*/s/*_____
Elenor Hodges
Executive Director, EcoAction Arlington

Mike Lowe,
Chair, Board of Directors

cc: Arlington County Board Members

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION
NORTHERN VIRGINIA CHAPTER

November 25, 2024

The Honorable Libby Garvey, Chair
Members of the Arlington County Board
2100 Clarendon Boulevard
Arlington, Virginia 22201

Dear Chair Garvey and Members of the Arlington County Board:

On behalf of NAIOP Northern Virginia, I urge you not to adopt the proposed Green Building Incentive Program ("GBIP") update and instead launch a working group comprised of members of the commercial real estate industry, civic and nonprofit groups, and county staff to advise on more thoroughly evaluated updates to the program.

NAIOP values its partnership and collaborative relationship with Arlington County on policies that directly impact the commercial real estate industry, and we support the County's region-leading efforts on sustainability, including the GBIP. In the past, NAIOP worked with Arlington County to provide feedback to staff during the creation and review of numerous GBIP updates, in the spirit of the "Arlington Way." GBIP updates typically took an iterative approach that refined the GBIP based on lessons learned by the County and the industry that implements it. However, the approach to the current update is a notable departure from previous successful processes.

We feel that the outreach to the commercial real estate industry has been rushed and only came after the proposed update was published. Despite some assertions of engagement with developers, NAIOP is not aware of staff discussing the update with any of our members during the drafting process. Arlington prides itself on a cooperative and open communication approach where interested parties work together for a policy solution. That did not happen with the currently proposed GBIP update.

NAIOP members look forward to more fully engaging with Arlington County staff to consider the proposed updates and discuss alternative approaches to achieving our shared goals of advancing sustainable development in the County. While NAIOP members and the commercial real estate industry are interested in considering new approaches, some of the proposed updates require further review. In particular, NAIOP members have raised concerns with the inclusion of a new certification process (PHIUS) with limited commercial execution, as well as the removal of the LEED Gold certification for bonus density. LEED Gold certification has been heavily utilized under the current GBIP, and PHIUS is untested and unfamiliar to the local commercial real estate industry.

We propose that the County reboot the GBIP update with a working group of players actively involved in this area. Doing so will leverage NAIOP's long-standing and productive history of working *with* the County on the GBIP.

We look forward to working with Arlington County to deliver a successful GBIP update in 2025.

Sincerely,

Martha D. Marks
President

cc: Mark Schwartz, County Manager
Greg Emanuel, Director, Department of Environmental Services
Jennifer Fioretti, Assistant County Manager for Climate Policy
Demetra McBride, Bureau Chief, Office of Sustainability and Environmental Management

DarkSky
VIRGINIA

Victoria Kiechel, vkiechel@arlingtonva.us
Jenna Peabody, jpeabody@arlingtonva.us
Paul Roman, proman@arlingtonva.us
Cc: Members of the Arlington County Board of Supervisors, CountyBoard@arlingtonva.us

Re: 2024-25 Green Building Incentive Policy

Ladies and Gentlemen:

I am the volunteer representative of the Virginia chapter of DarkSky International (formerly the International Dark-Sky Association) and am writing in support of the Bird Safe NOVA campaign's recommendations for Arlington County's revised Green Building Incentive Policy as submitted by the Northern Virginia Bird Alliance.

The night skies of the Washington, D.C. metro region are among the most polluted in the world and are within the Atlantic Flyway, a major north-south route for migratory bird species in North America, most of which migrate by night. Reversing light pollution—reducing the amount of wasted light dumped into our night skies—is essential for improving survival rates of migratory birds with far ranging benefits for our communities and natural areas and their inhabitants.

Light pollution is a source of habitat degradation for all animal species throughout ecosystems. It turns night into day: The cascading effects influence animal behavior and biology, disrupting communication, navigation, foraging, migration, mating, and reproduction. For migratory birds, light pollution brightens the night sky, washing out the "celestial compass" by which they navigate; lighted buildings, even those below skyscraper height, contribute to collisions; and light sources cause 'capture', when birds drawn to light cannot reorient and escape, ultimately dying from exhaustion.

We can change all this by changing how we use lighting, and Arlington County can lead the way. Choosing to integrate truly "dark sky friendly" lighting into Green Building Incentives means following the principles, policies, and certifications of DarkSky International:

- The Five Principles of Responsible Outdoor Lighting, as defined by the Illuminating and Engineering Society and DarkSky, require that lighting be useful, targeted, no brighter than necessary, controlled so that is in use only when purposeful, and warm in its color.
- DarkSky's Values Centered Lighting Policy provides the specifics of how to implement the five principles. All lighting must begin with a thorough examination of "is it necessary?" and evidence-based justification if it is found to be so. We routinely "over light", to the impairment of our own vision and the detriment of effective visibility and community character; illumination levels should be at the low end of IES recommendations. All LED lighting should be equipped with adaptive control for dimming and curfews. Lighting must be "warm" in color, limiting short wavelength, "blue" emissions; when higher than 2200K Color Correlated Temperature is necessary to meet lighting objectives, keep the total emission of blue light into the environment as low as reasonably possible through low intensities, careful targeting, and reduced operating times.
- The standard for "dark sky friendly" is DarkSky Approved: Objective, third-party certification for products, designs, and completed projects that minimize glare, reduce light trespass, and don't pollute the night sky.

Thank you for the opportunity to provide input on this important policy development. Please feel free to contact me at virginia@darksky.org for any additional information or referral to DarkSky International technical staff.

Sincerely,

Laura Greenleaf
DarkSky Virginia