

**Climate Change, Energy, and Environment Commission (C2E2)**  
Draft

Summary of April 26, 2021 Meeting

Virtual Meeting

Members Present: Joan McIntyre (Chair), Liliana Duica, Carrie Thompson, Timothy Effio, Jonathan Morgenstein, John Bloom, Kevin Vincent, Stephen D'Alessio, Shawn Norton, Emily Emery, Gilbert Campbell, Mikaila Milton, Majdi Shomali, Joshua Griset

Guests: Katie Ray, Katie Atwater, David Shilton, Kendall Ernst, Kyle Rives, Clint Brackman, Doug Snoeyenbos, Bernard Berne, Karen White

Staff Present: Adam Segel-Moss (DES), Joan Kelsch (DES), Demetra McBride (DES), Richard Pinsky (FDC), Cynthia Wilson (FDC), June Locker (FDC), Lauri Brown (DHS), Mark Thifault (FDC), Myron Richardson (Fire/EMS), Charles Njoko (DES), La Voyce Reid (DDB),

### **1. Public Comment on General Topics**

No comments.

### **2. Diversity, Equity, Inclusion (DEI) – Samia Byrd**

Samia Byrd is the Chief Race and Diversity officer for Arlington County. Ms. Byrd gave a presentation on DEI and related issues in Arlington.

Environmental justice and equity are key areas of focus for C2E2. The commission is committed to these issues and looks forward to iterative conversations and actions on the topic.

Ms. Byrd provided information on her background, her role, and changing the dialogue. She started working with the County in 2007. She has worked in Community Planning Housing and Development (CPHD). She was promoted to Deputy County Manager with part of her portfolio being CPHD and Site Plan projects.

Samia noted that her reason for being a Planner has been to build bridges and bridge the gap for people of color and women. Also, to physically improve communities and access to shape the places they live.

As background, Samia noted that in 2018 she started working at the leadership level about race and equity issues. At the time, Samia was the only person in a leadership level position who was black. An equity resolution was passed in 2019. That action and an equity learning cohort over a 10-month period led to the creation of the Chief Race and Diversity officer position.

Samia noted that racial equity is not just about equal access. Closing the gap so that race is no longer a predictor of any success in any sector of life. Racial equity is key because it is beyond diversity, inclusion, and equity in the broad sense of the term. This is unique, because, by adding race – it acknowledges that there are systems in place that are rooted and embedded in our culture and institutions that result in racialized outcomes based on race. Once outcomes are predicated on race - be it wealth, education, health, housing, justice systems, social status, geographic location, and even environmental impacts or access to clean energy--(something missing here). These are a result of race-based systems that must be changed.

There is a 10-year difference in life expectancy in Arlington depending on who you are and where you live. Ms. Byrd noted additional statistics on income and opportunity that are noted on the County's [Equity dashboard](#).

Ms. Byrd noted that being specific matters and when it comes to race. The County is race explicit but not race exclusive. Centering on race crosses other areas where people face prejudice, discrimination, are marginalized, and disproportionately impacted. Because the construct of race that has been created and embedded in society for centuries, when issues of race are addressed, they create possibilities for equality.

In Ms. Byrd's position, she is focused on identifying systemic issues exist, how institutions perpetuate them, and how systemic racism can be dismantled and disrupted to improve outcomes. This can be done through policies, procedures, and in partnership with the community.

The County is working toward realizing its commitment to equity. The goal is to close the gap to improve outcomes for all. This is being done through:

**Normalizing** and creating a shared understanding and language around racial equity.

**Organizing** a sustainable and organized structure around racial equity (e.g., staff, policies, etc.)

**Operationalizing** and using a racial equity lens on all policies, plans, and decision.

**Assessing** and benchmarking changes to reach racial equity as a value as a standard matter of practice.

Joan McIntyre asked what specific areas of focus should be for C2E2. Samia noted that affordable housing projects, opportunities to have sustainable environments in which they live. Environmental justice is key to focusing on where people live and the associated impacts. More needs to be studied and known about where the disparities exist and how to address them. Issues include tree canopy, access to parks and open spaces, as well as air and water quality.

Carrie Thompson noted that C2E2 has been working on a checklist for new SPRC projects in the County. There are some DEI items that were included in the Green Building Incentive update. Carrie asked who in DES or CPHD might be able to assist in DEI issues. Samia noted that Mike Collins is the point of contact for DES. Samia noted that when it comes to SPRC and energy, there is a great AIRE team that is focused on this. Samia encouraged C2E2 to work closely with AIRE staff.

Carrie asked that Samia notify C2E2 of her conversations with CPHD regarding where DEI-related issues fit into the process. C2E2 would like to support that conversation. Samia agreed to report back as those talks move forward.

The Commission plans to continue this conversation and looks forward to working more closely with the County to address these issues.

### **3. Environmental Assessments (1212 S. Irving Street and Fire Station 8)**

#### **1212 S. Irving**

The project is a home for individuals with developmental and intellectual disabilities. The existing County owned project is a detached single-family home. The home is approximately 5,000 square feet and is currently licensed for 5 individuals. When complete the new home will be licensed for 6 individuals.

The project has been designed and constructed with the EarthCraft net-zero energy certification and County facilities sustainability policy. The home has been designed with triple-pane windows, high insulation levels, liquid applied air and vapor barriers, LED lighting, as well as solar panels.

The project is also designed to use geothermal heating and cooling. Since the project has been designed to be super insulated, well-sealed, the geothermal will further reduce the energy use intensity.

Jonathan Morgenstein asked about the depth and number of geothermal wells. The number of wells will be between 3 and 5. A test hole will be drilled, and test fluid will be run through the test geothermal well. This will help identify the amount of heat rejection that can be run through the system. The makeup of the earth will decide how conductive the earth is in this area. The project expects the wells to be approximate 300–500-foot depth. Often there is somewhere between 1-2 tons of cooling that can be achieved through each well.

John Bloom noted that the solar would cover about half of the electric load. John asked if that were enough to achieve net zero designation, and if the remainder of the solar would be covered through the County's offsite solar PPA. The design team clarified that the goal of the project is to generate as much energy onsite as it uses. However, there is not enough space on the roof. The solar will generate half of the energy needed. The EarthCraft program designates this as a zero-energy home. Offsite solar will be needed to meet the other half of the solar to make it a true net zero energy project.

Kevin Vincent asked if the project calculated embedded carbon in the building materials. The project did not undertake a carbon calculation. Mr. Vincent suggested that an embedded energy calculation should be addressed on future projects. Jessica Abrialind noted that she heard his input and said that it could be considered for future County Facility policy updates. Mr. Vincent also noted disappointment that there is not any EV charging on the project. There are only 5 parking

stations, but there should be at least 1 charging station. The County should be investing and putting in charging stations because the future is electric. All new projects should have EV charging. It will need it over the life of the building.

## **Fire Station 8**

Katie Atwater represented the design team for Fire station 8. She provided background and information about the project.

She noted that there has been extensive discussion regarding the replacement of Fire Station 8 in recent years. The existing 2-bay station is aging and undersized and will be demolished as it does not meet modern standards for firefighter health and safety. The new fire station will be a three-story building with a total area of approximately 20,500 square feet and will include four drive-through apparatus bays with necessary width and length for modern apparatus, gender-neutral accommodations for staff, adequate space to address best practices for fire fighter health and safety, replacement of the fuel island, and 12 staff parking spots. Design features consistent with the recommendations of History and Legacy Working Group have been incorporated in the building plans. In addition, a temporary station will be created on the County owned property on North Culpeper Street.

Over the past two years, the architect has worked with the County to refine the fire station program (originally developed in 2015) and, more recently, with the Public Facilities Review Committee, to prepare conceptual layouts and design, and construction documents and specifications for the facility. To meet current Fire standards, the program scope and building square footage need to increase to provide larger apparatus bays, additional decontamination and gear storage areas, additional residential spaces, and circulation areas.

The design will include sustainable materials and systems and a minimum of LEED Building Design + Construction (BD+C) Silver Certification and a target energy use intensity of no greater than 70 kbtu/sq.ft. This is consistent with the recently updated facility sustainability policy and an improvement over the previous requirement. The design and construction team has utilized a collaborative process to explore and incorporate specific features that bring it closer to Net Zero.

The County will be utilizing a CMAR project delivery methodology to provide preconstruction and construction services. CMAR is a design and construction methodology that is first being used by the County for the Lubber Run Community Center project. This delivery method can better control project costs and schedule by allowing early builder input on costs, schedule, value and quality through collaboration with the architect-engineering firm. (The more traditional approach of design-bid-build can sometimes lead to a situation where a design is fully advanced and finalized and then when bid out to construction contractors, comes in over budget, requiring redesign, rebid and the resulting delay in project delivery.)

The existing vegetation on the site is highly maintained, ornamental, non-native landscape species, half of which are crape myrtles and lawns. Most of this non-native vegetation will be removed and replaced with new, native trees complying with the County's tree replacement policy, increasing the diversity of species on-site.

The following trees are being replaced as part of the Fire Station project as they are within the footprint of the building and/or site improvements and unlikely to survive construction activities: (7) Crepe Myrtles; (2) tulip poplar; (3) holly trees; (2) red maples; and (1) mulberry tree. There are 10 trees of varying species being preserved on the site (refer to Tree Inventory included as part of

CEPL 21-00005 for additional information). Per the Tree Replacement Table prepared according to the Arlington County Landscape Standards Reference Guide, the 15 trees being removed will be replaced by 19 trees. The plant schedule included as part of CEPL 21-00005 shows the project will be planting (3) American Elms, (3) Southern Red Oaks, (3) Eastern Redbuds, (4) Sweetgum trees, (3) American Lindens, (2) Sycamores, (1) American Holly, and (1) Foster's Holly in addition to Shrubs and Perennials/Groundcover.

Lighting fixtures have been selected with cutoff capabilities to ensure all light produced remains on the Fire Station site and below the horizontal to protect dark skies as required by LEED v4.

HVAC Systems have been selected to minimize energy consumption within the building. A rooftop solar photovoltaic system is included in the project as is a vegetated roof assembly. The combination of these two systems creates a bio-solar condition allowing microclimates created by the vegetated roof system to increase the efficiency of the PV system. All appliances being provided will meet Energy Star requirements and electrical appliances have been selected as opposed to gas where feasible to allow for power by renewable means in the future.

The basis of design rooftop photovoltaic system includes 114 solar panels with 355W, 39.1V (Vmpp, 48.8V (Voc)), 9.1A (Impp), 9.8A (Isc) per module. The system is included in the construction documents and will be procured and installed by the General Contractor for the Fire Station 8 project.

The exterior envelope of the building has been designed in collaboration with the mechanical systems and energy modeling of the new fire station. The exterior walls include additional insulation for thermal performance and an extensive analysis of the continuity of the air and weather barrier as it relates to fully conditioned spaces. Basis of design glazing has been selected with a focus on the SHGC and u-value of the glass for heightened performance.

The project studied 3 HVAC systems and geothermal was not possible due to site constraints. The payback period there for this project was 30 years for geothermal. It was not the right fit. Joan McIntyre asked whether natural gas was planned for any of the HVAC systems and was told that the project would use natural gas heat for the bay area as the alternative of electric radiant heat was too expensive for the planned budget.

Commissioners asked about electric fire engines. Katie noted that the electrical room is directly off the apparatus bay. It would be a simple upgrade if EV fire trucks are purchased. There are shorelines that plug in the electronics to charge batteries. The panel is being sized currently for increased electrical load if needed.

The Commission discussed EV charging and suggested 3 charging stations to serve 6 parking spaces. Staff agreed to look at that for the project or put conduit to the parking station.

Mikala Milton asked about room over the parking area for PV panels. Project staff noted that it was not feasible due to the apparatus movement. Ms. Milton also suggested straight species instead of cultivars. Also, Mikala suggested a pollinator garden as part of the rain garden. Staff agreed to investigate it.

#### **4. SPRC Process Update and Crystal Plaza Letter Review / Approval**

Carrie Thompson described the process they are suggesting for the SPRC review process. The Commission is considering a scoring system and a draft letter that can be tailored for each project. The scorecard focuses heavily on the energy issues. In a meeting with AIRE staff, the suggestion was made to ask the SPRC Chair to add "Sustainability/energy" to the SPRC meeting agenda to focus on the topic.

The Commission discussed the Crystal Plaza I letter, amended, and unanimously approved it.

#### **5. Meeting Minutes**

The Commission moved and unanimously approved the meeting minutes.

#### **6. Old/New Business**

Joan McIntyre noted that the Commission should be thinking about the Capital Improvement Process (CIP) for FY 22-24. That will come out in May and public discussions will happen from there. Joan noted that Community Energy Plan Goals should be embedded into the decision making. The Green Bank has been permitted by legislation in Richmond. This should be an area of focus for the C2E2 to take a deeper look into options. Consumer Choice Aggregation should be on the radar of the Commission. The County might consider banning gas leaf blowers and single-use plastics on Government property.

Demetra noted that Rich Dooley has been working on green banks. NVRC is working to put together a regional approach to apply for federal or state funds to seed fund it. No details have been framed for loans or for which types of programs, but discussions are moving forward.

Carrie Thompson noted that the SPRC template process is moving forward well. The Commission is still waiting for the HQ2 Penn Place to land on the SPRC list. A volunteer will be needed on the project when it comes.

Demetra provided an update from DES. The ART bus study is underway. That is going slower than staff would have liked but felt it was important to have the objectivity and rigor rather than just moving forward quickly. The final scope for the Arlington plan for the decarbonization of transportation is moving forward. A comprehensive plan for siting for EV charging will be part of that plan. That will be moving forward for completion in the middle of 2022.

The CEP Roadmap is moving forward with a target to complete it by the end of the calendar year.

Joan Kelsch is working to see if the County can ride a PPA from neighboring jurisdictions.

As part of the budget, there were additional monies put in for EV charging and vehicles. There was additional fund for analysis for EVSE studies. This would be engineering design.

Kevin Vincent noted that the Transportation Commission has been getting briefings on the RAISE program and suggested that the C2E2 should have a similar briefing.

John Bloom asked if staff are still looking at contracts for ART bus and CEP Roadmap. John noted the previous discussion of ICF and possible conflicts of interest. Mr. Bloom asked if staff have had any additional conversations. Demetra noted that the ART bus study was pulled back and cancelled. The Roadmap is still moving forward with ICF. Demetra noted that ICF was the contractor for the CEP.

Mikala Milton noted that she is participating on the the Public Spaces Master Plan Implementation Advisory Committee. They are working on field utilization and mountain biking. She asked what the Commissions opinion is on either. Joan M. noted that no official positions have been taken at this time.

Meeting ended: 9:07pm