

Environment and Energy Conservation Commission
Draft

Summary of September 26, 2016 Meeting
2100 Clarendon Blvd, Azalea Conference Room

Members Present: Scott Dicke, Adanna Woodson, Sarah Meservey, Christine Ng, Gabriel Thoumi, Irwin Kim, Patrick Kenney, Alex Sanders, Claire O’Dea, Mike Hanna

Members Absent: John Seymour, Kari Klaus

Guests: Dean Amel, Taylor Bennett, Rick Keller, Andrew Perlstein, John Bloom, Jennifer Reichert, Benjamin Burgin, Anthony Verdi, Atara Margolies, Lauren Brandes, Jeffrey Chambers, Bill Herring, Jr., Randall Wong, Barry Duncil

Staff Present: Joan Kelsch (DES), John Morrill (DES)

1. Public comment

Dean Amel, from the Mount Vernon Sierra Club, reported on the Sierra Club’s Ready-for-100 campaign, which addresses climate change by switching to clean energy as opposed to natural gas. The campaign asks jurisdictions to convert to 100% renewable by 2035. They are asking for Arlington to commit to clean electricity generation by 2035 and full conversion to renewables by 2050. They would like to make this an extension of the Community Energy Plan. He hopes to be on E2C2’s agenda later this year to ask E2C2 support the initiative. More information at www.sierraclub.org/ready-for-100

The Sierra Club is hosting a forum on November 16 on this topic. E2C2 members will be invited.

2. Stratford Middle School Environmental Assessment

Staff from APS, Quinn Evans, Wetlands Solutions, Oculus, and Gordon attended the meeting.

The existing school building will be expanded with a 40,000 square foot three-story addition on the Old Dominion side of the building where the current Stratford Park parking lot is located. A new driveway and ADA improvements will be added to improve drop-off and access. Improvements to Vacation Lane will be made and portions of the existing building will be renovated.

The schedule outlines that the Use permit and Certificate of Appropriateness for historical issues will be sought in January 2017. The Building Permit is expected in September 2017 so school can open in Fall 2019.

Trees will be removed in various areas of the site and trees added to the site will all be native species. Replacement calculations show that all trees will be replaced according to the tree replacement policy. The field will be grass, not turf. Garden plantings, raised beds, pollinator gardens, and biofiltration gardens will be added for stormwater management and educational purposes. Gabriel asked that they remove trees at the right time of year to minimize damage to trees. Vincent Verweij, Arlington County’s arborist, consulted and gave

approval for all tree decisions. Replacement trees will be 3-inch caliper. Gabriel expressed concern about fill soil having invasive seeds.

Anthony Verdi, an engineer from Gordon, outlined the stormwater strategy. They focus heavily on Low Impact Development solutions such as green roof and bioretention to maximize pervious green space. Bioretention systems will be both in more natural basins at grade as well as in structured planter boxes. Underground detention (a pipe system) will allow controlled release of stormwater filtered through the bioretention basins. The plan allowed the team to reduce impervious area in the RPA, which will not be significantly impacted by runoff from outside the RPA. The stormwater plan is dynamic as plans evolve during design. Gabriel asked if the neighbors are informed of the plans, so as to avoid future conflicts with neighbors. The team has worked closely with neighbors and the school community. They will add some drainage to the grass field (soil amendments to improve grass quality and surface infiltration). They will have a phased E&S plan as construction proceeds. The plan will meet the new County stormwater regulations (DES staff is currently reviewing the plans.)

Mike asked if APS has figured out how these changes will impact APS's MS4 permit. In addition, he asked how does the increase in land area owned by APS impact the MS4 permit. He is concerned about having to go back later and retrofit because MS4 requirements aren't being met across APS's portfolio. He would like to see the overall APS plan for MS4 permit compliance.

Alex commented on the driveway and asked how the additional stormwater will be captured. Collection points along the road and the field direct water to bioretention basins. There currently are inlets along the field to collect water and additional ones will be added to prevent the field from flooding. They are addressing stormwater with natural solutions as much as possible and are minimizing manufactured solutions. Mike asked about the 65% increase in impervious area. That number will be confirmed with DES Staff. No trees can be planted along the new driveway because of HALRB's desire to protect historic views from Old Dominion Drive. E2C2 members expressed concern about this decision, as trees would provide shade for pedestrians, would shade the pavement and cool stormwater runoff, and help with stormwater management.

The parking lot on the Old Dominion side includes the loading dock and must also accommodate a fire truck turnaround. The sidewalks in the front of the school and are part of the original site design and have historic significance. APS has no intention of putting artificial turf at this site. No lights are planned for the field. All site lighting, including along the road, will be dark sky compliant (not Carlyle lights).

The team noted that DPR will reinitiate renovation of Stratford Park very soon. E2C2 asked if an EA would be provided.

The architecture differentiates the new addition from the historic portion and makes a visual link between the two portions. The auxiliary gym will have glass block wall.

The team has conducted an energy analysis. The analysis shows the following Energy Use Intensities (EUI):

Existing building = 51-55 kBtu/sf

Baseline for the addition = 43.7 kBtu/sf

Addition with the high performance envelope = 40-43 kBtu/sf
Addition with the efficient HVAC system = 36-39 kBtu/sf

The team is confident that these energy targets for the new addition can be met.

The team is focused on building envelope performance and an efficient HVAC system. The project includes a Variable Refrigerant Flow (VRF) HVAC system and a Variable Air Volume (VAV) system for gym. They are employing techniques to bring in daylight without increasing heat gain. Green roofs are proposed for stormwater management. A small number of PV panels are proposed for educational purposes. A new ceiling grid product can use solar power for lighting. John Morrill asked if they could price out simple PV as this would provide more environmental benefit. The team reported that the ceiling grid would have valuable education benefit. The project is registered for LEED 2009 and the team is confident that they can get to Silver in LEED 2009. They may try to use LEED v4. There is a firewall between the old and new buildings. The project includes 10 Energy Optimization credits.

The building envelope has high R-value (R-30+) and continuous insulation mitigates the thermal bridges. Average R-25 for the wall assembly.

HB Woodlawn students will remain in the building during construction. The Stratford program will move, likely to Reed. They will do construction staging to minimize taking the field out of commission.

Existing building renovation is limited – new elevator, renovated cafeteria, teacher collaboration spaces, replace lighting to LED and ceilings as budget allows, and some restroom renovations. Asbestos has been abated over the years. There is some left in out-of-the-way places, and they will abate it as necessary.

If the grass field becomes artificial turf, an EA will be requested. The Water Quality Impact Assessment (WQIA) is being reviewed by DES staff.

Mike asked about wastewater generation to make sure the system has capacity to accommodate the added school size. The team said this has been considered.

E2C2 would like a future presentation on stormwater and the MS4 permit from APS.

The project will go to the County Board in January 2017. There has been a lot of stakeholder involvement. Christine Ng will draft a letter for review before the next meeting. APS will attend the next E2C2 meeting.

E2C2 discussion points for the letter regarding the Stratford EA:

- Process issue – when do environmental considerations come into play?
- The team did not recommend planting trees along the new road because HALRB wants the view from Old Dominion Drive protected. E2C2 members commented that this is a disappointing decision. The shade is healthier for pedestrians and would shade the pavement to reduce heat island effect.
- Tree loss on the site is significant and could be less if other decisions were made.
- Because of the increased impervious area due to the road, they need roof space for green roof installations thus reducing the opportunity for PV on the roof.
- Specs should include requirement that imported top soil be without invasive seed.

- Be sure to engage community on tree loss and other site issues.
- Extra money should go to lighting renovations in the existing building.
- The project reduces imperviousness in the RPA. Green pavers in some areas of the site are good.
- Mike will send Christine a paragraph about the MS4 permit.
- Is there a long-term tree replacement plan if trees don't survive.
- Encourage energy efficiency (LED lights in new and existing classrooms)
- Solar panels on the roof are experimental and costly. More environmental benefit could be achieved if other energy efficiency measures are incorporated into the project (e.g. LED lights and solar PV panels).

3. County Government Operations Energy Plan

John Morrill, Arlington energy manager, outlined the County Operations Energy Plan for County facilities and operations, including APS. Community Energy Plan's goal is to reduce greenhouse gas emissions by 75 percent by 2050. The County operations' GHG reduction goals are the same. In the near term, the County sets a 25% reduction goal by 2020. County government operations use the equivalent of 9,000 households worth of energy at a cost of \$16 million per year.

Over half of the County government's energy use is electricity. Natural gas is 27% of use. Vehicle fuels (diesel and gasoline) are the remaining. 64% of energy used in buildings (County and APS). Improving efficiency in buildings and at wastewater treatment plant is critical. Improving the emission rate from the electricity grid is also a big factor in reducing GHG emissions (i.e., grid is getting cleaner due to the conversion to natural gas).

The main components of the plan include:

- Reduce facility energy use through efficiency
- Improve vehicle efficiency, use cleaner vehicle fuels, and reduce travel
- Make use of waste heat (e.g., combined heat and power) and process optimization
- Increase production and use of renewable energy
- Use innovative technology
- Pursue sustainable funding strategies
- Institutionalize energy management.

Arlington is making good progress on achieving GHG reduction goals through a combination of efficiency and greener power, even in the face of growth in services. To date, the County is 11% of the way toward the Better Buildings Challenge 2022 goal for energy intensity of buildings. The Ballston garage alone is saving \$60K per year due to a LED retrofit in 2015.

Gabriel mentioned the MWCOG data tracking project and asked if Arlington could participate. COG provides local action ideas for GHG reduction. The federal government is about to announce a net zero goal. John Morrill noted that the private sector needs to get on board in order to reach community GHG reduction goals because the county only accounts for 4% of the county's energy use. Mike asked about how the reductions are counted when ART Bus routes are expanded. The energy use is transferred from the community sector (private cars) to the public sector (ART bus). One of the complicated issues is how green power purchases are calculated.

Staff will post John Morrill's Powerpoint presentation on the E2C2 website.

4. Meeting Summary Review – 4/25 & 6/27

Motion to approve both meeting minutes as amended. Passed unanimously.

5. Old/New Business

CEPIRC Update: Staff is working with the E2C2 Chair and the Chair of the Community Energy Plan Implementation Review Committee (CEPIRC) to rethink ways to engage the community with regard to CEP implementation. Currently, staff is working on scheduling informal Energy Meetups to encourage discussions and information sharing. In addition, staff is evaluating the option of updating the E2C2 Charter to formalize how the Commission tracks CEP implementation. In the future, a couple Commissioners with specific energy expertise could be appointed to the Commission.

The first Energy Meetup is scheduled for October 3. Staff will send the information to Commissioners.

Adanna Woodson is new to the Commission. She has an environmental background and works for Booz Allen Hamilton. Welcome Adanna!

Christine reported on a scoping study to upgrade rail line across the River near Long Bridge. There is a NEPA process. She also reported that the National Foreign Affairs Training Facility on George Mason Drive is adding parking and facilities. There is a trail that will be impacted. Both are federal projects and County staff is usually involved in the review of these projects, though there are limits to what County can dictate for federal projects.

Alex reported that the Four Mile Run construction project began last week. He also noted that the Urban Forestry Commission is investigating options for controlling tree loss on private property. They are partnering with ACE on this endeavor.

Gabriel reported that MWCOG has a regional progress dashboard and they are looking for comments. He hopes Arlington will participate. He also noted that Environmental Justice is the focus of ACPAC's work this year. The focus is on how local communities can address these issues.

Gabriel noted that NRJAG is focused on controlling invasive species and has shared this work with MWCOG. He noted that the combined weed management area on NVRPA land would prioritize invasive species and weeds. Finally, MWCOG tracks air quality issues and the only air pollutant we aren't in compliance with is ozone.

Scott elaborated on the CEPIRC discussion. Staff and CEPRIC representatives are working on how to address waning participation and how to leverage the community. E2C2 may designate a couple E2C2 members as energy experts and energy will need to be a well-defined task within E2C2. The details being worked out.

Patrick attended the ZOCO meeting to discuss amendments to Zoning Ordinance. The focus is on the S3A district, particularly schools, looking at height restrictions and expanding green space. Amendments are too broad to be considered by December 10. The focus of the discussion will be narrowed and additional public input will be sought.

Irwin reported on the Four Mile Run Valley working group. Couple meetings and a Community forum have been held. They are collecting ideas for the area. There is a multi-day Community Visioning workshop on December 2-6.

Claire has been tracking the POPS process. They are working through various topics in detail.

Mike reported that the TJ Elementary School BLPC voted to approve schematic design. Mike thinks it turned out well – a 4-story building and underground parking. There is a net reduction in imperviousness and very few trees are impacted. The EA will be coming to E2C2 in the upcoming months.

Fairlington Park is being redesign and updated. No EA will be done – adding stormwater management.

Adjourn 10:35pm.