

BOARD OF SUPERVISORS ENVIRONMENTAL COMMITTEE

June 16, 2020

3:00 P.M.

Government Center Conference Room 11

Board of Supervisors Members Present:

Board Chair Jeffrey C. McKay

Committee Chair Daniel G. Storck, Mount Vernon District

Supervisor Walter L. Alcorn, Hunter Mill District

Supervisor John Foust, Dranesville District

Supervisor Penelope A. Gross, Mason District

Supervisor Pat Herrity, Springfield District

Supervisor Rodney L. Lusk, Lee District

Supervisor Dalia A. Palchik, Providence District

Supervisor Kathy L. Smith, Sully District

Supervisor James R. Walkinshaw, Braddock District

Others Present:

Elizabeth Teare, County Attorney

June 16, 2020 Meeting Agenda:

https://www.fairfaxcounty.gov/boardofsupervisors/sites/boardofsupervisors/files/assets/meeting-materials/2020/june16_enviornmental_agenda.pdf

June 16, 2020 Meeting Materials:

<https://www.fairfaxcounty.gov/boardofsupervisors/board-supervisors-environmental-committee-meeting-june-16-2020>

The following is a summary of the highlights of the discussion from the June 16, 2020, meeting.

Today's meeting was called to order at 3:00 P.M.

Item I Opening Remarks

After a brief introduction from Supervisor Storck, Committee Chair, the Environmental Committee accepted the minutes of February 4, 2020. With no further changes, the meeting minutes were accepted into the record.

Item II Climate Adaptation and Resilience Plan Proposal

The second topic on the agenda was on the Climate Adaptation and Resilience Plan Proposal by Kambiz Agazi, Director, Office of Environmental and Energy Coordination (OEEC).

Dr. Agazi began by referring the Board's committee to a detailed memo dated May 6, 2020, which is included as part of the meeting materials and is a more detailed presentation on the proposed Climate Adaptation and Resilience Plan.

Dr Agazi opened by stating that climate change is an existential threat to Fairfax County and responding to it requires a two-tiered process – mitigation and adaptation/resiliency. This proposed Climate Adaptation and Resilience Plan consists primarily of strategies to resist natural disasters and other anticipated impacts of climate change. The county has already experienced a number of severe climate impacts in the past decade, which are only expected to intensify in the coming years. Beyond the impacts to county operations and services and the public, the other area of concern is with the future of our triple-AAA bond ratings. Based on staff research, Bond rating agencies have signaled that they are looking at climate preparedness in their assessments. Research has also shown that every dollar invested in resilience produces returns of \$4-6. Staff is aware of some local efforts and regional plans that respond to climate change, many of which we have participated in, but they do not replace a need for a local planning process.

The proposed Climate Adaptation and Resilience Plan will be facilitated and managed by OEEC and supported by a dedicated staff planning team. The community involvement includes the establishment of two advisory groups with up to four facilitated meetings. There will also be an opportunity for the general

community to participate in three public meetings, take a survey in the beginning of the process in Phase 2, and provide public input on the draft of the final plan, prior to Board adoption. There will be a dedicated public webpage with regular updates and materials provided.

Suggestions for the Infrastructure Advisory Group were made and Dr. Agazi invited suggestions for additional members of the advisory group. There will be one representative for each group, plus an alternate, and the invitations will be issued from the Chairman of the Board. In the Community Advisory Group, each entity will have one representative with the exception of district representatives, which will have two representatives and be nominated by the district Supervisor.

To begin this process to initiate the plan, it is important that we have a full commitment from the Board. During Phase I, recruitment will begin in August 2020 to have staff onboarded as to not delay contract negotiations and kick-off meetings.

The timeline for Phase II will be roughly six months and will include detailed climate and weather-related projections, a vulnerability and risk assessment, a detailed policy and regulatory audit, and at least one facilitated advisory group meeting and community meetings.

The timeline for Phase III is roughly twelve months. There is an overlap between Phase II and III. We will be developing and prioritizing equitable adaptation and resilience strategies that will complement mitigation and explore incentives to encourage private development to include resiliency measures. We will explore the land use policies, regulatory changes in zoning, and flood plain ordinances that consider natural forces.

The cost estimate for contractual services is predicated on our ability to ride an existing COG contract, which has a hard expiration date of June 2022. This process is contingent on riding the existing contract, hence the need for being funded this year versus next year.

Board Discussion:

Chairman Storck began by restating the core issue, that in order for the plan to proceed, the Board would need to fund the plan in FY 2020 Carryover.

Chairman McKay commented that there is broad support for the plan. He questioned the timeline: Are there things that we can identify and implement along the way, rather than at the conclusion of the process? He also mentioned the Community Advisory Group. He would like to see representation from revitalization groups, redevelopment of older areas being key to environmental improvement.

Chairman Storck echoed the need for the input on revitalization, especially the lower lying areas along the Potomac and Occoquan Rivers in the Mount Vernon District.

Supervisor Walkinshaw seconded Chairman McKay's support of the plan. We are about to spend \$30.5 million on a climate change resiliency project, dredging Lake Accotink. Because of Hurricane Sandy and/or the Derecho, there were several feet of sediment that entered Lake Accotink. What are the future costs of events like that? He suggested that the advisory groups should have representation from young people and students, for example, George Mason University and high school students.

Supervisor Storck agreed on the comments from Supervisor Walkinshaw. The Board has had similar kinds of foresight in the past. Funds and efforts made in stormwater management have positioned us well to address the Chesapeake Bay issues. I see this as a similar kind of thing, but we must have more data to help inform the approach and we have to do that in the most cost-effective way.

Supervisor Palchik commented on outreach and suggested that the LatinX community should be represented, also keeping in mind that the working community and parents should be given the opportunity to participate.

Supervisor Storck agreed and also added that the letter of invitation from the Chairman would be important to bringing attention to the planning efforts and involving a broad group of people.

Item III

Green Building Policy Update and Path to Net Zero Energy

The third item on the agenda was a presentation with on the Green Building Policy Update and Path to Net Zero Energy by Carey Needham, Director, Building

Design & Construction Division, Department of Public Works and Environmental Services (DPWES). He referred the Board to the recent memo issued on June 10, 2020, which was also included as part of the meeting materials.

Mr. Needham began with an overview of the Sustainability Program under the Sustainable Development Policy, which was adopted in 2008. The policy established LEED Silver as the achievement level for all projects over 10,000 square feet. Since that time, we have achieved LEED certification for 32 projects, 17 projects at the Silver level, and 15 at the Gold level. The current policy is based on LEED 3.0 and does not have any energy performance criteria other than what is included in the LEED program.

The proposed policy update will increase the LEED achievement level from Silver to Gold level certification. It will add an energy performance improvement goal of 30% for new construction and 25% for renovation projects. It includes future timelines for increased energy performance and Net Zero Energy achievement. The combination of increases in the policy and the program criteria creates an exponential effect on the policy. The LEED program has progressed from version 3.0 to 4.0 and will progress to version 4.1. The policy we are proposing is to move the achievement level from Silver to Gold certification and add the 30% energy performance improvement criteria. In addition, the ASHRAE standard that is part of the building code and the LEED program continues to be updated and to strengthen the baseline energy criteria. The proposed policy changes will also update and strengthen the energy conservation code. DPWES believes that it will be a significant challenge to consistently meet the new policy goals on all of our projects.

Mr. Needham gave an example of a cost and energy model for a typical project, the replacement of Fire Station 29 in Tysons. It is a 20,000 square foot project with a \$15 million total project estimate. The model is based on the average Energy Usage Intensity (EUI) for all of our fire stations in 2019 and reflects the first cost premium for achieving LEED Gold and 30% energy reduction. Based on this, we project that we will reduce the annual energy consumption by an average of 720,000 kBtu and reduce the annual energy costs by just under \$14,000. When we add solar energy, it will also offset energy consumption from carbon-based fuels and contribute to annual carbon dioxide reduction targets. The introduction of onsite solar arrays will offset fossil fuel consumption by approximately 242,000 kBtu and will offset annual fuel costs by approximately \$6,000 per year. The total

30% reduction in energy will be a combination of improved energy performance and the offset achieved by using renewable energy.

Addressing LEED as a holistic program at the basis of the policy, we do recommend that the policy update retain LEED as a holistic approach to sustainability. The LEED program does provide significant sustainable benefits, beyond energy, with additional indirect payback, which include low-impact development, recycling, use of recycled content materials, reduction in domestic water use, and indoor environment and wellness.

Showing the LEED Holistic Cost Benefits Model, Mr. Needham explained that LEED provides economic, social, and environmental benefits. A case study conducted on Bailey's Fire Station, a LEED Silver certified project that was completed in 2014, reflects the triple bottom line model result which combines the financial, social, and environmental costs and benefits. Autocase, a tool for triple bottom line cost benefit analysis, recognized by the United States Green Building Council, industry experts, and other jurisdictions, indicates the return on investment is 4.5 years for Bailey's Fire Station, based on actual energy savings, water savings, recycling, and waste reduction.

Regarding Post Occupancy Commissioning over the life cycle of the building, we have the data to annually review our energy benchmarks and the actual energy building consumption for our buildings portfolio, and the ability to investigate buildings with significant energy consumption shifts over time. The primary factors that affect energy consumption changes from the originally commissioned levels in a building are the varying weather year to year, changes in the operations of the building and the building automation systems, and the requirement to make adjustments to optimize the building's systems performance over time. Over the life cycle of the buildings, fine-tuning building systems to ensure that the facilities are operating efficiently to achieve optimized life cycle energy and cost savings is very important to recover our first cost investment. Staff does recommend that annual funding be set aside for targeted recommissioning of our worst performing buildings.

The next slide shows our pathway to increase energy performance over time as well as achieve Net Zero Energy. First, is the optimization of our building envelope and building systems in the designs for efficiency. Next, is the ability to offset our fossil fuel consumption with renewable energy. The primary renewable energy we are using is onsite solar, which is somewhat limited due to small roof

areas and small site areas associated with many county buildings. We have the opportunity to pursue offsite renewable energy credits and we believe that will be needed to achieve energy performance improvement and Net Zero Energy goals reflected in this policy update. In addition, we have numerous onsite solar arrays that are in the planning stages for our projects that are in design and moving into construction at this time. Examples of buildings that are incorporating solar in their design are: Woodlawn Fire Station, Sully Community Center, and Monument Garage.

Board Discussion:

Supervisor Gross noted that COVID-19 may change our expectations for Green Buildings due to the need for more space, not less, and also the need for plexiglass dividers, which may be long-term. What are the impacts of situations such as COVID-19 on these measures going forward and should it change our approach? Our sense of space has been changed tremendously.

Randy Bartlett, Director, DPWES, responded that it may be too soon to answer the question at this time. Conversations are happening internally about how the modifications due to COVID-19 affect the circulation patterns in offices. Considering the increase in teleworking, conference rooms and office square footage needs have changed, as have the needs for closed offices. DPWES will be paying attention to circulation patterns in ventilation systems and social spacing going forward.

Supervisor Lusk commented that he appreciates the Post Occupancy Commissioning and what is being done to assure that our buildings are maintaining a certain level of LEED Certification and efficiency over time. What do we anticipate to be the cost of this commissioning exercise in county buildings?

Mr. Needham responded that we do not have a figure at this time, that they have to work with the Facilities Management Department (FMD) to target the worst performing buildings in the annual energy data and come back to the Board after that has been considered.

Supervisor Walkinshaw commented on the timeline for Net Zero Energy eligibility. Do we have any mid-range targets, in terms of what number of or what percentage of buildings going into design will be Net Zero eligible before 2031? Or will they be considered as they come before us?

Mr. Needham responded that the new policy goals have not been achieved by any project to date. He considers it a stretch goal to achieve Net Zero Energy. As we progress, we will continue to learn and identify other opportunities for this achievement.

Supervisor Foust asked about the LEED version we're currently using.

Mr. Needham responded that it is currently LEED 4.0 and will transition to 4.1.

Supervisor Foust asked if as the version of LEED changes, our policy will keep up with that?

Mr. Needham responded, yes, it will.

Supervisor Foust asked about the ASHRAE standards to which we are currently building.

Mr. Needham answered that we are currently using the ASHRAE 2013 standards and will be migrating to ASHRAE 2016, which will be adopted by the Virginia Statewide Building Code as well as LEED.

Supervisor Foust asked about the LEED and ASHRAE standards and if they will change as the versions available change.

Mr. Needham responded, yes, that is correct.

Chairman McKay commented on Supervisor Walkinshaw's question and how this policy was put in place in 2008. He stated that, for this update, the Board should be more in tune with staff in how this action item is followed. He recommended that when the action item is presented to the Board that an annual memo be issued to update them on projects and with what is happening with the policy relative to our buildings to raise awareness to the Board as a whole.

Supervisor Storck agreed with the Chairman's comment and added that it is important to understand where we have been and where we're going.

Supervisor Alcorn asked the question, in relation to the policy: How consistent is what is in the Comprehensive Plan and what is in Objective 13 of our Environmental Plan?

Dr. Agazi responded that the Green Building Policy for Capital Facilities has historically been stronger and more robust because it is implemented by a single agency for our own facilities. The Green Building Policy that is in the Comprehensive Plan is one of many negotiating elements of the rezoning process and, therefore, a little more flexibility is needed to ensure that the development can achieve holistic environmental goals. There is an opportunity in the Fairfax Green Initiatives Board Matter to have staff re-examine the Green Building Policy for private development; however, as a first step, staff wanted to look at our own Green Building Policy for Capital Facilities, because it is much easier to negotiate improvements with the development community with an updated capital facilities policy. The Green Building Policy for Capital Facilities will always be a bit stronger than the private sector.

Supervisor Alcorn added that Fairfax County facilities represent 3% of the total greenhouse gas emissions in the county. He supports that we be able to take what we are trying to do ourselves and put into more general usage. He also followed up on the memo to the Board from the Great Falls Group of the Sierra Club and Clean Energy for Fairfax Now. Would it be possible for staff to provide answers to the points raised in that recent memo? It points out a broader policy discussion for the Board and that the LEED program is much broader than just energy efficiency. If we push ourselves on how we do county buildings going forward, are we going to take this more broadly? Do we want to push on the energy efficiency side specifically?

Dr. Agazi responded that they worked with DPWES, FMD, and the Park Authority on this policy. It is a hybrid policy. A study was done by MITRE to report on building energy and whether to continue with LEED policy or focus more on Energy STAR or other energy policies. In response to that report, we did not want to deviate from the LEED policy because it is a very holistic sustainability policy. Our Green Building Policy is the best of both worlds; it recommends staying with LEED but also transitioning to Net Zero Energy so that the buildings will become as energy efficient as practicable in the near future that just a small amount of renewable energy will be required to allow for a Net Zero Energy certification.

Supervisor Alcorn added that we might want to consider more LEED Silver buildings rather than LEED Gold if we get more energy efficiency. Annual updates from staff, requested by Chairman McKay earlier in the meeting, should afford us the opportunity to reexamine this component of the policy down the road.

Chairman Storck commented that getting a higher percentage of energy efficiency sooner is beneficial. Higher efficiencies seem to be in our reach. The method of assessing that is by testing EUIs routinely and making those comparable to other buildings. We would like to tie in what we are doing as a county with what we are doing with the broader community through CECAP and lead by example and show people what is possible. It is an ongoing conversation. He instructed staff to provide a report on existing projects and where they fit into the Sustainable Development Policy that we are looking at today. The report should be issued in the next few weeks and will allow the Board to see where different buildings are - whether they're LEED Gold or Silver, and their environmental efficiencies. With the passage of the Solar Freedom Bill in Virginia, we want to know how we can put solar panels on the roofs of our buildings and encourage the School Board to do the same.

The meeting adjourned at 4:10 P.M.