

Climate Change, Energy, and Environment Commission (C2E2)

Summary of February 28

2022 Virtual Meeting

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

Members Absent: Gilbert Campbell

Guests: Ruth Woollett, Leslie Arminski, Matt Shuma

Staff Present: Greg Emanuel (DES), Rich Dooley (DES), Demetra McBride (DES), Stephen Burr (DES), Adam Segel-Moss (DES)

1. Public Comment on General Topics

None

2. Meeting Minutes

The Commission moved and unanimously approved the meeting minutes from January.

3. Budget and Roadmap – Roundtable with Greg Emanuel

Joan introduced and thanked Greg Emanuel, the Director of Environmental Services, for joining the meeting and speaking with the Commission about the budget, CEP roadmap, and other issues of concern.

Greg briefly reviewed the three topics that he would be discussing: 1. What he is planning to share with the County Board on energy and, briefly, on stormwater. 2. Information regarding the auto fund, because the County is doing a lot in the EV space. 2. the roadmap and plans to roll it out, with assistance from Demetra and Rich.

Budget Presentation

There is \$245 million for the annual operating budget, and about 780 FTEs. Great funding and opportunity for the Community Energy Plan implementation. The Department is working on the following: preparing the roadmap, which includes electric vehicles, the installation of a new solar facility, PPA projected to launch (not sure when, more details on this to come).

Regarding stormwater: Second MS4 permit issued last year. By May, we will have two high water detection systems installed. Took a while for the installation, but there are several high-profile water and stormwater infrastructure projects under construction.

Regarding solid waste: continue glass collection efforts with 7.9 million tons collected. Kicked off the food scraps collection last September – this is a major milestone in the goal towards zero waste.

New water infrastructure rate went into effect January 2022. First wave of bills are more complex now.

There are several capital projects, including the solids master plan (John Bloom will give an update tonight). With transit, the County is facing real challenges with ridership, but have continued reliable service for the Community.

In terms of the County workforce, the County had its lowest lost workdays since it began tracking about a decade ago. The County Board adopted the Vision Zero action plan and the County implemented 200 safety modifications since then. The facilities group is managing 2.5 million square feet of space over 90 buildings. Again, a huge opportunity for CEP implementation.

Approaching the budget this year by aligning with Board policy priorities and following through on commitments like implementation of the CEP. There are some targeted budget additions, such as transit/transportation implementation metro bus \$16M next spring. The County is keeping pace with a very aggressive development timeline by using data (both raw and special) to analyze programs through a racial equity lens, which is also a Board priority. The County manages this through a very competitive hiring environment. Proposed compensation increases help significantly, in addition to job studies completed by HR.

The County must be flexible in how it delivers services if revenues are down, or the Community behavior changes over the long term, especially for areas like parking, commuter services, and transit.

The County has taken an expansive all hands-on deck, whole of government approach to climate, energy planning and programs from the beginning. In everything being done, elements of the comprehensive plan are considered, including the CEP. As the County's climate and energy mission has expanded, inter-governmental ownership and participation to get to these goals has also grown. The County is trying to elevate a longstanding interdepartmental staff working group. This will happen in a similar way to how stormwater did it.

The proposed budget included \$4.4 million in energy investments to execute energy and climate resilience programs across departments, with a whole of government approach. For flexibility and execution in a very dynamic environment now, the County manager has proposed a \$1 million dollar CEP action fund. Examples of what this money could fund: piloting new system electrification, small capital projects, additional consulting studies, and matching funds for federal & state grant opportunities and community energy investments. The budget also includes funding for staff, for example, an associate environmental management specialist. Furthermore, \$218,000 for consultant funds, to do things such as optimizing an on-site solar consultant, support for PPA and VPPA procurement feasibility studies for public and right-of-way EV charging tools for assessing government building energy efficiency upgrades. Vehicle electrification: an AIRE project manager specifically hired to manage EV stations and solar panel installations. One-time funding added to pay for the incremental cost of converting up to 53 new vehicles to electric. \$200,00 of pay-go funds for charging infrastructure to support the new electric fleet and 125 EV charging stations for public use.

Proposed facility investments include: \$350,000 for energy efficiency upgrades, \$140,000 for renewable energy assessments, at least 10 government sites for on-site solar capacity readiness and structural changes, \$250,000 for HVAC replacements, \$420,000 for life cycle replacement on Fire Station 5's roof in Pentagon City and \$300,000 of window replacements at 3700 S Four Mile run.

Stormwater: proposed budget recommends stormwater tax rate maintained at \$0.017 for CY 2022. This funds the operating budget, maintenance capital and debt service on stormwater capacity capital projects. Issuance of the second MS4 Permit in 2021. The Stormwater utility implementation is underway. The stormwater working group continues, and the Risk Assessment and Management Plan is expected to be completed by the end of 2022. The County must fund, in a balanced way, debt service, which is almost \$1,000,000 now, which is 6% of the budget. We fund O&M expenses which are 11.16 million. The remaining funds go to the Capital PAYG.

Auto Fund: The auto fund changes each year depending on replacement needs and costs. Right now, there is significant inflation pressure, particularly for heavy equipment. Great alliance between the Equipment Bureau, the facilities team, and the AIRE team to meet the Board policy direction to replace vehicles where feasible with electric vehicles. By the end of 2023, we estimate that over 35% of sedans will be electric. To accomplish this, the Equipment Bureau will receive an additional \$275k to pay for the incremental cost of planned EV replacement. FY 2023 replacement plan includes up to 52 planned EV conversions.

Future considerations: Competitive job market resulting in hiring and retaining challenges at all levels in DES. New normal due to Covid-19 may mean future service delivery models will change. Metro funding pressure in the future may impact local service delivery and put more pressure on ART to fill gaps. CEP Roadmap will continue to guide future energy investments. Continue to build upon DEI (Diversity, Equity & Inclusion) work to align internal policies with program delivery.

Demetra noted that the County is not only working on County-owned fleets with public transportation, but the Transportation Department and commuter services is working on several different initiatives, such as car on demand, a car share service for both commercial office and retail places, as well as multi-family and condominiums.

Joan asked Greg about HVAC and building retrofits, and where the County is at assessing its use of natural gas. Greg responded by selecting a building or two to conduct a pilot for the right building and finding the systems where we are stretching ourselves, and not put the mission at risk. Looking at this, but it hasn't been finalized. Not doing a policy decision up front, but instead with staff, try new things and gather information. Do it by building, instead of the whole County at once.

Adam will provide a PDF copy of the slides.

Carrie asked about making sure that any new buildings are being built with electrification in mind, so that it will be easy to phase out gas and switch over to electric systems. This requires a culture change in County government to make electrification a priority from the beginning. Considering a whole of government approach, with a Coordinator at a higher level that cross-cuts the government and can champion climate concerns and remind County staff to make decisions with our carbon neutrality by 2050 goal in mind. Carrie highlighted one example that was disappointing – the ART bus operations and maintenance facility was initially recommended by consultants to be electric, but staff later decided it would be better to have it a gas-based system. Greg's response: This is already happening and will be reinforced at all the right levels. Working group is for lower levels. These conversations are already occurring with department directors across the County.

John notes and furthers Carrie's point by adding that the public facility sustainability has a net zero standard that can be waived, but net zero includes the requirement of no on-site combustion, which both are emissions based. Within these discussions it's a recurring theme. Additionally, the commission has advocated for a Chief Sustainability Officer in the CMO, it is common, and becoming a best practice in the private and public sector. The budget doesn't include this and if you could say why. Greg's response: That position doesn't get you a whole lot more than what we're already doing, and adds an additional layer of reporting which would actually work against us. Leave this up to Mark [Schwartz] as it was his decision.

Jonathan: If there was effective infrastructure in place, the County Board would not have required the County Manager to report back about how the government was going to achieve the goals of the CEP. An ad hoc manner is the antithesis to a whole of government approach, thus is not an accurate reflection of what is happening. Please address how there will be a coordinated whole of government approach.

Greg's response: Your point is fair, stormwater may not be cross cutting as much, but it is cross cutting. The master transportation plan is another that is totally integrated with the planning

department. We do this within the construct of operating departments.

Demetra will continue to send to Adam, and he to the group a monthly roundup summary of committees and commissions that have been in existence for several years that are talking and producing additional mechanisms to enhance all of government approach.

CEP Roadmap

Tim asked about how the budget looks without having a fully developed roadmap in place.

Greg's response: These had to occur in parallel, so they don't inform each other.

Joan asked of the HVAC systems that are listed as being replaced, how many are going to be natural gas-based systems?

Greg's response: I'll have to get back to you on that.

Precedent: 2013 CEP and Implementation Framework companion document, followed by 2019 update, which includes dramatic expansion in the energy sector. Board adoption of equity as a guiding principle and lens of the CEP. Maturing Program and Evolving Public/Stakeholders informs a change from reference tools to actionable frameworks.

Key changes in roadmap: measures of success and trying to directly relate them to the wedge graph to focus on things that matter the most. Tiered time frames and timelines, this was used to inform both operating budget and capital budgets. Keep our focus on things that matter.

Tim: Do we know where we are now that it's 2022?

Greg: No, we won't measure it until we measure. Discussing the next update in a year or so.

Demetra: Next iteration will look more like a climate action plan. Right now, it doesn't include waste and water, which are important, so we will revise these additions.

Greg: The implementation of the CEP will not be similar to replacing water lines, or even at some level implementing the master transportation plan, which include small projects here and there and we know what we're doing and how to accomplish it. Things are much more dynamic right now, which is good. There is huge worldwide interest, we see a wave of government funding, and technology will change things over time which we cannot predict. So instead of making things very predictable, which we cannot, we can have a stake in all areas, hire more people and have staff in the right places at the right time and capitalize on what comes up as it comes up. Having a diversified portfolio will set us up for success. We have to be flexible because a lot of things will be out of our control.

Joan: How is the County going to decarbonize building infrastructure and look at different types of building structures, and identify targets of retrofitting and getting greenhouse gas emissions down through energy efficiency and the removal of natural gas?

Demetra: It will be how effective we are at persuasion because we do not have the ability to regulate. We do not form policy. We are the demonstration model where we lead by example, we measure and report out on the benefits and co-benefits. One piece of the puzzle, but also do build public-private partnerships.

Greg: We have to be careful not to spend too much time planning and modeling. The numbers and variables change at a rapid rate. Not to not do our homework or due diligence, but it is possible to overdo and spend too much time planning and then not get to work and do.

Joan: About 70% of items listed in the CEP, AIRE is taking the lead on, or at least co-lead. In many strategies, significant funding challenges were noted as well. How is this reflected into both staffing and funding estimates?

Demetra: When we mentioned funding, we should have been clearer. Funding does not mean AIRE's budget will be large enough. Consistent with all of government approach, is transportation,

engineering, facilities etc. going to get money too. When we say AIRE will take the lead, we don't mean necessarily in execution. The funding is not 100% from local government, we rely on state funding, federal funding, private/public partnerships, etc. Funding must be taken in a larger context. Joan: Has any analysis been done to map out exactly what staff is able to reasonably take on, given the shortage of staffers?

Demetra: We are aware of this, and we model programs, like the energy efficiency for low-income areas, so that the outside contractor can administer it and we don't have to supervise it. We are also cross-training internal staff in other departments.

4. Budget Talking Point Development Discussion

Joan asked the commission about initial talking points she should make during the County Board work session this Thursday, and key points when drafting the budget letter. A request for volunteers to draft the letter was made.

John: Include the pros and cons, there are good things to highlight, and we should. The action fund allows us to be nimble. It looks like a good process on the EV fund. Track reporting on vehicles purchased and why. Continue and elevate the need for high-level leadership on our top priorities and issues.

Joan: Found it disturbing that electrification was listed as an 'emerging technology' where it shouldn't be looked that way. Asked if this is something the commission should highlight.

John: The HVAC systems are claimed to be climate investments. The efficiency of these systems are continuously brought up, but this means gas. Raise the need for a robust analysis of electrification opportunities for these systems.

Tim: Suggest spending money on a study that proves to people that electrification is possible and economical. This has a greater multiplier effect. The County should commit to this research which will help future retrofits in County-owned buildings. Hire a professional with experience in electrification to assess county properties and provide insight into how to electrify them.

Joan: Working with other jurisdictions to make progress despite Richmond's influence/veto power. Creative ways of using the tools that jurisdictions have control over.

Demetra: We are having the Steven Winter report updated by another consultant. Are you wanting a technical report and easy to digest with appendices?

Joan: End-use cases.

Demetra: Finalize scope for the renewed study, perhaps put this down as an agenda item for the EC Committee.

Joan: Included in talking points will be the importance of a Chief Sustainability Officer.

John: Consider giving examples, i.e. procurement policy, of policies that are not aligned, CPHD, greater interaction alignment. With electrification, we need public facing programs, without shortchanging energy efficiency, still need to promote this among other key issues too. Seems like less of an investment in public facing programs (in AIRE).

Carrie: How will the decision of the CEP action fund be made across the government if we don't have a high-level Chief of Sustainability officer? Something to consider asking. Who is the decision maker? Also, explicitly have a life cycle greenhouse gas emissions reduction as part of an ROI calculation.

Demetra: Additional point – hard to work on key issues with Dominion because they are not attending meetings or partnering with the County. Something to keep in mind.

5. Solids Master Plan Update

John Bloom gave an update. Sewage treatment plant will convert the approach to process our waste through anaerobic digestion. Several advantages to this. The new approach will create class

A fertilizer that can be commercially sold and has value. Cut the number of truck trips in half. Eliminate limejuice completely. Produce biogas (biomethane), which we must decide what to do with.

Two options: 1. Combined heat and power plant, on-site, that would generate 1.3 megawatts of electricity and generate waste heat, to be used in the waste processing that the facility needs. Efficient electric generation options

2. Invest more money to clean the gas (remove all carbon dioxide) and inject the remaining, pure methane into the gas grid. Participating in an EPA program, and getting very good money for it, making the approach hard to beat financially.

Greenhouse gas emissions discussion shows reductions with either option (1 or 2). Consultants' analysis falls short in a couple of ways. What we do with biogas, if we put it in the gas grid, Arlington will procure the same amount of renewable electricity, but also displace fossil gas in the gas grid. Consultants calculated GHG emissions from 2009 to 2019 grid mix from Dominion and used this to estimate the next grid from 2028-2053, which is an entirely different grid, and will be much cleaner in the future.

There will be greater GHG reductions with the grid injection approach.

Joan: Complex and future oriented. John didn't mention emissions – emissions will likely be higher under the combined heat and power plant (option 1) because gas will be burned on-site. One point to consider, County staff will proceed without consulting the CB (County Board).

Joshua: No discussion about alternative methane products. There are opportunities for turning methane gas into methanol or other gasses. Injecting methane, if we create a fund, where would those funds go & what are we doing with that money? – Something to include for the CB.

John: Draft letter to the Board of the Commission's assessment, and review it, and try to get the letter to Commission for approval. If we can't get consensus, then we push to the following month (April).

1. Old/New Business

The Civic Federation passed a resolution on stormwater for comprehensive stormwater planning. The Commission should look into supporting it. Joan to send this to commissioners. Simple letter from the Commission to endorse.

Carrie circulated the Zero Waste Solid Waste Plan development process for those interested. Next meeting Thursday night.

Mikaila: Public Spaces Master Plan working group is set to meet on March 31st.

Stephen A: Career Center Planning group meeting. Good turnout and more participatory. No discussion of sustainability issues. Stephen raised some to get the discussion going. Presented for Marbella, talking points when the letter was approved. Certain kinds of assessments and energy modeling will come later.

Adam: No guidance/update for emergency provisions to meet virtually.

Meeting ended: 8:34pm