

**MEETING MINUTES OF THE HYBRID MEETING**  
**ARLINGTON COUNTY C2E2 ENERGY COMMITTEE**  
**12/13/2023**

The **C2E2 ENERGY COMMITTEE** convened its hybrid meeting at **7:00 PM** on **December 13, 2023**.

**PRESENT**

Doug Snoeyenbos  
Rick Keller  
John Bloom  
Jonathan Morgenstein  
Kip Malinosky  
Scott Dicke  
Scott Brideau

**PRESENT (VIRTUALLY)**

Greg Brozak, participated virtually from home (via Teams)  
Stephanie Burns, participated virtually from home (via Teams)

**ABSENT**

Elizabeth Whitney  
Suzanne Swink  
Claire Noakes  
Scott Sklar  
Kevin Vincent

**STAFF**

Rich Dooley  
Demetra McBride

**GUESTS**

Joan McIntyre  
Lauren Hall

## **SUMMARY OF PRESENTATIONS/DISCUSSIONS**

### **1. Greetings and introductions (7:00) – Doug Snoeyenbos**

- D. Snoeyenbos introduced himself and welcomed everyone to the meeting.
- S. Dicke told the group about the new C-PACE deal that recently closed. The project used just under \$500,000 to fund energy efficiency improvements, façade improvements, and stormwater management system implementation.
  - The primary mortgage holder was in the process of standing up a new C-PACE program. So, it was incentivized to get this deal done. That lender noted that his project would likely be the only Arlington C-PACE project it would close on, given its concerns with the Arlington C-PACE ordinance.

### **2. Review/approve meeting agenda and November meeting summary (7:05) – Doug Snoeyenbos**

- The December meeting agenda, revised from what was originally sent out by e-mail, was approved. The November meeting summary, with John Bloom’s edits included, was approved.

### **3. Public Comment on General Topics (7:10)**

- None

### **4. Update on Solar tax exemption (7:15) – Doug Snoeyenbos**

- In 1979, the County passed an ordinance to provide for a tax exemption for solar PV equipment
- There will be a meeting next week, and then it would go to the County Manager’s Office (CMO), then to the County Board (CB) for a Request To Advise (RTA), and then a vote at a future CB meeting.
- S. Brideau – anything we’d want to recommend to the CB when this comes up for the RTA?
- K. Malinosky noted that this would be a local incentive for solar PV – something that citizens asked about during public events at which he has participated.

### **5. Update on RGGI (7:25) – Demetra McBride**

- The Governor took an administrative action to withdraw VA from RGGI this month (12/13/23).
- There was a lawsuit. The judge hearing the case determined 3 of the 4 parties for the lawsuit had no standing, and the 4<sup>th</sup> was in the wrong venue. So, for the suit to proceed, a new venue would be needed.
- If a Stay was not filed, then the administrative action would go through, which would happen today.
  - We have not heard any news about the Commonwealth withdrawing or if a Stay was filed to delay the Administrative Action from taking effect.
- Because of the State’s Appropriations Law (where a certain percentage of RGGI funds went to different State agencies, such as VHDA), the money slated to go to those agencies would eventually go instead to the General Fund because the State’s Appropriations Law would sunset after 2.5 years.

- J. Morgenstein spoke with Carrie Hearne at Virginia Energy (VE). VE thought the money in the VHDA accounts would last another year.

## **6. Update on EV Charging & Grants update (7:35) – Demetra McBride**

- The County is adding electric vehicle charging equipment (EVSE) for the County fleet.
  - FY24: for public use and access – Fairlington Community Center, Madison Community Center, Lubber Run Community Center, and Central Library. Courthouse Plaza parking lot is TBD (it depends on Dominion Energy).
  - FY 25: Aurora Hills, Barcroft Community Center, Barcroft garage, and Walter Reed Community Center
  - FY24: Govt fleet – Solid Waste Bureau, Transportation and Operations Bureau (TE&O), Fairlington Community Center; and at places where public access EVSE will be located
- MWCOG put in a regional submission under the NEVI program.
  - There may be another round of funding MWCOG will pursue in February 2024.
  - We might pursue the use of the EV ARC system for County fleet charging – we’d like to get two of them to see how they work.
- D. Snoeyenbos asked about chargers here at the Bozman Center.
  - A: D. McBride said we are waiting to hear from Dominion how that could be done. There have been many delays have been many due to the County for Dominion Energy (DOM) to act. This issue has been elevated up to DES leadership that we may need to go to the SCC to lodge a formal complaint if progress is not made.
    - The EC fully supported the County to submit such a complaint.
  - D. McBride reminded the EC that DOM has had an EVSE program for a while, but no EVSE has been installed under that program
  - In addition, the Carbon Neutral Transportation Management Plan (CNMTP) draft is due in January 2024.
- J. Morgenstein asked about the EVSE rate. D. McBride noted that the County needs to update its interim EVSE Rate Ordinance.
  - The EC appreciates the work of AIRE and the County in getting the EVSE installed.
- D. McBride included information on Arlington’s grants pursuits (Attachment 1).
- The VE staff wants to talk with us in January 2024 about our DOE Buildings UP Prize application (which was not funded by DOE).
- The big push between now and April 1, 2024 is pursuit of the CPRG implementation fund (Phase 2) which has \$4.6B available for projects.
  - MWCOG is considering a regional approach with a regional application for Phase 2 funds.
  - Slide 2 of Attachment 1 shows the OSEM program designs that OSEM submitted to MWCOG for the CPRG
  - If we were able to get all of these funded, we’d be able to make great progress toward reaching our CEP goals.
  - There are different Tiers for awards, e.g., Tier 3 is the one we’d like MWCOG to pursue for the project portfolio
  - We are also tracking what the Commonwealth might pursue itself

## **7. Report on Sustainable Infrastructure Breakfast (7:45) – Scott Brideau**

- S. Brideau provided a recap of the country's infrastructure grades
  - Except for rail, all grades were at a C-minus, or worse.
- The Infrastructure Act (BIL) was discussed. \$1.2T in spending available to cover infrastructure improvements.
- The Inflation Reduction Act (IRA) was discussed. At the breakfast S. Brideau attended, the assumption was that emphasis in the IRA is more on *resilience* rather than *sustainability*.
  - Connecting with our neighbors was emphasized – having partners is very important
- The [Envision framework](#) (from the Institute for Sustainable Infrastructure) was discussed. It is essentially like USGBC's LEED platform, but for infrastructure projects.
  - J. Bloom noted that the Envision framework has a small number of points focused on energy use and carbon.
  - R. Dooley noted the County was interested in using the Envision platform for a water treatment plant project.
- Bob Lazaro (NVRC) singled out Arlington during the breakfast for the excellent work Arlington has been doing.
- Data centers are driving increased energy use and carbon accounting issues in our region.
- There are workforce issues – we need to train workers on the new technologies to support our new infrastructure.
  - J. Morgenstein noted there is a lot of Federal funding being directed toward workforce training.
- Behavioral change is essential and could be our biggest challenge in reaching our goals
- There is a need to shift from focusing on historical data and instead look forward using new data that takes climate change into account
  - R. Dooley noted how the County's RAMP project uses RCP 8.5 assumptions in developing flood inundation maps

#### **8. Update on WPI Cohort – Adaptive Reuse of Buildings (7:55) – Rich Dooley**

- Demetra McBride and Paul Roman led an efforts to assist the team of WPI students for their project.
- The WPI Cohort presented its study and findings today to Arlington County Staff, and external stakeholders. The presentation was focused on adaptive reuse and embodied carbon in underutilized office buildings in Arlington County.
- The presentation and study will be posted on the AIRE website. Included in the presentation are adaptive reuse test-fits and embodied carbon results for two buildings in Arlington.
- This study conducted by the students is part of a deeper conversation about adaptive reuse and embodied carbon in the County, and it will be used as a reference in conversations going forward.
- Demetra and Paul give thanks to County Staff; AIRE, CPHD, and AED, as well as Steve Walz (former MWCOG staff member), Stantec, and Gensler for their participation and help with this project.
- D. McBride noted the research the students conducted was to see why building owners might not choose to reuse a building.

#### **9. Monthly update from the AIRE team (8:00) – Rich Dooley**

- R. Dooley presented the AIRE programs and projects updated slide deck. The items in yellow highlight are changes from what was presented last month (Attachment 2).

## 10. Update on ART Buses (8:05) – John Bloom

- D. Snoeyenbos recognized the hard work of J. Bloom and noted his great effectiveness in tracking the ARTbus project.
- From what J. Bloom understands, CB 2x2 meetings are happening on the project, but new CB members are coming onboard in January.
- The Transportation Committee (TC) met and had this topic as an item. Chris Slatt has his views on this; he sees the importance of serving the bus riders and delaying the transition to electric buses.
  - J. Bloom will share the copy of the TC letter (Attachment 3)
- Treasury is slated to provide a “green hydrogen” definition. We’ll see what happens.
  - COP28 supposedly has a definition
  - 3 pillars: 1) hourly time-matching, 2) additionality of solar PV resources that lead to the creation of green hydrogen, and 3) deliverability/regionality.
- S. Brideau thinks we need to always press for the right solutions when it comes to picking from one or more options
- Feb. 1, 2024 – date on which a decision on what buses the County will order from DRPD. CB options include:
  - Order CNG buses
  - Order BEBs
- D. McBride says that staff supports the ARTbus pilots. Staff is presenting Arlington-specific route and propulsion data to the CB and CMO.
- D. Snoeyenbos said that if the County purchases one or more hydrogen buses for a pilot, he thinks the transition to BEBs will be delayed at least five years (the time it will take for the pilot to be done). He is also concerned there will be a delay in the hydrogen buses actually being used due to delays in hydrogen infrastructure. He thinks the County should commit to BEBs now.
- D. McBride reminded the EC that the County bus fleet has a relatively low GHGe impact on Arlington’s overall GHGe portfolio in comparison to other GHGe sources.
- J. Bloom reminded the group of the two-week trials for a couple of different BEB manufacturers.
  - D. McBride noted the need to have a full four seasons of BEB data running their routes.
    - ACTION: D. McBride will provide the EC with the data from those trials.
- S. Burns is most concerned about the hydrogen source, that it will not be truly “green.” Or, in order to get green hydrogen we will need to have it shipped from far away. Can we get more information about the source of the green hydrogen?
- ACTION: D. McBride asked for the EC to compile all of its questions and to e-mail them to her, which will lead to future Change Orders with the consultant working on this project.

## 11. EC Plans and Priorities for 2024 (8:15) – Doug Snoeyenbos

- D. Snoeyenbos asked EC members to e-mail him ideas for 2024 EC meetings
  - J. Bloom encouraged the Chair to reach out to each EC member, prompting for input from each individual EC member.
- S. Burns suggested to reach out to City of ALX EC equivalent.
  - J. Bloom and Scott Brideau may have contacts for D. Snoeyenbos.

## 12. Adjourn (9:00)

- The meeting adjourned at 9:08 pm.

ATTACHMENT 1

ARLINGTON GRANT PURSUITS

**AIRE/OSEM - Summary-Update of Federal Grants In-Progress**

| Grant  | Notes   |
|--|---|
| Energy Efficiency Community Block Grant Formula Award  | Developed multiple incentive and program options <b>submitting in Jan-2024</b>  |
| DOE Buildings UP Prize   | Highly-competitive (only 20 awards, nationally); proposal submitted; waiting for awards announcement Sept/Oct 2023 <b>initially not awarded, but the State is very interested in our program design and wish to discuss it with us in another context.</b>  |
| EPA Environmental Justice G2G Program  | Proposal submitted; award announcements expected in October <b>Work Plan Meeting w/ EPA and working on the EPA agreement.</b>   |
| Climate Pollution Reduction Fund (CPRG) Phase 1 PCAP (not eligible direct applicant)- <b>See next slide for Program summary.</b> | Working with both MWCOG and the state to develop Phase 1 Plans and seek Phase 2 implementation funding <b>OSEM developed and provided MWCOG with Energy Program Designs; and reached out to Loudoun, Fairfax, Prince William, Falls Church and Alexandria re a NOVA coalition AIRE is managing the Virginia parallel program.</b> |
| Greenhouse Gas Reduction Fund (not eligible direct applicant)  | Working with Coalition for Green Capital to enroll in Green Bank Program. Bank-ready w/ ACFCU partnership (week of 09/18). <b>Waiting for federal award of master grants.</b>   |
| BRIC Grant (FEMA)  | <b>FILED: Microgrid and Resiliency Hub Proposal; est. response April 2024</b>   |
| CPRG Competitive Grants Phase 2 Implementation (direct application)  | <b>See Slide 12 for Program proposals to MWCOG.</b>   |
| CFI (charging infrastructure)  | Partners with MWCOG; preparing list for government sites and potential piloting site at Trades  |
| IRA Neighborhood Access and Equity Grants (heat island)  | <b>Likely not competitive on an individual basis.</b>   |
| Clean School Bus   | <b>Facilitated (w/Engineering Bureau) grant application for 5 EV School Buses</b>   |

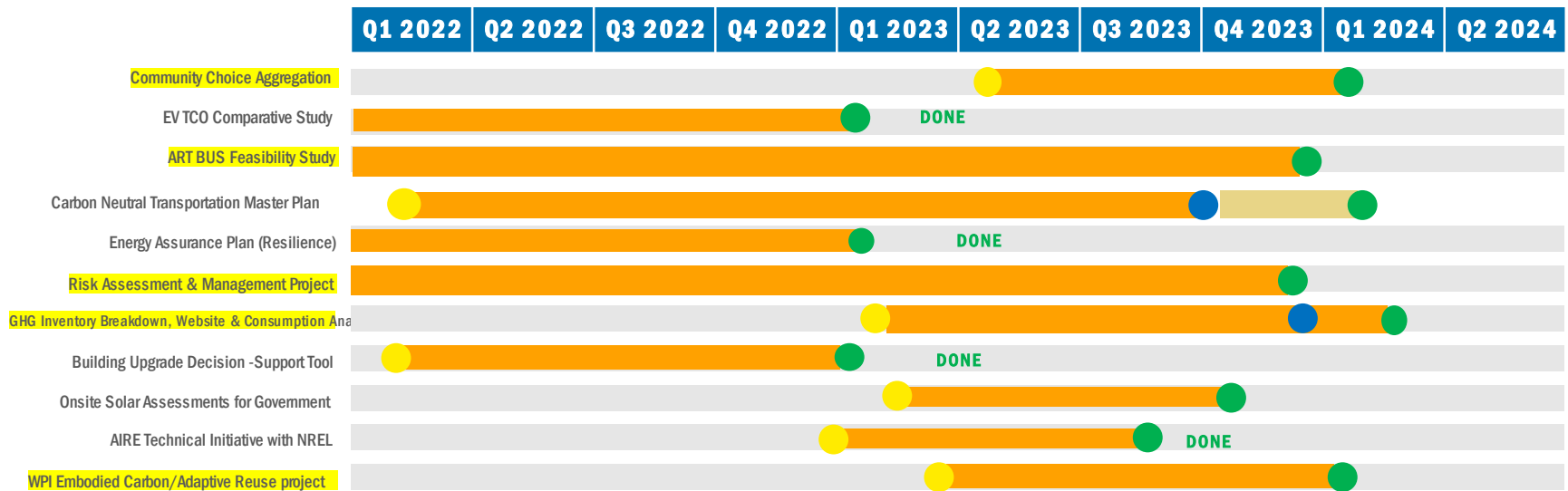
## Summary – OSEM Program Designs Submitted to MWCOG re CPRG

|  | Notes  |
|--|--|
| <b>DIRECT – Energy Performance for LIDAC Multifamily &amp; Commercial Buildings</b>                  | Provides incentives for individual measures and bundled measures including without limitation energy efficiency, building envelope, fuel switching systems and appliances, green infrastructure, renewable energy and storage (collectively, “Energy Performance”).  |
| <b>DIRECT - Energy Performance for NonLIDAC Multifamily &amp; Commercial Buildings</b>               | These two programs offer incentives for ASHRAE Building Audits, tiered incentives based on an escalating scale of modeled energy efficiency improvement Enhanced by Cross-Cutting Programs (see below)   |
| <b>DIRECT - Energy Efficiency, Solar and Storage for Non Profits and Places of Worship</b>           | Structured comparably with the Energy Performance Programs above; enlisting nonprofits such as FACS and InterFatih Power & Light   |
| <b>DIRECT - MUSH (Municipal, University, Schools &amp; Hospitals) Program for Energy Performance</b> | Provides incentives and allows for an ESCO/ESPC option; conditioned upon measures that blend near and longer-term recoupment (longer term recoupment typically reflect deep retrofit measures that produce higher energy efficiency improvements)..  |
| <b>CROSS-CUTTING- Finance Mechanisms</b>   | Will include without limitation, loan loss reserve and interest rate buydown funds, as well as Technical Assistance to property owners interested in funding energy performance upgrades through GPACE, Residential PACE (where it is authorized), Green Bank Programs and Green Mortgage options. This crosscutting program is intended to be leverage: |
| <b>GROSS-CUTTING– Technical Assistance</b>   | E.g., walk-thru audits, finance information, contractor standards and QA/QC, information resource on energy performance measures (single and bundled), customer service regarding incentives, eligibility and other requirements   |
| <b>CROSS-CUTTING– Education, Training &amp; Workforce Development</b>                                | Also includes education program to support GBIP Upgrade and Adaptive Reuse of Buildings  |

ATTACHMENT 2

AIRE PROGRAM AND PROJECT UPDATE

# Progress Report on Studies and Plans



Start ● In progress ■ Key Milestone ● Estimated Completion ●

Note: Years listed above are Calendar Year (CY), not Fiscal Year.



# Progress Report Notes

## Amendments:

- **Community Choice Aggregation (CCA):** Work start 10-16-2023; fQ1 2024 internal review with leadership.
- **EV TCO Comparative study:** Report finished and [published](#)
- **ARTBus Feasibility Study:** Study draft provided 082023. Project required additional scope to Study and related engagement process, beginning in Q4 2023; in response to ~~public~~ stakeholder internal comments. Updated draft complete and currently pending scheduling of Board 2x2s.
- **Carbon Neutral Transportation Master Plan:** Reviewed progress and Plan template for C2E2 at its September 2023 meeting. A hands (internal meeting Nov 2023; draft Plan and 5 Year Implementation Plan in-progress for completion Feb 2024.
- **Energy Assurance Plan (EAP):** Completed Jan 2023. Scheduled for Manager's Notes Oct 2023; moved to Dec-2023. Alternative options to recognize Plan may be in discussion
- **Risk Assessment & Management Plan RAMP** webpage to launch in Jan 2024. Arlington Resiliency Summit in 2024.
- **GHG Inventory Diversification/Public Website.** The sector based breakdown of GHG emissions sources is available on the AIRE website. The link is [2016 Arlington County Community Greenhouse Gas Emissions Inventory](#)
- **Building Upgrade Decision-Support Tool:** Tool is being used by the County staff; expansion Q1/2-2024.
- **On-Site Solar Assessments Project** Launch work with PPA contractor Q4-2023.
- **AIRE Technical Initiative with NREL:** NREL providing technical assistance to County staff and Barcroft property owner to enhance project energy efficiency and resiliency. Completion-2023.
- **Worcester Polytechnic Institute project** Starting Oct. 23– ending Dec. 15

## ATTACHMENT 3

### TRANSPORTATION COMMITTEE LETTER RE: ARTBUS FLEET



ARLINGTON COUNTY TRANSPORTATION COMMISSION  
2100 Clarendon Boulevard, Suite 900, Arlington, VA 22201  
Phone: 703-228-3689 | Fax: 703-228-7548  
www.arlingforva.us

December 4, 2023

Mr. Christian Dorsey, Chair  
Arlington County Board  
2100 Clarendon Boulevard  
Arlington, VA 22201

RE: Zero Emission Bus Study Draft Report

I am writing to express the view of the Transportation Commission regarding the draft Zero Emission Bus Study report recommendations.

**The commission, by a vote of 12-0, recommends that the County Board:**

- 1. Pilot battery-electric bus technology as soon as feasible, and pilot fuel cell bus technology in the near term, both with a small number of buses, as recommended in the ART Zero Emission Bus Study report. This will allow Arlington to gain familiarity with the day-to-day operation of these technologies and gain local experience with their benefits and trade-offs.**
- 2. Maintain the reliability & efficiency of ART bus operations by not converting the bus fleet to a particular zero-emission bus technology until the available buses have a proven track record of providing comparable range, cost of operation, and reliability as CNG/RNG buses; no earlier than the 2028 decision point envisioned in the draft ART Zero Emission Bus Study report.**
- 3. Direct that in any future updates to the Zero Emission Bus Study report include an additional alternative exploring what could be achieved in emission reductions for a similar amount of money by expanding existing transit frequencies and routes using existing bus technology.**

The commission received a briefing from county staff on this item at a joint virtual meeting with the Climate Change, Conservation & Environment Commission (C2E2) and the Transit Advisory Committee. The commission then discussed and acted upon this item at its November 30th, 2023 meeting. There were no public speakers.

The commission feels that the draft report sets a realistic and appropriately measured timeline for converting the ART bus fleet to zero-emission technology. It imagines a near-term pilot of both Battery Electric Buses and Fuel Cell buses, followed by a decision point in 2028 where the County will commit to a potential full fleet changeover if one or more technologies have sufficiently matured.

Climate Change is an emergency that requires us to act with all due haste, but we must be careful not to act so quickly as to be reckless or foolhardy and end up doing more harm than good. The transition to a zero-emission bus fleet must take into account:

- **The emissions reductions brought about by existing CNG buses.** Existing transit service gets cars off the road. Increased transit service would remove even more cars from the road. Switching to buses with a more limited range, fewer features, or lower reliability has the potential to reduce transit's ability to get cars off the road.

- **The cost of the transition, both one-time capital and ongoing operating.** The study report indicates that both battery electric and fuel cell buses currently have an operating cost that is at least double that of existing CNG buses, and given the current price premium of fuel cell vehicles and the reduced range of battery electric buses, the capital cost to transition the fleet would also be at least double the normal replacement cost of CNG/RNG buses. While spending money to fight climate change is expected & necessary, the report fails to indicate if this is the best use of scarce money. Would this be better spent on other emissions-reduction strategies (converting county buildings to heat pumps, building more rooftop solar, etc) while waiting for zero emission bus technology to further mature?

Transitioning the ART bus fleet to zero emission technology is important, but only one piece of a larger picture when it comes to combatting climate change. It is important that we make wise, reasoned choices that do not endanger the efficiency and reliability of bus service and make careful investments that will return the best outcomes from our tax dollars.

In order to enable this wise decision-making, we encourage the county to include in any future update of the Zero Emission Bus Report, an alternative that determines how much emissions reduction could be achieved with existing bus technology, by running more routes, more service, and higher frequencies for a monetary outlay that is comparable to what is required to transition to a zero-emission fleet.

Present and voting were commissioners Coleman, Fuhrman, Husain, Lantelme, Locker, Ludlow, Muratovic, Yarie, Shannon, Slatt, Terry, and Theo. I am happy to answer any questions at 571-482-8454 or [chris@dodgersden.com](mailto:chris@dodgersden.com).

Sincerely,



Christopher Slatt, Chairman