MEETING MINUTES OF THE HYBRID MEETING

ARLINGTON COUNTY C2E2 ENERGY COMMITTEE

6/14/2023

The C2E2 ENERGY COMMITTEE convened its hybrid meeting at 7:30 AM on June 14, 2023.		
PRESENT (IN-PERSON)		
	Doug Snoeyenbos	
	Claire Noakes	
	John Bloom	
	Stephanie Burns	
	Scott Sklar	
	Scott Brideau	
	Kevin Vincent	
PRESENT (VIRTUALLY)		
	Greg Brozak, participated virtually from home (via Teams)	
	Greg Brozak, participated virtually from home (via Teams)	
	Greg Brozak, participated virtually from home (via Teams) Rick Keller, participated virtually from home (via Teams)	
ABSENT	Rick Keller, participated virtually from home (via Teams)	
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David Epley

Ivy Main

SUMMARY OF PRESENTATIONS/DISCUSSIONS

1. Greetings and introductions (7:30) – Doug Snoeyenbos

• D. Snoeyenbos introduced himself and welcomed everyone to the meeting.

2. Review/approve meeting agenda and May meeting summary (7:35) - Doug Snoeyenbos

- The June meeting agenda was approved
- Regarding the May meeting summary:
 - o CCA opt in vs opt out
 - We want automatic opt-in, which means people would need to opt-out, if they wanted.
 - Make the change in the AIRE Update section of the meeting summary
 - EVs before finalizing, reflect the e-mail from Demetra incorporate John Bloom's changes from his e-mail
- The May meeting summary, with aforementioned edits being made, was approved.

3. Public Comment on General Topics (7:40)

None

4. Monthly update from the AIRE team (7:45) – Rich Dooley

- Q: When will the ARTBus go public for review?
 - o A: D. McBride will get back to the EC and the C2E2 by e-mail after this EC meeting.
 - Also, this plan is not adopted by the CB. The plan is slated to adapt over time, based on technological matters. It may go to the CB as part of the Manager's Notes or a Manager's Report.
- J. Bloom ask regarding the Fleet Transition Plan which was to go forward as well as the ARTBus Feasibiltiy Study: How does that former plan relate to the ARTBus Feasibiltiy Study, and how will the CB review and react to that report?
 - A: D. McBride thinks that the CB will review this as part of the annual budget process.
- J. Bloom there are bus purchases that need to be made before the next budget. How will these reports inform those purchasing decisions?
 - A: D. McBride said the ARTBus Feasibility Study will include a definitive timeline about information being made available to help inform future bus purchases.
- J. Bloom was the CCA decision made by the end of May?
 - A: Yes D. McBride said we are moving forward with this project, and we are working with the CAO to refine the SOW. We are preparing for interviews with possible outside counsel.
 - D. McBride recommended that we add on to this study a retail choice and status of retails choice and aggregation in the Commonwealth. We are not confident we can legally proceed with setting up a viable CCA. Regarding aggregation, we are interested in teaming with other jurisdictions for a CCA.
- 5. Presentation on DC's climate & energy efforts (8:00) David Epley (DOEE Associate Director, Data & Benchmarking Division)

- David focused on buildings today. Others on his team address transportation electrification matters.
- David provided a slide deck (see Attachment 2) explaining what Washington DC government is doing to address climate and energy issues.
- What does DC have to do to electrify buildings?
 - o A: There are a lot of things to take into account, e.g., legislation (Healthy Homes bill).
 - DC does not explicitly state that buildings need to be electrified, rather, language will say something like, "buildings need to be carbon neutral" instead.
- There are numerous policies that address buildings:
 - 2021 Clean Energy DC Act
 - They are working on adopting a second version of that Act. It is DC's main energy policy.
 - Climate Commitment Act that helps to electrify DC-owned buildings
 - DC believes that renewable natural gas (RNG) will not allow DC to get to its carbon neutrality goals (2045)
- BEPS addresses existing buildings; it is part of the benchmarking program
 - Prescriptive Path explicitly steers building owners toward building electrification
 - C. Noakes asked whether DC has tracked the economics of the BEPS program to help VA jurisdictions who do not have the ability to do BEPS.
 - A: Building owners are not required to show the economics behind their work.
 - The Building Electrification Institute has an online report <u>Customer Economics Analysis</u> for Residential Building Electrification.
 - Also, DC SEU worked with DOEE on a fuel-switching effort.
 - C. Noakes asked about whether a boiler to geothermal study has been done by DC.
 - A: No that has not been done.
- David noted how they are looking at health issues, not just energy economics issues, such as lowering energy bills, in its programs
 - Example they are assessing how combustion equipment affects health issues
- D. McBride asked about data from the utility
 - A: David asked D. McBride to e-mail him the question so David can check with others in the DOEE team
- S. Dicke asked how the AHRA program was working. He noted that MD is taking a different approach than DC when it comes to outreach and technical assistance.
 - A: DOEE is working with the DC Green Bank. AHRA funds electrification and/or energy efficiency enhancements for buildings
 - There are 40 buildings in the AHRA pipeline
- The DCSEU updated contract with DC encouraged electrification
- Challenges:
 - It is challenging technically, economically, and even getting the natural gas utility to come out and cap a property owner's natural gas pipe coming to the building
- DC conducted a Fugitive Methane Study
- Engagement:
 - They have task forces, working groups that they work through, but there is no explicit Electrification Task Force, per se

- J. Bloom asked how DC public schools fit into the programs?
 - A: For the Greater Govt Buildings Act & 2023 and 2025 Climate Commitment Act school buildings need to meet those requirements.
 - Property Managers still have issues with costs.
- J. Morgenstein asked about performance contracts that pencil out for LMI residential EE upgrades.
 - A: The DCSEU contract has performance targets that VEIC needs to meet.

6. Presentation on legislative matters (8:40) – Ivy Main: Energy consultant, lawyer and writer

- C. Noakes proposed a different approach this year for the legislative process:
 - o In the Roadmap it shows where we are, where we need to be
 - Cleaning up the grid takes up about 30% of our wedge chart to get us to our 2050 carbon neutrality goal. Transportation takes up about another 30% of our effort to that goal.
 - o So, should we focus legislative efforts on cleaning the grid and transportation?
 - Energy Transition Initiative UVA Weldon Cooper Center reports three main initiatives
 should our wish list mirror those initiatives?:
 - Study of permitting timelines across the Commonwealth to improve sequencing
 including both local and State permitting approvals
 - Hydrogen production whether there should be a focus on Green Hydrogen production (mostly from offshore wind)
 - Long-term storage technologies possibly study geological formations across
 VA
 - o J. Morgenstein noted that geothermal power is also a possibility
- Ivy asked whether the utilities will actually clean the grid
- From/since the last legislative session:
 - Growth in data centers is a major threat to the Clean Economy Act (CEA)
 - May 1st Dominion Energy released its 2023 Integrated Resource Plan (IRP).
 - In the IRP Dominion Energy tries to explains that because of growth in demand –
 we should not try to meet the CEA targets due to growth in data centers.
 - For the IRP is all of it really true? Regardless, we should consider it a serious threat.
 - The General Assembly did not see this coming. Amazon was committing large amounts of money (\$35B?) toward more VA data centers. 21% of Amazon's energy load comes from VA data centers.
 - Data centers have been land use issues in different places around the State.
 - There was a bill to study the effect of data centers. That bill was killed in a House Subcommittee.
 - The Governor appears to be protecting the growth of data centers.
 - Dominion Energy's and PJM's planning takes into account the growth in data centers.
 - The Air Services Board is a threat in that it wants to pull us out of RGGI.
 - Anything that talked about "solar" was killed in subcommittees.

- Governor did not get the support he hoped for regarding small nuclear reactors, hydrogen projects. General Assembly said that ratepayers would be held harmless for those projects, which thus killed those projects due to costs.
- What to expect to see this session?
 - o It depends on the election results
 - As long as the Democrats hold at least one (House or Senate), then we'll likely see more
 piecemeal attampts to chip away at existing energy efficiency and sustainability bills
 - There is a SCC dispute between Dominion Energy and independent solar providers about a 35% set-aside for new projects by independent developers per the VCEA.
 Dominion Energy said that 35% is a hard ceiling, whereas the independent developers say is simply a floor.
 - VCEA Energy Efficiency provisions end in 2025. After 2025, the SCC is set to create the next set of targets. Assembly would like to set those targets instead – not the SCC.
 - Governor tacked onto an existing bill the idea of opening up competitive offshore wind bidding. That will likely arise again this year, which is fine.
 - Solar Consumer Protections Bill. The bill would set up a committee to create consumer protections; the Democrats need to have a Republican patron this bill
 - S. Sklar noted that other States have laws on the books to protect against energy issues related to the growth of data centers.
 - I. Main noted that numerous environmental and other groups are combining efforts to protect against the rampant growth of data centers. They've asked VA DEP to set up guardrails to protect against energy demand issues related to growth of data centers. VA DEP never replied to those requests, as well as letters from General Assembly members.
- J. Bloom noted the Clean Energy Buying Alliance is really committed to buying clean energy.
 - Are we missing the connection between those companies in that trade association and the bills that promote energy efficiency in data centers?
- I. Main noted that Amazon is interested in clean energy in other states, where it is lowest cost to produce clean energy (to counteract Amazon's increased energy demand stemming from more data centers).
 - None of the new data centers have first added on-site solar and battery backup to address data center energy needs.
 - S. Sklar noted that most of the fires associated with data centers relate to the diesel generators used at those centers.
- C. Noakes noted that Arlington consumes a lot from energy produced elsewhere in the State. What can we do to support other VA communities?
 - o I. Main said we could write into our County contracts that we will only use data centers that use renewable energy. I. Main noted that some data centers use VPPAs.
- To C. Noakes' earlier points (we need the Senate / House to pass these because the Governor would not want to veto these):
 - Stretch Building Codes
 - o Benchmarking
 - Solar Schools Bill
 - All public buildings retrofits need to make the buildings solar-ready

- C. Noakes asked about hospitals being allowed to use renewable energy for backup power
 - o There is no model ordinance for localities to consider for energy storage safety issues
- C. Noakes asked the EC whether they are willing to ask for things in the legislative wish list that is more focused on Statewide issues
- J. McIntyre echoed C. Noakes and I. Mains points
 - She'd like us to keep in mind this is a budget year, too.
- J. Bloom noted other groups are forming their legislative agendas.
- I. Main noted that there are also Position Papers being formed, but those papers generally should not surprise anyone.
- I. Main also noted that solar developers are okay, generally, with the longer time it takes to develop solar in VA.
 - o Getting pubic buy-in is essential, so if that process helps get that buy-in, then so be it

7. Adjourn (9:30)

• The meeting adjourned at 9:39 am.

ATTACHMENT 1

AIRE PROJECTS AND PROGRAMAS UPDATE

Progress Report on Studies and Plans





Progress Report Notes

Amendments:

- Community Choice Aggregation (CCA): Includes CCALegal/Regulatory Analyses + Retail Choice/Aggregation/Transactional Analyses. OSEM Bureau Chief furnished draft Purpose, Background, and Scope of Work to the County Attorney. Initial list deputed of firms to interview. CAO response anticipated by end of May.
- EV TCO Comparative study: Report finished.
- ARTBus Feasibility Study: Draft Study Report scheduled fodune 2023
- Carbon Neutral Transportation Master Plan: Amended SOW Jan. 2023 to expand EVSE analysis/siting plan & engagement. Est. completion adjusted Oct. 2023.
- Energy Assurance Plan (EAP): Report provided to County staff.
- Risk Assessment & Management PlanRAMP Task 6 (Gap Analysis with Mitigation and Adaptation Strategy Development) County staff & consultant workshop is scheduled for midarch.
- Building Electrification Assessment and Use Case Studies Builds on previous SWAreport. With FY23 funding available, the
 project will move forward after the Energy Services Contract RFP is completed. Report slated for Q4 CY2023.
- Building Upgrade Decision-Support Tool: Tool is being used by the County staff.
- On-Site Solar Assessments ProjectWith FY23 funding expected to be available, the project will move forward after the Energy Services Contract RFP is completed. Report slated for Q4 CY2023.
- AIRE Technical Initiative with NREL: NREL providing technical assistance to County staff and Barcroft property owner to enhance project energy efficiency and resiliency.





ATTACHMENT 2

DAVID EPLEY PRESENTATION

Arlington's Energy Committee

06-14-2023



Dave Epley DC Department of Energy and Environment

Associate Director, Energy Administration David.Epley@dc.gov



- 1. What are the current rules in DC as far as new buildings being required to have electric heating/cooling and cooking, and EV charging (building electrification)?
- 2. What incentives are used by DC to encourage owners of **new** buildings to go beyond the minimum to include electric heating and cooling, electric cooking, and EV chargers?
- 3. Please describe the incentives, if any, that are used by DC to encourage owners of **existing** buildings to retrofit to transition from gas heating and cooling to electric heating and cooling, from gas cooking to electric cooking, and to add EV charging.
- 4. Have there been many instances of owners of **existing** DC buildings making a transition from gas to electric heating, cooling, and/or cooking, and adding EV chargers?
 - a. What do you think are the major considerations that go into a building owner deciding to make these potentially expensive changes?
 - b. Does electrification increase the value of a building?
 - c. Can the owner of a building charge more rent (residential or commercial) after electrification?
 - d. Are there any federal programs that provide incentives for building owners to electrify?
- 5. Have there been any problems with the DC electric utility as far as load letters, interconnection fees, and necessary changes to the grid?
- 6. Is there a short (2-3 pages max) document that lays out the rules and incentives in DC with respect to building electrification?
- 7. How do you engage and do outreach with commercial developers to publicize your requirements and incentives on building electrification, to get the word out on what is available?

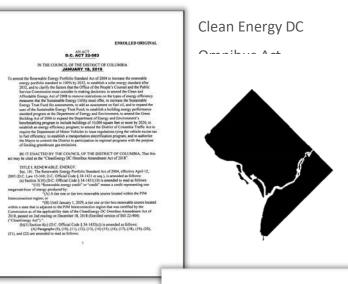


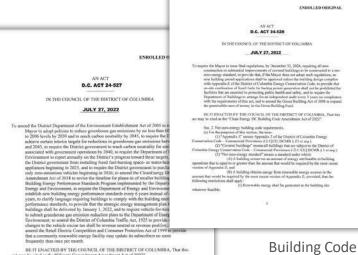
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POLICY CONTEXT

2006	Green Building Act (GBA)	LEED, most public + private construction
2010	Clean + Affordable Energy Act	Benchmarking: phase in public + private construction 10,000+ sf
2014	Green Construction Code	Covers everything not under the GBA
2020	EV Readiness Act	20% new parking is EV ready
2021	Clean Energy DC Act	BEPS Cycle 1, Energy Star-based; no fossil fuel equipment in Rx compliance paths
2022	DCSEU contract	Elimination of nat gas incentives from SEU
2023	Proposed energy code	Electrification, new bldgs; Appendix G shift from energy cost to site energy/GHG
2023	Green Govt Buildings Act	Elec-NZE for District-funded/financed bldgs.
2025	Climate Commitment Act	Electrification of DC-owned/financed bldgs
2026	Building Code Amendment Act	Net Zero bldg code + electrification, all bldgs., equivalent to "Appendix Z"
2027	Clean Energy DC Act	BEPS Cycle 2 Trajectory/GHG-based?
2032	Clean Energy DC Act	100% RPS/fossil fuel-free grid, 15% solar
2045	Climate Commitment Act	DC reaches Carbon Neutrality





Climate Commitment Act

not may be cited as the "Climate Commitment Assendment Act of 2022".

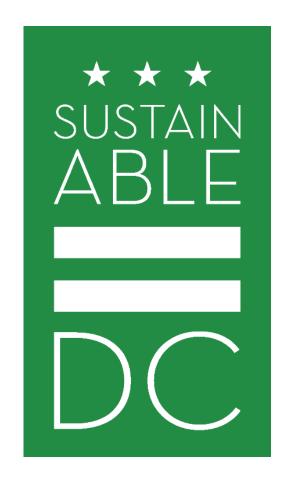
Sec. 2. The District Department of the Environment Establishment Act of 2005, effective February 15, 2006 (D.C. Law 16-51; D.C. Official Code § §-151.01 et reg.), is smended by

adding new sections 109d and 109e to read as follows:
"Sec. 109d. Commitment to greenhouse gas emission reductions.



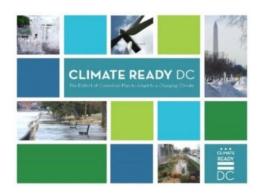
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POLICY CONTEXT



ADAPT TO CLIMATE CHANGE

CLIMATE READY BUILDINGS



CUT ENERGY USE 50%

50% RENEWABLE ENERGY

NET ZERO NEW BUILDINGS

NET ZERO RETROFITS

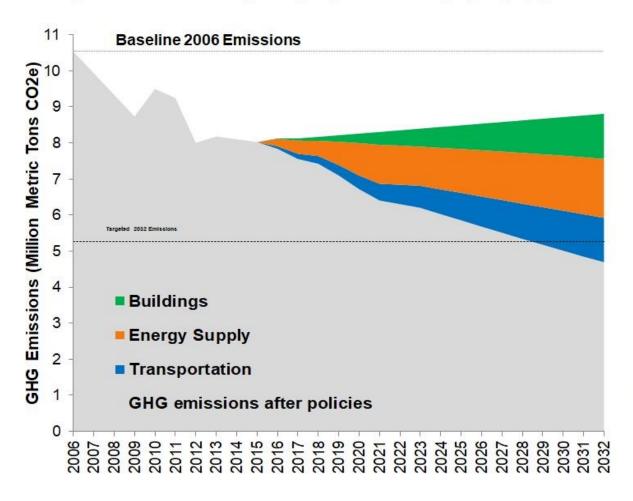
CUT GHG EMISSIONS 50%

Statutory Commitment to ZERO Carbon by 2045

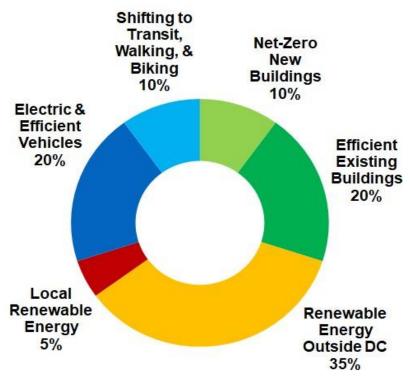


CLEAN ENERGY DC PLAN

ESTIMATED GHG SAVINGS: 56%



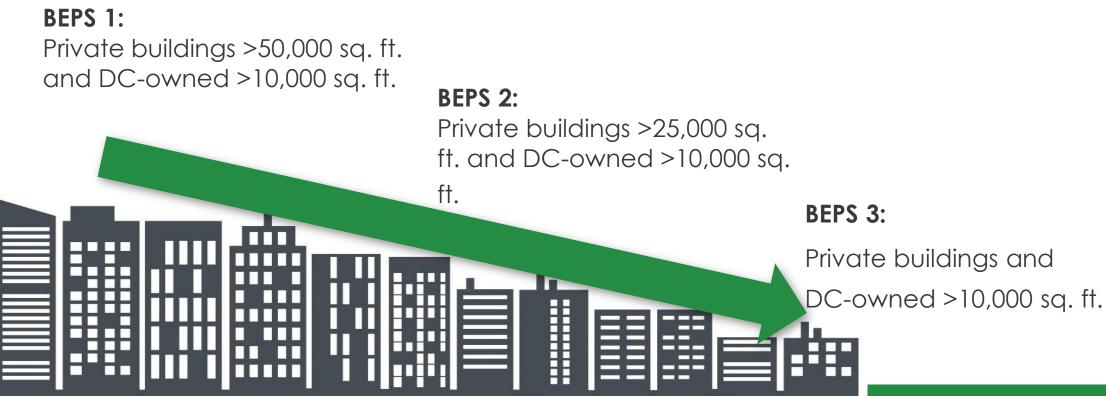
RELATIVE IMPACT OF ACTION AREAS



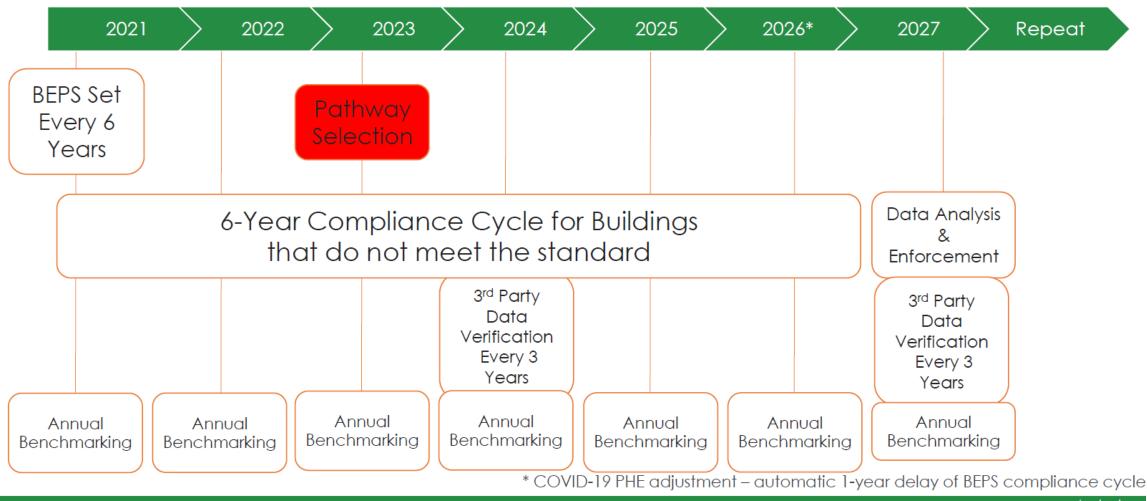


BEPS APPLICABILITY

As the benchmarking requirements ratchet down in square footage over time, the buildings will be required to meet the BEPS in the following periods until all buildings 10,000 sq. ft. and over are following the performance standards.



BEPS REVOLUTION – with COVID-19 PHE adjustment





ENERGY CODE DEVELOPMENT PROCESS

- Development process began in 2020 for 2023 adoption:
- 2021 ICC & ASHRAE 90.1-2019 for Commercial Energy Conservation Code
- Public call for proposed amendments

- TAG evaluates + approves proposals, sends to CCCB
- CCCB approves or denies TAG proposals

- Mayor's Office +Legal reviews
- Notice of Proposed Rulemaking
- Public comment period (2-3x)

- Final package submitted to Council for vote
- Public hearings
- Adoption + 1
 year grace period for
 projects with
 permits or signed
 design contract



FEEDBACK/PUSHBACK

- Residential electrification code received less pushback
 - Gas stoves were not a concern (majority multifamily; no homebuilder contingent in DC)
 - BUT approval of residential code ignited concerns about forthcoming commercial code
- Technical exemption requests
 - Equipment (Lab, Commercial Kitchen) and building use types (Healthcare)
 - District Energy, Standby Power
- Market-based exemption requests
 - Multifamily developers concerned about amenities
 - Rooftop grills, firepits, decorative fireplaces, etc.
- Code development process
- Electric utility ambiguity
 - Supportive of vehicle electrification, but reluctant participant in building electrification code adoption



ONGOING CHALLENGES

- Policy
 - No clearly stated building electrification goal in DC climate plans
 - Legislation did not call for phase-in of electrification ahead of NZE 2026
 - Current BEPS: *limited alignment* with electrification
- Code development
 - Decarbonization not explicit in CCCB charge
 - Construction code adoption process is risk averse and slow
- Market alignment
 - Exemptions how to determine valid needs versus wants
 - Post-pandemic real estate market concerns
 - Fossil gas cheaper than electricity



LESSONS LEARNED

- A legislative backstop is essential, e.g.
 - Building Code Amendment Act
 - BEPS GHG/trajectory update
- Implement earlier public engagement for 'big' code changes
- Clarify utility's role in code development process
- Align incentives
- Phase in types/scope of construction
- Establish limited-duration exemptions, flexibility
- Equity and health perspectives need more emphasis



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ELECTRIFICATION IN THE DCSEU CONTRACT

- The DCSEU is a performance contract is managed by DOEE. Contractor is VEIC.
- When exercising the 5-year option period, the contract was updated to include aspects that further encouraged electrification
 - Fossil-fuel equipment was listed as a non-reimbursable expenditure, unless approved in advance by DOEE (e.g. low-income emergency HVAC program)
 - DC had already adopted a fuel-neutral energy savings target
 - A GHG savings target was adopted.
- The base contract provides rebates for heat pumps WH and H/C
- An HVAC replacement program focuses electrification with varying degrees of fuel-switching

AFFORDABLE HOUSING RETROFIT ACCELERATOR (AHRA)

In FY21, DOEE applied for APRA funds to launch AHRA

- The goal of the program is to support the ~140 affordable housing buildings not meeting the BEPS Standards come into compliance
- Financial and technical resources to be provided with a focus on deep energy efficiency electrification retrofits
- Program designed to address the specific needs of all types of affordable housing including:
 - Naturally-Occurring Affordable Housing (~60 buildings)
 - Covenanted Affordable Housing (~40 buildings)
 - Public Housing (~40 buildings)

ACCELERATOR PARTNERS





ACCELERATOR FUNDING OVERVIEW

In FY22, DOEE received ~\$35M in ARPA Funds

- \$21.244* million increase for BEPS support (DCSEU)
 - \$10 million for mid-cycle (covenanted) affordable housing
 - \$8.244 million for BEPS Energy Audits and Predevelopment Grants
 - *Includes additional \$3M in local (SETF) funds
- \$10.8 million for BEPS Construction Loans (DCGB)
- \$5.3 million to support public housing (DCHA)
- \$428,702 for DOEE Staffing and Admin (4 FTE's)

In FY23, DOEE received roughly the same amount of funding for a total of \$75 million to support the program.



GOAL AND OVERVIEW

Goal: multicycle BEPS compliance while maintaining affordability

Target: Energy Star Portfolio Manager Score 80

Tactic: Cost-neutral funding package that is a blend of base level incentives and low-

interest financing in partnership between DOEE, DCSEU, and DCGB



Direct Financial Assistance: Energy audits, design work, pre-development work, Retrocommissioning, Energy Efficiency Measures: HVAC equipment, building envelope, lighting, etc.

Construction Loan: Coupled with deeply subsidized, voluntary low-rate construction loan for deeper energy retrofits

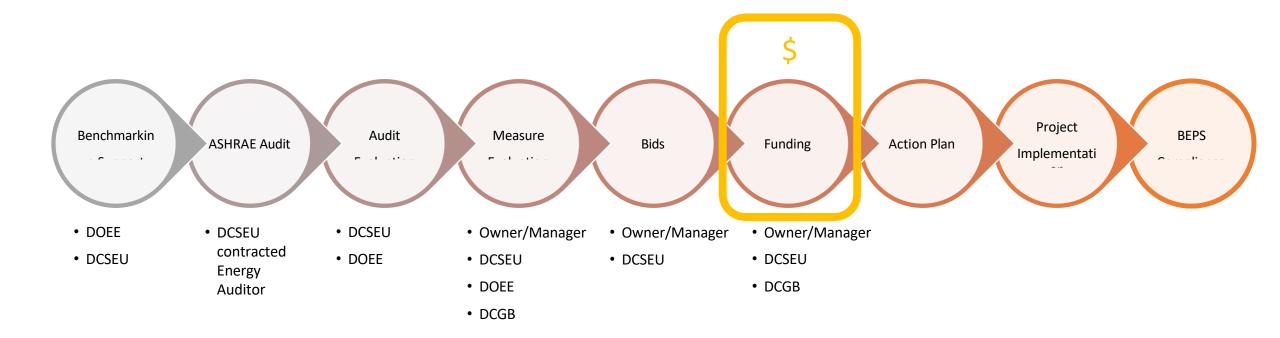
Additionally, one-on-one Technical Guidance for:

- Understanding BEPS regulatory requirements and deadlines,
- Uncovering energy-saving opportunities,
- Developing a compliance pathway and action plan to improve energy performance



OVERVIEW AND ROLES





CHALLENGES TO IMPLEMENTATING THE AHRA

- Reaching building owners
- Scale and complexity
- Bridging EEM investments across fiscal years
- Coordination among partners
- Voluntary nature of the program
- Funding and technical assistance to building owners
- Scaling up the hiring of experienced staff

*How do we take lessons learned into the IRA-funded programs?

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ELECTRIFICATION CONTEXT

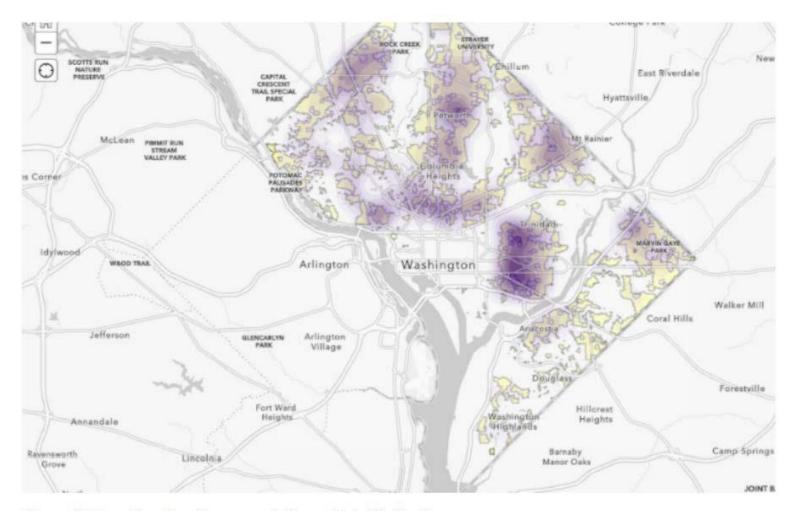


Figure 3. Density of methane emission point distributions.

https://edocket.dcpsc.org/apis/api/Filing/download?attachId=143587&guidFileName=d93076fd-4fbd-4537-9947-27db2f19f967.pdf

DC Fugitive Methane Survey:

- 6.2% Nat Gas leak rate, the highest percent lost of all states in US.
- Annual volume of lost gas: 19M therms, represents ~
 \$24M lost value to DC ratepayers.
- 3,346 locations of fugitive methane
- 4.7 methane emission points/centerline road mile



INFRASTRUCTURE + EQUITY

- Pepco grid readiness study
- BEI consumer study
- Washington Gas PROJECTpipes
 \$4.5B infrastructure proposal
- LMI utility burden
- Priority: healthy, resilient homes



https://www.pepco.com/Documents/1167%20%20Pepco%27 s%20Electrification%20Study%20%20082721.pdf



https://www.beicities.org/s/BEI-DC-Customer-Economics-Analysis_Dec-2020_FINAL.pdf



- 1. What are the current rules in DC as far as new buildings being required to have electric heating/cooling and cooking, and EV charging (building electrification)?
- 2. What incentives are used by DC to encourage owners of new buildings to go beyond the minimum to include electric heating and cooling, electric cooking, and EV chargers?
- 3. Please describe the incentives, if any, that are used by DC to encourage owners of existing buildings to retrofit to transition from gas heating and cooling to electric heating and cooling, from gas cooking to electric cooking, and to add EV charging.
- 4. Have there been many instances of owners of existing DC buildings making a transition from gas to electric heating, cooling, and/or cooking, and adding EV chargers?
 - a. What do you think are the major considerations that go into a building owner deciding to make these potentially expensive changes?
 - b. Does electrification increase the value of a building?
 - c. Can the owner of a building charge more rent (residential or commercial) after electrification?
 - d. Are there any federal programs that provide incentives for building owners to electrify?
- 5. Have there been any problems with the DC electric utility as far as load letters, interconnection fees, and necessary changes to the grid?

6. Is there a short (2-3 pages max) document that lays out the rules and incentives in DC with respect to building electrification?

- 7. How do you engage and do outreach with commercial developers to publicize your requirements and incentives on building electrification, to get the word out on what is available?
- 8.
- 9



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