

BEPSDC Task Force

April 28, 2020



@DOEE_DC
#BEPSDC

*** DEPARTMENT
OF ENERGY &
ENVIRONMENT
GOVERNMENT OF THE DISTRICT OF COLUMBIA

WE ARE
WASHINGTON
DC GOVERNMENT OF THE
DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

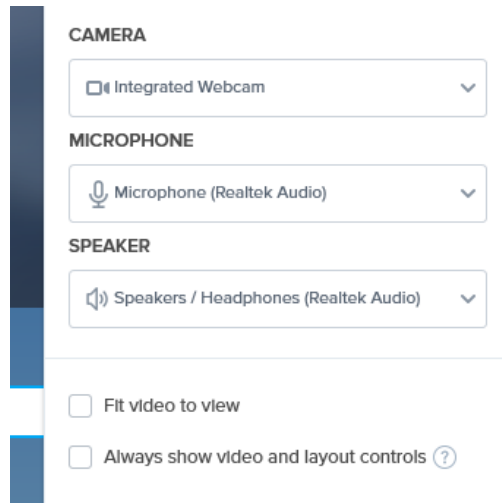
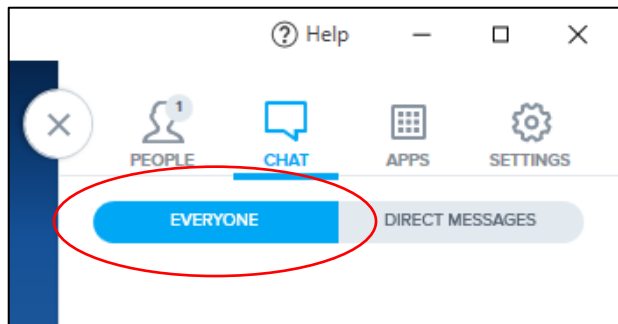
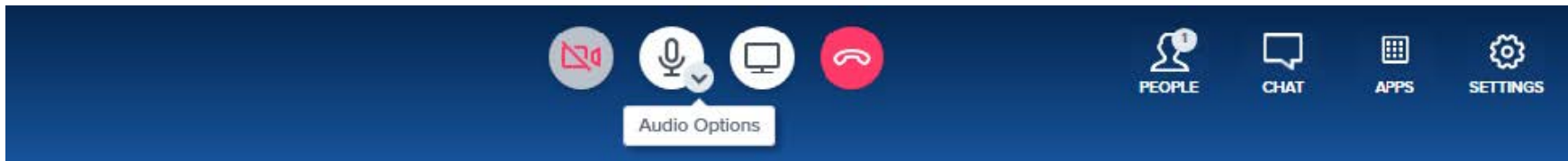
ONLINE MEETING



- The meeting is being recorded and will be posted to our website
- Questions and Comments throughout the meeting:
 - Task Force Members – will stay un-muted but please mute if you are not talking to avoid background noise
 - Non-Task Force Members will be muted on entry – but you can un-mute to participate in a discussion
- Attendance
 - Task Force Members - roll call (will also use this for voting)
 - Non-Task Force Member – please use the chat box at this time to register your name, organization and email to “sign in”



ONLINE MEETING



AGENDA



- Administrative Items
- Tradable Allowances
- Voting on Items from Previous Meeting
- Standard Target Pathway
- Extended ACP for Deep Retrofits
- Penalties Matrix (part 1)
- Announcements

ROLE OF TASK FORCE



- Advise DOEE on creation of an implementation plan for the Building Energy Performance Program;
 - Recommend amendments to proposed regulations issued by DOEE; and
 - Recommend complementary programs or policies.
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- If topic needs in-depth discussion, anyone can suggest moving to a committee
 - This is an open meeting - everyone is allowed to participate

MEETING SCHEDULE



- January 7 – Property Types, Equivalent Metric
- January 21 – Performance Path, Other Pathways
- February 4 – Penalties and Enforcement, Exemption Criteria/Process
- February 18 – Prescriptive Pathway and Penalty Structure
- March 3 – Sub-Committees, Prescriptive Pathway process, Bike Rack items
- March 31 – Vacancy/Occupancy, Equivalent Metric, 5% Property Type Group Issues, Setting Standard above Local Median, Higher Ed/Hospital Carve-out introduction
- April 14 – Standard Target Pathway, Extended ACP for Deep Retrofits , Bike Rack Review for Rule-making Items
- April 28 - Tradable Allowances, Standard Target, Extended ACP for Deep Retrofits, Penalties Matrix
- May 5 – Penalties Matrix (cont.), Bike Rack Review (Historical, Mixed-Use, District Energy, Solar), Portfolios
- May 12 – Draft Rules Outline, any outstanding rules issues



PORTFOLIO GOALS/TRADABLE ALLOWANCES BACKGROUND



- On Jan. 21, the TF discussed the possibility of a District-wide credit trading system and thought to wait for NYC to figure out their system and possibly follow later. Stated we would probably not be able to set this up in an equitable way by the end of 2020.
- On March 31, we have an outstanding recommendation from Public Building sub-committee that property type groups 100% owned by “one owner” could use a portfolio goal to satisfy compliance each cycle.
- On Jan. 21, in discussing whether or not to allow a general portfolio goal for building owners to satisfy compliance, concerns expressed about equity issues for building owners who do not have a portfolio. DOEE concerned about definition of “building owner” for portfolio purposes (LLCs for tax purposes are confusing)

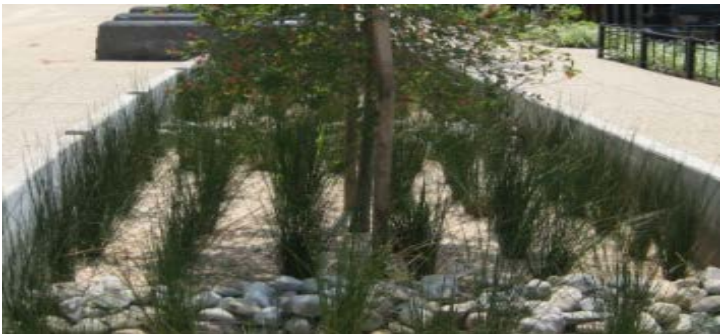
DC STORMWATER RETENTION CREDIT TRADING PROGRAM



Matthew Espie







GREEN INFRASTRUCTURE (GI) RETROFITS

- Retain runoff on site to mimic natural land cover
- Essential for long-term restoration of waterbodies
- 2013 Stormwater Regulations adopted retention standard
- Also help communities by:
 - Mitigating flood risk
 - Recharging groundwater
 - Reducing the Urban Heat Island Effect
 - Lowering building energy demands
 - Reducing potable water consumption

SRC PRICE LOCK PROGRAM

FUNDING SOURCES



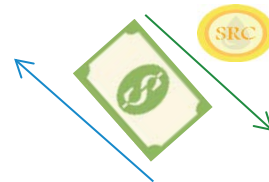
SRC AGGREGATORS



GI RETROFIT PROPERTIES



SRC PRICE LOCK PROGRAM



REGULATED DEVELOPERS

RECENT PROGRAM UPDATES

- High-Impacts SRCs are generated by new, voluntary installations in areas where green infrastructure is most needed to restore the District's waterbodies
- Everyone can use high-impact SRCs, and some developers can comply with 100% of their retention requirement with high-impacts SRCs
- DOEE pays a portion of the price for developers to purchase high-impact SRCs (by offering incentive payments to sellers to reduce the price they charge buyers)

LESSONS FROM THE SRC PROGRAM

- Set up the program such that buying a credit is as good as or better for environmental outcomes
 - Additionality matters (i.e. improvement over a baseline). Ensure that credit generation comes from new/improved performance.
 - Program can establish a funding stream for more distributed benefits and access to benefits
- Establish clear measurement of credit units and lifespan (are credits for one year vs permanent, can credits be banked over time, etc.)
- Create a robust data tracking system and registry to ensure program transparency and to ensure that market facilitator knows status of each credit

LESSONS FROM THE SRC PROGRAM

- Define role(s) for government / market facilitator, e.g.:
 - Minimizing trading barriers (template contract, registry, etc.)
 - Support to suppliers (price floors/ceilings, etc.)
 - Creating tools/resources to plan projects
- Adaptively manage the program over time to ensure it continues to work to achieve key objectives
 - Create new rules/processes to keep improving program's environmental outcomes

MORE INFORMATION

Matthew Espie

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SRC program: doee.dc.gov/src

Stormwater Regulations: doee.dc.gov/swregs



PORTFOLIO GOALS DISCUSSION



- District-wide credit trading system?
- Recommendation from Public Building sub-committee that property type groups 100% owned by “one owner” could use a portfolio goal to satisfy compliance each cycle?
- Should BEPS allow a portfolio goal outside the above recommendation (i.e. large building owners)?

VOTE 1: ELIGIBILITY CRITERIA FOR LOW/NO-OCCUPANCY EXTENSION (with modified text)



- Buildings that do not meet the standard at the beginning of the compliance period and that fall below the **average annual** occupancy threshold during the compliance period are eligible to apply **by a deadline determined by DOEE** for an extension of up to 3 years to comply with BEPS.

STANDARD TARGET PATHWAY DISCUSSION



Standard Target Compliance Pathway

Buildings that do not meet the standard must reduce Site EUI by 20% **or** **reduce Source EUI to meet the standard for its property type group**

- Last meeting's unofficial vote showed most Task Force members were in favor of some version of this pathway.
- Carbon Neutrality Modeling already accounts for this pathway.
- DOEE feels that this pathway is important in later cycles out of fairness to buildings in high-performing property type groups.

STANDARD TARGET PATHWAY OPTIONS



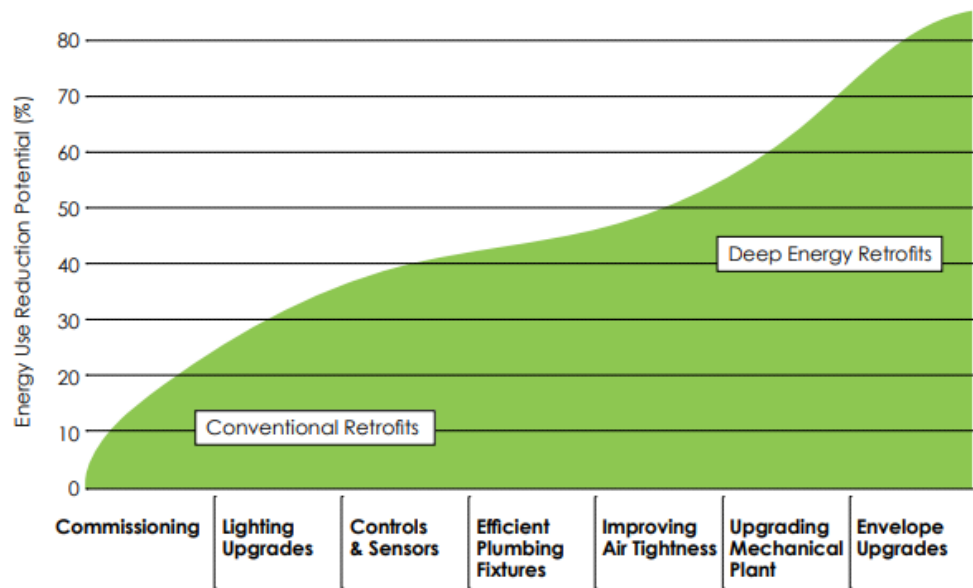
- A. Offer as a permanent alternative compliance path every cycle
- B. Offer only in the 1st cycle of each building sq. ft. inclusion
 - 2021 for 50K+ plus public
 - 2027 for 25K-50K
 - 2033 for 10K-25K
- C. Offer only for the 2021 cycle



DEEP RETROFIT DEFINITION

"a deep energy retrofit is a building-specific, whole-building analysis designed to identify points in the building lifecycle where investments in energy efficiency can achieve the highest return. They involve bigger measures, such as replacing all windows to reduce heating and cooling loads—which in turn can allow a switch to building equipment that requires less energy.

A deep energy retrofit may occur over a few years, and will require a more significant financial commitment than conventional energy retrofits. The energy savings created with a deep energy retrofit are generally greater than 40%."



↑ Figure 18: Sampling of retrofit components against general energy use reduction potential

DEEP RETROFIT ASSUMPTIONS



- Affordable Housing will have their own process that takes into account their 15-year financial process
- Extension process will be in place if an owner needs more time for project planning or financial reasons for deep retrofit project

DEEP RETROFIT PATHWAY PROPOSAL



Buildings that do not meet the standard at the beginning of the compliance period may submit to DOEE by the end of the first year of the compliance cycle a compliance plan that shows a Deep Energy Retrofit with modeled energy savings greater than **XX%** in return for **2-3** cycles of compliance.

- Modeling, permitting, construction, and commissioning of the Deep Energy Retrofit must be completed during the first compliance cycle.
- Savings equal to or greater than the modeled energy savings proposed must be shown by the end of the second compliance cycle otherwise the building will be subject to penalties for both compliance cycles.

PREVIOUS POINTS OF AGREEMENT (TASK FORCE AND WORKING GROUPS)



Penalty Structure

- Penalties should be adjusted on building size.
- Penalties should be adjusted on a buildings relative performance to it's compliance pathway.
- Penalties should not be adjusted to building's assessed value.

Penalty Level

- Penalty levels will be set above cost of compliance.
- Penalty levels will be set based on one time fee for entire compliance period.

INTEGRITY
EFFICIENCY
TRANSPARENCY

PENALTY STRUCTURE FOR NON-COMPLIANCE



DOEE's Assumptions:

- All penalties will be based on the performance path.
- Failure to comply with prescriptive pathway (or any alternative compliance path) will result in the building defaulting to the performance path.

Options for calculating fines:

- Flat Penalty
- Square Footage Bin Based Penalty
- Per Square Foot Based Penalty
- Flat Penalty Adjusted for Distance from Target
- Flat Penalty Adjusted for Distance from Standard
- Combination of two of the above

Please note that fine/penalty monetary levels have been provided for illustration purposes only.



FLAT PENALTY

High Flat Penalty

- **Example A:**

- 90,000 square foot Multifamily Building
- ENERGY STAR Score of 31 (Standard = 64)
- Makes 10% reduction by 2025
- Non-Compliance Penalty = \$100,000

- **Example B:**

- 200,000 square foot Office Building
- ENERGY STAR Score of 59 (Standard = 68)
- Makes 15% reduction by 2025
- Non-Compliance Penalty = \$100,000

Please note that fine/penalty monetary levels have been provided for illustration purposes only.

Flat penalty is completely made up for example purposes. Penalty numbers will be fine-tuned based on cost of compliance estimates.

SQUARE FOOTAGE BIN BASED PENALTY

Please note that fine/penalty monetary levels have been provided for illustration purposes only.

Flat Penalty based on Square Footage Bins

- **Example A:**

- 90,000 square foot Multifamily Building
- ENERGY STAR Score of 31 (Standard = 64)
- Makes 10% reduction by 2025
- Non-Compliance Penalty = \$75,000

- **Example B:**

- 200,000 square foot Office Building
- ENERGY STAR Score of 59 (Standard = 68)
- Makes 15% reduction by 2025
- Non-Compliance Penalty = \$200,000

Examples based on Benchmarking SF Bins:

- 200,000+ SF = \$200,000
- 150,000 – 200,000 SF = \$100,000
- 100,000 – 150,000 SF = \$100,000
- 50,000 – 100,000 SF = \$75,000
- 25,000 – 50,000 SF = \$50,000
- 10,000 – 25,000 SF = \$10,000

PER SQUARE FOOTAGE BASED PENALTY

Penalty based on \$ per square foot of building

- **Example A:**

- 90,000 square foot Multifamily Building
- ENERGY STAR Score of 31 (Standard = 64)
- Makes 10% reduction by 2025
- Non-Compliance Penalty = \$90,000

- **Example B:**

- 200,000 square foot Office Building
- ENERGY STAR Score of 59 (Standard = 68)
- Makes 15% reduction by 2025
- Non-Compliance Penalty = \$200,000

Please note that fine/penalty monetary levels have been provided for illustration purposes only.

Penalty amounts based on \$1 per square foot



FLAT PENALTY ADJUSTED FOR DISTANCE FROM TARGET

Flat Penalty is reduced based on building's performance relative to 20% target

- **Example A:**

- 90,000 square foot Multifamily Building
- ENERGY STAR Score of 31 (Standard = 64)
- Makes 10% reduction by 2025
- Non-Compliance Penalty = \$100,000
- Adjusted Non-Compliance Penalty = \$50,000

- **Example B:**

- 200,000 square foot Office Building
- ENERGY STAR Score of 59 (Standard = 68)
- Makes 15% reduction by 2025
- Non-Compliance Penalty = \$100,000
- Adjusted Non-Compliance Penalty = \$25,000

- Flat penalty is \$100,000
- Penalty amount is reduced based on performance (i.e. - $100,000 * (10\%/20\%) = 50,000$)

Please note that fine/penalty monetary levels have been provided for illustration purposes only.



FLAT PENALTY ADJUSTED FOR DISTANCE FROM STANDARD

Flat Penalty is reduced based on buildings relative distance to standard

- **Example A:**

- 90,000 square foot Multifamily Building
- ENERGY STAR Score of 31 (Standard = 64)
- ENERGY STAR Score in 2025 at end of cycle is 50
- Non-Compliance Penalty = \$100,000
- Adjusted Non-Compliance Penalty = \$66,000

- **Example B:**

- 200,000 square foot Office Building
- ENERGY STAR Score of 59 (Standard = 68)
- ENERGY STAR Score in 2025 at end of cycle is 70
- Non-Compliance Penalty = \$100,000
- Adjusted Non-Compliance Penalty = \$0

- Flat penalty is \$100,000
- Penalty amount is reduced based on performance (i.e. $- 100,000 * ((64-50)/(64-31)) = 66,000$) **Not 50/64 because that would assume the building is starting at a score of 0.

Please note that fine/penalty monetary levels have been provided for illustration purposes only.

DOEE's PREFERENCE: Square Footage bins + Distance from Target Penalty



Flat Penalty is based on square footage bin and is reduced based on buildings performance

- **Example A:**

- 90,000 square foot Multifamily Building
- ENERGY STAR Score of 31 (Standard = 64)
- Makes 10% reduction by 2025
- Non-Compliance Penalty = \$75,000
- Adjusted Non-Compliance Penalty = \$37,500

- **Example B:**

- 200,000 square foot Office Building
- ENERGY STAR Score of 59 (Standard = 68)
- Makes 15% reduction by 2025
- Non-Compliance Penalty = \$200,000
- Adjusted Non-Compliance Penalty = \$50,000

- “Per Square foot” can be hard to verify.
- Buildings will know their penalty potential from the beginning of the compliance period.
- DOEE can easily adapt this for the standard target pathway.

Please note that fine/penalty monetary levels have been provided for illustration purposes only.

INTEGRAL
2012



COMPARISON OF PENALTY STRUCTURE OPTIONS

Criteria	Flat Penalty	Square Footage Bin	Per Square Foot	Distance from Target	Distance from Standard	SF Bins + Distance from Target
Penalties should be adjusted on building size	✗	✓	✓	✗	✗	✓
Penalties should be adjusted on a buildings relative performance to it's compliance pathway	✗	✗	✗	✓	✗	✓
Penalties should not be adjusted to building's assessed value	✓	✓	✓	✓	✓	✓
Max Penalties should be calculable from the start of the compliance period	✓	✓	✗	✓	✓	✓

NEXT TASK FORCE MEETING



May 5

- Penalties matrix (cont.)
- Bike Rack Review (Historical, Mixed-Use, District Energy, Solar)
- Tradable Allowances – Portfolio Questions?

May 12

- Outstanding Rule Issues
- Draft Outline of Rules



