BEPSDC Task Force

August 4, 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

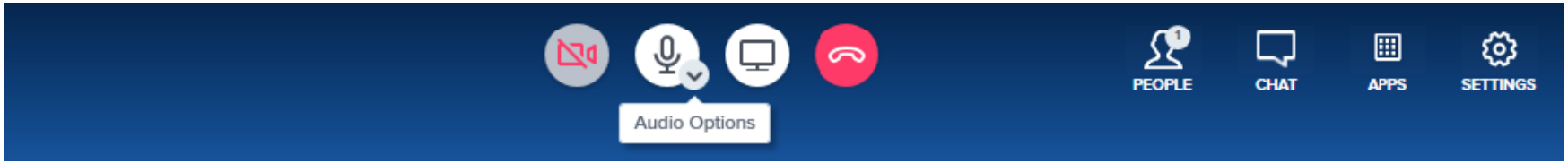
ONLINE MEETING ETIQUETTE

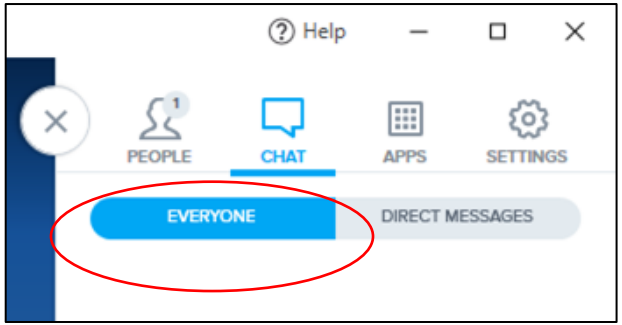
- The meeting is being recorded and will be posted to our website

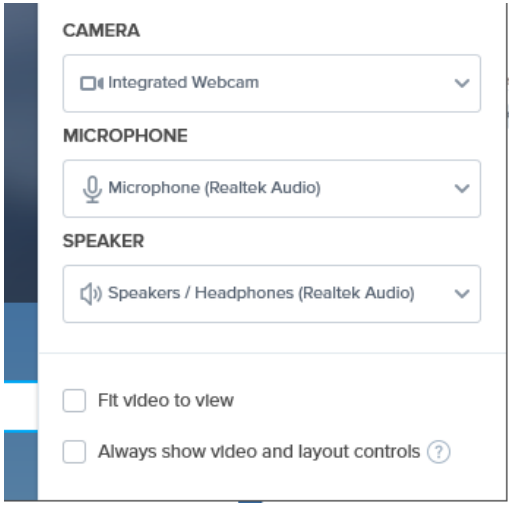
- Questions and Comments throughout the meeting:
  - All attendees will control their own mute function but could be muted by the facilitator due to background noise
  - Task Force Members – can comment at any time
  - Non-Task Force Members - please use the chat box to request to talk

- Attendance
  - Non-Task Force Member – please use the chat box at this time to register your name, organization and email to "sign in"
  - Task Force Members - roll call (will also use this for voting)

BLUEJEANS TOUR





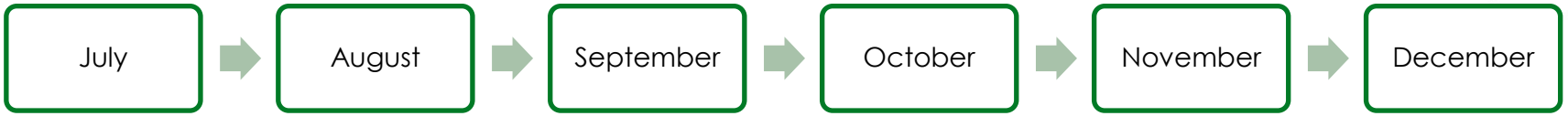


ROLE OF TASK FORCE

- Advise DOEE on creation of an implementation plan for the Building Energy Performance Program;
- Recommend amendments to proposed regulations issued by DOEE;
- Recommend complementary programs or policies.

- If topic needs in-depth discussion, anyone can suggest moving to a committee
- This is an open meeting - everyone is allowed to participate

OVERALL SCHEDULE



Future Agenda Items for Discussion/Feedback

- Cost/Benefit Study (prescriptive path)
- Guidance Documents (alternative comp. path, campuses, reporting/verification, etc.)
- Green Bank/DCSEU feedback sessions

AGENDA

- Administrative Items
- Sub-committee update
- Cost/Benefit Study Discussion
- Alternative Compliance Path Discussion
- Announcements

HIGHER ED/HOSPITAL SUB-COMMITTEE UPDATE

- Met July 29
- Reviewed previous standard proposals
- Discussed standard proposal for hospitals
- Discussed standard proposal for higher education
- Reviewed possible benchmarking changes needed – institutions reviewing square footage of high intensity spaces on their campuses
- August 12 – compliance paths

COST/BENEFIT STUDY

Steven Winter Associates, Inc.
Improving the Built Environment Since 1972

AOBA
APARTMENT & OFFICE BUILDING ASSOCIATION OF METROPOLITAN WASHINGTON

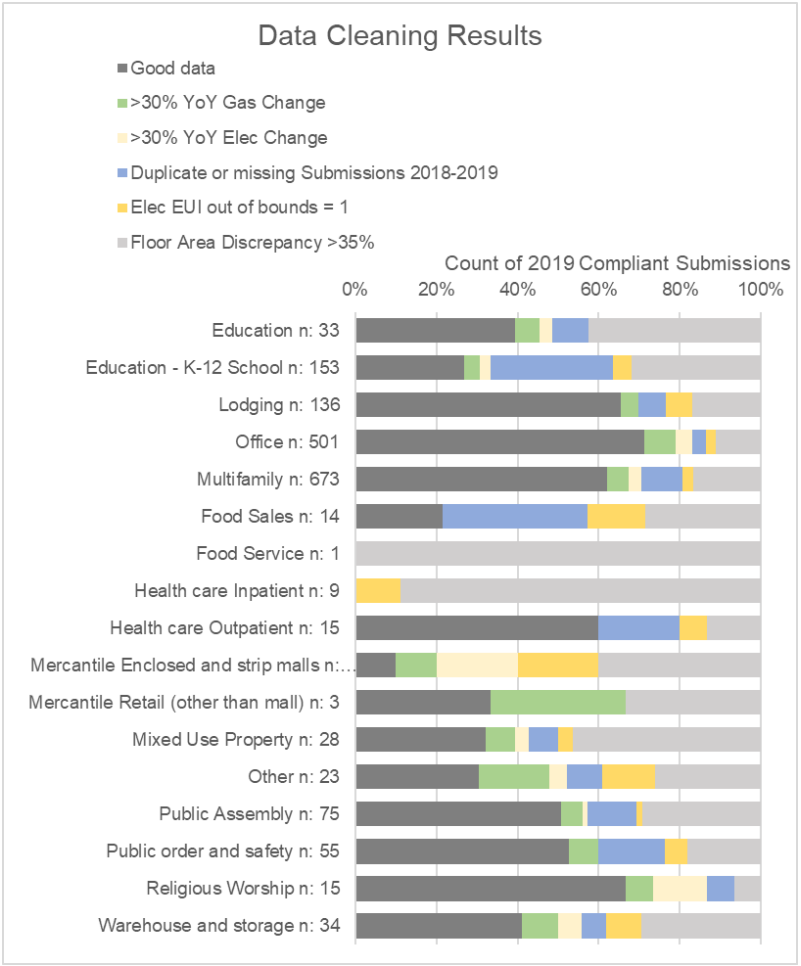
nbi new buildings institute

MARKET SEGMENTATION ANALYSIS

- Reviewed 2019 benchmarking data
- Cleaned data to eliminate errors
- Organized to identify patterns on energy usage

DATA CLEANING RESULTS

- Major swings in electricity or natural gas usage year over year
- Duplicate or missing submissions
- Electricity EUI out of reasonable bounds
- Large discrepancy between reported square footage and publicly reported square footage



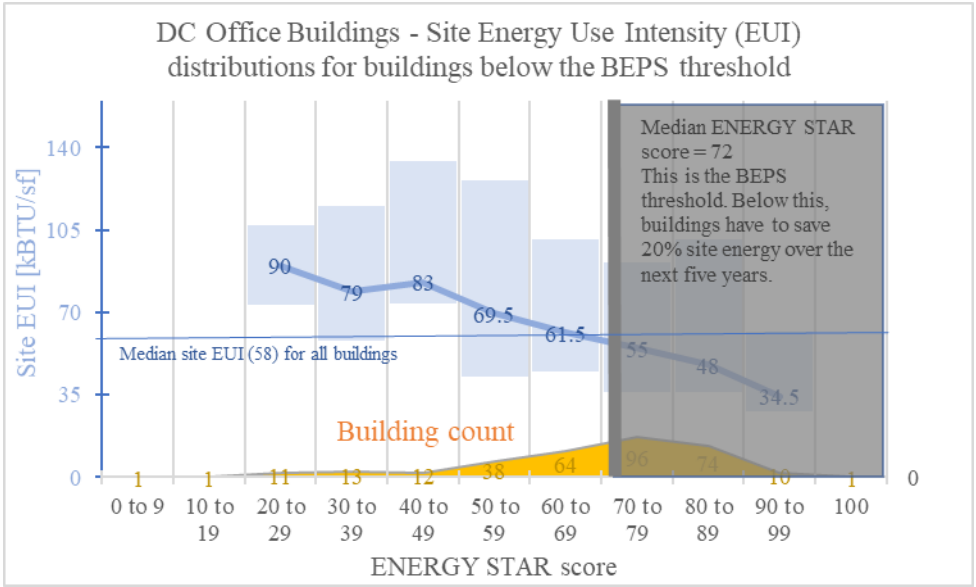
MARKET SEGMENTATION

- Over 80% of submitted represented by Office, Multifamily, Lodging (Hotels), K-12 Schools
- Year of construction highlighted changes in EUI and fuel types:
  - Pre-1940
  - 1940-1970
  - 1970-2000 – Fossil fuel usage drops, signifying a switch to electric heating
  - Post-2000
- Size – above and below 100,000 SF (“small” and “large”)
- Selected 12 specific typologies for review

OFFICE

All data shown is from the CBA cleaned datasets only; medians listed are solely for the Cost-Benefit Analysis and may not represent the actual standard for BEPS 1.

- 365 Buildings, Median ENERGY STAR Score = 72
- Fossil fuel drops after 1970
- Highest ENERGY STAR Scores in newer buildings
- ENERGY STAR Score and site EUI correlate, most intensity driven by electricity



OFFICE

1. Pre-1940, Small

- Lowest ENERGY STAR scores

2. 1940-1970, Any Size

- Representative of fossil-fuel using systems

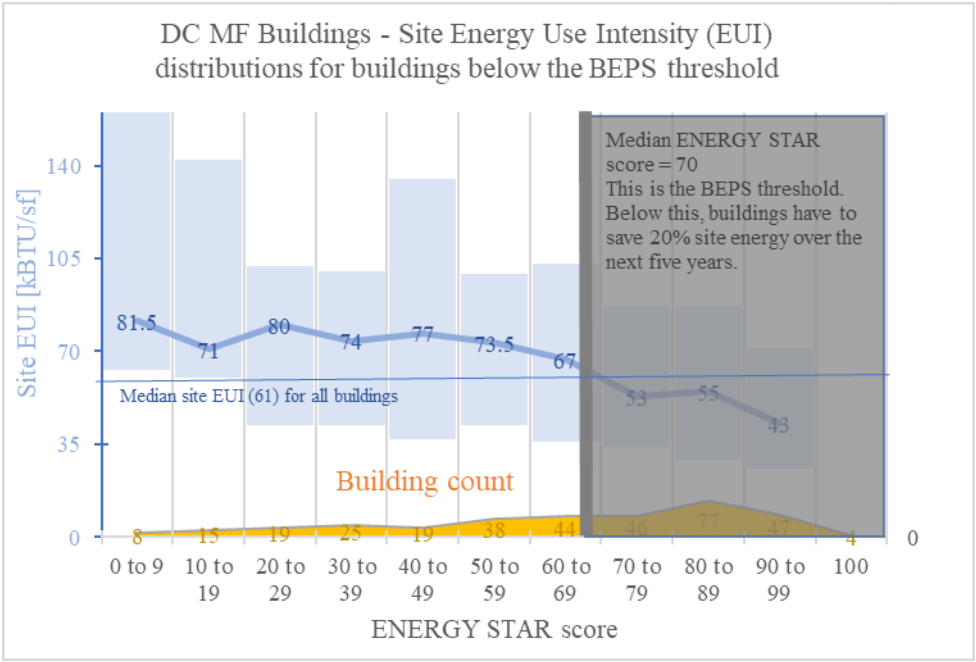
3. 1970–Present, Large

- The largest single typology in the data, represents post 1960s electric systems buildings. The median ENERGY STAR score is relatively high, but this group is a large portion of the office typology.

MULTIFAMILY

All data shown is from the CBA cleaned datasets only; medians listed are solely for the Cost-Benefit Analysis and may not represent the actual standard for BEPS 1.

- 417 Buildings, 70 Affordable, Median ENERGY STAR Score = 70
- Fossil fuel drops after 1970
- 64% built before 1940
- Highest ENERGY STAR Scores in pre-1970 buildings, though have higher fossil fuel usage



MULTIFAMILY

4. Pre-1940, Small, Affordable Housing

- Second most common building typology in DC

5. 1960s, Large, High EUI, Market Rate

- Some of the worst ENERGY STAR scores and highest site EUIs in the dataset

MULTIFAMILY

6. Post-2000, Any Size

- Site EUI and ENERGY STAR scores distinct from pre-2000s buildings
- Investigating unitized systems rather than central

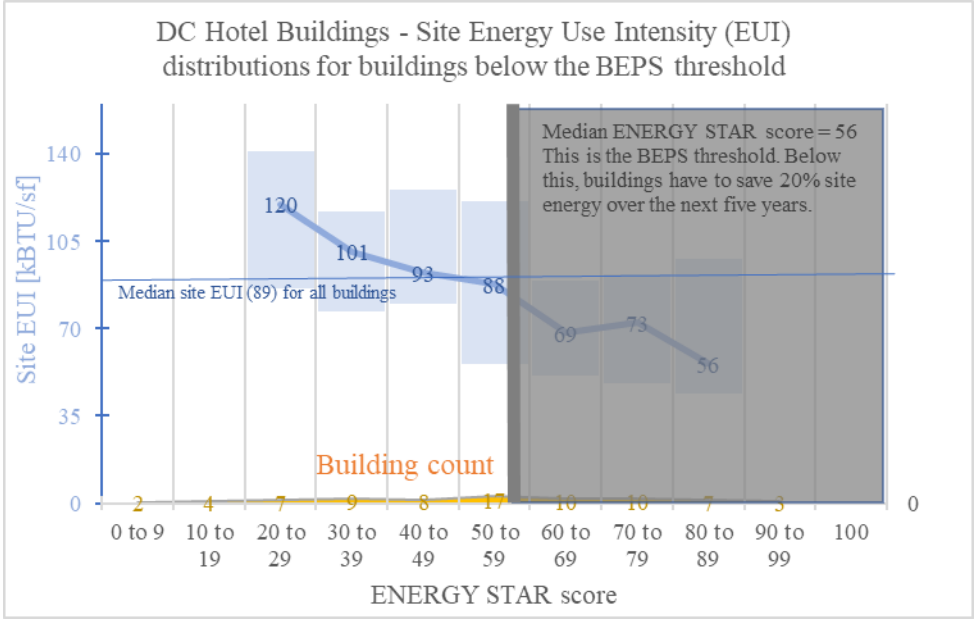
7. 1940-1970, Affordable, Any Size

- The largest grouping of affordable housing. Considering DCHA property

LODGING (HOTELS)

All data shown is from the CBA cleaned datasets only; medians listed are solely for the Cost-Benefit Analysis and may not represent the actual standard for BEPS 1.

- 89 Buildings, Median ENERGY STAR Score = 56
- Fossil fuel drops after 1970
- 52% built before 1970
- Low ENERGY STAR Scores throughout ages and sizes – appears to be the typology most impacted by BEPS



LODGING (HOTELS)

8. Pre-1970, Any Size

- Higher fossil fuel usage prior to 1970 indicates similarity in system types, older buildings targeted for more "budget" amenities if possible.

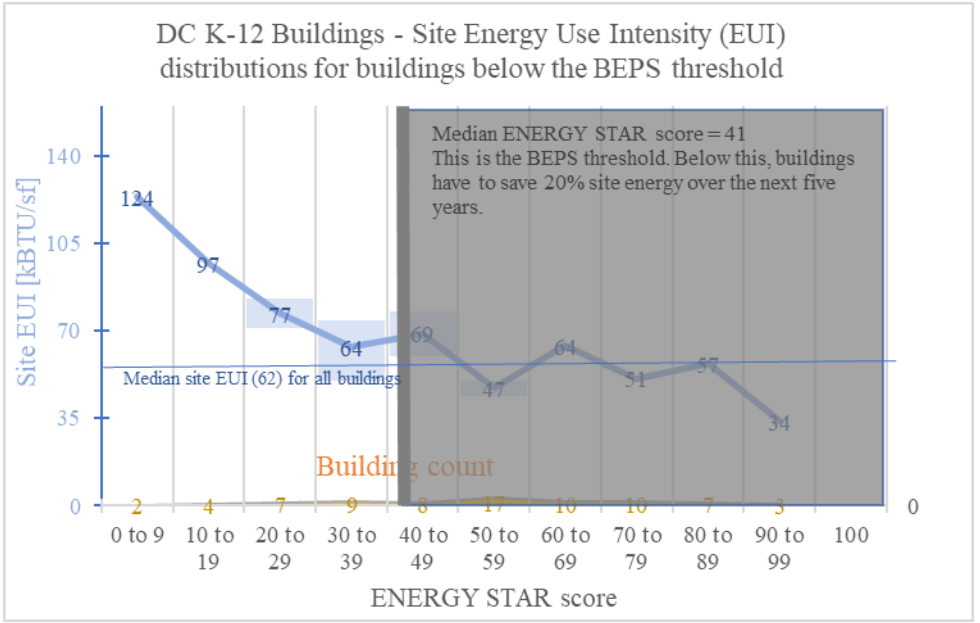
9. Post 1970 to Present, Any size

- Lower fossil fuel usage after 1970 indicates similarity in system types, newest buildings assumed to have more luxury amenities.

K-12 SCHOOLS

All data shown is from the CBA cleaned datasets only; medians listed are solely for the Cost-Benefit Analysis and may not represent the actual standard for BEPS 1.

- 41 Buildings, 25 public, 9 charter, 7 private), Median ENERGY STAR Score = 41
- Initial data cleaning eliminated a large number of schools – SWA reviewing updated benchmarking data
- DCPS schools undergo modernization – ensuring buildings reviewed before and after this process
- Ensure charter and private schools are identified



K-12 SCHOOLS

10. Pre-1940, Any Size, Public School

- Over half of the buildings in the dataset were built prior to 1940
- Select 1 pre-renovation project
- Select 1 post-renovation project

K-12 SCHOOLS

11. Pre-1940, Any Size, Private School

- Rationale: Private schools are well represented in this data set

12. Post-2000, Any Size, Charter School

- Rationale: Charter schools are well represented in this small set and have low ENERGY STAR Scores

EEM Considerations

Pillars of Equity

- Affordability
- Workforce Development
- Health
- Climate Resiliency

EEM Considerations

Non-energy Benefits

- Electrification
- Weighting Considerations
  - Should each EEM be scored against non-energy benefit criteria?
  - What is right weighting scale?

EDUCATION PLAN

Task

- Develop a comprehensive outreach and engagement plan for BEPS to be implemented by DOEE and its partners.

Purpose

- A comprehensive education plan can help structure a successful rollout of BEPS by identifying:
  - What information is needed by whom
  - Where there are gaps in resources available
  - When resources are needed
  - Where resource can be found

EDUCATION PLAN

Structure

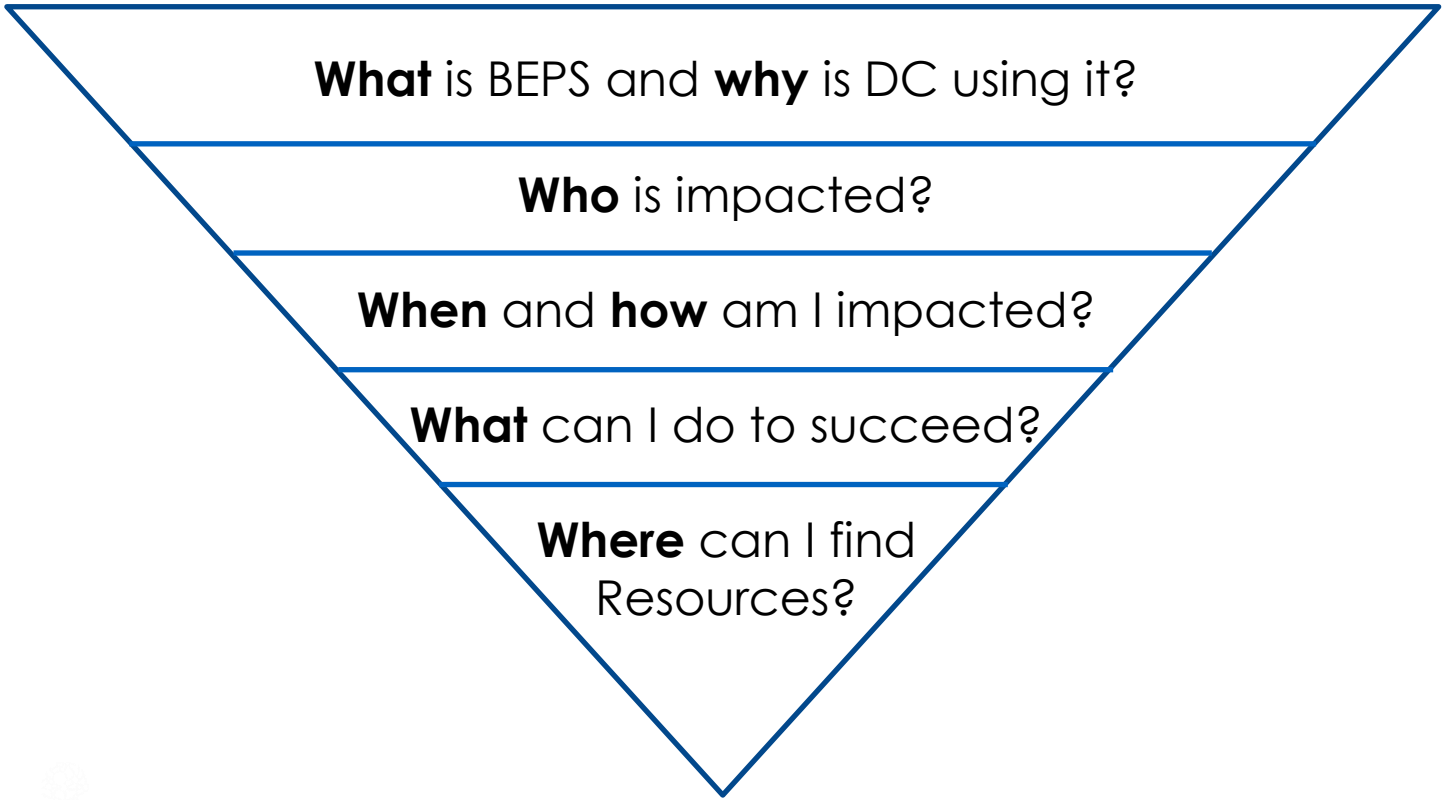
- Three primary time-bound periods
  - Immediate Actions (2020 pre-launch)
  - Year One Actions (2021)
  - Compliance Actions (2022-2026)
- Identifies education needs per audience
- Identifies delivery methods and partners
- Includes recommendations for future compliance cycles

EDUCATION PLAN

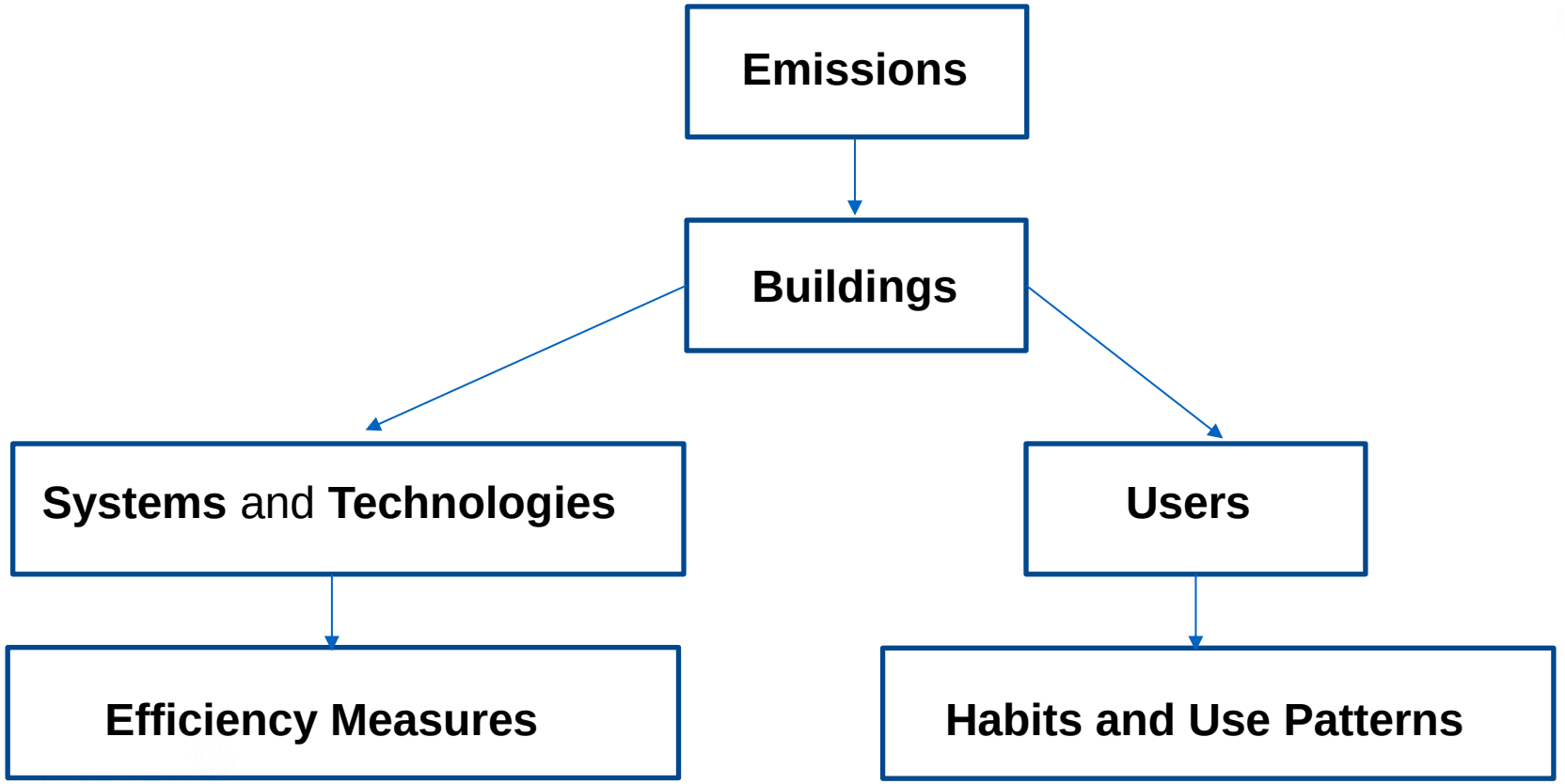
Target Audiences

- Decision Makers (Building owners, Developers, etc.)
- Operators (Facility and Property managers, Building engineers)
- Designers (Architects, Engineers, Consultants)
- Building Users (Residents, Commercial Tenants)
- Contractors (GCs, Trads, Vendors)
- General Public
- Future Buildings

EDUCATION PLAN



EDUCATION PLAN



EDUCATION PLAN

Possible Outputs

- Media Outreach
  - Media Toolkit
  - Press Releases
  - Social Media posts
  - Features on BEPS / building success stories (TV, Radio, Print, Web)
- Web resources
  - Virtual Trainings
  - Interactive simulators
  - Centralized BEPS Hub
  - Case Studies
- In-person
  - Trainings and seminars (interactive and audience-dependent)

ALTERNATIVE COMPLIANCE PATHS

- Process
- Intent
- Pre-Approved
- Core Criteria
- Optional Criteria

ALTERNATIVE COMPLIANCE PATHS PROCESS

- Custom ACP can be proposed through an RFI process.
  - Will solicit ideas before the compliance pathway selection process and then publish the approved pathways.
  - Then building owners can select these pathways when they report their pathway.

ACP INTENT

- Target and receive compliance for energy savings beyond the 3 base pathways;
- Adjust base compliance pathways due to special circumstances for a given building; or
- Meet legal requirements of BEPS (i.e. secondary education and hospital campuses).

PRE-APPROVED ACPS

- Deep Energy Retrofit
- Single Owner Portfolio
- Higher Education/Hospital
- Affordable Housing

CORE CRITERIA FOR CUSTOM ACP PROPOSAL CONCEPT

- Achieves energy savings comparable or greater than the base compliance paths
- Addresses barriers in buildings that make it hard to comply with existing pathways
- Address inequities in the built environment for DC residents
- Is technically achievable and cost effective for buildings in the District
- Is measurable and verifiable by DOEE

ADDITIONAL/OPTIONAL CRITERIA

- Helps the District achieve its Sustainable DC energy goals
- Utilizes an innovative approach to energy conservation
- Address issues unique to the affordable housing sector

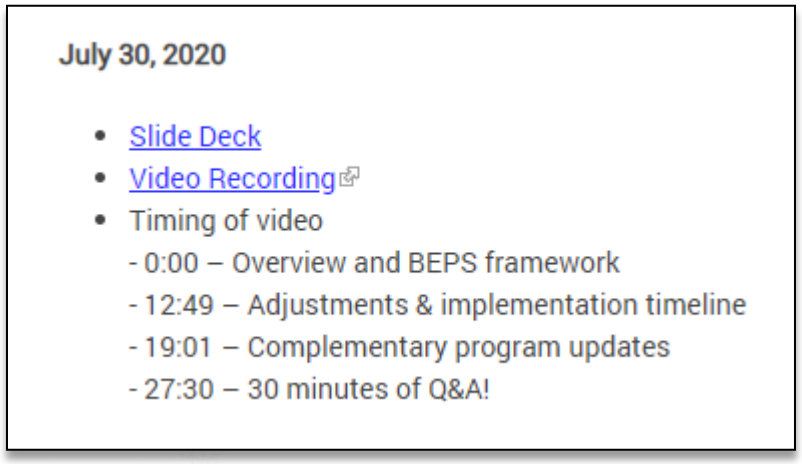
FEEDBACK ON ACP PROPOSAL CONCEPT

- How do we make this process manageable for DOEE and beneficial for the District in the long run?

MONTHLY WEBINAR UPDATE

DOEE hosting a live monthly webinar to update the public on the progress of BEPS (and associated programs) implementation

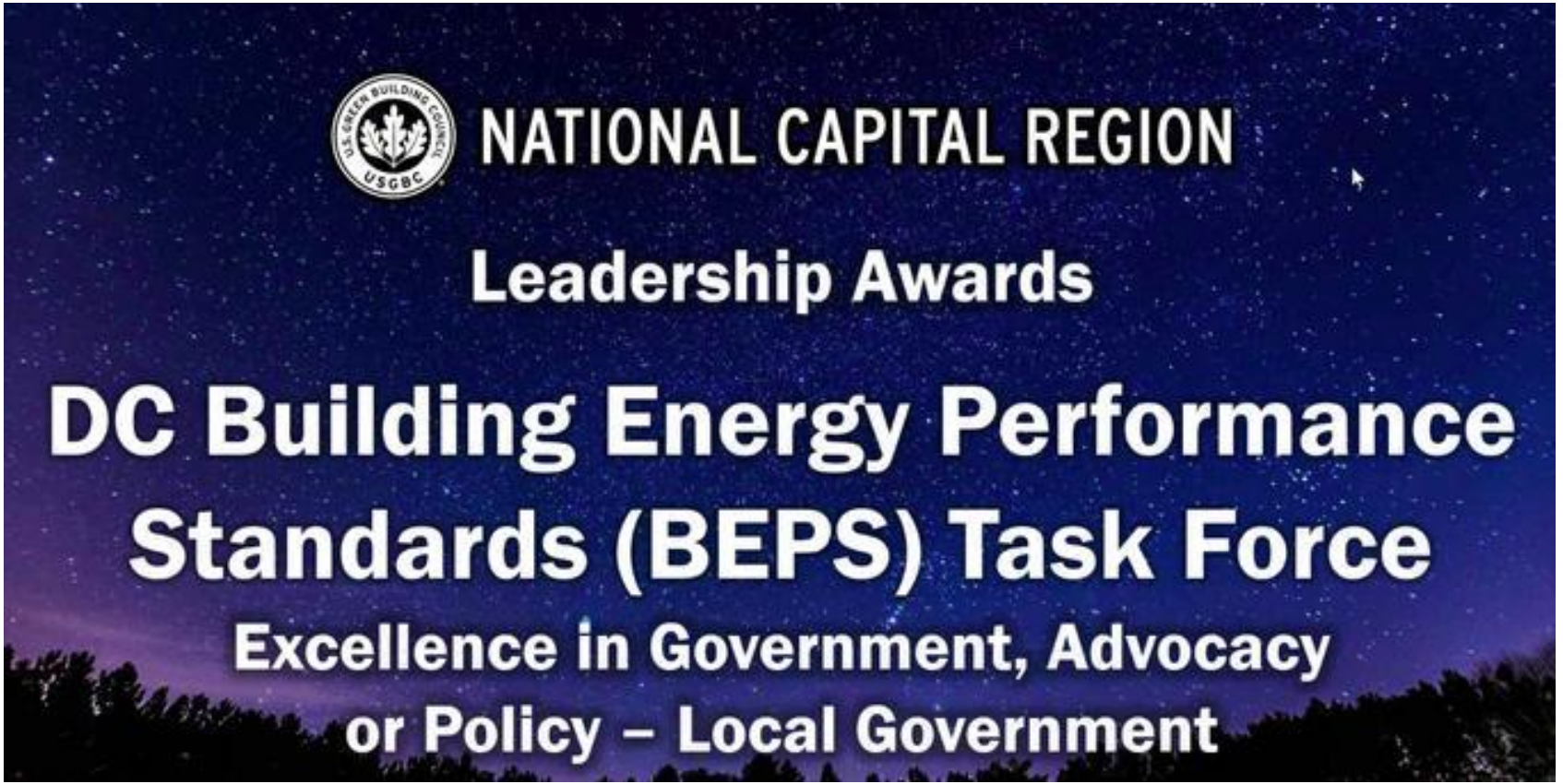
~~July 30~~
August 27
Sept 24
Oct 29
Dec 10



July 30, 2020

- Slide Deck
- Video Recording
- Timing of video
  - 0:00 – Overview and BEPS framework
  - 12:49 – Adjustments & implementation timeline
  - 19:01 – Complementary program updates
  - 27:30 – 30 minutes of Q&A!

- 125 attendees – over 200 signed up!
- Added 100+ *new* people to our contacts
- Turned into a great video for basic understanding of BEPS
- Help us promote future sessions!


NATIONAL CAPITAL REGION
Leadership Awards
DC Building Energy Performance Standards (BEPS) Task Force
Excellence in Government, Advocacy or Policy – Local Government

NEXT MEETING

August 18, 2:30 – 4:30pm

- Sub-committee update
- Possible follow-up from cost/benefit study
- Other guidance document information?
- ?

ANNOUNCEMENTS