

# BEPSDC Task Force

July 7, 2020



@DOEE\_DC  
#BEPSDC

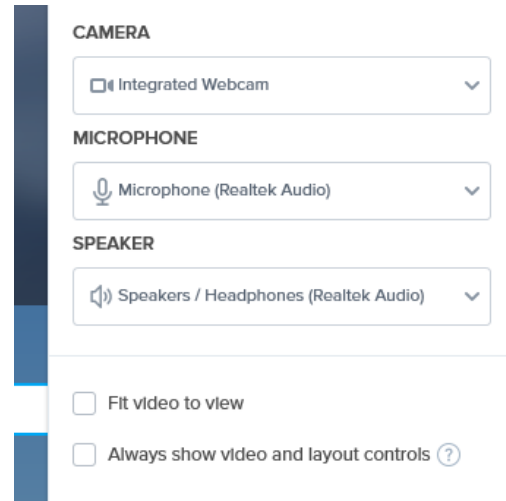
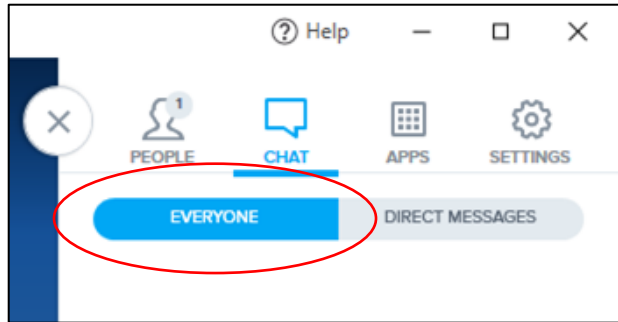
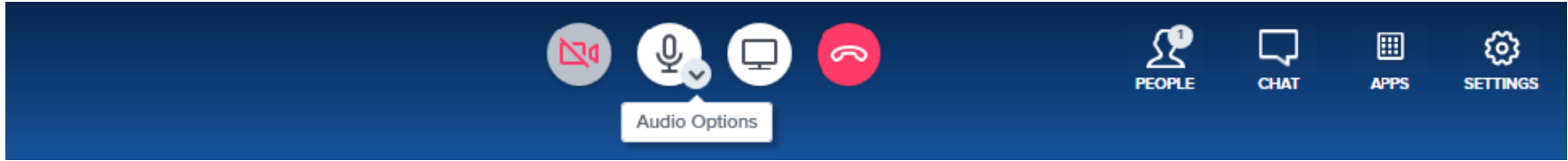
\*\*\* DEPARTMENT  
OF ENERGY &  
ENVIRONMENT  
GOVERNMENT OF THE DISTRICT OF COLUMBIA

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 not muted on entry – but please use the chat box to request to talk
- 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”

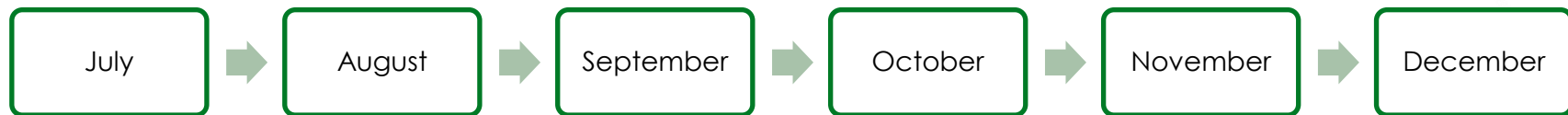
# ONLINE MEETING



# ROLE OF TASK FORCE

- Advise DOE on creation of an implementation plan for the Building Energy Performance Program;
  - Recommend amendments to proposed regulations issued by DOE; and
  - 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

- Task Force Report
- Cost/Benefit Study (prescriptive path)
- Guidance Documents (alternative comp/path, campuses, reporting/verification, delay of compliance criteria, etc.)
- Hub/Green Bank/DCSEU feedback sessions
- Disclosure of BEPS data

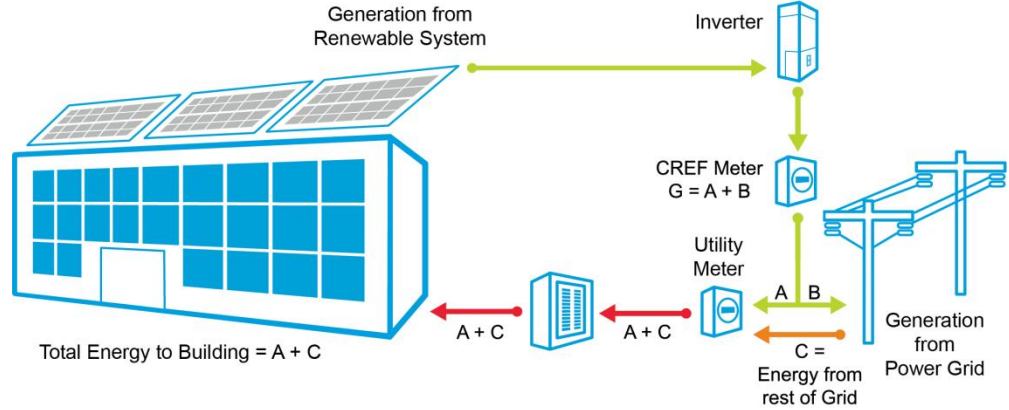
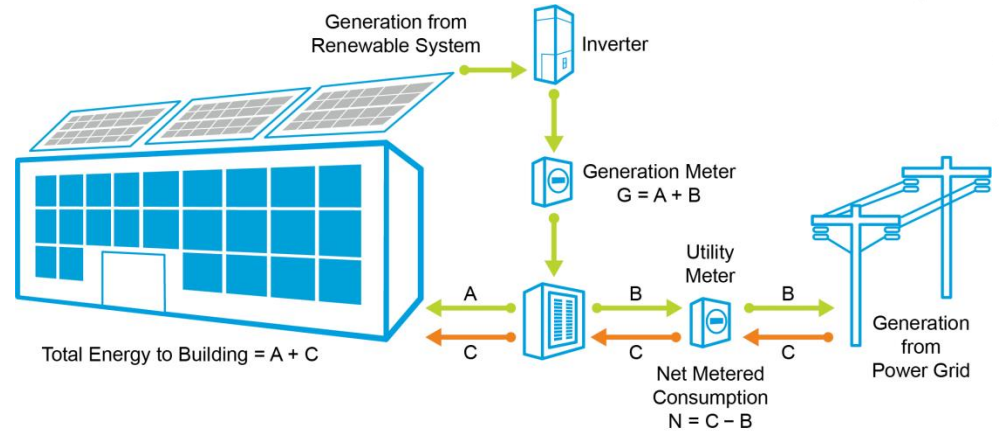
# AGENDA

- Administrative Items
- Sub-committee update
- Solar – Part 2
- Announcements



# SOLAR IN THE DISTRICT

**Net-metered systems (NEM)** are behind the meter and produces energy directly to the building host site. Excess energy not used on site is sold back to the grid.



**Community Renewable Energy Facility (CREF)** are in front of the meter and directly produces energy to grid regardless of the building host site. Energy may or may not be running to the building host site depending on who is subscribed to the CREF.

# SOLAR IN THE DISTRICT

- **What is a PPA?**

- *Power Purchase Agreements* (PPA) are agreements between one customer and a renewable resource to off take a large amount of the energy produced by that system (solar or other source)

- **What is a SREC?**

- Solar Renewable Energy Credits (SREC) are a market-based instrument that represents the property rights to the environmental, social and other non-power attributes of renewable electricity generation.
- SRECs are issued when one megawatt-hour (MWh) of electricity is generated and delivered to the electricity grid from a renewable energy resource.



# CLEAN ENERGY DC AND DEEP DECARBONIZATION

## Clean Energy DC Plan focuses on 2032 goals of Sustainable DC:

1. Reduce GHG emissions by 50%
2. Reduce Energy Consumption by 50%
3. Increase Renewable Energy by 50% (now 100%)

To the ultimate goal of reducing GHG emissions, the District has adopted two policies: the Renewable Portfolio Standard (RPS) to tackle the supply side (goal 3) and the Building Energy Performance Standard (BEPS) to deal with the demand side(goal 2). This follows the basic principles of **deep decarbonization**, which are:

1. High levels of energy efficiency first,
2. Decarbonization of the electricity supply
3. Electrification of our energy end-use systems

**Without focusing on implementing efficiency first,  
deep decarbonization becomes incredibly costly to implement**

# HOW BEPS AND SOLAR WORK CURRENTLY

## Calculating the ENERGY STAR Score

- On-site non-combustible renewables will reduce a buildings Source Energy (the main input for the ENERGY STAR Score). *A building with a solar array on their roof will see increasing an their Score if they use that energy on-site (regardless of SREC ownership).*
- EPA's national source-site factor for grid purchased electricity assumes that national on-site non-combustible renewables have no production loses. *Over time as more renewables come on line this will lower the electric source-site factor raising the score of all (or mostly) electric buildings.*

## Meeting Requirements of Compliance Pathways

- Standard Target Pathway allows buildings to use their ENERGY STAR Score to comply. *Adding on-site solar and using the energy on-site will increase a building's Score.*
- Selling SRECS or selling energy from a CREF can help finance efficiency upgrades. *DC has the most lucrative SREC market in the country.*
- Installing solar can be paired easily with major efficiency measures like roof replacement

# DOEE'S POSITION ON BEPS AND SOLAR

## **To meet 2032 goals, the District needs a program that ensures “efficiency first”**

- BEPS must remain primarily a demand reduction program to enable 10% solar carve out compliance AND carbon neutrality

## **BEPS already includes solar through ENERGY STAR**

- Buildings can use it to meet the standard to avoid being placed in a compliance cycle for a BEPS period
- Buildings in property types above the national median that are close to the standard can use it to comply with the Standard Target Pathway

## **BEPS does not disincentivize buildings from installing solar**

- BEPS does not require building owners to retire or sell SRECs
- Installing solar does not inhibit a buildings ability to install efficiency measures or vice versa

## **The District already has a number of solar incentives**

- DOEE's Solar For All; RPS + Carve out

# CREFS IN THE DISTRICT

- ~90 CREFs on benchmarked buildings (out of 2,000 ~ 4.5%)
- ~30 of the CREF buildings will not meet the first BEPS
- CREFs sit in front of a building's meter and do not count toward a building's energy profile (in either a positive or negative way)
- BEPS does not place any restrictions on a building installing a CREF

**DOEE does not plan to account for CREFs in BEPS but is coordinating with Solar For All to ensure that the programs are aligned.**

# NEM SYSTEMS IN THE DISTRICT

- ~70 NEMs on benchmarked buildings (out of 2,000 ~ 3.5%)
- ~20 of the NEM buildings will not meet the first BEPS.
- Impacts of solar are marginal and will only affect a building's ability to comply if they are near the standard.
  - Median benefit for NEM properties +3 points in ENERGY STAR score

**Because the impact of the solar installation is marginal, DOEE feels this preserves the intent of BEPS as a demand reduction program.**

# NET ENERGY METERING & EPA GUIDANCE

**DOEE aims to follow ENERGY STAR guidance when accounting for renewables whenever possible.**

- Integrity of ENERGY STAR program as an industry standard is the basis of BEPS
- Deviations from ENERGY STAR guidance would cause confusion for buildings on to how account for renewables correctly

# POTENTIAL IMPACT OF NEMS IN THE DISTRICT

## Estimated impact if all buildings affected by BEPS installed a NEM solar system

- Aggregate demand reduction savings lost = 135,307 MWH (47,000 tons of CO<sub>2</sub>e)
  - 29,429 – 99,846 MWH based on 25 – 75% penetration (10,000 – 35,000 tons of CO<sub>2</sub>e)
- DOEE views this energy as GHG savings lost since the RPS already ensures renewable development
- The District will be more likely to meet its local solar carve out if BEPS is successful at reducing energy demand

## Solar installed on buildings constituted anywhere from 0.3-150% of total site energy

- Average = 32%; Median = 8%
- If DOEE were to count solar as an demand reduction resource a small number of buildings would be able to comply by installing solar without making any efficiency upgrades

**DOEE does not plan to deviate from how ENERGY STAR counts NEMs but will study the role of solar as part of the GHG study to be completed in 2023**

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# NEXT MEETING



## July 21, 2:30 – 4:30pm

- Sub-committee update
- High-performance Building Hub update and feedback request
- BEPS disclosure of data





# ANNOUNCEMENTS