

# Seattle's Building Emissions Performance Standard (BEPS) Rulemaking

Technical Rulemaking Workgroup –  
Meeting #3



# Agenda

- **Welcome + introductions of any new attendees (5 minutes)**
  - Consent to record
- **Recap of meeting #2 (5 minutes)**
- **Introduction to alternate GHGIT (15 minutes)**
- **Requirements for using the alternate GHGIT pathway (10 minutes)**
  - Breakout groups (30 minutes)
- **Break (5 minutes)**
- **Review of other alternative compliance pathways (25 minutes)**
  - Multifamily Prescriptive Path & Mentimeter Feedback
  - Alternative compliance payment
- **Wrap-Up (10 minutes)**



# Welcome + Recap



# Last meeting we discussed...

- Defining building portfolios, district campuses, and connected buildings
- Calculating aggregate GHGIT
- How to verify ownership of a building portfolio
- Protocols for buildings <20,000 ft<sup>2</sup> that are part of a campus
- Application process for complying with multiple buildings
- Buildings with exemptions, extensions or decarbonization plans in multi-building reports
- Proposed timeline for complying with multiple buildings



# Charter Agreements

- **Mutual respect** - All working group participants and facilitators are respectful of each other. Members will value each other's time, listen when people are speaking, and speak kindly to each other.
- **Open-mindedness** - Members are open to new ideas and perspectives, and do not disregard ideas they disagree with.
- **Equity** - All members are treated fairly, both by the facilitation team and by one another. Efforts are made to eliminate any real or perceived barriers to participation.
- **Be present** - You reserved the time to be here. Avoid outside distractions as much as possible but take care of your personal needs.
- **Accountability for Accuracy** - When sharing data and information make sure it is accurate and be prepared to provide a credible reference.
- **Chatham House Rule** - Participants are free to use the information received in meetings but should not identify the speaker or their affiliation.



# Alternative Compliance Pathways





# Focus of today is on alternate GHGIT, alternative compliance payment, and multifamily prescriptive path

Option	Description
Aggregate Standard GHGIT (Two or More buildings)	Meet GHGITS using an aggregate GHGIT based on pro-rated mix of building activity types in two or more buildings, in lieu of building by building compliance.
<b>Alternate GHGIT</b>	<b>A constant percent emissions reduction target from building's baseline GHGI for each interval until net-zero emissions.</b>
<b>Alternative Compliance Payment</b>	<b>A payment based on the total MTCO<sub>2e</sub> exceeding the target times the social cost of carbon for 5 years.</b>
<b>Multifamily Prescriptive Paths</b>	<b>In lieu of meeting GHGIT, convert equip. to heat pump DHW or heat pump HVAC or in-unit electric resistance, in compliance with Seattle Energy Code.</b>
Net-Zero by 2041-2050 Decarbonization Compliance Plan	A customized plan, created by a qualified person, that shows how the building will achieve net-zero by 2041-2050. Plan must include details such as an energy/emissions audit, cost analysis, GHGIT schedule, actions, milestones, and any applicable content specified by decarbonization plan provisions in the Seattle Energy Code.
Low Emissions by 2041-2050 Decarbonization Compliance Plan	A customized plan, by a qualified person,, shows how building will achieve a low carbon target by 2041-2050. Plan must include details such as an energy/emissions audit, cost analysis, GHGIT schedule, actions, milestones, and any applicable content specified by decarbonization plan provisions in the Seattle Energy Code.
District Campus Decarbonization Compliance Plan	A customized plan, by a qualified person, shows how campus will upgrade its district energy plant to generate cumulative emissions reductions from 2028 – 2050 equal to or greater than the cumulative emissions reductions achievable by meeting GHGIT.

Discussed in meeting #2

Will be addressed in meeting #7 and focused group(s)



# Alternate GHGIT





# Comparing alternate GHGIT to aggregate GHGIT

## Aggregate GHGIT

**What is it:** Building owners can set and meet their GHGIT based on a **pro-rated mix of standard building activity type targets** for all their buildings' square footage combined in lieu of building by building compliance

### Who is eligible:

- a. Building portfolios (private, public, or nonprofit ownership), district campuses, or connected buildings (e.g., multiple building reporting)

## Alternate GHGIT

**What is it:** Buildings can **start at their own baseline and set their own interim targets** from that baseline to net-zero, with incremental targets reducing 33% (or 25% for multifamily) for each compliance interval

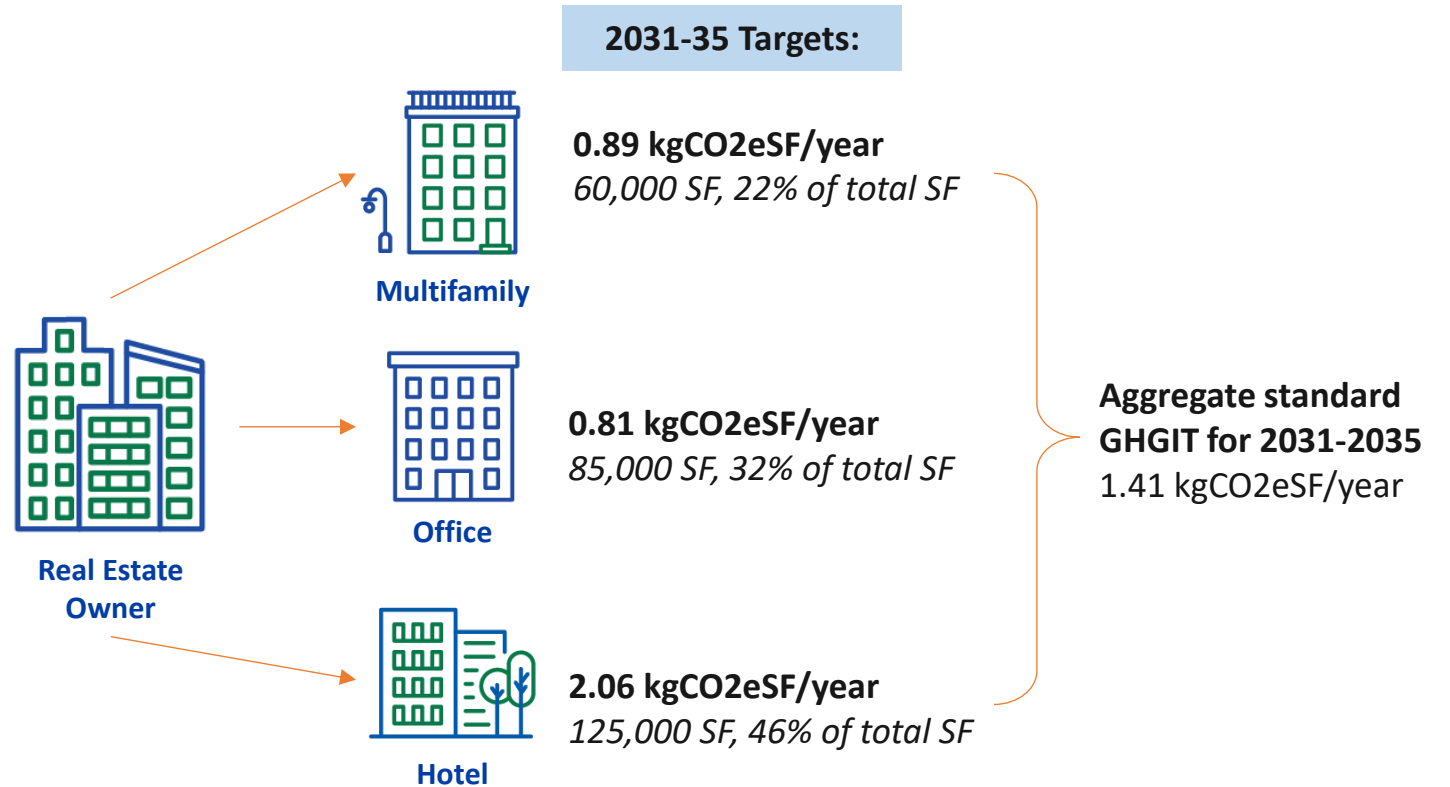
### Who is eligible:

- a. Public or nonprofit building portfolios (not private), district campuses, or connected buildings
- b. Nonresidential buildings with >50% of building with no activity type targets (or, optionally, those defined as 'other')
- c. Individual buildings with baseline GHGI emissions 3.5 times greater than the 2031-2035 GHGIT for their building type(s).



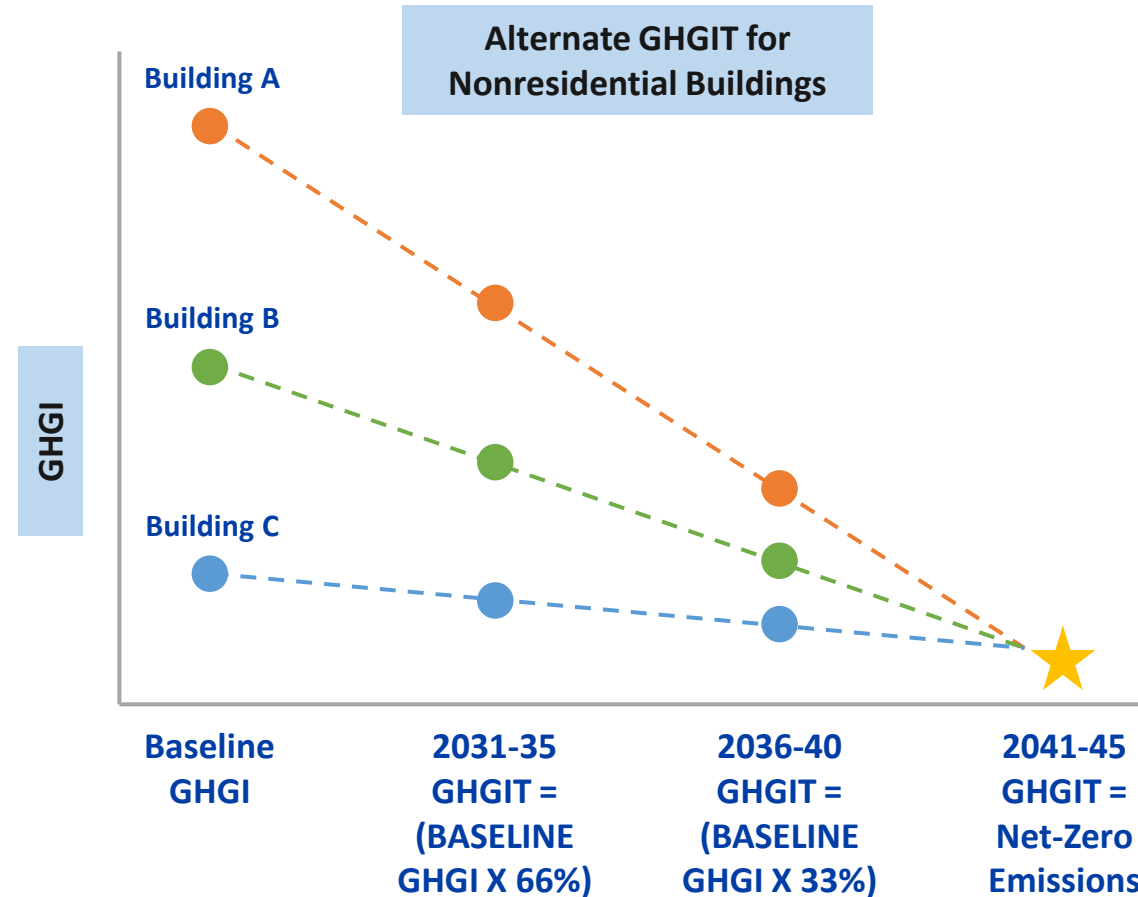
# From last meeting...

“Aggregate standard GHGIT” means that building owners can set and meet their GHGIT, based on a pro-rated mix of spaces for all their buildings’ square footage combined, in lieu of building by building compliance.



# Today's focus: Report using the alternate GHGIT

**“Alternate GHGIT”** means that these buildings can **start at their own baseline and set interim targets** from that baseline to net-zero, with incremental targets reducing 33% (25% if multifamily) for each compliance interval.



Multifamily buildings have one additional compliance cycle to achieve net-zero emissions:

2031-35 GHGIT = (BASELINE GHGI X 75%)

2036-40 GHGIT = (BASELINE GHGI X 50%)

2041-45 GHGIT = (BASELINE GHGI X 25%)

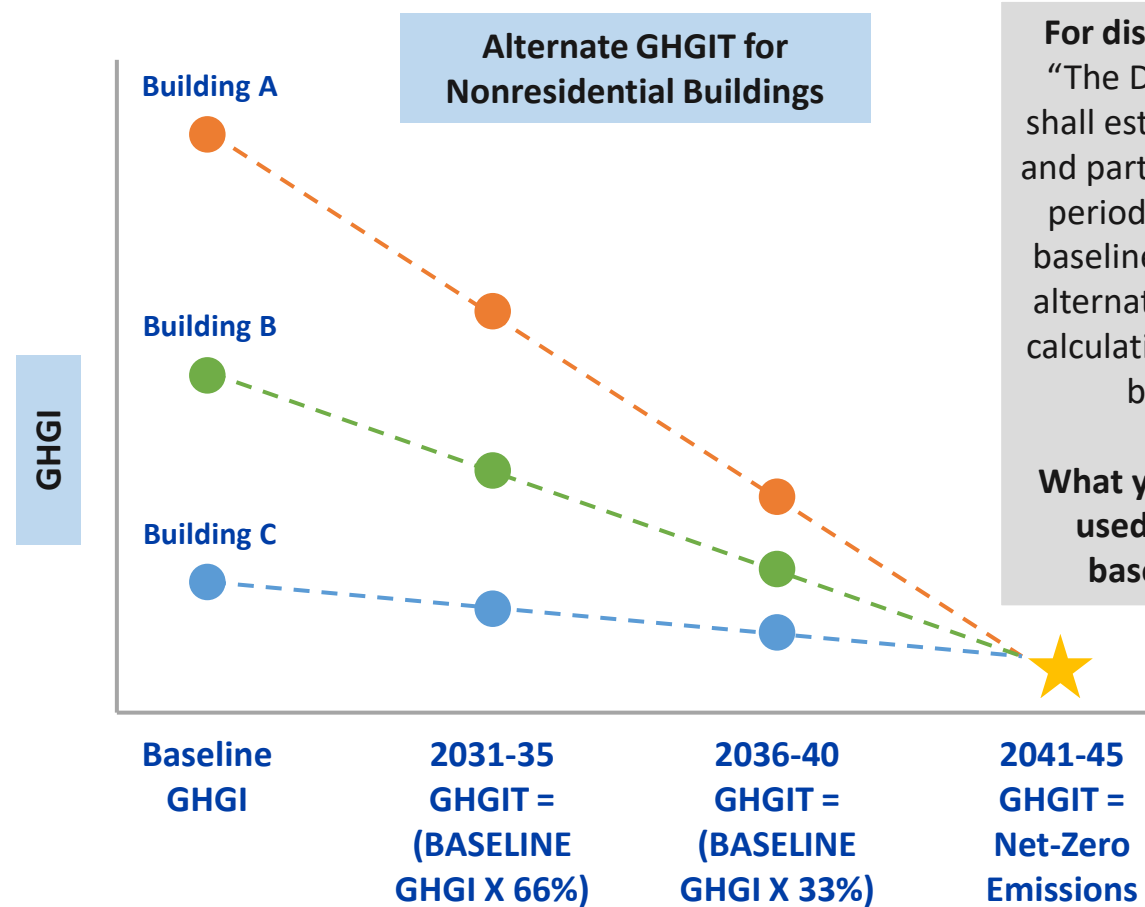
2045-50 GHGIT = Net-Zero Emissions

# There are three important metrics for alternate GHGIT compliance

“Greenhouse gas emissions intensity target” or “GHGIT” means the target that limits a covered building's GHGI. GHGIT is reported as a value of kgCO<sub>2</sub>e units per square foot per year (kgCO<sub>2</sub>e/SF/yr).

“Baseline GHGI” means the GHGI in kgCO<sub>2</sub>e/SF/yr for a particular 12-month period for a covered building, building portfolio, district campus, or connected buildings used to calculate compliance with certain alternative compliance options.

“Compliance GHGI” means the GHGI in kgCO<sub>2</sub>e/SF/yr for a particular 12-month period for a covered building, building portfolio, district campus, or connected buildings used to show compliance with the GHGIT.



# Which buildings can use the alternate GHGIT pathway?



Public or nonprofit building portfolios, district campuses, or connected buildings

**Note:** Per BEPS ordinance, private sector portfolios are not eligible for this pathway!



Individual building with >50% of building with no activity type targets (or those defined as 'other')



Individual building with baseline GHGI emissions 3.5x greater than the 2031-2035 GHGIT for their building type

# Comparing alternate GHGIT to standard GHGIT

## Offers flexibility for...

- ✓ Campuses or public entities that may be tracking baselines already
- ✓ Buildings with uncommon uses that have GHGIs higher than the “Other” target
- ✓ Individual buildings with very high GHGIs relative to standard targets

### Example “Very High GHGI” Office Building

Building baseline GHGI = 2.84  
(>3.5x standard GHGIT)



	Standard (2031-35)	Alternate (2031-35)
Greenhouse gas intensity target (GHGIT)	0.81	1.90
% emissions reduction required to meet 1st target	71%	33%

# Clarifying questions?





# Requirements for using the alternate GHGIT pathway

## *Questions for discussion:*

1. What is the process for calculating baseline emissions?
  - a) What time periods can be used?
  - b) What reporting years can be used?
2. What circumstances would require recalculation of baseline emissions & alternate targets?
3. Other considerations for individual buildings, public or nonprofit building portfolios, and campuses



# 1. What is the process for calculating baseline emissions?

*What the ordinance says...*

(SMC 22.925.100) “The Director by rule shall establish the **years** and particular **12-month period(s)** allowed for **baseline GHGs** used in alternative compliance calculations for covered buildings.”

**For discussion today:**

- 1a) What **time periods** can be used to calculate baseline emissions?
- 1b) What **reporting years** can be used to calculate baseline emissions?

# 1a. What time periods can be used to calculate baseline emissions?

(SMC 22.925.080) “To calculate a covered building's **compliance GHGI**, building owners shall use verified energy benchmarking data. Building owners may use either:

- **Twelve consecutive months of verified energy benchmarking data** from the time period preceding the covered building's GHGIT compliance deadline. The 12-month period **may run from January 1-December 31 or from July 1-June 30**; or
- **The annual average of 24 consecutive months of verified energy benchmarking data** from the time period preceding the covered building's GHGIT compliance deadline. The 24-month period may run from January 1-December 31 or from July 1-June 30.”

## *Proposal:*

**Use same time periods for baseline GHGI as compliance GHGI**

# Clarifying questions?



## Do you support this proposal?

To calculate a covered building's **baseline GHGI**, building owners may use either:

1. **Twelve consecutive months of verified energy benchmarking data** from January 1-December 31 or from July 1-June 30
2. The **annual average of 24 consecutive months of verified energy benchmarking data** from January 1-December 31 or from July 1-June 30

(Note: We will discuss the actual year in breakout.)

## Fist to Five Voting



No way.



We need to talk about this.



I have reservations.



I'm okay with it.



Sounds good.



Total agreement.

# Breakout Session #1



# What reporting years can be used to calculate baseline emissions?

- Ordinance specifies that building owners must use verified energy benchmarking data to calculate compliance GHGI
  - Same protocols will apply when calculating baseline GHGI
- Building owners are already required to verify benchmarking data in 2027-2030 compliance cycle
  - Data verified in 2027 will cover benchmarking data ending December 2026

## Potential options for discussion today:

**Option 1:** Can use third-party verified benchmarking data from 2024 onward (after BEPS passed)

**Option 2:** Must use data that is third-party verified during 1<sup>st</sup> compliance period (2027-2030)



# What circumstances would require recalculation of baseline emissions & alternate targets?

## Individual buildings eligible for alternate GHGIT

- The **gross floor area** (GFA) has changed from the baseline year by more than 10%\*
- The **largest primary building use** has changed from the baseline year

## Public or nonprofit building portfolios and campuses

- The **gross floor area of the portfolio** has changed from the baseline year by more than 10%\*
- **Buildings are added or removed** to the portfolio/campus

**Discuss in breakout groups:** Are these reasonable guidelines? Are there other circumstances that should be considered?

\*10% aligned with [International Performance Measurement and Verification Protocol \(IPMVP\) guidelines](#)



# Clarifications on process for calculating baseline GHGI for rules and education

- Owners of individual buildings should take any allowed end use deductions into account for baseline GHGI when deciding to use the **Alternate GHGIT**
  - Example: A building using steam should consider if their GHGI is  $3.5x > \text{GHGIT}$  *after* they deduct the steam emissions
  - Why? Compliance  $\text{GHGI} = \frac{\text{GHG emissions (CO}_2\text{e/yr)} - \text{GHG deductions (CO}_2\text{e/yr)}}{\text{gross floor area (square feet)}}$
  - Using the steam deduction alone will likely support meeting the standard target... and it's an easier compliance process.



# Breakout Session #1

## Group A: Individual Buildings

- Eligible reporting years
- Guidelines for recalculating baseline emissions
- End use deductions in baseline calculations

*Gemma, Kirstin, Anna*

## Group B: Public/Nonprofit Building portfolios and campuses

- Eligible reporting years
- Guidelines for recalculating baseline emissions

*Nicole, Sepideh, Santiago*



# Facilitators shareout







**BREAK**

# Multifamily Prescriptive Path





# What is the multifamily prescriptive path?

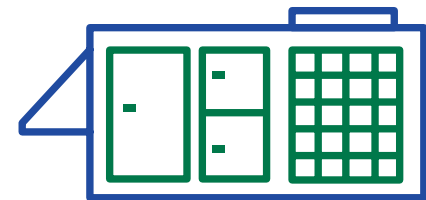
*What the ordinance says...*

(SMC 22.925.100) “A building owner **may utilize one or more prescriptive options for a multifamily building in lieu of meeting its GHGIT** during the 2031-2035, 2036-2040, or 2041-2045 compliance intervals. Each prescriptive option shall only be used for one compliance interval.” Prescriptive options include:

Replacing existing fossil fuel combustion service hot water system(s) with **electric heat pump water heating**



Replacing existing fossil fuel combustion HVAC heating system equipment with **electric heat pump systems**





# Rationale for multifamily prescriptive path

1. **Equitable:** Allows multifamily buildings to comply in a way that does not need energy modeling to determine if emissions savings from a project could meet the standard GHGIT
2. **Flexible:** Compliance could be achieved in a shorter time span because the installation of equipment can occur in the final year of the compliance window
3. **Straightforward:** Reduces some complexity for owners with separate HVAC and DHW systems



# Proposed application & reporting timeline for multifamily prescriptive path

**Step 1:** Notify OSE of intent to use **prescriptive path** as part of GHG report (2027-2030)

- Notify OSE of plan to use prescriptive path when submitting first benchmarking verification and GHG report

**Step 2:** Submit **GHG Report** documenting actions taken to achieve compliance (beginning in 2031)

- What documentation can be used to show work is complete?
- Potential ideas: Contractor SOW, permits, photos, onsite verification

**[Mentimeter] What documentation can be used to show work is complete when using the multifamily prescriptive pathway?**



# Alternative Compliance Payment



# Background and rationale for alternative compliance payment (ACP)

(SMC 22.925.100) “**Alternative compliance payment**” or “**ACP**” means a payment that a building owner pays to the City to comply in lieu of meeting GHGITs.

- ACP is included as an **option in the first interval only** (2031-2035) for all covered buildings
- Offers **flexibility** – can accommodate situations when replacement timeline for equipment is out of sync with compliance deadline
- ACP **can cover up to 100% of the emissions target** – enables owner to make partial progress towards meeting GHGIT
- ACP (and fines) **at least 40% of the revenue collected prioritized** towards buildings in or serving disadvantaged communities (SMC 22.925.140)



# Many details of ACP are in the legislation, including the size of the payment

The greater of:

	Minimum payment	Calculated payment
Buildings ≤50,000 SF	\$1250	A calculation that multiplies the amount of GHG a building emits in excess of its GHGIT by the social cost of carbon (\$190.00 per MTCO <sub>2</sub> e)
Buildings >50,000 SF	\$2500	ACP = total annual MTCO <sub>2</sub> e/yr * 5 * cost of MTCO <sub>2</sub> e (\$/MTCO <sub>2</sub> e)  Total annual MTCO <sub>2</sub> e = [compliance GHGI (kgCO <sub>2</sub> e/SF/yr) - GHGIT (kgCO <sub>2</sub> e/SF/yr)] * gross floor area /1000



# How can building owners make alternative compliance payments?

- Payment mechanism does not need to be set up during initial rulemaking – why?
  - Administrative process
  - Limited options for owners to make payments to the City
  - **ACP is not an option for early compliance because it does not result in emissions reductions**
    - Payment is based on the actual MTCO<sub>2</sub>e above the GHGIT **at the time of compliance**
    - ACP payments will be made at the time of compliance (or shortly thereafter, pending City determining mechanism of payment)





# Questions?



# Looking ahead: End Use Deductions, Extensions, Exemptions, & Decarbonization Plans



# End use deductions will be covered in meeting #5

Option	Type	Description
Fossil Fuel Cooking Equipment	Deduction	May deduct emissions from cooking equipment (e.g., gas stoves, grills) from compliance GHGI.
High-intensity Process Equipment	Deduction	May deduct emissions from this equipment from compliance GHGI.
High-intensity Laundry Equipment	Deduction	May deduct emissions from this equipment from compliance GHGI.
Fossil Fuel Equipment in Residential Condo Units	Deduction	May deduct emissions from equipment located in the condo owner's unit (e.g., in-unit gas water heaters, gas stoves) from compliance GHGI.
Electric Vehicle Charging Equipment	Deduction	May deduct emissions from this equipment from compliance GHGI.
Communications Equipment	Deduction	May deduct emissions from this equipment from compliance GHGI.
Emergency Fossil Fuel Generators	Deduction	May deduct emissions from this equipment from compliance GHGI.
Emergency Backup Heat	Deduction	May deduct emissions from this equipment from compliance GHGI.
District Energy Contract in Place from Provider	Deduction	May deduct emissions from private district energy provided steam, hot water and/or chilled water from compliance GHGI.

# Extensions and exemptions will be covered in meeting #6

Option	Type	Description
Electric-Only Building	Exemption	Exemption from GHGIT requirements and reporting for all intervals -- must still verify benchmarking.
Building Demolition	Exemption	Exemption from all requirements and all intervals.
New Construction	Extension	One-time extension from all requirements of initial compliance date.
Financial Distress	Extension	One-time extension from all requirements for one compliance interval. (May be renewed).
High Rental Vacancy Rate	Extension	One-time extension from GHGIT requirements for one compliance interval -- must still verify benchmarking and report. (May be renewed).
Low Income Housing and Human Service Uses	Extension	One-time extension from meeting GHGIT in 2031-2035 -- must still verify benchmarking and report and meet subsequent GHGITs.
Low Income Housing: Pre-established Refinancing Date Conflict	Extension	One-time extension from meeting GHGIT in 2036-2040 -- must still verify benchmarking and report and meet subsequent GHGITs.
Low-Rent Housing	Extension	One-time extension from meeting GHGIT in 2031-2035 -- must still verify benchmarking and report and meet 2036-2040 and later GHGITs.

# Decarbonization plans will be covered in meeting #7 and a focus group

Option	Type	Description
Net-Zero by 2041-2050 Decarbonization Compliance Plan	Alternative Compliance	A customized plan, created by a qualified person, that shows how the building will achieve net-zero by 2041-2050. Plan must include details such as an energy/emissions audit, cost analysis, GHGIT schedule, actions, milestones, and any applicable content specified by decarbonization plan provisions in the Seattle Energy Code.
Low Emissions by 2041-2050 Decarbonization Compliance Plan	Alternative Compliance	A customized plan, by a qualified person,, shows how building will achieve a low carbon target by 2041-2050. Plan must include details such as an energy/emissions audit, cost analysis, GHGIT schedule, actions, milestones, and any applicable content specified by decarbonization plan provisions in the Seattle Energy Code.
District Campus Decarbonization Compliance Plan	Alternative Compliance	A customized plan, by a qualified person, shows how campus will upgrade its district energy plant to generate cumulative emissions reductions from 2028 – 2050 equal to or greater than the cumulative emissions reductions achievable by meeting GHGIT.



# Actions

- End of meeting [check-in](#)
  - In person meeting – planning for Wednesday, December 18<sup>th</sup> at the Smart Buildings Center in Seattle
- Moving January meeting from Jan 8th -> Jan 15th
- We will circulate a 'what we heard' summary. Please let us know if anything wasn't captured correctly



# Conclusion

- Topics for next session on October 9th:
  - Third-Party Verification for Benchmarking
- Questions or comments? Email [cleanbuildings@seattle.gov](mailto:cleanbuildings@seattle.gov)

# THANK YOU!



# Summary Slides of Breakout Group Discussion

*See summary notes for further detail*





# Group A: Two potential options to discuss for baseline calculations

**Option 1:** Can use third-party verified benchmarking data from 2024 onward (after BEPS passed)

**Option 2:** Must use data that is third-party verified during 1st compliance period (2027-2030)

- Better to have an earlier baseline - if buildings still emptier now vs future, later is better, but buildings tend to continue to improve over time so earlier could be better
- Hotels are still not up to pre-covid levels. Earlier is typically better, but maybe not the case now
- If Option 1, does everyone have to have 2024 as the baseline?
- No - must use third party verified energy benchmarking data. If outside of the 2027-2030 period, the earlier year data would still need to be third party verified data
- Life science/biotech challenge is that it's very dynamic - hard to get a solid baseline. May be very skewed if using 2024 data. Flexibility is useful, and allows more appropriate sequencing of upgrades
- Lots of leaning towards option 1 or neutral



# Group A: What circumstances would require recalculation of baseline emissions & alternate targets?

## Individual buildings eligible for alternate GHGIT

- The **gross floor area** (GFA) has changed from the baseline year by more than 10%\*
- The **largest primary building use** has changed from the baseline year

## Public or nonprofit building portfolios and campuses

- The **gross floor area of the portfolio** has changed from the baseline year by more than 10%\*
- **Buildings are added or removed** to the portfolio/campus

**Discuss in breakout groups:** Are these reasonable guidelines? Are there other circumstances that should be considered?

\*10% aligned with [International Performance Measurement and Verification Protocol \(IPMVP\) guidelines](#)

**Is this a reasonable rule for when baseline GHGIT must be recalculated? How often would this happen for your buildings? Are there any issues to consider? The gross floor area (GFA) has changed from the baseline year by more than 10%**

- How is GFA determined? King County assessor is currently used, but TBD.
- Historic buildings have specific requirements - Seattle Times Building, for example
- Can private building portfolios use this pathway? - No, just individual private buildings
- King County Assessor may not always be accurate, different methods will have different numbers
- Generally okay with the 10%, but unsure how the floor area is actually calculated
- Where do third party assessors get the data? BOMA



**Is this a reasonable rule for when baseline GHGIT must be recalculated? How often would this happen for your buildings? Are there any issues to consider? The largest primary building use has changed from the baseline year**

- Generally okay!
- What about changes in occupancy?
- May not be a change in use categories but still a lot of change within that category. Ex. densifying a floor with more lab space, still not changing use types. Maybe need an option for changing baseline if square footage per use type changes
- A third party verifier will generally check things like occupancy, floor plans, etc and see if the baseline still makes sense



## Anything else that should be considered?

- Occupancy
- Climate change - as in gradual and drastic changes in heating degree days and cooling degree days might be considered
- Environmental factors in proximity to the building - ex. A building nearby is torn down and affects solar exposure, trees planted
- Do I have the option to recalculate the baseline amount if I want to?
- Ownership changes?



# Group B: Two potential options to discuss for baseline calculations

**Option 1:** Can use third-party verified benchmarking data from 2024 onward (after BEPS passed)

**Option 2:** Must use data that is third-party verified during 1st compliance period (2027-2030)

- More flexibility is helpful, but we want to be careful with admin burden.
- Submit what they expect will be their target.
- As long as the baseline can be a period, option 2 dis-incentivizes fast action. Flexibility of having option 1 is good.
- It is also good to know what my number is - so using that earlier year is helpful.
- Alternate baseline is different than standard target - that does not need baseline!

# Group B: What circumstances would require recalculation of baseline emissions & alternate targets?

## Individual buildings eligible for alternate GHGIT

- The **gross floor area** (GFA) has changed from the baseline year by more than 10%\*
- The **largest primary building use** has changed from the baseline year

## Public or nonprofit building portfolios and campuses

- The **gross floor area of the portfolio** has changed from the baseline year by more than 10%\*
- **Buildings are added or removed** to the portfolio/campus

**Discuss in breakout groups:** Are these reasonable guidelines? Are there other circumstances that should be considered?

\*10% aligned with [International Performance Measurement and Verification Protocol \(IPMVP\) guidelines](#)

**Is this a reasonable rule for when baseline GHGIT must be recalculated? How often would this happen for your buildings? Are there any issues to consider? The gross floor area (GFA) has changed from the baseline year by more than 10%**

- Reasonable.
- Good starting point.
- Whole building type C IPMVP.
- Other cities used the same threshold
- Portfolio of office space and you add efficient SF of the portfolio in a more recent year. Taking the current SF and adopt to it back year.





**Is this a reasonable rule for when baseline GHGIT must be recalculated? How often would this happen for your buildings? Are there any issues to consider? The largest primary building use has changed from the baseline year**

- Replace under utilized SF with more efficient SF.
- If the building name changes, does it trigger this? This might dis-incentivize major Retro.
- Will divesting a poor performing building be dis-incentivized because of the baseline change?
- Maybe staying with 10% makes sense.
- Q: If an all electric building is added, will it trigger baseline and target re-calc? Perhaps if it adds 10% to sf. Worth looking at more.



## Anything else that should be considered?

- Could building type change impact baseline?

