



# Annual GHG and Energy Limits By-law Year 1 implementation



Micah Lang  
Gurmeet Ghera

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ENERGIZE  
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# Land Acknowledgement







# Agenda

- 1. Policy Overview**
- 2. Year 1 Results**
- 3. Support Programs**
- 4. What's coming up in 2025**
- 5. Q&A**



# 1. Policy Overview

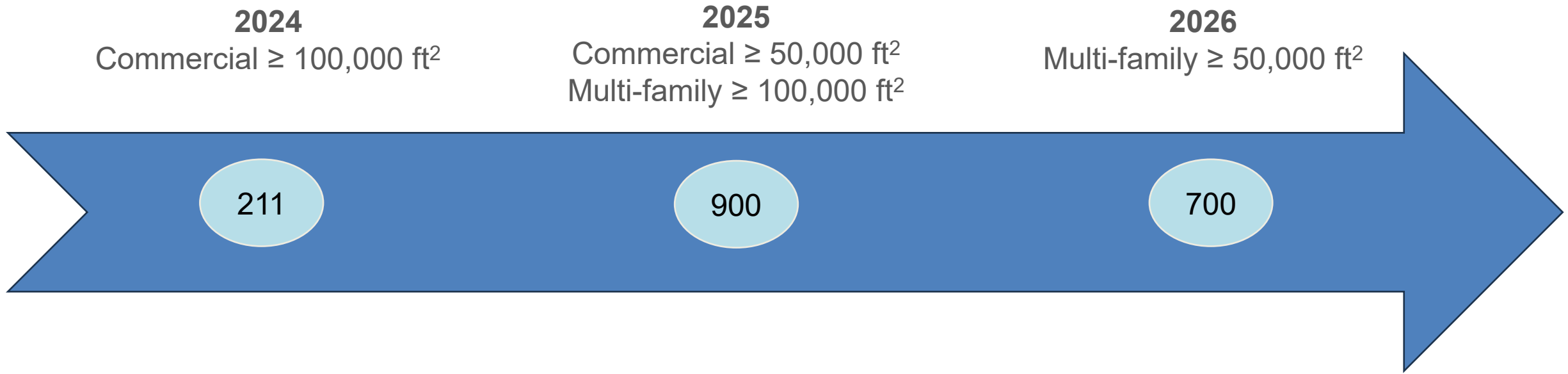


# Annual GHG and Energy Limits By-Law

- Establishes energy and carbon reporting rules for large commercial and multi-family buildings
  - Energy & Carbon Reporting (ECR)
    - Commercial and multi-family buildings  $\geq 50,000$  ft<sup>2</sup>
  - Greenhouse Gas Intensity (GHGI) and Heat Energy Intensity (HEI) Limits
    - Office & Retail Buildings  $\geq 100,000$  ft<sup>2</sup> **ONLY**
- Goal to cut emissions from all buildings 50% by 2030 and 100% by 2050



# Energy & Carbon Reporting (ECR) Timeline



# GHGI & HEI Limits - Timeline

**2026**  
 GHGI Limits  
 Office + Retail  $\geq$  100,000 ft<sup>2</sup>

**2040**  
 GHGI + HEI Limits  
 Office + Retail  $\geq$  100,000 ft<sup>2</sup>

**139** Office = 25kg CO<sub>2</sub>e/m<sup>2</sup>/year  
 Retail = 14kg CO<sub>2</sub>e/m<sup>2</sup>/year

**139** Office and Retail  
 GHGI = 0 kg CO<sub>2</sub>e/m<sup>2</sup>/year  
 HEI = 0.09 GJ/m<sup>2</sup>/year

Requirement	Timeline
ECR Report	Starting with 2024 submission; Annually (June 1)
Carbon Emissions Operating Permit	Starting in 2027; Annually (Aug 1)
Third-Party Certification	Starting in 2027; Every 4 years (June 1)







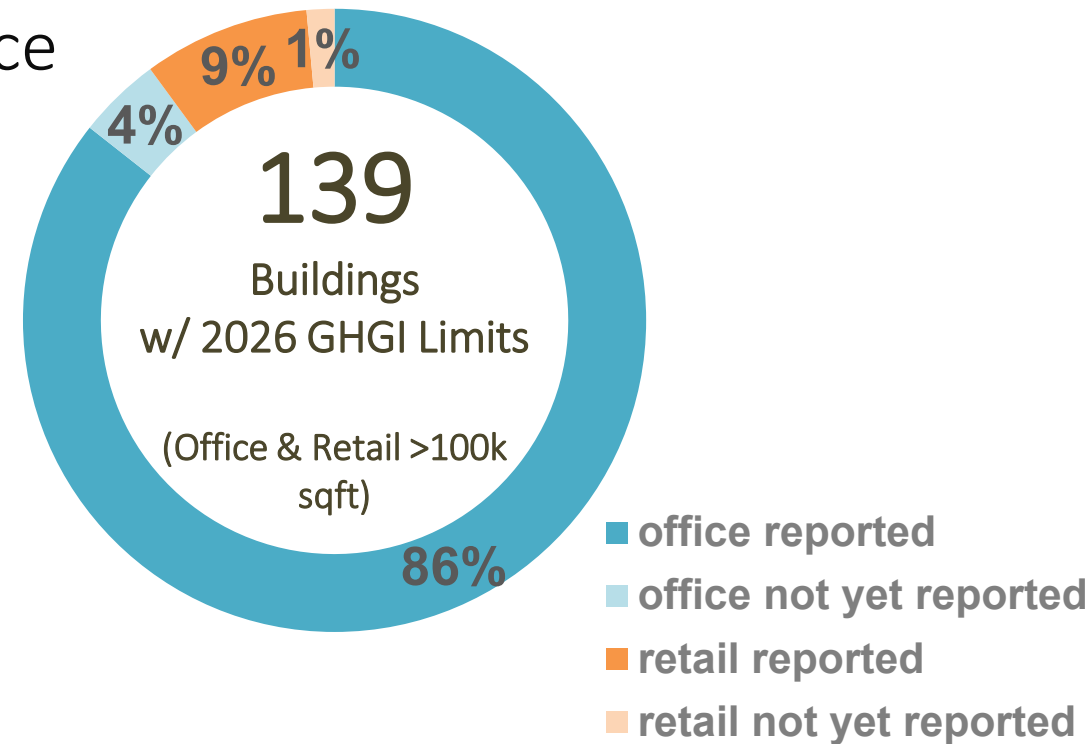
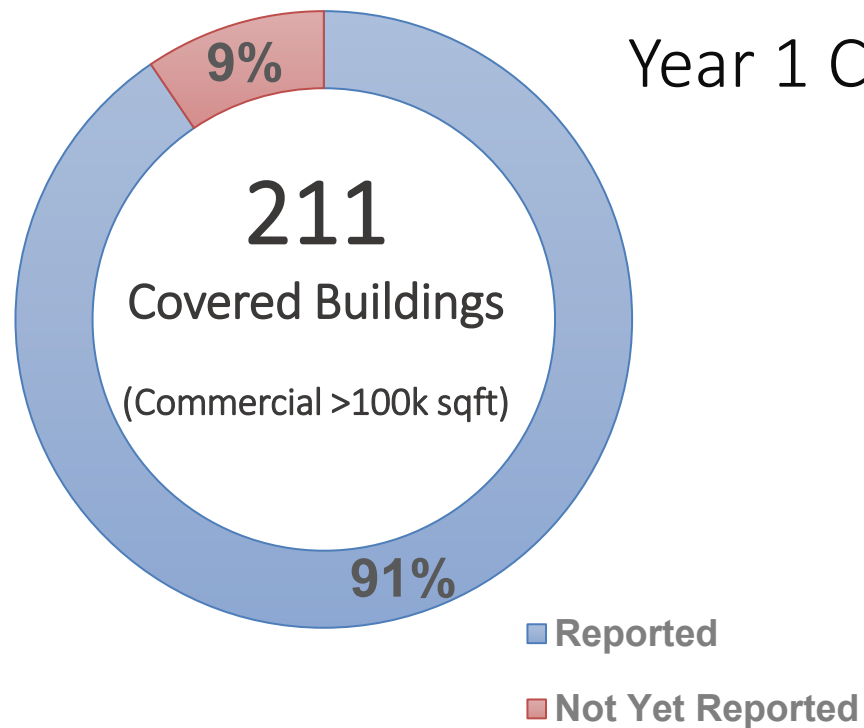
# 2. Year 1 Results



# Compliance Rate

## 91%

### Year 1 Compliance



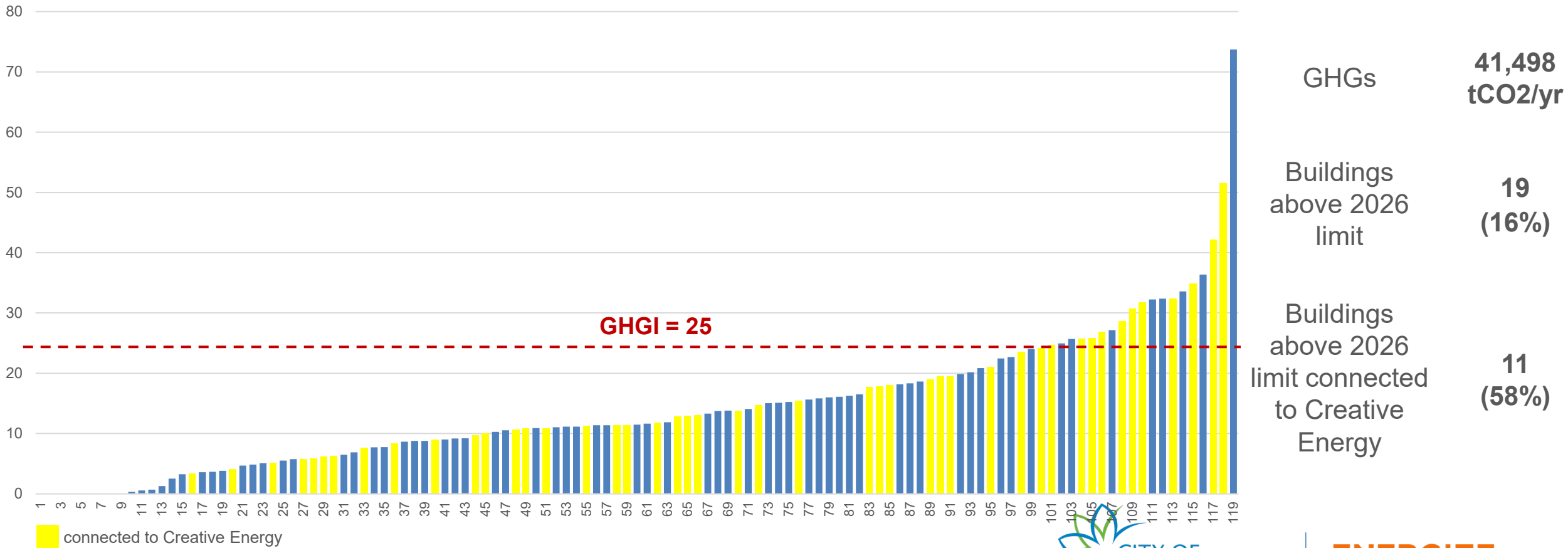
# Challenges

- Utility data access
- Connection issues with BPRS
- Metering questions
- Reporting restaurant energy use



# Office >100k sqft – GHGI Distribution

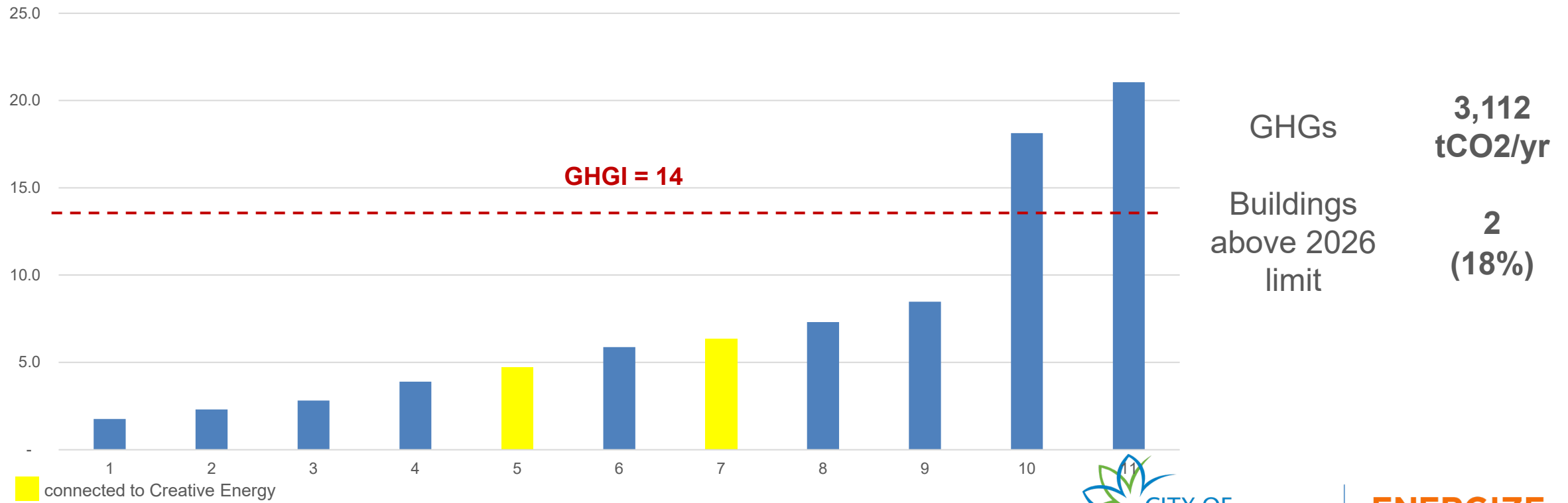
2023 GHGI Data (2024 Reporting Year) - Office Buildings with 2026 Limits





# Retail >100k sqft – GHGI Distribution

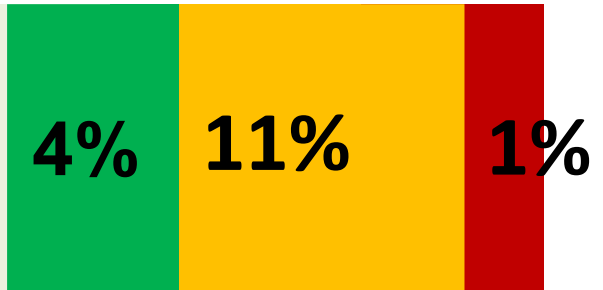
2023 GHGI Data (2024 Reporting Year) - Retail Buildings with 2026 Limits



connected to Creative Energy

# Outlook on 2026 GHGI Limit Compliance

**84%** OF BUILDINGS MEET LIMIT



TUNE-UP

LIGHT - MOD  
ACTION

DEEP  
ACTION

Recommissioning / Tune-ups | 1-3% operating cost savings  
Recommissioning / Tune-ups + RNG | 0.1 - 0.5% operating cost  
Equipment replacement | \$100-\$350/tCO<sub>2</sub>e capital, 1% operating cost savings

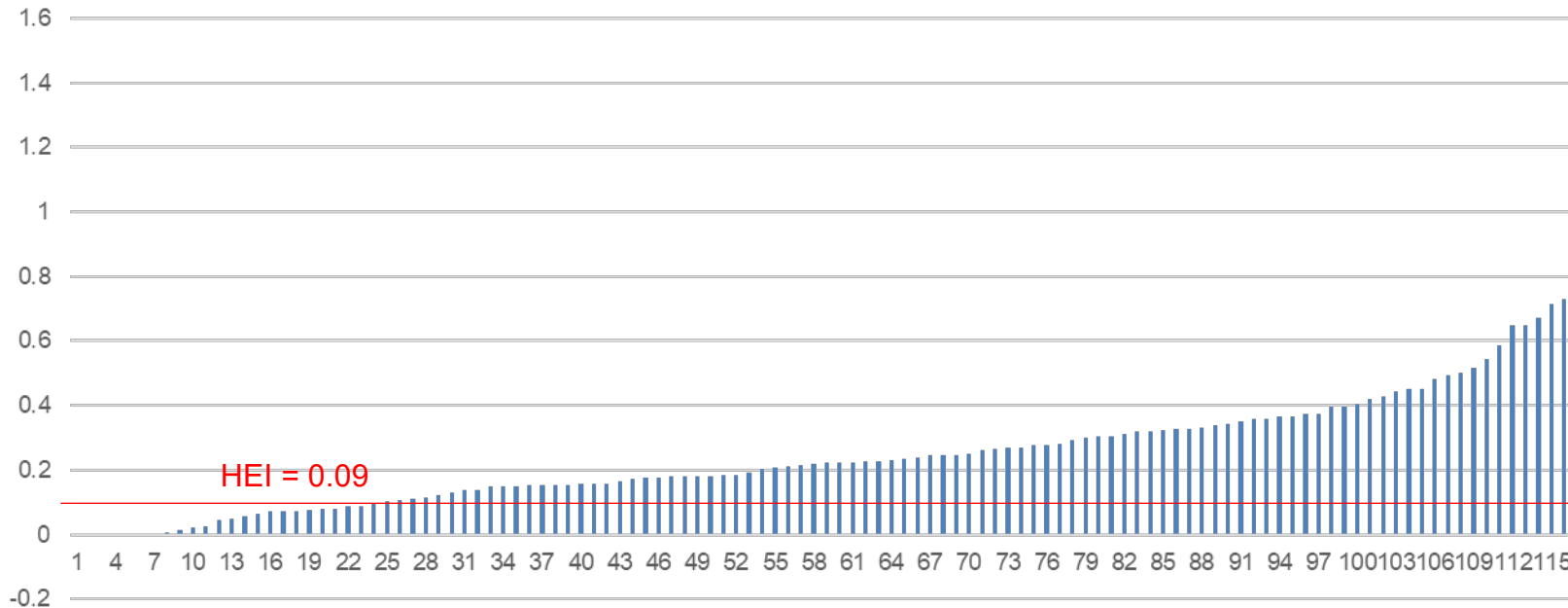
Creative Energy “Community Rate” (20%)\*: 1% operating cost  
Creative Energy 50% Low Carbon Rate\*: 1.5% operating cost  
Creative Energy 100% Low Carbon Rate\*: 3% operating cost

*\*proposed*



# Office $\geq$ 100k sqft – HEI Distribution

2023 HEI Data (2024 Reporting Year)  
Office buildings with 2040 HEI limits (n=117)

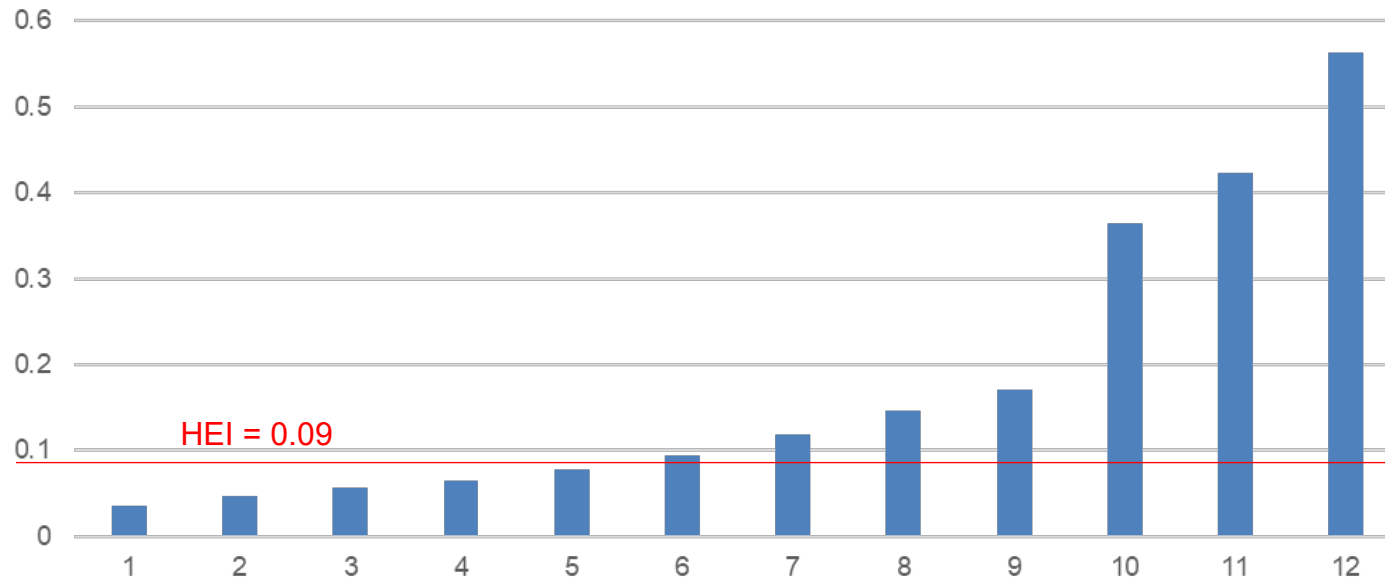


Heat Energy GJs	<b>687,445</b>
Buildings above 2040 limit	<b>94 (80%)</b>

\*includes office primary (n=95) + office-dominant mixed-use buildings (n=22)

# Retail $\geq 100k$ sqft – HEI Distribution

2023 HEI Data (2024 Reporting Year)  
Retail\* buildings with 2040 HEI limits



Heat Energy GJs **49,309 GJ/yr**

Buildings above  
2040 limit **7  
(58%)**

\*includes primary retail (n=10) and retail-dominant mixed-use buildings (n=2)





# Energize Vancouver Map



# Map

- Compliance status of buildings
- Key performance metrics for disclosed buildings
- Anonymized and non anonymized data export





# Building Performance Scorecards



[Redacted]
Timeframe: Jan. - Dec. 2023
Building ID: [Redacted]
Square Footage: [Redacted]
Year Built: [Redacted]

GHGI and HEI Limits Table	
	GHGs in Excess Limits (tons kgCO2) 0
2026 Limit	Projected GHG over emission permit fee (\$) \$0
	Carbon Emissions Operating Permit fee (\$) \$500
	GHGs in Excess Limits (tons kgCO2) 96
	Heat Energy in Excess of Limit 1,079
2040 Limit	Projected GHG & HEI over emission permit fee limits (\$) \$XX,XXX
	Carbon Emissions Operating Permit fee (\$) \$500

<b>GHGI: 10.3</b> kg CO2e/m2/yr	<b>Heat Energy Intensity:</b> 0.21 GJ/m2/yr
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- Your building stands **46<sup>th</sup>** in terms of GHGI and **56<sup>th</sup>** in terms of HEI out of **119 buildings**
- For further compliance with the 2026 GHG Limit/2040 GHG and HEI limit, conduct an energy audit and take advantage of utility programs for energy efficient and greener buildings

**EMISSIONS COMPLIANCE STATUS**

**Year of Emissions Compliance: 2026**  
(GHGI Limit = 25 kg CO2e/m2)

**ON TRACK**

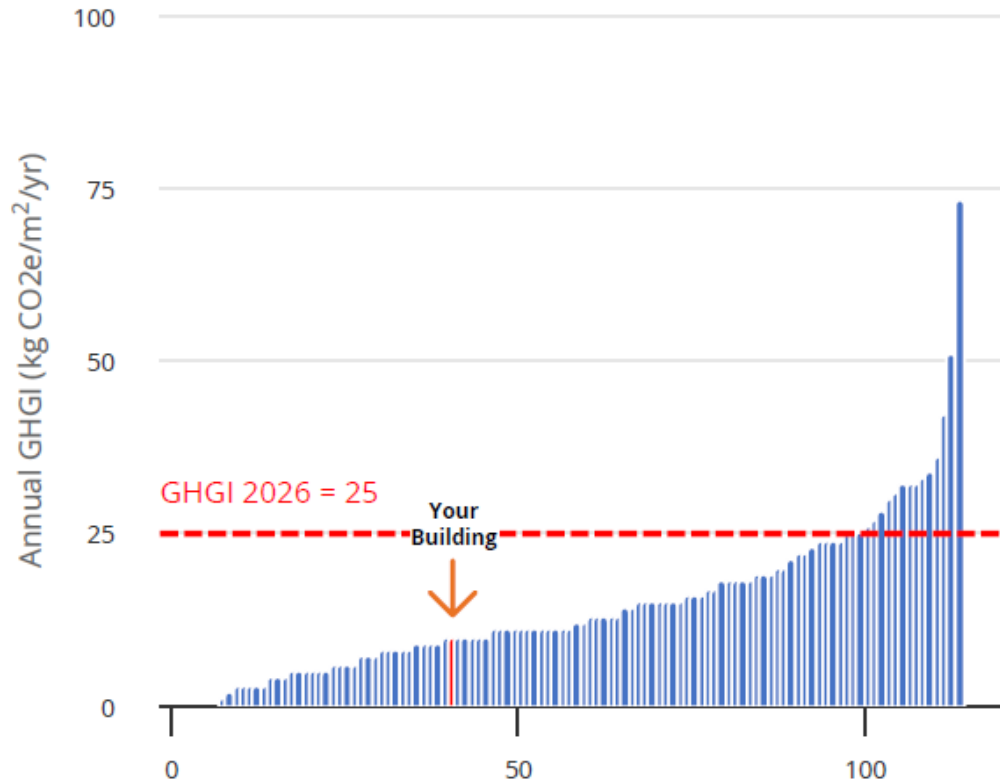
**Year of Emissions Compliance: 2040**  
(GHGI Limit = 0 KgCo2/m2 & HEI = 0.9 GJ/m2)

**REDUCTION PLAN REQUIRED**



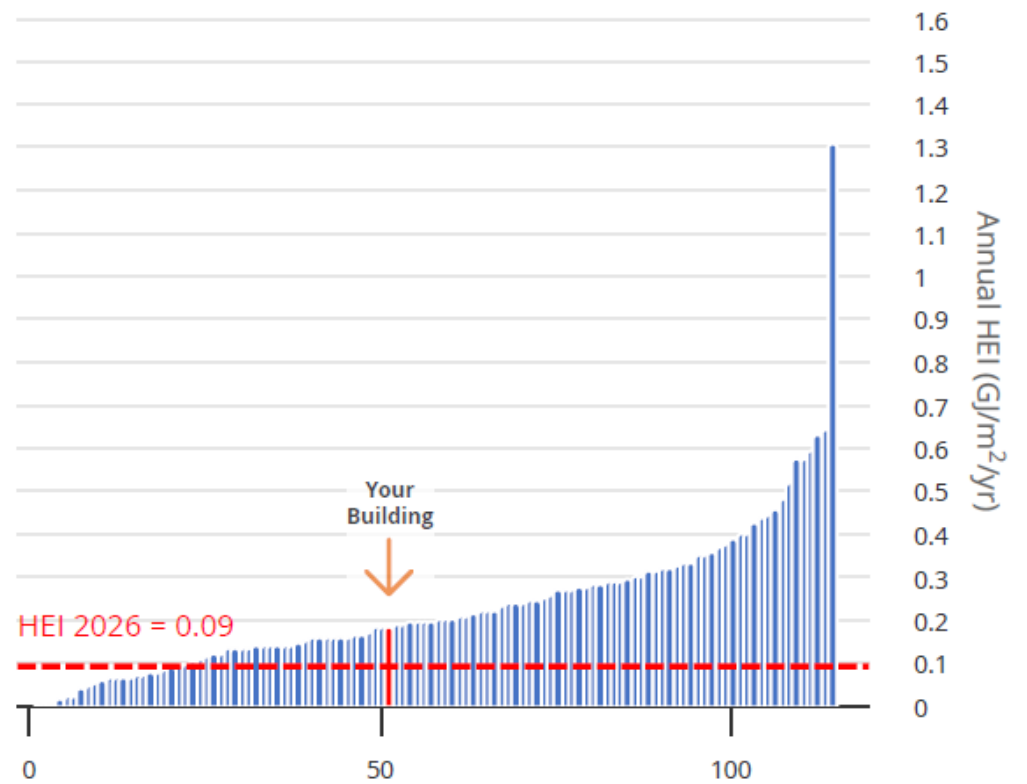
## Greenhouse Gas Intensity (GHGI) Comparison

See how your building's GHGI measures up against other office buildings in Vancouver



## Heat Energy Intensity (HEI) Comparison

See how your building's HEI measures up against other office buildings in Vancouver



## Resources and Recommended Actions

Energy-efficient and greener buildings provide financial savings, stand out in the market, and add resilience. Here are the recommended programs for your building.

### Identify inefficiencies in your building

[BC Hydro Integrated Energy Audit](#): offers up to 100% funding for an energy audit.

[CleanBC Feasibility Funding](#): Custom Program supports up to 50% of an energy study's cost, up to a maximum of \$20,000.

### Reduce GHGI and operational costs

#### Quick actions to meet 2026 limits

Incentives for GHGI reductions up to 20%

- [Continuous Optimization Program](#): offers no-cost recommissioning consultations to large, commercial buildings
- [HVAC Controls for Commercial and Industrial](#): offers rebates on connected thermostats, domestic hot water recirculation controls, hydronic additives
- [Pipe and Tank Insulation](#): offers rebate of \$4 - \$9 per square foot for pipe and tank insulation
- [Air Curtain Rebates](#): offers up to \$2,000 per door for installing a qualified air curtain

#### Long term actions to meet 2040 limits

Incentives for GHGI reductions up to 60%

- [Dual Fuel Rooftop Units](#): offers up to \$150,000 per installation or building
- [Custom Efficiency Program](#): offers up to \$500,000 to fund natural gas efficiency upgrades in commercial buildings

Sign up for FortisBC voluntary [Renewable Natural Gas](#) blend to lower your GHGI!

### Reduce electrical load and operational costs

[BC Hydro Lighting Systems Incentives](#): offers average incentive of 25% of a lighting project's cost

[BC Hydro Custom Project Incentives](#): offers funding for the implementation of energy management opportunities

### BC & Federal Tax Credit Programs

[Clean Buildings Tax Credit](#)

[Clean Technology Investment Tax](#)

For more information contact utilities:

FortisBC: [Olivia.Sieniewicz@fortisbc.com](mailto:Olivia.Sieniewicz@fortisbc.com)

BC Hydro: [Netu.Sidhu@bchydro.com](mailto:Netu.Sidhu@bchydro.com)

## City of Vancouver Annual Greenhouse Gas and Energy Limits Bylaw:

Office and retail buildings in Vancouver with gross floor area greater than or equal to 9,290 m<sup>2</sup> (100,000 ft<sup>2</sup>) will be subject to Greenhouse Gas Intensity (GHGI) limits starting in 2026 and Heat Energy Intensity (HEI) limits starting in 2040. These limits focus on reducing emissions from space and hot water heating and transitioning to low-carbon and renewable energy sources. Compliance can be achieved through energy efficiency measures and/or using low-carbon energy like electricity and renewable natural gas.

### Definitions & Terminology Used in the Scorecard:

- **2026 GHGI (Greenhouse Gas Intensity) Limit**  
The 2026 GHGI limit is set at 25 kg CO<sub>2</sub>e/m<sup>2</sup>/year for commercial office buildings and 14 kg CO<sub>2</sub>e/m<sup>2</sup>/year for retail buildings.
- **2040 GHGI (Greenhouse Gas Intensity) Limit**  
The 2040 GHGI limit is 0 kg CO<sub>2</sub>e/m<sup>2</sup>/year for both commercial office and retail buildings.
- **2040 HEI (Heat Energy Intensity) Limit**  
The 2040 HEI limit is 0.09 GJ/m<sup>2</sup>/year for both commercial office and retail buildings.
- **Carbon Emissions Operating Permit fee (\$)**  
The fee is applicable annually to all buildings covered under GHGI and HEI limits and is set at a flat rate of \$500 per year.
- **Projected GHG over emission permit fee 2026 (\$)**  
The over emissions fee applies to buildings that exceed their specified GHGI limit. This fee is calculated at a rate of \$350 per tonne of CO<sub>2</sub>e that surpasses above the allowed annual limit.
- **Projected GHG & HEI over emission permit fee 2040 limits (\$)**  
The over emissions fee applies to buildings that exceed the specified GHGI and HEI limits in 2040. This fee is calculated at a rate of \$350 per tonne of CO<sub>2</sub>e and \$100 per gigajoule (GJ) for buildings that exceed the annual GHGI and HEI limits, respectively.



# 3. Support Programs



# Support Programs

## Utilities

- Continuous Optimization Program – BC Hydro/FortisBC
- Battery Storage + Solar Incentives – BC Hydro
- Studies & Custom Incentives – FortisBC
- Hybrid HP RTUs - FortisBC

## BOMA BC

- Decarb Accelerator

## Tax Credits

- BC Clean Buildings 5% Tax Credit
- Federal 30% Clean Technology Investment Tax Credit

## Vancouver + BOMA *(Coming in 2025)*

- Decarbonization Planning Tool
- Commercial Building Accelerator



# Energize Vancouver

- One stop shop for existing commercial and multi-family buildings
- Regulation details
- Compliance steps
- Resources and support available



[vancouver.ca/energize-vancouver](http://vancouver.ca/energize-vancouver)



# 4. 2025 Outlook







# Upcoming activities

- Reporting for comm. and multi-family  $\geq 50,000$  ft sq
- Continued reporting for comm. buildings  $\geq 100,000$  ft sq
- Update adjustments for restaurant and residential use
- Publication of GHGI guide and technical reference manual – next week
- Monthly webinar series in 2025 till reporting deadline

# Q&A

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Q & A

Captions

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# Questions?

Stay up-to-date with Energize Vancouver mailing list at <http://vancouver.ca/energize-vancouver>

ECR Help Centre: [energycarbonreport@vancouver.ca](mailto:energycarbonreport@vancouver.ca) (604) 330-3797

