



Atlanta

6

# mini Technical Assistance Panel

**TEAM # 6**

GWINNETT PLACE MALL CID – NET ZERO IMPACTS

**MAY 8, 2023**

# AGENDA

- Introduction
- Summary of Findings
- Follow-up Steps
- Considerations
- Leadership Lessons

# Introduction



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# Summary of Findings

mTAP Project – Gwinnett Place Mall Redevelopment

**Challenge:** What regulations, procurement practices, policies are impeding design and construction companies from implementing innovative sustainable, net zero strategies? How can these barriers be innovatively eliminated?



We determined that there are **NO** regulations, procurement practices, and/or policies impacting the implementation of innovative sustainable solutions.

The only underlying impediment is a focus on short-term margins vs a long-term renewable and regenerative framework.



# Summary of Findings

mTAP Project – Gwinnett Place Mall Redevelopment

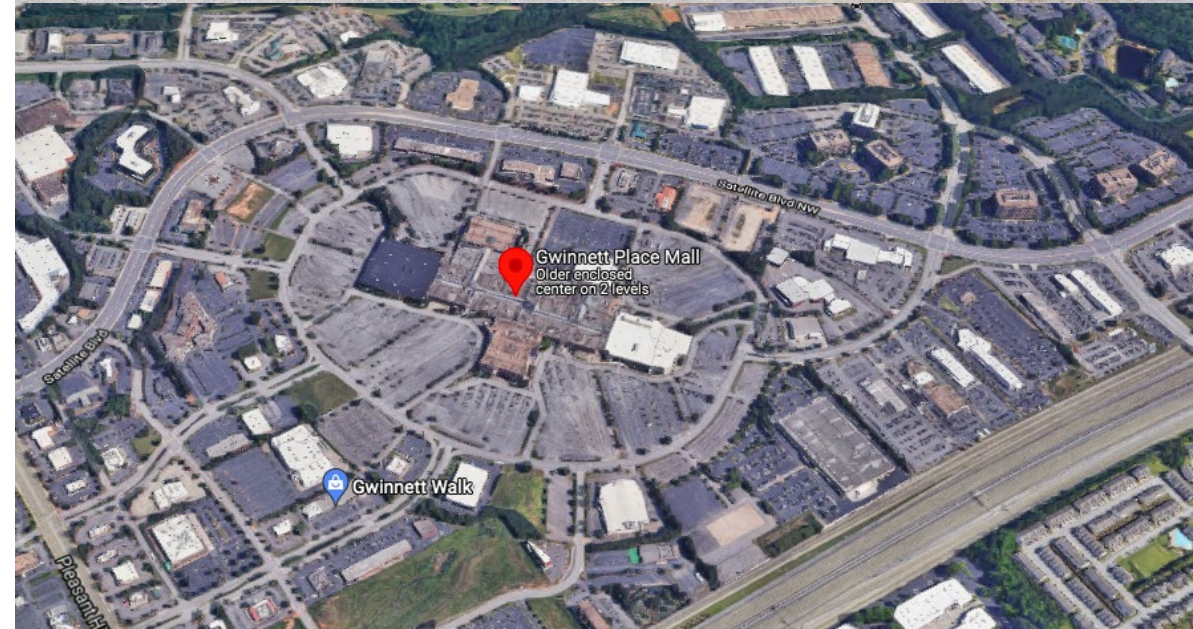
## Findings:

1. There are currently very limited considerations given towards incorporating sustainable solutions within the Gwinnett Place Mall Redevelopment Plans
2. The focus on multi-family developments creates opportunities for the county to invest in sustainable solutions
3. Changing leadership in the county can have an impactful presence on the future of this redevelopment
4. Local partners within this community should be included in sustainability efforts

# Summary of Findings

Existing Conditions: 80s-90s Suburban Expansion

- Zero Environmental Consideration
- Almost 100% Impermeable Surfaces
- Single Use Zoning
- Auto-Dominated
- Lack of Economic Diversity and Vitality
- Difficult to Adapt to Changing Economic, Cultural, and Environmental Development Trends





# Summary of Findings - Existing Conditions





# Summary of Findings

## Proposed Redevelopment - Global Villages

- 7 Villages
- Developed over 10- to 30-year period
- 2,400-3,800 Residential Units
- 55,000 sq.ft. of new retail
- 50,000 sq.ft. of office
- 51,000 sq.ft. cultural and educational center
- 12.7 acres of new parks
- 750 space public parking garage





# Next Steps

Sustainability Action Plan with a broad emphasis approach toward Net Zero

## Plan Considerations

- Leverage a multi-faceted approach
- Address both positive and negative components of carbon impacts
- Holistic sustainability as a path toward net zero
- Implementation of mandatory minimum requirements and incentive -based policy structures

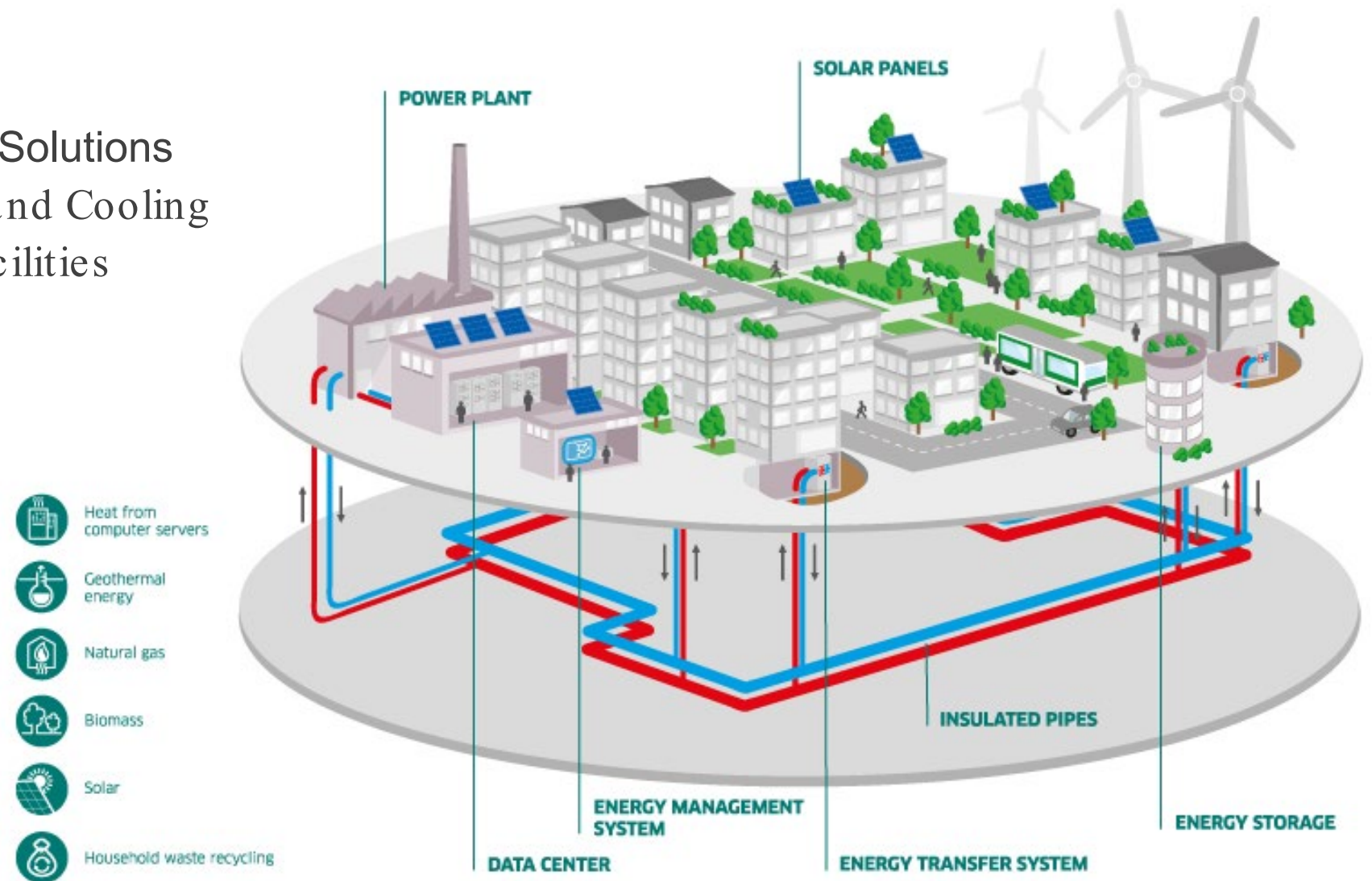
## Plan Focus Areas

- Energy
- Buildings
- Transportation
- Greenspace
- Jobs / Housing
- Education

# Energy

## District Level Facilities

- Pursue District Level Solutions
  - District Heating and Cooling
  - Cogeneration Facilities





# Energy

## Photovoltaic (PV) Generation

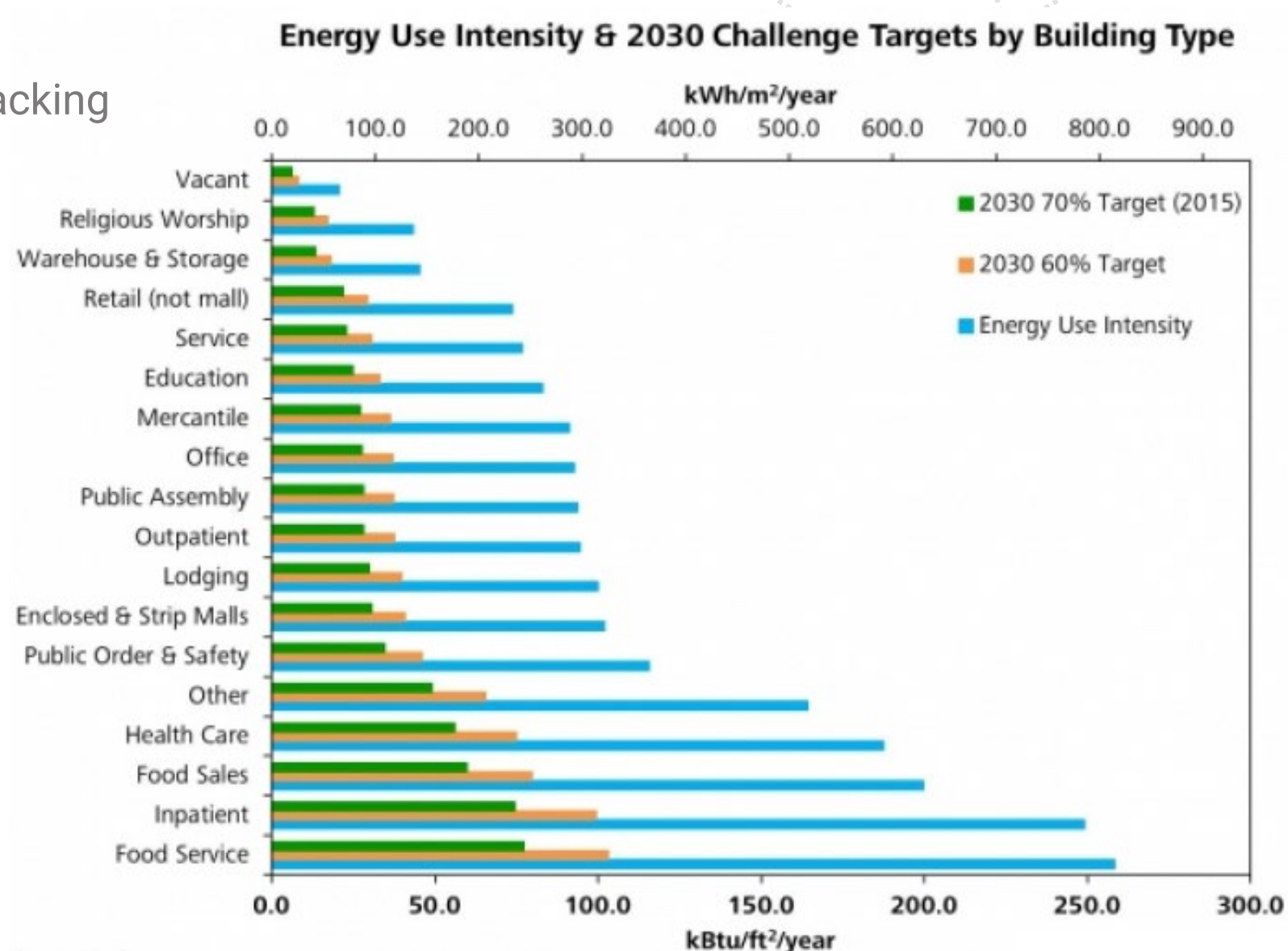
- On-Site
  - Canopy Parking
    - (deck and surface lots)
  - Building Rooftop
- On or Off-Site
  - Municipal Scale PV



# Energy

## Reduced Consumption and Tracking

- Establish District Level Energy Use Intensity (EUI) Targets

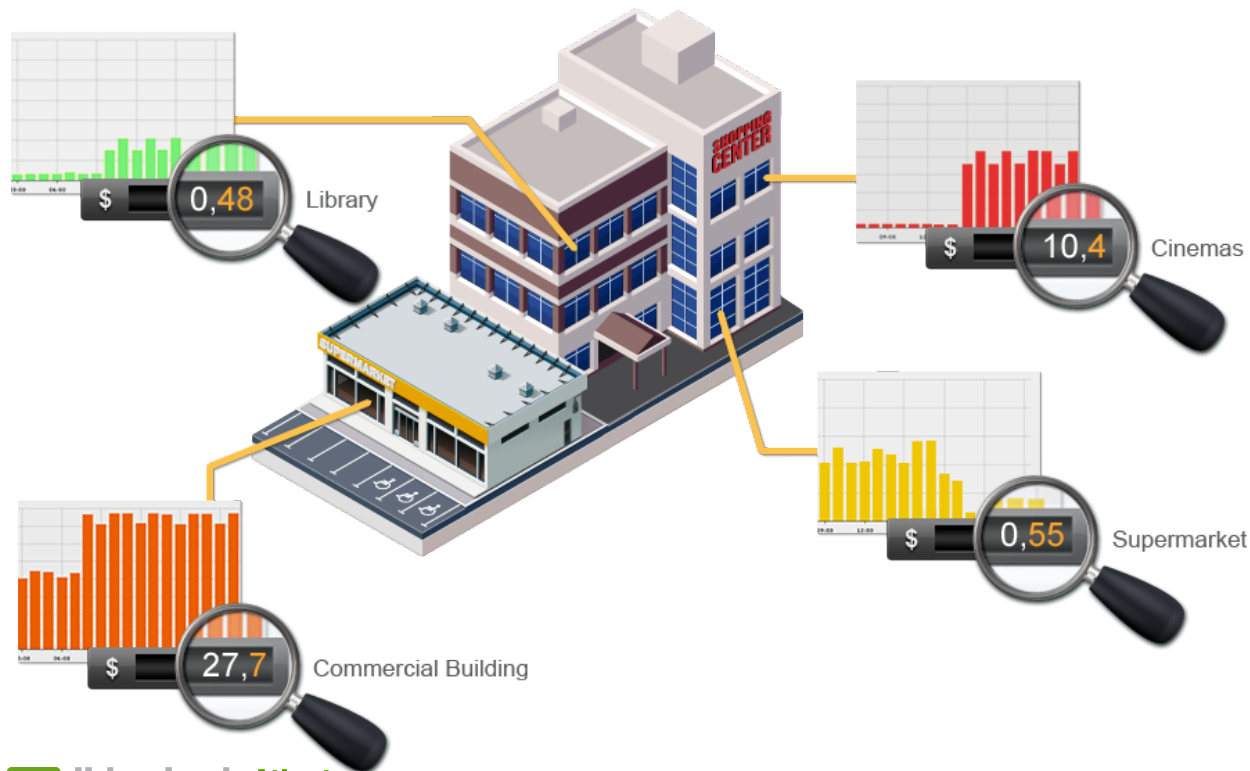




# Energy

## Reduced Consumption and Tracking

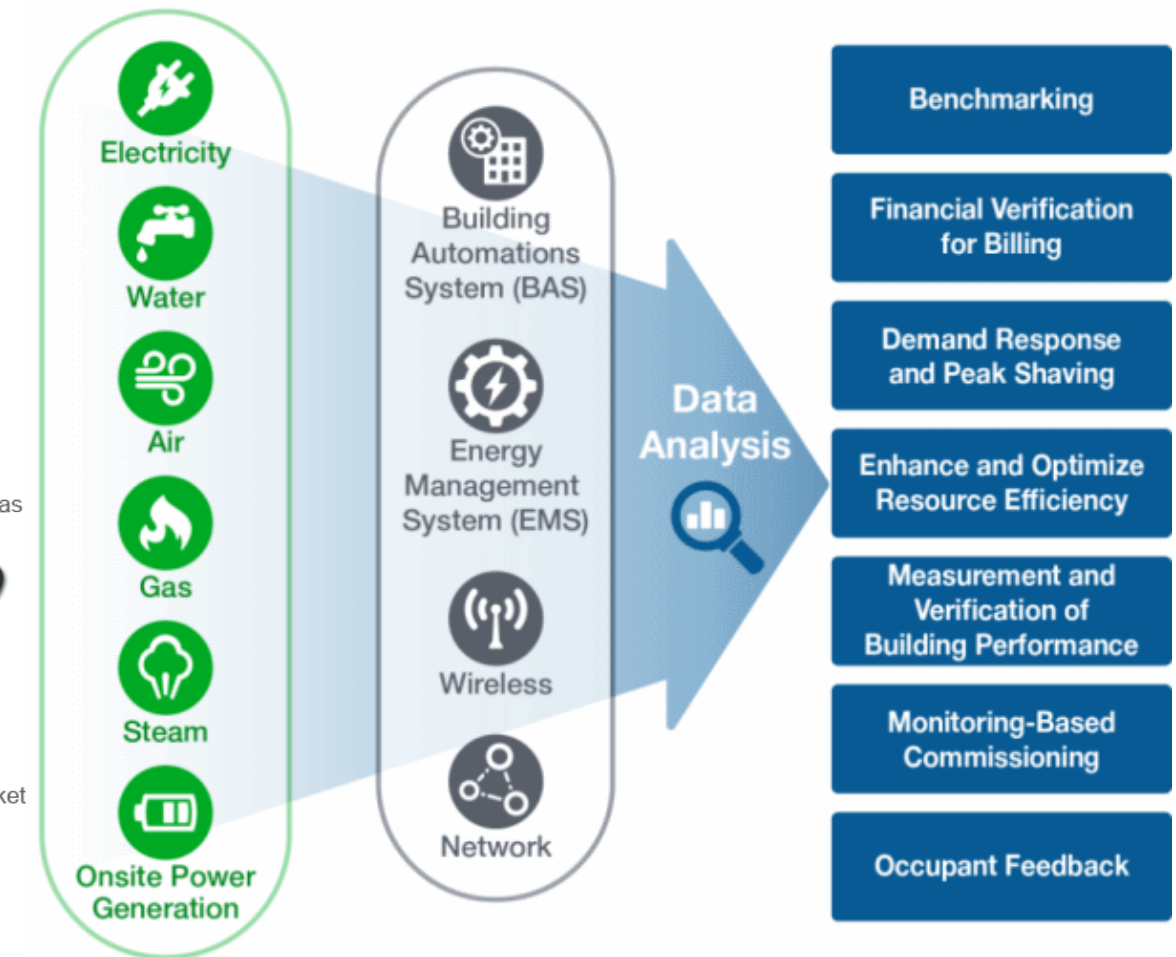
- Mandatory Energy and Water Submetering and Reporting



### Metering & Submetering

### Communications

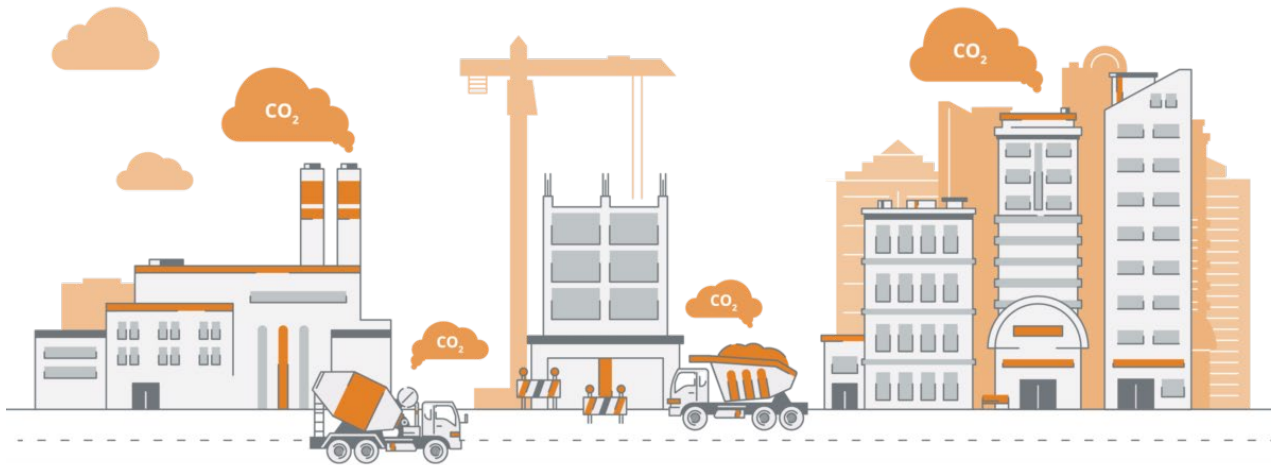
### Actions



# Buildings

## Embodied Carbon Material Technology

### Types of Carbon in Buildings



#### Embodied Carbon

The emissions from manufacturing, transportation, and installation of building materials.

#### Operational Carbon

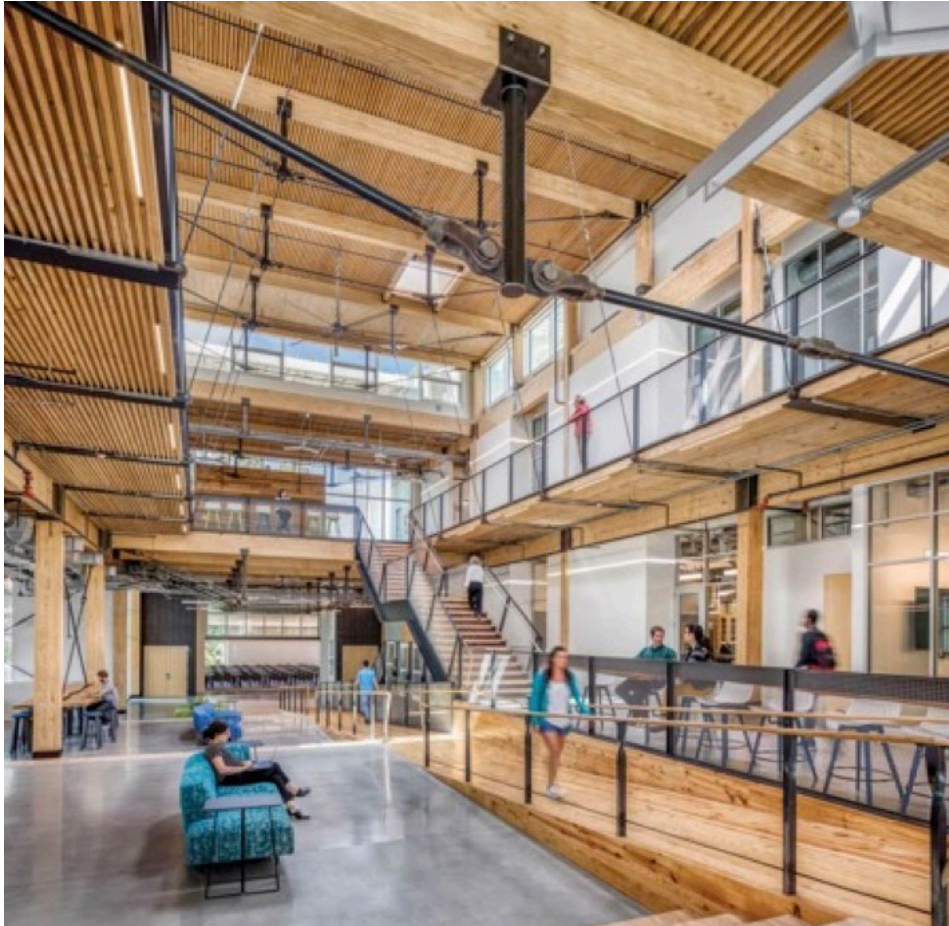
The emissions from a building's energy consumption.








# Buildings

## Passive Building Technologies

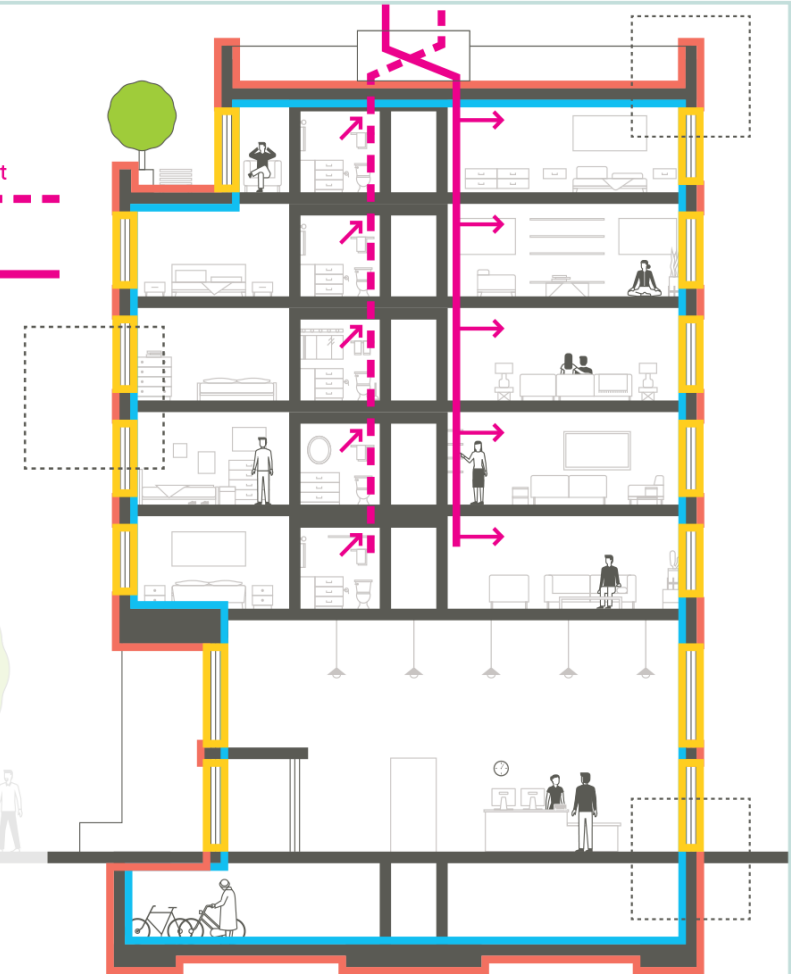


### PASSIVE HOUSE PRINCIPLES

-  Airtightness
-  Continuous insulation
-  Thermal bridge free construction
-  High performance doors and windows
-  Energy recovery ventilation
-  Appropriately sized HVAC
-  Quality control via testing and certification

exhaust

supply



### PASSIVE HOUSE BENEFITS

- Utility cost savings
- Avoidance of future carbon penalties
- Construction risk reduction
- Improved indoor air quality and occupant health
- Improved thermal comfort and acoustics
- Enhanced climate resilience and reliability



# Buildings

## Zoning Updates

Table 1 of 4

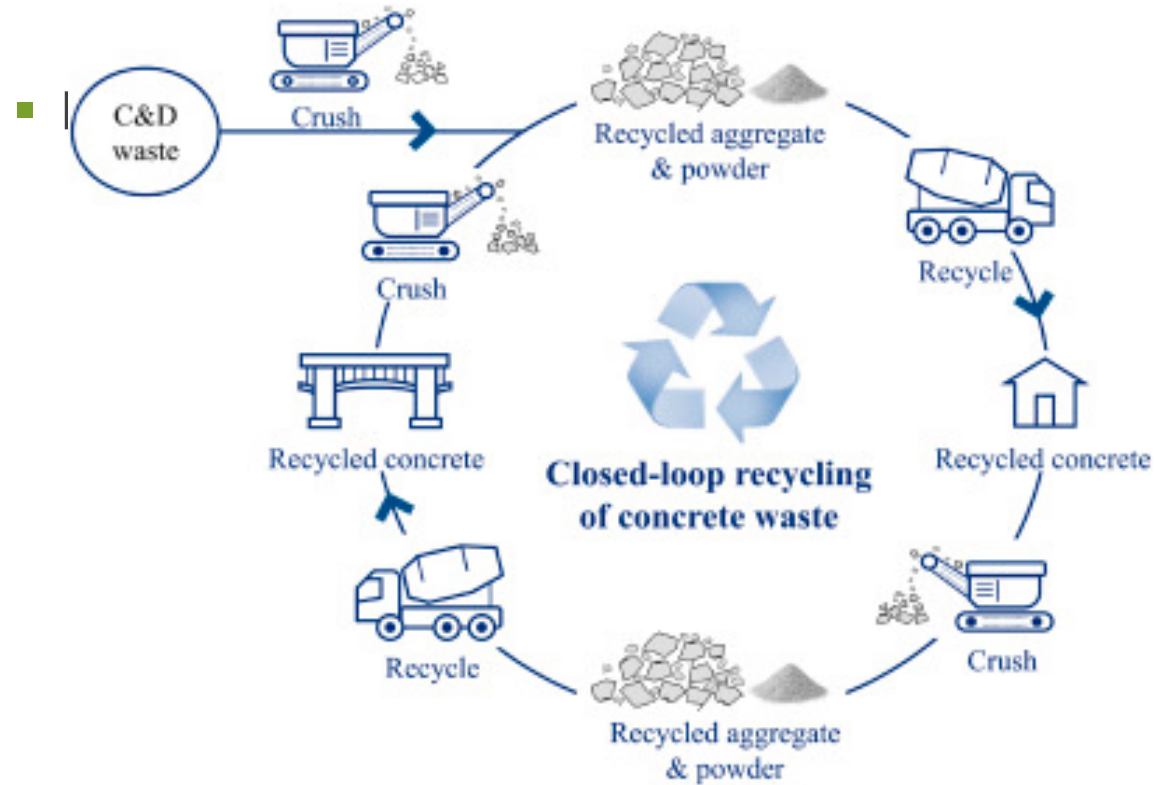
Table 1. Sustainability principles and regulatory items.

Sustainability principles	Regulatory items
I. Encourage higher density development	1. Infill development 2. Maximum lot size/minimum net density 3. Purchase or transfer of development rights (PDR/TDR) 4. Small lot residential development permitted (<3,000 square feet)
II. Encourage mixed use	1. Commercial uses permitted in standard residential districts (e.g., R1) 2. Housing of any kind permitted in standard commercial districts (e.g., C1) 3. Live/work units permitted in standard residential districts (e.g., R1) <sup>a</sup> 4. Mixed-use land development 5. Mixed-use buildings/mixed occupancy permitted in standard residential districts
III. Encourage local food production	1. Agricultural uses permitted in standard residential or commercial districts <sup>b</sup> 2. Commercial gardens permitted in standard residential or commercial districts 3. Community gardens permitted in standard residential or commercial districts 4. Farmers markets permitted in standard residential or commercial districts 5. Minimum lot size/maximum net density (ag districts only) 6. Urban agriculture/farming, including animal keeping
IV. Protect ecosystems and natural functions	1. Conservation subdivisions/cluster housing 2. Conservation landscaping 3. Green/eco-roofs 4. Green infrastructure/on-site water management 5. Open space protection/preservation, including agriculture 6. Parking lot landscaping 7. Pervious surfaces 8. Steep slope and hillside protection 9. Water resources/wellhead protection, including riparian buffers 10. Wetlands and wildlife habitat protection
V. Encourage transportation alternatives	1. Bicycle paths and/or parking 2. Complete streets/ <i>woonerf</i> 3. Parking maximums 4. Shared/joint use parking 5. Transit-oriented development (TOD) 6. Transit stops/stations permitted in standard residential districts
VI. Preserve/create a sense of place	1. Form-based code 2. Grocery stores permitted in standard residential districts 3. Historic/cultural preservation 4. Maximum building size or building occupancy 5. Natural hazards (except flooding) 6. Neighborhood or district development/preservation 7. Pedestrian-friendly development 8. Public and civic spaces/urban plazas 9. Public markets permitted in standard residential or commercial district 10. Transportation connectivity (within and between neighborhoods) 11. Urban design/design review
VII. Increase housing diversity and affordability	1. Accessory/secondary dwelling units 2. Boarding and rooming houses/single-room occupancy housing permitted in standard residential districts 3. Community housing permitted in standard residential districts 4. Cooperative housing permitted in standard residential districts 5. Inclusionary/affordable housing 6. Manufactured housing permitted in standard residential districts 7. Small dwelling units (<1,000 square feet) permitted in standard residential districts <sup>c</sup>
Table 1. (Continued). Sustainability principles and regulatory items.	
Sustainability principles	Regulatory items
VIII. Reduce the use of fossil fuels/encourage the use of fossil fuel alternatives	1. Green buildings 2. Solar energy systems or projects 3. Wind energy systems or projects
IX. Encourage the use of industrial byproducts	1. Eco-Industrial park development



# Buildings

## Reuse and Recycling of Existing On-site Materials





# Transportation

## Net Zero Impacts

- Electric vehicles have higher upfront costs – but lower total life cycle costs
- Integrating solar energy into local plans to support sustainability

### Electrifying Transportation



- Promoting walkable space is good for the environment and health
- Walkable cities increase home values

### Enhancing Pedestrian Infrastructure



- Traffic delays create congestion, which increase CO2 emissions
- Limited congestion will decrease CO2 from exhaust

### Reducing Congestion along Pleasant Hill Rd





# Transportation

## Electrifying Transportation

- EV Bus Connection
- EV Charging Station
- Integrate solar energy into local plans

Electrifying  
Transportation



### Consideration:

Transportation accounts for 30% of carbon emissions. Embracing electrical vehicles would have a significant impact on the carbon reduction efforts around Gwinnett Mall.

- Electric Vehicles have a higher upfront cost, but cheaper operating costs, which would present lower overall costs after the first 3.5 years
- Incorporating solar energy initiatives can provide cost controls and enhance sustainability efforts

### Options:

- Introduce EV Bus Connection
- Advance installation of EV charging stations
- Upgrade existing lighting along Pleasant Hill Road to solar powered streetlights



# Transportation

## Enhancing Pedestrian Infrastructure

- Promoting walkable space is good for the environment and health
- Walkable cities increase home values

Enhancing  
Pedestrian  
Infrastructure



### Consideration:

40% of the Gwinnett CID is parking space. With a focus on increasing multi family residential growth, enabling a more pedestrian friendly environment would benefit both reducing the carbon footprint and impacting socioeconomic factors of the community.

### Options:

- Evaluate zoning laws
- Create protected bike lanes
- Enhance walkable areas such as trails and greenspace areas





# Transportation

## Reduced Congestion

- Traffic delays create congestion, which increase CO2 emissions
- Limited congestion will decrease CO2 from exhaust

Reducing  
Congestion along  
Pleasant Hill Rd



### Consideration:

Not only does traffic congestion have a harmful effect on the air, it negatively impacts fuel consumption and travel time expectations.

### Options:

- Investigate adaptive traffic control options – Optimize flow of traffic along Pleasant Hill Rd
- Revisit/Revise incident response plans for Pleasant Hill Rd - When incidents occur on I-85, traffic may be diverted to Pleasant Hill Rd, working with GDOT to implement the most optimal response plan will support the management of congestion during those times.

# Greenspace

## Parks and Access

- Parks Inherently provide climate and health benefits to the communities
  - Cool- green spaces reduce "heat Island" effect which protects people from heat and reduces energy usage
  - Absorb- Pervious area in parks absorb rainfall which reduces flooding and the need for irrigation
  - Protect- Parks provide safe spaces for outdoor activities and buffers from roads and buildings
  - Connect- Trails, greenways and park systems provide carbon-free transportation options and link residents to popular destinations and to one another.

Figure 30. Contextual Bicycle and Pedestrian Connections

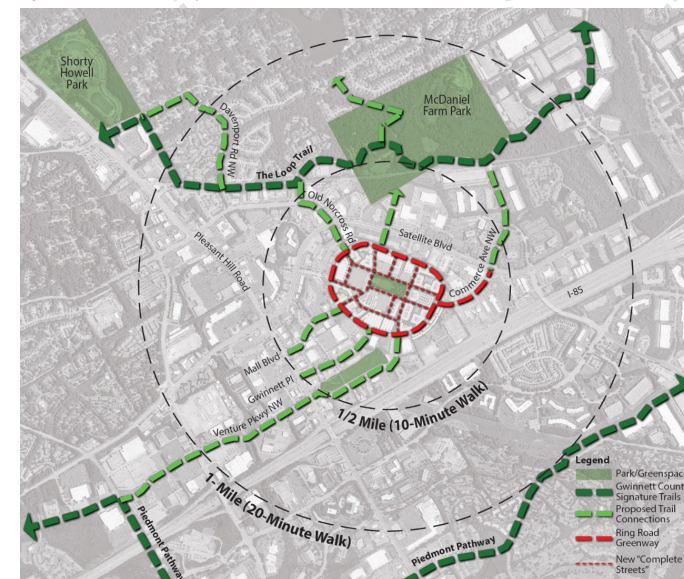
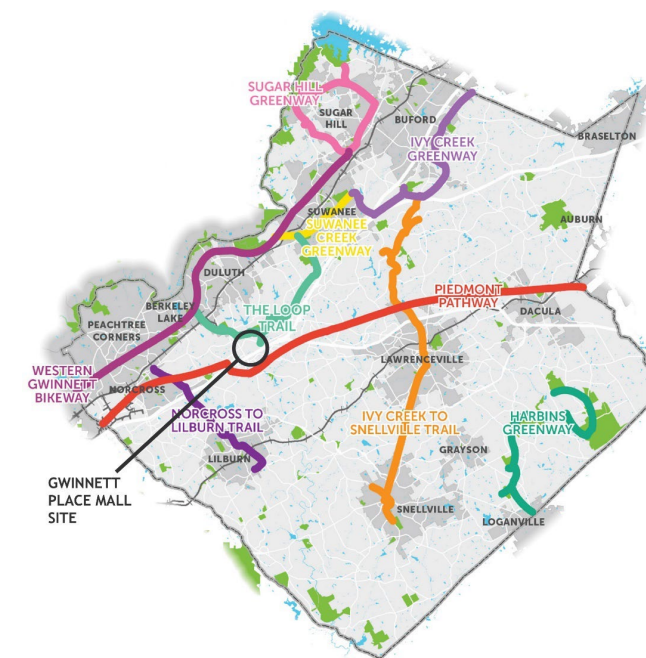


Figure 3N. Signature Trails from Gwinnett County Trails Master Plan



# Greenspace

## Greenways

- Improve access to non -automotive transportation through use of bicycle trails and pedestrian walkways
- Improved health through active living
- Absorbed carbon through trees and plants
- Enhanced cultural identity



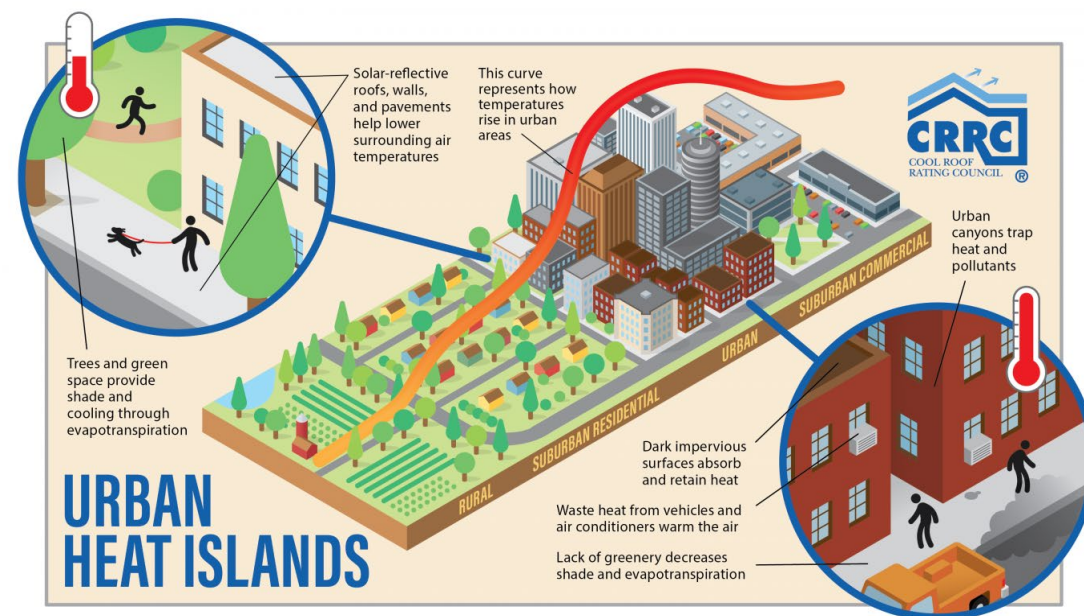


# Greenspace

## Tree Canopy

### ■ Heat Island Mitigation

- Increasing tree and vegetation cover lowers surface and air temperatures by providing shade and cooling. Trees and vegetation can also reduce stormwater runoff and protect against erosion.
- The use of trees and vegetation in the urban environment brings benefits beyond mitigating urban heat islands including:
  - Reduced Energy Usage
  - Improved Air Quality
  - Enhanced Stormwater Management and Water Quality
  - Reduced Pavement Maintenance
  - Improved Quality of Life





# Jobs

## Net Zero Impacts

### Benefits of Net Zero Policy on U.S. Employment

- The US Inflation Reduction ACT (IRA) of 2022 not only aims to reduce emissions by 50% by 2030, but new research shows it also has the potential to deliver massive economic benefits
- Research from the World Research Institute (WRI) finds that federal policies relying on a combination of tax credits for low-carbon technologies and infrastructure investments can generate an additional **900,000 jobs** by 2035.
- The study also finds that additional federal policies geared to bring U.S. emissions down to net zero by 2050 can create an extra **2.3 million net jobs** by 2035.
- While net zero policy will not benefit all jobs sectors, the IRA can ensure that clean energy transition does not come at the expense of some workers and communities.

# Jobs

## Net Zero Impacts

### Effect of Net Zero on Energy Employment Sectors

- The primary benefactors in the energy space will be those who work in electricity and buildings.
- The energy sectors who will potentially face the most job losses as a result of net zero policy are in transportation and fuels.

Summary of Employment Impacts Across Sectors by Scenario, 2020 vs. 2035

Energy Economy Sector/Subsector	2020	2035 - RS	2035 - ATC Scenario	2035 - NZ Scenario
<b>Electricity</b>	<b>3,879,180</b>	<b>4,890,437</b>	<b>6,184,901</b>	<b>7,717,523</b>
Distributed Solar PV	395,300	496,642	496,893	496,642
Utility solar	100,670	616,452	1,499,447	2,548,918
Offshore Wind	0	108,100	108,100	110,764
Onshore Wind	187,686	464,576	1,056,809	1,423,033
Other Generation	183,036	182,890	182,890	182,890
Natural Gas	334,376	496,379	447,640	494,759
Coal**	181,680	0	0	0
Nuclear**	307,360	292,542	272,201	272,043
Transmission & Distribution	1,877,272	1,908,737	1,974,559	2,057,771
Storage	111,780	124,118	126,362	130,704
<b>Buildings</b>	<b>2,510,698</b>	<b>6,017,948</b>	<b>6,980,233</b>	<b>7,119,655</b>
Res Efficiency	1,172,503	1,988,565	1,956,833	1,740,528
Non-Res Efficiency	885,601	3,388,680	3,364,860	3,352,852
Res Electrification	264,603	401,337	918,506	1,103,502
Non-Res Electrification	187,989	239,367	740,035	922,772
<b>Transportation</b>	<b>5,963,198</b>	<b>5,818,508</b>	<b>4,593,718</b>	<b>3,999,965</b>
Alternative Vehicles	309,912	1,743,852	2,159,224	3,651,432
Alternative Vehicles Infrastructure	16,732	117,132	155,950	244,949
ICE Vehicles**	5,636,553	3,957,523	2,278,544	103,584
<b>Fuels</b>	<b>4,430,591</b>	<b>4,279,831</b>	<b>3,556,985</b>	<b>3,224,725</b>
Hydrogen	29	5,583	8,489	369,025
Biofuels	162,817	159,135	334,139	418,248
Fossil Fuels**	4,267,745	4,115,113	3,214,357	2,437,453
<b>Others*</b>	<b>30</b>	<b>30</b>	<b>381,124</b>	<b>998,142</b>
<b>Net Change in Employment (2020-2035)</b>		<b>4,223,079</b>	<b>5,093,286</b>	<b>6,478,336</b>

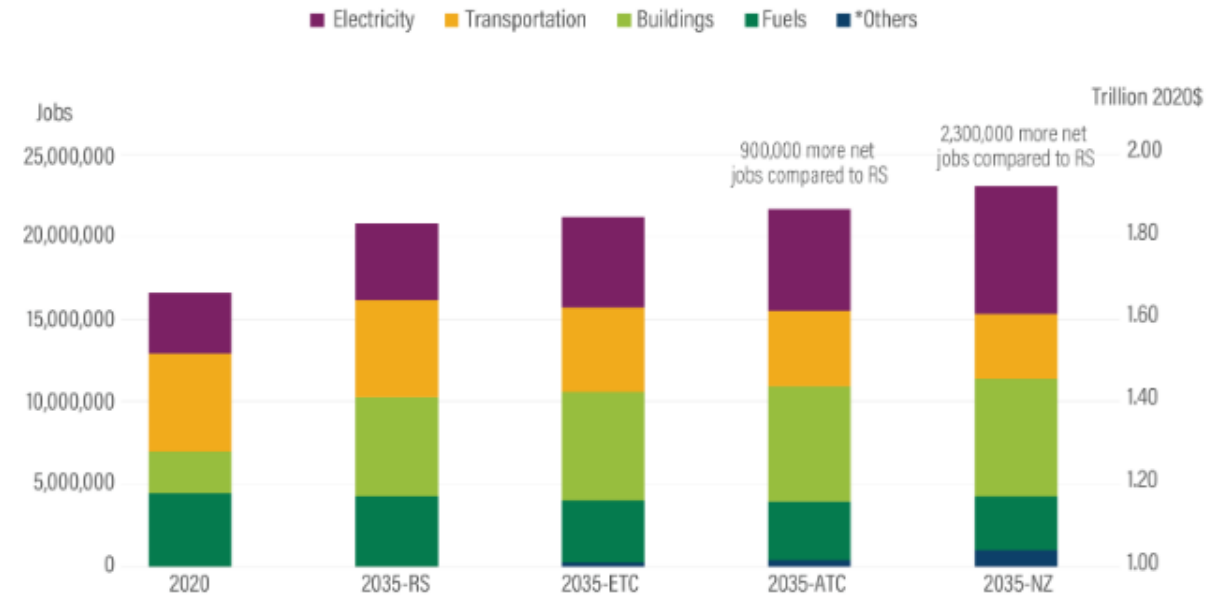
# Jobs

## Net Zero Impacts

### Job Growth by Employment Sector as a result of Net Zero

- Improving the energy efficiency of buildings and advancing building electrification are the most labor-intensive of all clean energy measures and generate local construction jobs in every part of the country.
- The next-biggest job-creating sector is power generation, where federal policies and investments to generate zero-carbon electricity and modernize the electric grid lead to 2.5 million and 4 million net jobs by 2035

Net employment across different sectors by scenario, 2020 and 2035\*



# Housing

## Incentivizing Net Zero Housing

### To drive adoption of the US DOE Zero Energy Ready Home Program (ZERH) the following incentives could be issued

- Density bonuses could be awarded for developers who agree to comply with a certain number of the
- In addition to the density bonus, another attractive incentive tool could be a tax abatement that is structured on a sliding scale depending on the number of best practices adopted by a developer. By way of example, if a developer agrees to adopt 10 of the categories in the new ZERH program, the tax abatement would have a term of 10 years.

Program Component	Version 1	Draft Multifamily Version 2	Rationale
Built-In Best Practices (Mandatory Requirements)			
ENERGY STAR Prerequisite	Requires certification under the ENERGY STAR program applicable to the project. Program version depends on state.	Requires certification under <a href="#">ENERGY STAR Multifamily New Construction (ESMFNC) Version 1.2</a> , which is the most recent version of ESMFNC.	ZERH-MF V2 builds upon the efficiency and performance of ESMFNC and therefore references the highest efficiency ESMFNC program version available.
Building Envelope Insulation Levels	2015 IECC insulation requirements (Residential Chapter) for opaque areas.	2021 IECC insulation requirements ( <a href="#">Residential</a> or <a href="#">Commercial</a> chapter) for opaque areas.	All ZERH projects take advantage of the one chance to build a very high-performance envelope.
Window U/SHGC Values in Dwelling and Sleeping Units	Based on ENERGY STAR V5.0 and 6.0 specs, depending on climate zone.	Based on ENERGY STAR V6.0 specs for all climate zones, except for Very Cold Climates (6-8) which are more rigorous at U 0.25. Allowances provided for structural (Class AW) windows.	Updates the minimum window requirements to higher performance levels. Even higher performance windows may be used to meet performance targets.
Hot Water System Efficiency	Requires an efficient hot water plumbing layout or the use of high efficiency water heater + water conserving fixtures (and a backstop for stored volume in hot water piping).	Also requires a maximum amount of stored volume in hot water piping (similar to V1). Adds pipe insulation requirements for central recirculating systems, and requires <a href="#">WaterSense</a> fixtures for in-dwelling showerheads, bath faucets and aerators.	Targeted measures to reduce water heating energy, improve overall building performance, and generate water use savings.
High Efficiency Lighting in Dwellings	80% requirement.	100% requirement.	Recognizes the cost-effectiveness and availability of LEDs, and increases ZERH efficiency.
Energy Efficient Appliances	All builder-installed refrigerators, dishwashers, and clothes washers are ENERGY STAR qualified.	All builder-supplied and installed in-dwelling refrigerators, dishwashers, clothes washers, and clothes dryers are <a href="#">ENERGY STAR qualified</a>	Recognizes ENERGY STAR labeling of clothes dryers and increases ZERH efficiency.



# Housing

## Incentivizing Net Zero Housing (ctd.)

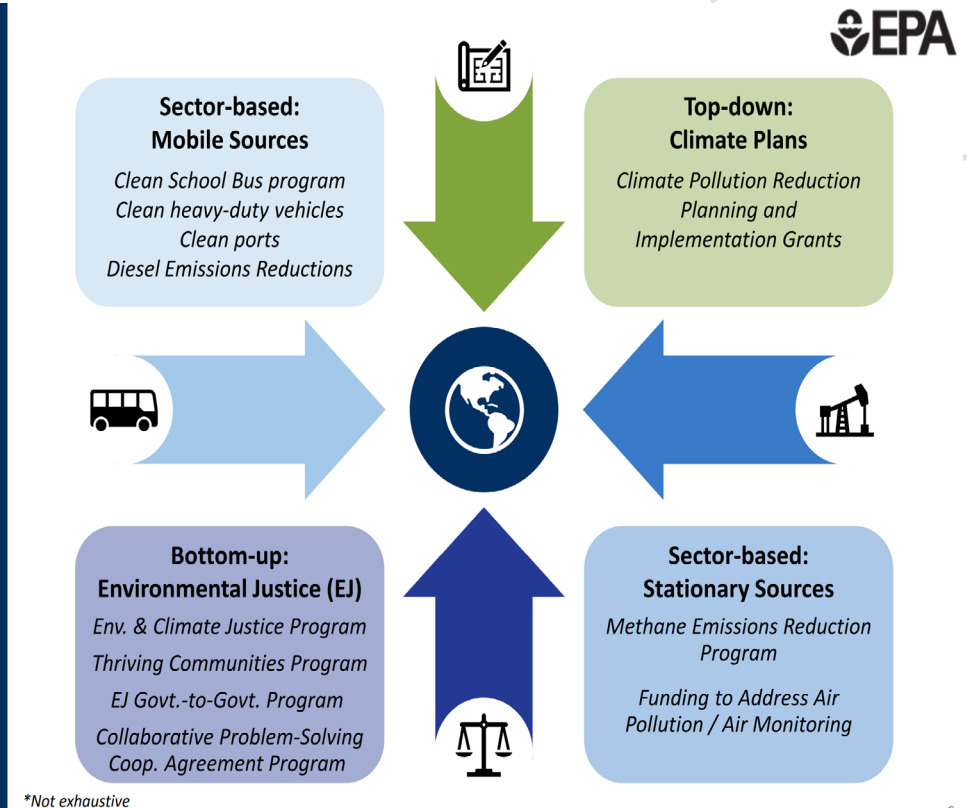
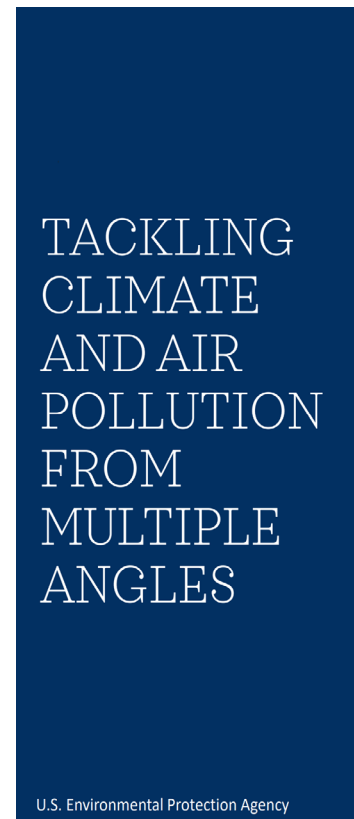
Program Component	Version 1	Draft Multifamily Version 2	Rationale
<b>Efficiency Threshold</b>			
<b>Minimum Required Energy Efficiency Threshold</b>	Energy Rating Index (ERI) scores to qualify for ZERH in the 50s.	ERI scores to qualify for ZERH in the low- to mid-40s (when using the ERI compliance pathway). Note: the ASHRAE and Prescriptive pathways are designed to achieve a similar level of energy efficiency (see below).	ZERH builds upon ESMFNC to achieve energy efficiency at least 15% beyond 2021 IECC.
<b>Program Compliance &amp; Certification Oversight</b>			
<b>Building Eligibility</b>	Allows multifamily up to 5 stories.	No height limits on multifamily buildings. Same eligibility provisions as the <a href="#">ENERGY STAR Multifamily New Construction</a> (ESMFNC) program.	Aligning building eligibility for ESMFNC and ZERH-Multifamily allows stakeholders to leverage both programs in a consistent manner where ZERH builds upon the performance of ESMFNC, and to qualify for the 45L tax credit.
<b>Compliance Path Based on ASHRAE 90.1</b>	No ASHRAE 90.1 compliance pathway.	Includes an ASHRAE 90.1 compliance pathway, which is also offered under ESMFNC.	Adding this element makes ZERH-Multifamily more accessible for commercial multifamily builders.
<b>Certification Oversight</b>	EPA-approved Home Certification Organizations (HCOs) required to provide oversight (effective in Revision 8).	DOE-approved HCOs and Multifamily Review Organizations (MROs) for ZERH required to provide oversight and quality assurance for raters and ZERH certifications.	DOE-recognized <a href="#">HCOs and MROs for ZERH</a> assure minimum oversight and quality assurance provisions for ZERH certifications.

Program Component	Version 1	Draft Multifamily Version 2	Rationale
<b>Built-In Best Practices (Mandatory Requirements), cont.</b>			
<b>Indoor Air Quality</b>	Certify under Indoor airPLUS (IAP) V1.	Certify under <a href="#">IAP V1</a> . Advises that DOE may consider updated IAP provisions as they are developed.  H/ERVs in Very Cold Climates (6-8).	Maintains requirement to certify under the IAP Version 1 program through at least 2024.  Adds energy efficient whole-house ventilation in very cold climates.
<b>Photovoltaic (PV) Ready</b>	Implement the ZERH PV-Ready Checklist in all locations with the requisite annual solar radiation.	PV-Ready Checklist is revised to specifically address Multifamily buildings and provides a solar-ready zone as defined by <a href="#">Appendix CB of the 2021 IECC</a> , covering at least 40% of the roof area. Include additional dead load in the design, conduit to the service panel, space for an additional breaker, and documentation of all solar-ready provisions. These provisions apply everywhere, regardless of annual solar radiation.	Increases PV readiness in multifamily buildings in a flexible manner to provide a streamlined opportunity to add renewable energy in the future.
<b>Electric Vehicle Ready</b>	No requirement.	Provide EVSE, EV Capable, and EV Ready spaces for 40% of units or automobile parking spaces with designated capacity and connections as established by the EV-Ready Checklist.	Provides EV Charging infrastructure for a portion of parking spaces with provisions similar to drafted 2024 IECC requirements.
<b>Heat Pump Water Heater Ready</b>	No requirement.	Dedicated circuit is installed and energized for each installed fossil fuel water heater in dwellings. Space is reserved for a future electric (heat pump) water heater.	Lays the groundwork for the future installation of a HPWH and reduces retrofit cost and complexity.
<b>Heat Pump Space Heater Ready</b>	No requirement.	A dedicated circuit outlet or conduit, and condensate drain, are installed to facilitate a future heat pump installation for dwellings with installed fossil fuel space heaters.	Lays the groundwork for the future installation of a heat pump for space heating and reduces retrofit cost and complexity.

# Education

## Net Zero Impacts

- Educate Gwinnett Place CID about federal policy opportunities available
  - Climate Pollution Reduction Grant (CPRG) with ARC, including attending listening sessions
  - Upcoming Greenhouse Gas Reduction Fund (GHGRF) opportunities - \$27B in clean energy funding
- Coordinate with newly established Gwinnett Sustainability Department



# Education

## Net Zero Impacts

- Educate commercial property owners about federal tax credit opportunities to make clean energy improvements and buy electric cars
- Partner with trusted community organizations like Southface and USGBC to host webinars and educational workshops

## INFLATION REDUCTION ACT: Tax Incentive Provisions Targeting Housing



### Renewable Energy Investment Tax Credit (sect. 48/48E)

Includes stackable bonuses, one pertaining to low income communities



### Energy Efficient Home Credit (sect. 45L)



### Energy efficient commercial building deduction (sect. 179D)



### Residential clean energy credit (sect. 25C) and energy efficient home improvement credit (sect. 25D), for owner occupied homes

Source: Novogradac



# Leadership Lessons Learned

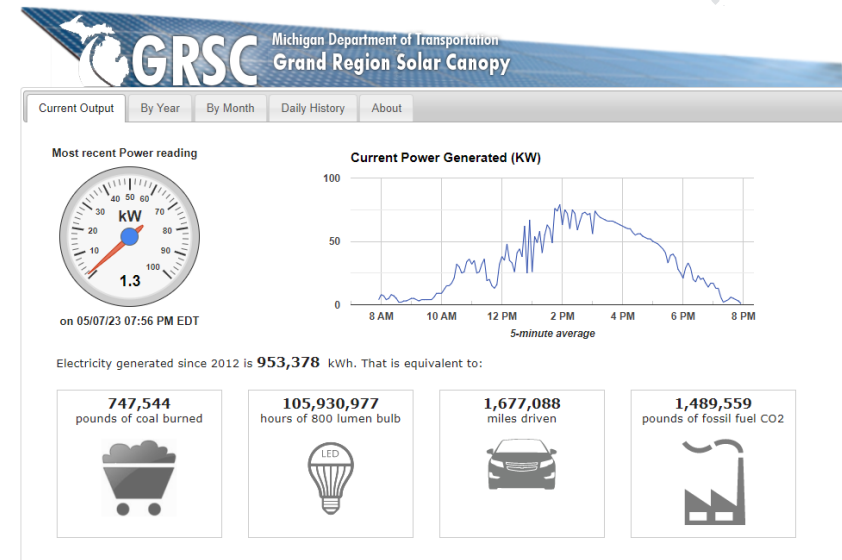
mTAP – Investments in sustainability is making a difference

## SUSTAINABILITY

CAP is committed to ensuring that Downtown Atlanta grows in a manner that is environmentally and economically sustainable. As our community changes, we believe that investing in sustainability and resilience enables us to preserve, protect, and enhance the economic health and vitality of Downtown.



The Central Atlanta Progress, in partnership with the City of Atlanta launched the Atlanta Better Buildings Challenges in 2011. Since the launch, ABBC has saved a combined 6.75 trillion British thermal units of energy and 1.3 billion gallons of water.



The Michigan Department of Transportation (MDOT) installed a solar canopy pilot project in 2012. Since implementation, this project has produced 953,378 kWh of energy. This is equivalent to 747,544 lbs of coal burned.

# Leadership Lessons Learned

mTAP

- Create a district level impact and initiative toward a 2050 Net Zero imperative
- Establish measurable KPIs to track performance over time
- Allow 2050 Net Zero target to serve as a meaningful differentiation in an increasingly competitive marketplace



mTAP

Questions



# Appendix - Summary of Recommendations

## Table of Strategies

### Energy

Strategy 1.1: Pursue District Level Heating and Cooling and Cogeneration Systems

Strategy 1.2: Incentivize On-Site Photovoltaic Generation – Canopy Parking and Building Rooftops

Strategy 1.3: Organize Off-Site Photovoltaic Generation to Reach District Scale Net Zero Energy

Strategy 1.4: Establish District Level Energy Use Intensity (EUI) Targets

Strategy 1.5: Mandatory Energy and Water Submetering and Reporting

### Buildings

Strategy 2.1: Incentivize development plans with passive and embodied building plans

Strategy 2.2: Encourage Implementation of Passive Building Technologies

Strategy 2.3: Update Zoning Guidelines to Support Sustainability Principles

Strategy 2.4: Mandate Reuse and Recycling of Existing On-Site Materials

# Appendix - Summary of Recommendations

## Table of Strategies

### Transportation

Strategy 3.1: Review Transit Plan and Investigate the incorporation of EV options

Strategy 3.2: Conduct a Benefit/Cost study on the energy savings from implementing solar panel street lightning

Strategy 3.3: Revisit Bicycle/Pedestrian Suitability Score – Evaluate considerations within project limits

Strategy 3.4: Validate Gwinnett County engagement with GDOT's TIM program

### Greenspace

Strategy 4.1: Provide for park space in the global village plan

Strategy 4.2: Integrate brown water systems for irrigation of parks and greenways

Strategy 4.3: Establish tree canopy requirements for development

Strategy 4.4: Connect public transportation via greenways

Strategy 4.5: Incentivize developers to include brown water recovers systems in their storm water management



# Summary of Recommendations

## Table of Strategies

### Housing / Jobs

Strategy 5.1: Establish CID employment training programs for those who work in industries negatively affected by net zero and the Inflation Reduction Act, so that they can transition into industries that have growth as a result of net zero

Strategy 5.2: Establish a density bonus incentive for developers who comply with a set amount of the US DOE Zero Energy Ready Home Program (ZERH)

Strategy 5.3: Structure a tax abatement incentive that is tied to the number of categories adopted from the ZERH program

### Education

Strategy 6.1: Establish CID education group to inform tenants and residents of opportunities for personal improvements that address carbon impacts

Strategy 6.2: Educate CID leaders to the policy opportunities coming to decarbonize their building stock and the metro-wide efforts

Strategy 6.3: Technical Assistance programs to advise homeowners and commercial property owners as the the tax credits with IRA for clean energy improvements (home solar & EV charging)