



DECATUR, GA

CLEAN  
ENERGY  
PLAN

# TABLE OF CONTENTS

## CHAPTER A

---

- 3 LETTER FROM THE MAYOR

## CHAPTER B

---

- 4 EXECUTIVE SUMMARY

## CHAPTER C

---

- 6 INTRODUCTION
- 7 A WAY FORWARD
- 9 THE PLAN AT A GLANCE

## CHAPTER D

---

- 12 THE CITY OF DECATUR TODAY
- 12 DECATUR'S DEMOGRAPHICS
- 13 ECONOMIC DEVELOPMENT  
IMPACTS OF CLEAN AND  
RENEWABLE ENERGY

## CHAPTER E

---

- 16 DECATUR'S ENERGY  
LANDSCAPE AND CURRENT  
EMISSIONS
- 16 BUILDINGS
- 17 TRANSPORTATION

## CHAPTER F

---

- 19 THE NEED FOR LARGER  
SOLUTIONS

## CHAPTER G

---

- 21 PATHWAYS TO 100% CLEAN  
ENERGY
- 22 WHAT IS ACES AND HOW IS IT  
USED

## CHAPTER H

---

- 27 COMMUNITY ENGAGEMENT  
PROCESS
- 28 ENGAGEMENT THROUGH  
LEARNING: ROUNDTABLE  
DISCUSSIONS AND  
EDUCATIONAL RECORDINGS
- 29 CREATING LASTING SOLUTIONS  
WITH CHARETTES
- 30 ENGAGING CITY SCHOOLS  
THROUGH DECATUR YOUTH  
CANVASSING
- 31 LIMITATIONS AND LESSONS  
LEARNED

## CHAPTER I

---

- 32 CLEAN ENERGY ACTIONS
- 32 EXISTING PROGRAMS &  
POLICIES
- 33 IMPACT AREAS

- 
- 39 GLOSSARY
  - 41 INDEX
  - 45 APPENDIX

# LETTER FROM THE MAYOR

In developing the 2020 Strategic Plan, the Decatur community made climate action a top priority. Together, we affirmed that the climate crisis is here. Significantly reducing our greenhouse gas emissions and leading in the transition to clean and renewable energy is critical to our future, locally and as partners in a more global community.

The Clean Energy Plan is a key step in these efforts, and the goals we set today will help guide the decisions we make to foster an equitable, thriving, and welcoming Decatur for all, today and in the future. Achieving the goals outline in this plan will require an ongoing commitment from each of us – city leadership and staff; business, institutional and faith leaders; residents, and all stakeholders within our city.

Decatur's network of strong civic organizations and vibrant community groups can ensure that all of our stakeholders are involved in setting and achieving our goals and in centering equity and inclusion in this clean energy transition. The City's forward-thinking building policies can serve as a strong foundation for creating the net-zero buildings of tomorrow and reorienting the impact of the built environment on our climate and natural world. Our longstanding focus on smart-growth, transit-oriented development, and supporting a walkable, bike-able, age-friendly community, positions Decatur well to lead in realizing a zero-carbon transportation future. Decatur can be a leader and innovator in this important work, and it will take all of us to do so.

In addition to addressing our community's emissions, investing our time, effort, and dollars into energy efficiency improvements and a clean and renewable energy future can have other substantial, positive impacts. Well-designed policies and programs can help reduce energy burdens for our residents struggling with energy costs and make our homes and community buildings more efficient and comfortable. Trainings for clean energy jobs, scholarships, and other support for Decatur residents can make these jobs of tomorrow accessible, while efforts to attract and retain green businesses can enhance Decatur's local economy and support a thriving community. Reducing emissions and local air pollution can reduce asthma rates and improve overall public health and well-being. This need for bold climate action is also an opportunity to create a future that truly embodies the vision we have set for ourselves.

We encourage you to read and endorse this ambitious plan and to find ways to participate in reducing our energy use, our greenhouse gas emissions and in making our community more resilient, environmentally sound and in protecting our climate. On behalf of the City Commission, I want to thank everyone that has helped us get to this point and encourage all to participate in this important work. Together, we can make our community stronger and healthier. I am confident we can create the future we want to see for our city.



# EXECUTIVE SUMMARY

As a prosperous and growing community, Decatur takes its role seriously in reducing the impact of emissions related to its energy consumption. Decatur recognizes that it must go beyond the minimum efforts called for by the Intergovernmental Panel on Climate Change in its very low greenhouse gas emissions scenario to help account for other communities' inability to act. As such, Decatur is planning to eliminate its government and community carbon emissions from electricity by 2035 with all remaining community uses, including transportation, eliminated by 2050.

This document, Decatur's Clean Energy Plan, is intended to guide Decatur's energy transition and address the City's contributions to the climate crisis, while also improving living conditions and addressing equity issues. This plan describes a path to a Clean Energy Future, while facing an aggressive goal and conditions outside of Decatur's control.

Building on Decatur's Strategic Plan to:

- Think Holistically
- Confront Climate Challenges
- Work Together
- Embrace Accountability and Pioneer Innovation

The Clean Energy Plan was developed with deep engagement of Decatur's residents through

roundtables, surveys, community industry professional interviews, and a two-day in-person charrette (integrated planning session). In addition, the process sought to educate residents with learning sessions focused on actions they can undertake to help Decatur reach its goals.

The planning consultants, Southface and Greenlink, utilized Greenlink's Advanced Clean Energy Scenario modeling tool to help community members, partners, and decision-makers visualize the costs and benefits of shifting their energy supply to a more clean and renewable fuel mix. Inputs from initial engagement sessions guided the team toward a scenario entitled Social and Local Impact.

This scenario describes a pathway that leads to higher public health and job benefits than the Cost-Effective Scenario, with lower costs than the Maximum Scenario (which describes unlimited investment). Survey results and charette participants confirmed this scenario as matching Decatur's community values.

The Social and Local Impact Scenario calls for a cumulative investment of \$57 million, including government and private, in Clean Energy over the period of the goal, reaping cumulative benefits of \$507 million and avoiding nearly 1 million metric tons of CO2 emissions



To attain these benefits the plan calls for seven impact areas further described in the plan.

1. Leading by Example
2. Building Community Through Investment
3. A Clean Energy Fund
4. Greening the Built Environment
5. Moving to Low-and-No Carbon Transportation
6. Advocating for Larger Solutions
7. Closing the Gap

The goal of eliminating Carbon Emissions from Electricity by 2035, with all remaining uses eliminated by 2050 starts with these impact areas and includes a "100" Day work plan to begin the investments necessary for success.

The City of Decatur and the consultant team appreciate your participation in development and adoption of this plan.



# INTRODUCTION

The City of Decatur became a prosperous town after its incorporation in 1823, primarily due to its proximity to railroad networks in Atlanta. In contrast to its busier neighbor, Decatur offered a peaceful and quiet atmosphere.

Today, it enjoys much of the same renown. Decatur is known for its vibrant downtown square and strong small business community, abundant green spaces, walkable neighborhoods, educational institutions, and transit access to nearby metropolitan areas. Each neighborhood offers its own unique character along with a shared goal: **a thriving, equitable, livable city.**

That goal is at the core of this Clean Energy Plan and guides the City's efforts to combat the impacts of climate change. Community engagement revealed that many Decatur residents are currently feeling the effects of climate change. The Southeast is at high risk of facing more frequent heatwaves and rising average temperatures.

Over the last 30 years, Decatur residents experienced an average of 20 days above 95 °F and are expected to see that number increase to more than 90 days by 2050. These increased temperatures are expected to exacerbate respiratory illnesses like asthma. Children especially are negatively affected by asthma, which is associated with increased emergency room visits and missed school days.<sup>1,2</sup>



THE COOPER PLACE, BUILT IN 1877 FOR GEORGE WASHINGTON SCOTT, IS NOW THE SITE OF THE DECATUR RECREATION CENTER AT 231 SYCAMORE ST.

Like many other urban areas, Decatur is susceptible to the heat island effect. This phenomenon occurs when natural land cover is displaced by buildings, asphalt, and other impervious features, resulting in increased rates of heat absorption and retention. Over time, this effect results in increased reliance on air-conditioning and therefore increased energy consumption, air pollution, and heat-related disease, such as heat exhaustion and heat stroke, and mortality rates.<sup>3,4</sup>

The need for more air-conditioning to keep people cool during summer months increases energy bills. Residents who do not have sufficient access to air conditioning may need access to cooling centers to avoid extreme illness or death. Nearly 800 households north of West Howard Avenue and East College Avenue already experience severe energy burdens.<sup>5</sup> Energy burden is quantified as the percentage of household income that is spent towards electricity and/or natural gas bills caused by excessive energy usage, inefficient appliances, and/or poor housing stock.<sup>6</sup> For families already facing financial struggles, higher energy bills that accompany increased temperatures can cause higher levels of stress and health issues.<sup>7</sup>

The Intergovernmental Panel on Climate Change (IPCC) states in its latest report that current plans to address climate change are not enough to limit warming to 1.5°C above pre-industrial levels – a threshold scientists believe is necessary to avoid more catastrophic events.<sup>8</sup> The City of Decatur has pledged to cut carbon emissions as quickly

as possible, serving as an example to other cities around the United States. Committing to a renewable energy transition will reduce climate emissions, improve public health, support jobs and economic development, and help the City achieve its vision of a thriving, equitable, livable Decatur.

## A WAY FORWARD

On May 17th, 2021, the City of Decatur's Commission approved an initiative to develop Decatur's Clean Energy Plan.<sup>9</sup> This Plan is intended to guide Decatur's energy transition and address the City's contributions to the climate crisis while also improving living conditions. Decatur will shift energy consumption away from fossil fuels in an economically sustainable and equitable way, ensuring that residents, business owners, worshippers, visitors, commuters, and all Decatur residents enjoy the benefits of this transition. The City of Decatur has decided to break up the goal into targeted, intermediate timelines to tackle the ambitious goal of shifting toward 100 percent clean and renewable energy:

- **All municipally owned buildings** will be supplied by 100% clean and renewable **Energy (fully electrified)** by **2030**.
- **By 2035, community buildings**, which include commercial and residential buildings, will be supplied by 100% clean and renewable electricity. All **municipal vehicles** will be fully electrified by **2035**.
- **By 2050**, all other community uses, including transportation, will be supplied by 100% clean and renewable energy.



The City of Decatur recognizes that this timeline is ambitious. Achieving the goals set out in this Clean Energy Plan will require ongoing engagement with Decatur residents and periodic review to track progress, celebrate victories, and incorporate lessons learned to ease Decatur's path forward.

|

# 2030

MUNICIPAL BUILDINGS WILL BE SUPPLIED BY  
100% CLEAN AND RENEWABLE ENERGY

|

# 2035

ALL MUNICIPAL VEHICLES WILL BE ELECTRIFIED

COMMUNITY BUILDINGS, INCLUDING  
COMMERCIAL AND RESIDENTIAL BUILDINGS, WILL  
BE SUPPLIED BY 100% CLEAN AND RENEWABLE  
ELECTRICITY

|

# 2050

ALL OTHER COMMUNITY USES, INCLUDING  
TRANSPORTATION, WILL BE SUPPLIED BY 100%  
CLEAN AND RENEWABLE ENERGY

## THE PLAN AT A GLANCE

Decatur’s Clean Energy Plan is intended to serve as the initial roadmap for its journey away from fossil fuels. The Plan incorporates the vision, mission statements, and climate action commitments from the 2020 Strategic Plan, which are:

### Think Holistically

Create interconnected climate and social policies, programs, and projects by identifying gaps in equity and leveraging community-driven opportunities.

### Confront Climate Challenges

Strengthen environmental sustainability and resiliency by aligning Decatur’s clean energy goals and practices.

### Work Together

Continue to design and promote community engagement opportunities and regional, cross-sector partnerships.

### Embrace Accountability

Commit to learning from past injustices to measure progress toward equitable climate outcomes.

### Pioneer Innovation

Continue to seek bold and creative climate and social solutions to serve as an example to others.<sup>10</sup>

Decatur recognizes that a transition away from fossil fuels will ultimately impact its community residents in many ways. Prioritizing the voices of residents will be a crucial component to moving forward. With the community in mind, Decatur worked with several partners to hear concerns,

experiences, and input from residents and visitors. Greenlink Analytics and the Southface Institute helped provide analytical and community engagement expertise.

Key partners included:

---

Agnes Scott College Center for Sustainability	DeKalb County Emory University
Better Together Advisory Board	Georgia Environmental Finance Authority
City Schools of Decatur	Georgia Tech Kendeda Building
Decatur Active Living Board	Georgia Clinicians for Climate Action and Decatur Climate Advocacy (GCCA)
Decatur Business Association	Georgia Interfaith Power and Light
Decatur Environmental Sustainability Board	Lifelong Community Advisory Board
Decatur Housing Authority	Martin Luther King, Jr. Service Project
Decatur Land Trust	
Decatur 100	

The community engagement process included three Roundtables, three learning opportunities, a survey analysis, and a two day in-person Charrette where a group of interdisciplinary professionals engaged in participatory planning. Both residents and business leaders provided insightful input throughout each community engagement session.

The community engagement process identified these objectives:

- Protecting the environment and fighting climate change are top priorities for Decatur residents
- A majority of survey respondents prefer that 75% to 100% of Decatur's energy consumption be fueled by clean and renewable energy as soon as 2030
- Creating local jobs, ensuring that all Decatur residents receive the benefits of clean and renewable energy, and improving residents' health and well-being are three important priorities for the community.

City of Decatur staff also worked with Greenlink Analytics to create a Decatur-specific Advanced Clean Energy Scenarios (ACES) modeling tool to help community members, partners, and decision-makers visualize the costs and benefits of shifting their energy supply to a more clean and renewable fuel mix. This tool utilizes Decatur's existing building stock, energy fuel mix, greenhouse gas inventory, and means of transportation to forecast changes in energy through 2050. ACES helped community members and the City of Decatur's staff understand the feasibility of different types of investments to plan for the future.

The City of Decatur has already made efforts to improve the lives of its residents through economic development, accessible transportation, and diversify housing, and yet there is still much work to be done. A fundamental goal for Decatur is to address

historical and current inequities while building towards a clean and renewable energy future. The City and its partners settled on the following seven Impact Areas as the centerpiece of the plan, these are discussed in more detail in chapter I.

- 1. Leading by Example** in the transition of government operations to clean and renewable energy, Decatur sets the example for and becomes a resource to the community.
- 2. Building Community Through Investments** by expanding and advancing weatherization programs and partnerships within organizations such as the Decatur Land Trust<sup>11</sup> and the MLK Project<sup>12</sup>.
- 3. A Clean Energy Fund** creates different avenues of sustainable funding for clean and renewable energy projects.





4. **Greening the Built Environment** through Building Performance Standard (BPS)<sup>13</sup> policies and making new buildings Zero-Energy Ready by 2030.
5. **Moving to Low-and-No Carbon Transportation** through transportation demand management (TDM) reducing vehicle miles traveled (VMTs), implementing improved bike and pedestrian goals, and initiation of electric shuttle and EV charging infrastructure.
6. **Advocating for Larger Solutions** by partnering with other Georgia municipalities to engage with and intervene in Georgia Power's Integrated Resource Planning (IRP) every three years.
7. **Closing the Gap** by creating a local renewable energy credit (REC) strategy to cover the electricity that cannot be converted to 100% renewable energy by 2030.

Clean and renewable energy has the potential to lower energy bills, improve public health, and create more local, high-paying jobs. However, it is essential that this transition equitably benefits all members of the community. As Decatur embarks on transitioning its energy supply to clean and renewable energy, it is essential to understand the community's demographic makeup so that all voices are considered.



# THE CITY OF DECATUR TODAY

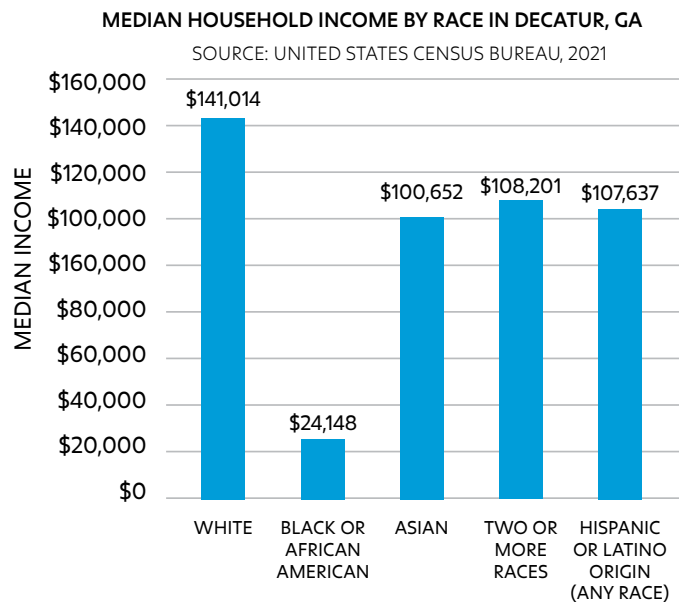
## DECATUR'S DEMOGRAPHICS

The City of Decatur is home to roughly 25,000 diverse residents across different age groups, education levels, racial demographics, and professions.<sup>14</sup> Most households in Decatur are higher-income families with a college education.<sup>15</sup> However, stark disparities across the City exist:

In 2020, the median income for a White household was roughly \$141,000—480% greater than the median income for a Black household (Figure D.1). 70% of households relying upon the Supplemental Nutrition Assistance Program (SNAP) for nutrition assistance are Black, compared to the 21% of White households who are on SNAP.<sup>16</sup> This disparity extends to education as well. The percentage of a White households with a bachelor's degree is 82%, while only 33% of Black households hold equivalent levels of education.<sup>17</sup>

Homeowners compose 67% of Decatur's housing market and of those, only 6.7% are Black, which make up 16% of the City's total population. This discrepancy is essential to keep in mind when talking about energy consumption and household utility bills—a huge component behind the purpose of this plan.

Among Decatur households, close to 14% are considered severely energy burdened. Energy burden



can be caused by a number of factors, including poor construction, outdated appliances, deteriorating housing, and/or excessive energy consumption.<sup>18</sup> One reason these households may have higher energy burdens is that they often face financial barriers to adopting more capital intensive, energy-saving equipment and appliances. HVAC, water heating equipment, and appliances such as refrigerators and dryers are the most energy-intensive to use and costly to upgrade.<sup>19</sup> High energy burdens are particularly problematic for renters, lower-income households, and communities of color who still suffer the effects of systemically racist housing policies.<sup>20,21</sup>

This Plan outlines how the City of Decatur can move its energy supply to clean and renewable resources efficiently and equitably. Clean energy technologies, such as energy efficiency and rooftop solar, are more cost-effective than ever before<sup>22</sup> and improve the health of those living in and around the community.<sup>23</sup> Investments in energy efficiency can support individuals living in inefficient housing by

reducing their energy bills, and can also improve economic mobility by freeing up financial resources. Understanding these technologies and their associated costs and benefits can guide the City on how to pay for energy upgrades. Decatur residents can benefit from clean energy investments made possible through programs, subsidies, and City-provided funding mechanisms discussed in chapter H.

## **THE ECONOMIC DEVELOPMENT IMPACTS OF CLEAN AND RENEWABLE ENERGY**

Decatur is known for its vibrant downtown shopping and entertainment district, made possible by progressive economic development practices. The City Commission and Downtown Development Authority have worked together to maintain a strong local economy that attracts small businesses and visitors, and that supports schools and City services. Increased downtown development has driven improvements in public transit infrastructure—the city recently earned a silver level certification for being a Bicycle-Friendly Community (BFC). Decatur has also been recognized for its commitment to sustainability—the City was recertified as a Green Community at the Platinum Level through the Atlanta Regional Commission’s Green Communities Certification Program.<sup>24</sup>

Yet at the same time, many of these services and benefits are only accessible for wealthier homeowners who live in more walkable areas. Work must still be done to improve the lives of all residents in Decatur,

including lower-income households, people living with disabilities, and traditionally marginalized households. Shifting Decatur’s energy supply and transportation options from fossil fuels to clean and renewable energy has the potential to benefit all residents through cleaner air, reduced energy bills, and a more connected community. This transition also has the potential to lessen Decatur’s contribution to the effects of climate change and create new ‘green’ jobs, leading to equitable economic growth for generations to come. It is up to Decatur to decide how individuals are trained for these new jobs and who will be given the training opportunities.

Investing in energy efficiency and rooftop solar for Decatur’s commercial and residential buildings is a crucial first step toward reducing its reliance on fossil fuels. These investments can provide local jobs with livable wages if done intentionally. Targeted workforce development programs can provide training opportunities for Decatur residents seeking careers in the clean and renewable energy industry. The table on the next page explains the breakdown of jobs and their average salaries for different energy sectors in the City of Decatur

Each full-time equivalency (FTE) job represents one job held by one person for one year, as a result of every \$1 million invested toward energy efficiency, rooftop solar, or fossil fuels. For example, roughly 10 jobs are created or sustained for every \$1 million dollars invested toward residential energy efficiency, each of which has an average salary of \$53,000 per year.<sup>25</sup> Construction workers, heating, ventilation, and air-conditioning (HVAC) technicians, program administrators, and



electricians are a few of the specialists that make up this field. Jobs indicated are in existing Metro area businesses serving Decatur and DeKalb. These 10 jobs also include about three 'general economy' jobs. 'General economy' jobs for each industry are created or sustained because of the new salaries created by each industry job. When residents have more money in their pockets because they are employed, they have money to spend on entertainment, home improvements, and other household items.

Transitioning toward clean and renewable energy in Decatur will ultimately lead to a shift away from jobs within the power generation industry. As more homes invest in energy efficiency, thereby reducing their household energy consumption, there will be less of a need to fill jobs in the power sector. These shifts or job losses are indicated in red in the table to the right. Essentially, for every \$1 million invested in rooftop solar, about 11 jobs will be created through the solar industry, but roughly 5 jobs will be lost from the power and generation sector, representing a net gain of 6 jobs.

As of 2020, 63% of Decatur residents over the age of 16 were employed and 3.6% were unemployed.<sup>26</sup> Management, business, and financial-sector jobs make up the majority of the workforce in Decatur, followed by jobs within the education and sales sector.<sup>27</sup> About 1% of Decatur's labor force holds construction and maintenance occupations, a crucial job sector needed to support Decatur's transition to clean and renewable energy.

**CLEAN AND RENEWABLE ENERGY JOBS CREATED OR SHIFTED (PER \$1 MILLION INVESTED IN EACH INDUSTRY)**

SOURCE: GREENLINK ANALYTICS, 2022

INDUSTRY	FULL TIME EQUIVALENCY (FTE) JOBS	AVERAGE SALARY
<b>Total Energy-Efficiency (Direct, Indirect, Induced)</b>	<b>9.8</b>	<b>\$53,200</b>
Construction	1.5	
Heating, Ventilation, Air-Conditioning and Refrigeration (HVAC&R)	1.5	
Water Heating	0.4	
Lighting	0.7	
Material for Envelope	0.9	
Other Electrical Equipment	0.4	
Energy & Environmental Management and Smart Controls	1.1	
Insurance & Finance	0.1	
Program Administration	0.3	
Architecture & Engineering Services	0.4	
General Economy	2.5	-
<b>Total Solar Energy (Direct, Indirect, Induced)</b>	<b>10.5</b>	<b>\$49,000</b>
Construction	2.4	
Hardware Manufacturing	1.4	
Electrical Equipment	1.4	
Electronic Components	1.4	
Scientific and Technical Services	1.4	
General Economy	2.5	-
Power Generation (Direct, Indirect, Induced)	(4.6)	<b>\$50,000</b>
Fossil Fuel Generation	(2.8)	
General Economy	(1.9)	-

Understanding which industries will experience job growth and which will experience job losses is a crucial component of Decatur's clean and renewable energy plan. The City will need to partner with local universities, schools, workforce development organizations, and residents to prepare its residents for the career opportunities in this transition. Partnerships with career centers and community leaders can help find the right people for the new jobs in demand. Many jobs in construction, engineering, HVAC, and program administration already exist within Decatur. These sectors will need additional training to extend education around clean and renewable energy technologies. Education around new or alternative green job pathways will need to be provided to all communities in Decatur, so that people are aware of the jobs these skills can make available to them. Residents employed by the power generation industry will need to be prioritized in this clean energy transition first, so they are equipped with the necessary skills to shift to a new industry.

To promote an equitable transition and improve Decatur's racial income disparities, the City could provide scholarships and financial support to area technical colleges and certification programs. The City will need to take targeted action to ensure the opportunities provided by the clean energy transition are available to all community members, especially Decatur's Black residents.

The actions that Decatur takes to achieve its target of 100% clean and renewable electricity by 2030 and 2035 will directly affect its residents and Decatur's economy. This Plan shows how using clean and

renewable energy to power Decatur's businesses, homes, and vehicles can benefit residents through energy equity, climate mitigation, improved health, and increased jobs.



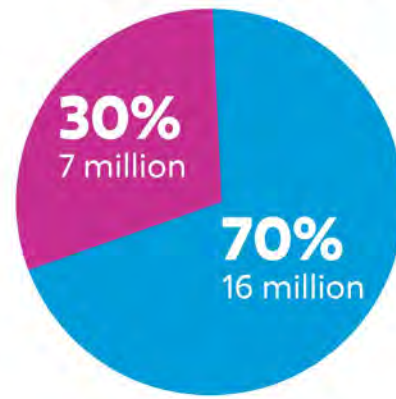
# DECATUR'S ENERGY LANDSCAPE AND CURRENT EMISSIONS

## BUILDINGS

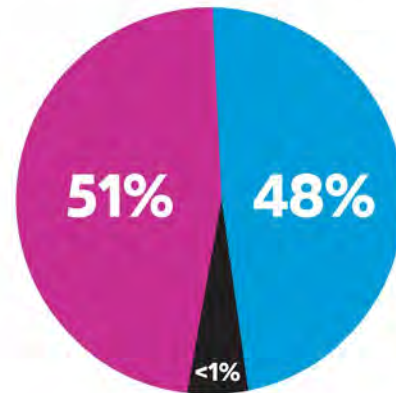
To better understand how Decatur will achieve its ambitious goal of 100% clean and renewable energy, Greenlink Analytics evaluated the City of Decatur's current and projected energy consumption. This projected consumption is the basis for each energy related claim throughout this chapter, unless noted otherwise.<sup>28</sup> In 2019<sup>29</sup>, energy use in the City of Decatur resulted in about 175,000 metric tons of carbon dioxide (CO2) emissions, which is the same amount that 38,000 gasoline-powered vehicles pollute in a year.<sup>30</sup> Electricity use was the largest source of CO2 emissions during this year, representing 61% of the total. Emissions from transportation and natural gas combustion contributed to 19% and 20% of the CO2 emissions, respectively.

The majority of the community's energy consumption occurs within Decatur's residential and commercial buildings. In 2019, community-wide (residential and commercial buildings) electricity consumption was 241 million kilowatt-hours (kWh). Even though Decatur's residential building sector is more than twice as large as its commercial sector, residential buildings accounted for only 48% of Decatur's electricity consumption. Less than 1% of Decatur's electricity consumption is related to the industrial sector.

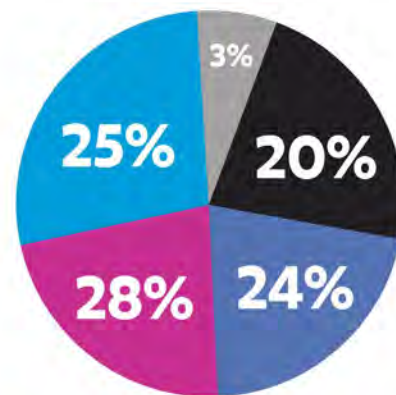
SQUARE FOOTAGE BY SECTOR



BUILDING ELECTRICITY CONSUMPTION BY SECTOR



DECATUR'S FUEL RESOURCES IN 2035, BAU CASE





Residential buildings typically use less electricity than their commercial neighbors because of their size relative to commercial buildings and more homes use natural gas for heating rather than electricity. In fact, 72% of Decatur's natural gas consumption comes from residential homes whereas businesses account for 26%.

The municipal building electricity and natural gas consumption of Decatur itself account for a small portion of energy use and CO2 emissions. Municipal building demand produces about 1,700 metric tons of emissions. Decatur intends to lead by committing to clean and renewable energy, starting with its municipal buildings and transportation fleet.

## TRANSPORTATION

Buildings are only one part of the fossil fuel energy equation in Decatur. Making the choice to transition away from fossil fuels and toward clean and renewable energy is more than updating building codes and investing in rooftop solar; the City will also need to understand energy trends within the transportation sector. Moving to low - and - zero-emission transportation will require increased investments in sidewalks and bike lanes, mixed-use development near transit systems, incentives to increase electric vehicle purchases, and upgrades to public transportation systems.

Decatur prides itself on providing sustainable and easy transportation options through improved and extended sidewalks, protected bike lanes and cycle tracks, public transportation, and

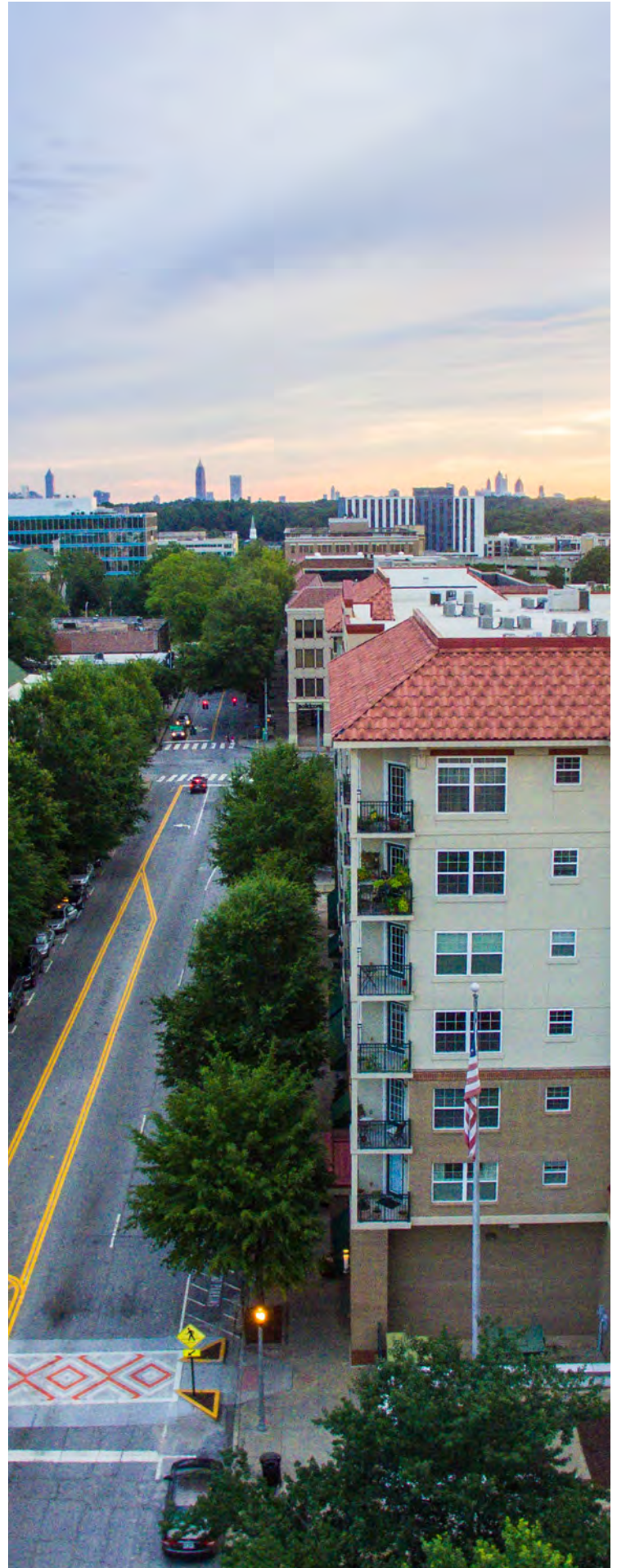
driving options. The City is located within close proximity to three major highway connectors and offers access to three MARTA train stations. Decatur has also been awarded with the Georgia's "Most Walkable City" by Walkscore<sup>31</sup> and has earned a silver-level Bicycle Friendly Community (BFC) certification.<sup>32</sup> The City has made great strides toward a more sustainable transportation system; however, driving is still the preferred method of mobility and equitable access to public transportation is still limited.

Within the transportation sector, the Decatur community's 2019 vehicle-miles-traveled totaled approximately 84 million miles, equal to 38,000 tons of CO2 emissions.<sup>33</sup> Municipal employees account for roughly 1,200 metric tons of emissions through commuting alone. Access to low-to-no-carbon transportation options must be made available to everyone in Decatur, regardless of their income, race, or disability status.



Consistent with the 2018 Community Transportation Plan (CTP), Decatur continues to commit to prioritizing corridor and intersection improvements so that walking is more accessible and safer for pedestrians.<sup>34</sup> A proposal within this plan for a “10-minute neighborhood” is underway to provide residents with the ability to get to where they need in ten minutes or less, regardless of their location in Decatur. Decatur will also need to encourage individuals to purchase electric vehicles by increasing access to free or low-cost charging stations throughout the City. Updating building codes to expand options for electric vehicle charging will be necessary for this type of transition.

The choice to switch all of Decatur’s buildings and the municipal vehicle fleet to 100% clean and renewable energy by 2035 will be no small feat. Understanding where the City receives their energy from and the control it has is an important step in their energy transition.





# THE NEED FOR LARGER SOLUTIONS

There are political limitations to the actions that Decatur can feasibly take to transition to 100% clean and renewable energy. Understanding those limitations is a crucial component of this Plan. Residents must be aware of what is in their control so they can make the most feasible, efficient, and impactful contributions to their community.

Decatur residents have little choice in their energy providers. While a handful of natural gas utilities operate within the City, including Atlanta Gas Light, Gas South, and SCANA Energy, Georgia Power is the sole electric utility operating in the City of Decatur. Georgia Power, a subsidiary of Southern Company, is a vertically integrated monopoly electric utility, meaning that the company owns and operates the majority of the power plants, power lines, and the related infrastructure that produce and deliver electricity to the Decatur community. This type of market structure means that Decatur residents and businesses do not have an option to buy retail electricity services from any other company.

The decisions of Georgia Power and its regulator, the Georgia Public Service Commission (PSC), heavily influence Decatur's clean energy planning. The Company creates integrated resource plans (IRPs) over a three-year cycle, which are reviewed in hearings before the PSC. IRPs determine the

mix of resources the utility uses to produce electricity. For example, the "mix of resources" may determine how much capacity from coal-fired power plants and renewable energy Georgia Power will need to meet their projected demand. IRPs also influence how much the utility invests in energy efficiency programs and to which customers these programs are targeted. Rate cases are separate from the IRP process but set the price (cents per kilowatt hour) Decatur residents and businesses pay for power. Rate structures discussed in these proceedings include the price rooftop solar owners are paid for energy exported back to the Company's grid.

By choosing to supply the grid with fossil fueled resources, Georgia Power and the PSC ultimately determine the carbon intensity of the electricity that Decaturites consume. Georgia Power currently discourages customers from installing solar onto their rooftops by charging additional fees for clean rooftop solar.<sup>35</sup> Fortunately, the City of Decatur is actively intervening in integrated resource planning through public input hearings and partnership opportunities, and will continue to do so in the coming years. Formal interventions have included testifying against Georgia Power's decision to continue reliance on fossil fuels and advocating for improvements in the Company's energy efficiency programs. Informal intervention has included participating in public engagement sessions and submitting public comments to members of the PSC. These intervening activities help show Georgia Power staff and members of the PSC the wants and needs of the Company's customers and can influence their future



decisions. Ultimately, since the utility and its regulator will determine the greenhouse gas content of the City's electricity, Decatur must work indirectly to decarbonize electricity. In addition to intervening with the PSC, Decatur can reduce community electricity consumption by encouraging rooftop solar and energy efficiency.

The City's relationship with Georgia Power also includes the collection of municipal franchise fees, which could potentially be a financial tool in the City's transition to clean and renewable energy. Municipal franchise fees are a form of tax paid by customers across Georgia Power's service territory. These franchise fees are meant to cover the cost of Georgia Power's use of public space (also known as public "right-of-way") for energy infrastructure.<sup>36</sup> Franchise fees are collected across Georgia Power's service territory and distributed to Georgia cities and counties proportional to their population; in Decatur, this revenue is close to \$1,000,000 annually.<sup>37</sup> This funding can be used to support municipal and community clean energy projects.<sup>38</sup>

Along with educating residents and intervening in the IRP and rate case, Decatur can pull other levers to accelerate the clean energy transition, including:

- Update or change building codes,
- Invest in residential and commercial energy efficiency,
- Add rooftop solar on municipal buildings and support the installation of solar by residential and commercial customers,

- Create new or promote existing policies and programs discussed in Chapter I.

Based on Decatur's energy landscape described above, the next chapter explains pathways to 100% clean energy.



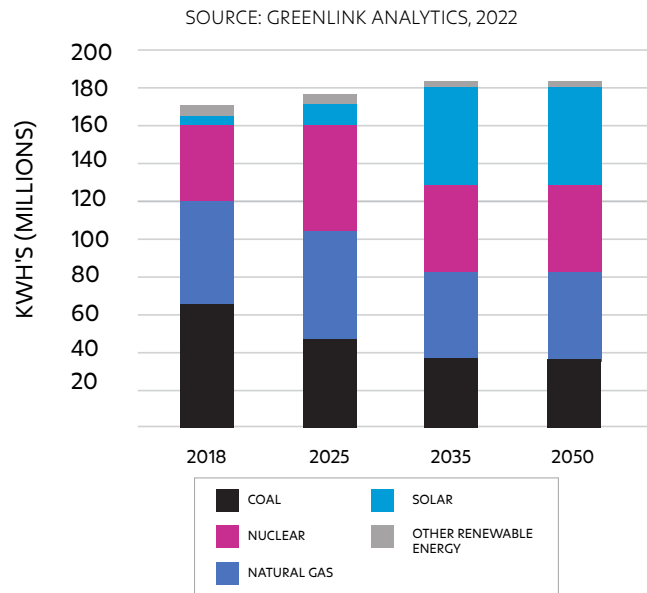
# PATHWAYS TO 100% CLEAN ENERGY

Greenlink Analytics (GLA) has outlined various clean energy scenarios using sophisticated modeling analysis. This analysis was used to determine Decatur’s current energy demand and greenhouse gas emissions and the impacts to each resulting from potential actions and investments. Each clean energy resource category is assigned a defined maximum potential value (for example, Decatur’s households can install up to 12 MW of capacity). A scenario is made up of a combination of resource potentials for each of the following:

- Residential and Commercial Energy Efficiency
- Rooftop Solar and Solar Farms
- Residential and Commercial Battery Storage
- Electric vehicles (EVs) and Public Transportation Expansion
- Increased Sidewalks and Walkability Networks
- Renewable Energy Credits (RECs)

During public input sessions, Decatur residents compared each modeled scenario to a business-as-usual (BAU) scenario based upon 2019 Integrated Resource Plan filings for the Southern Company grid. The BAU scenario is one in which no policy action is taken nor additional investments made – the status quo maintains the way forward. If no new actions are taken, Decatur’s total energy

FIGURE G1 — DECATUR GRID RESOURCES BY FUEL



consumption is expected to be 240,000 Megawatt-hours (MWh)—primarily provided by coal and natural gas—by 2035 (Figure G.1).<sup>39</sup>

To achieve the City’s goals of reaching a 100% clean and renewable energy future, however, a combination of the resource potential mentioned above is needed. These different resource potential combination scenarios come with both advantages and limitations that vary widely according to both the technological specifications and costs, both of which are expected to improve over time. The deployment of any one of these resource potentials will also have a rippling effect on other resource potentials. For example, investing highly in residential energy efficiency decreases the need for large investments for rooftop solar.

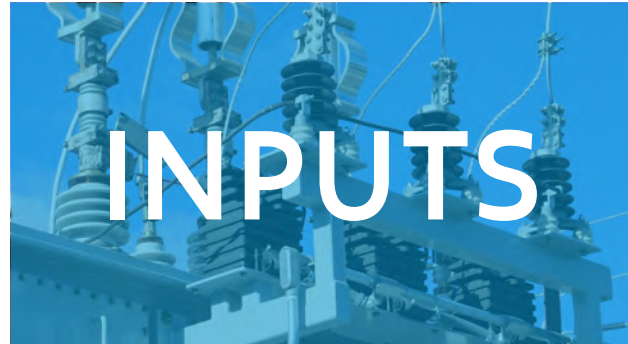
Each modeled scenario evaluated the range of trade-offs implicit in any combination of resource options using the Advanced Clean Energy Scenario (ACES) modeling tool. The ACES tool was available to utilize on computers during

community engagement sessions to guide the City of Decatur in choosing different clean energy scenarios. Scenarios analyzed in ACES consisted of different levels of clean and renewable energy investments (Table G.1, on page 46-47) that would lead to 100% clean and renewable energy use in Decatur.

## WHAT IS ACES AND HOW IS IT USED

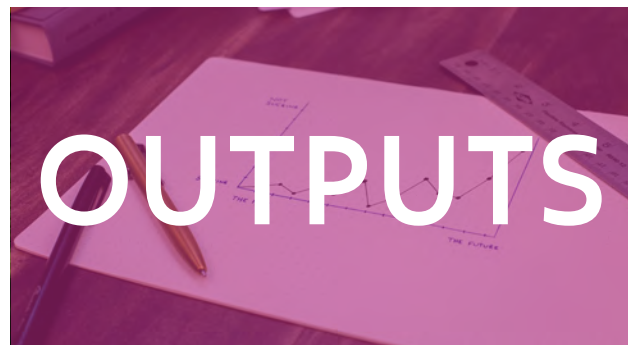
The ACES tool utilizes data from ATHENIA, a machine-learning model of the electricity system developed by Greenlink Analytics. For this analysis, ATHENIA developed hourly load profiles of the electricity demand and supply of Decatur's existing energy grid. Electricity demand modeling takes into account building type, size, construction year, and occupancy. Electricity supply modeling accounts for operational specifications, fuel prices, generation cost, emissions, and resultant waste. This data is then used in the ACES tool to forecast and evaluate a range of clean energy pathways that will allow the City of Decatur to achieve a 100% clean and renewable electricity future by 2030 and 2035.

To use the ACES tool, the following assumptions (Table G.1 on page 46-47) on Decatur's maximum achievable clean energy potentials were made relative to Decatur's building stock, residential demographics, household energy costs, and current energy mix. The "maximum achievable potential" is the maximum level of each resource that is possible for Decatur to achieve, given its current political and economic constraints. For example, energy



- Historical hourly power plant operations
- Historical hourly customer demand
- Utility expansion plans and demand forecast

Algorithm learns grid patterns and simulates operations under future conditions



- Future hourly emissions rates for measuring granular impacts of local resource choices



efficiency potentials were calculated for the ACES tool based off the Technical, Economic, and Achievable Energy Efficiency Potential (TEAPOT) studies conducted by utilities across the United States. Utilities conduct these studies to determine how much energy efficiency programs will cost them compared to the benefits they provide to customers. These studies adapt based on changing customer energy demand each year. For Georgia Power, studies have shown that from an economic perspective, the maximum energy savings for residents through energy efficiency is around 1.3%.<sup>40</sup> It is important to note that the following metrics are not assumed to be constant overtime but are rather provided as an estimate of year-over-year maximum achievable potential in Decatur.

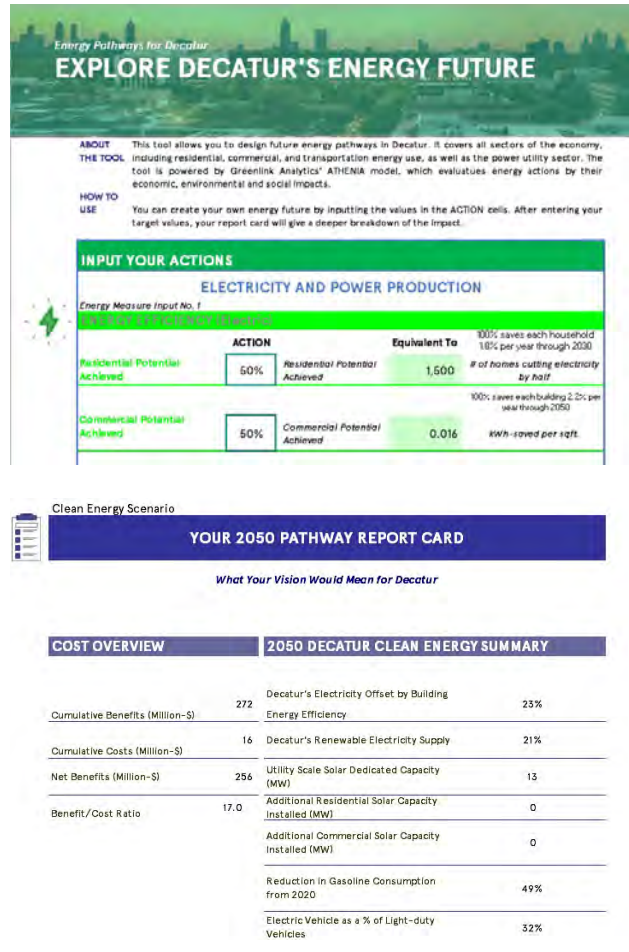


An example of the tool can be seen below in figure G.2. Users were able to input a desired level of different resource potentials in each 'Action' box to see how Decatur's clean energy report card changed. In this example, choosing to deploy 50% of residential and commercial electricity efficiency leads to \$256 million net benefits and 23% of Decatur's building electricity offset by energy efficiency by 2050.

The City of Decatur worked with GLA and The Southface Institute to devise three different clean energy scenarios, in addition to the business-as-usual (BAU) case, that would achieve 100% clean and renewable electricity by 2030 & 2035. These scenarios were based off resident input received during the planning process. These three scenarios are:

1. **Business-As-Usual (BAU) Scenario:** The pathway that would exist if no changes in Decatur are made (no new policies, no incentives for solar, no programs that fund energy efficiency).
2. **Maximum (MAX) Clean Energy Scenario:** The pathway that would exist if Decatur did everything in its power to provide 100% clean and renewable energy (unlimited investment and political influence).
3. **Cost Effective (CE) Scenario:** The pathway that leads to a significant buildings related benefit/cost ratio and assumes for transportation a medium level of electric vehicle adoption. Costs include investments in energy

FIGURE G2 — AN EXAMPLE OF DECATUR'S ACES TOOL



efficiency, solar, fossil fuels, and transportation. Benefits include reduced medical bills from cleaner air, increased incomes from new, high paying jobs, and energy bill savings.

4. **Social and Local Impact (SLI) Scenario:** The pathway that leads to higher public health and job benefits than the CE Scenario, with lower costs than the MAX Scenario, and assumes a high level of electric vehicle adoption.

The purpose of these scenarios is not to prescribe the exact path that Decatur should take, but to show a range of outcomes that are possible based on the actions Decatur can take to advance Decatur's priorities (e.g., equity, cost-effectiveness, jobs, etc.).

Figure G.3 shows the range in possible fuel mixes in 2050 across all four scenarios. In 2050, the City of Decatur’s energy consumption will be approximately 270,000 MWh. The BAU scenario notably results in most of the energy consumption to be fueled by coal and gas with no additional energy efficiency. The MAX scenario utilizes all possible uses of energy efficiency to reduce Decatur’s energy demand by more than a third. It is important to note that the MAX scenario does not reach 100% clean without RECs, due to the fact that Decatur will still be supplied by Georgia Power. Energy efficiency levels progressively increase across the four pathways while coal and gas energy production decreases. Nuclear and solar remain relatively equal across all scenarios.

Figure G.4 shows the changes in transportation technologies that are possible in Decatur’s community transportation fleet in 2050. In the BAU pathway, conventional passenger vehicles account for the vast majority of vehicle miles traveled, and electric

vehicles (EVs) account for only about a third of vehicle miles traveled. In the remaining three alternative pathways, EV adoption progressively increases across the scenarios. In the MAX case, however, the primary strategy for reducing CO2 emissions calls for reducing single-occupancy vehicles (SOVs) before maximizing EV adoption. Improving walkability and public transportation while encouraging multi-vehicle households to sell their combustion engine vehicles before purchasing an electric vehicle is one way to go about this.

Table G.2 shows the costs and benefits resulting from each scenario. The BAU scenario does not provide any cumulative benefits, such as new jobs, public health savings, and household utility bill savings. It also does not have any new costs associated with it. The CE pathway has the least benefits across each category but is also the least costly scenario other than BAU. The SLI scenario provides the highest public health benefits and job creation while still providing a high benefit-cost ratio but is not as

FIGURE G3 — DECATUR’S FUEL MIX IN 2050 (ALL PATHWAYS)

SOURCE: GREENLINK ANALYTICS, 2022

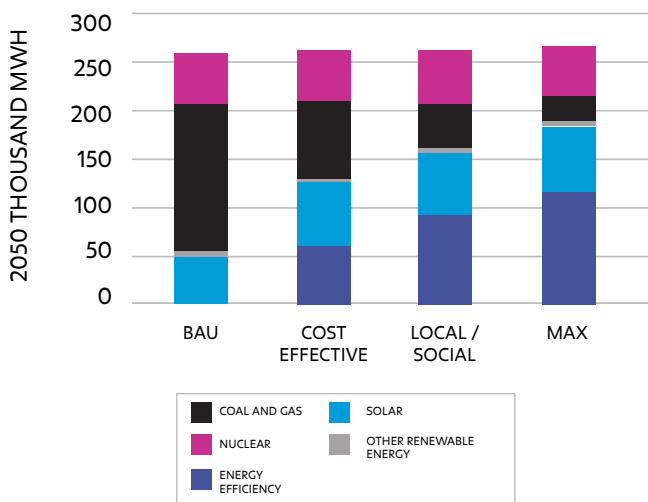
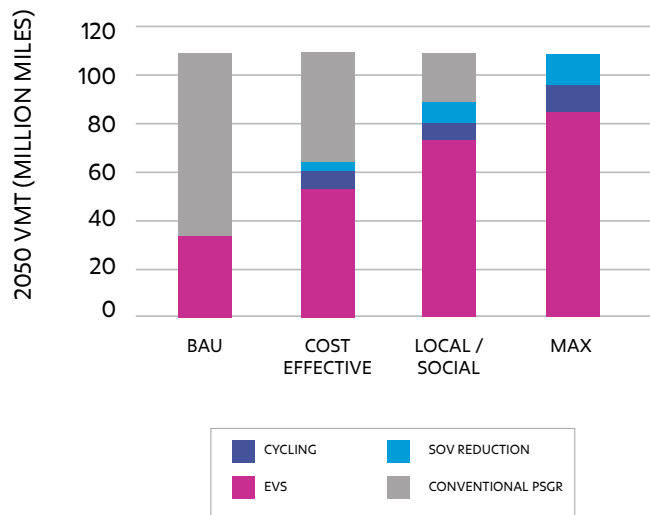


FIGURE G4 — DECATUR’S TRANSPORTATION FLEET IN 2050 (ALL PATHWAYS)

SOURCE: GREENLINK ANALYTICS, 2022





cost-effective as the CE scenario. Finally, the MAX scenario provides the most benefits across every category but is the least cost-effective aside from the BAU scenario where nothing is done.

Components of these scenarios can be interchangeable, depending on changes in Decatur’s financial, social, and political circumstances. For example, Decatur may choose to invest in the level of rooftop solar from the CE scenario but the energy efficiency investments from the SLI scenario. The purpose of comparing each scenario is to help Decatur residents understand the general tradeoffs of each action the City could potentially take. Prioritizing costs over job creation, public health benefits, and household bill savings may result in short-term savings, but the long-term impacts of climate change on the community could soon catch up, resulting in long-term expenditures.

**TABLE G2— PATHWAY CUMULATIVE (2030-2050) OUTCOMES SUMMARY (RELATIVE TO BAU)**

SOURCE: GREENLINK ANALYTICS, 2022

	BAU Pathway	CE Pathway	SLI Pathway	MAX Pathway
Cumulative Benefits (\$M)	\$0	\$400	\$507	\$634
Cumulative Costs (\$M)	\$0	\$35	\$57	\$86
Net Benefits (\$M)	\$0	\$365	\$450	\$548
B/C Ratio	N/A	11.4	8.9	7.4
Net-Jobs <sup>41</sup>	0	105	153	225
Total Decatur Household Income Increased (\$M)	\$0	\$22	\$32	\$47
Gross Regional Product (GRP) Growth (\$M) <sup>42</sup>	\$0	\$46	\$68	\$99
Public Health Savings (\$M)	\$0	\$20	\$33	\$43
CO2 Emissions Avoided (MMT)	0	0.56	0.91	1.17
Household Bill Savings (\$M)	\$0	\$20	\$24	\$30

**Transitioning to clean and renewable energy reduces CO2 emissions and other criteria pollutants through solar, wind, and energy efficiency.**

**Benefits in this transition include public health benefits, which are a result of residents spending less of their income on medical expenses and more on what they want. Other benefits come from expected energy bill savings experienced by residents through increased energy efficiency and renewable energy in their properties. Increased bill savings and ripple out through the greater economy, as more individuals are able to spend their money on other wants and needs.**

# COMMUNITY ENGAGEMENT PROCESS

Community engagement is an important aspect of any plan and is crucial to ensuring that the input from all community members is included. Due to COVID-19, most of these engagement opportunities were held virtually, but this did not deter residents from participating. This process engaged more than 390 individuals through interviews, Decatur youth canvassing, roundtable discussions, and a two-day in-person charrette.<sup>43</sup>

A few themes stood out throughout each engagement event regarding what participants wanted out of a clean and renewable energy transition in their community:

## Decatur should be a leader when it comes to reducing its impact on climate change:

- “We as a city should and absolutely **MUST** be the leader on this. We need to be the model for the rest of the state and for all the South.”
- “[We need to] hold city leaders accountable for making this happen as quickly as possible.”
- “Prioritize commercial and municipal shifts before [making requirements from the] residential [sector].”

## Decatur needs to be transparent and engaging in its clean and renewable energy transition:

- “Decatur should make this a flagship and very visible program.”

Many Decatur’s survey respondents advocated for the City to power at least 75% of Decatur’s energy demand with clean and renewable energy. Roughly 40% of survey respondents advocated that 100% of Decatur’s energy demand be met with clean and renewable energy by 2030 (Figure H.1). An overwhelming percentage of Decatur survey respondents consider solar, wind, hydropower, and energy efficiency to be forms of clean and renewable energy (Figure H.2).

FIGURE H1 — WHAT TIMELINE DO YOU MOST AGREE WITH?

SOURCE: SOUTHFACE INSTITUTE, 2022

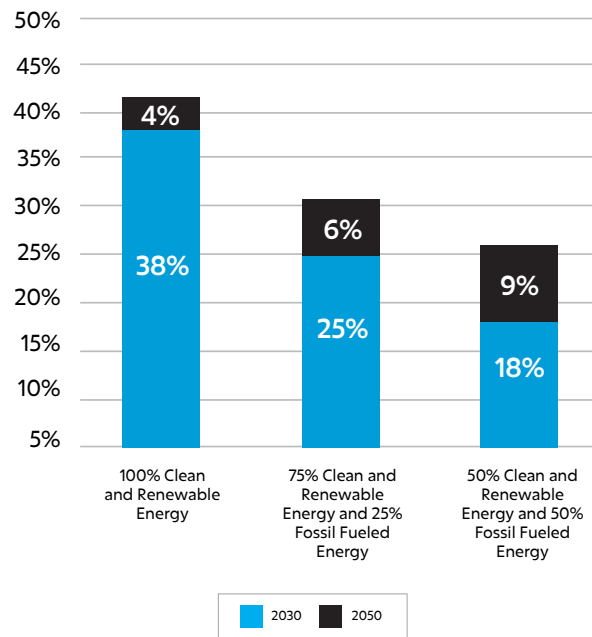
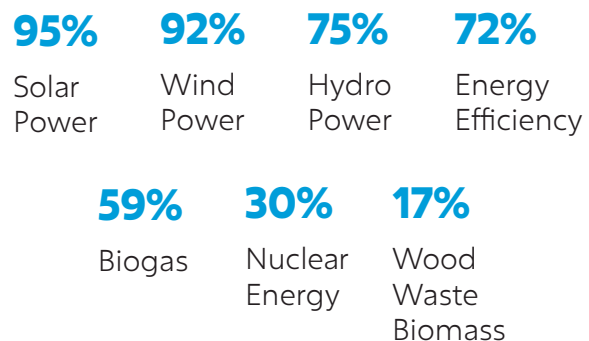


FIGURE H2 — WHICH OF THE FOLLOWING DO YOU CONSIDER CLEAN AND RENEWABLE ENERGY SOURCES?

SOURCE: SOUTHFACE INSTITUTE, 2022



## ENGAGEMENT THROUGH LEARNING: ROUNDTABLE DISCUSSIONS AND EDUCATIONAL RECORDINGS

Three virtual Roundtables were held to engage and inform more than 100 community members about what clean and renewable energy would mean for the City of Decatur. Each Roundtable was led by industry experts and policy leaders to demonstrate to participants how clean energy relates to equity, the economy, and the built environment. To make the most of the virtual environment, guest speakers highlighted applicable and attainable policy solutions and included a substantial community engagement component using interactive Miro boards—online whiteboards meant for group collaboration. These group activities enabled Decatur residents an opportunity to voice their concerns and set forth their priorities regarding Decatur’s emerging Clean Energy Plan. All community feedback generated during the Roundtables was utilized to significantly inform Decatur’s Clean Energy Plan. All virtual community engagement presentations were recorded and can be found at [www.cleanenergydecatur.com](http://www.cleanenergydecatur.com).

Decatur also held virtual learning opportunities to dive deeper into topics related to clean energy. Knowing many Decatur residents are already well versed on clean energy, the learning opportunities were named 202s, derived from collegiate class structures. The sessions were recorded and made available for free to the public. These helpful tools are available on Decatur’s plan website.

### Community and Equity

October 28, 2021 | 34 Attendees

Clean and renewable energy has the potential to reduce energy bills, improve community health, and increase job creation, but doing so without considering the livelihoods of all residents can make this transition inequitable. Understanding how clean and renewable energy investments should be divided among the community can help alleviate energy costs for those who need it most. This Roundtable taught community members about the energy burdens in their neighborhoods and the demographic indicators associated with it.

### Clean Energy and the Economy

November 17, 2021 | 31 Attendees

As Decatur shifts its energy resources from fossil fuels to renewables, a demand for new skills is created. Clean and renewable technologies such as solar power and energy efficiency require new skillsets within the economy. Ensuring that these jobs are local and high-paying is one of the many responsibilities that Decatur recognizes throughout this transition. The Clean Energy and the Economy Roundtable educated participants about the types of jobs that could be created throughout this transition and discussed workforce development policies.

### The Built Environment

January 19, 2021 | 23 Attendees

Understanding how different clean and renewable technologies work is a fundamental first step in transitioning to an energy future without fossil fuels. Through this Roundtable discussion, participants learned the technical details of rooftop solar, renewable energy credits, and energy efficiency. They determined which technologies they considered “clean energy” and which fuels they would like to phase out.



- A **Weatherization and Equity 202** was led by Decatur resident and energy efficiency expert, Mike Barcik. This 202 discussed his work with Decatur's Martin Luther King Jr. Service Project, which provides home maintenance and repair free of charge to Decatur homeowners. A video can be found on Decatur's website for viewers to look back on.
- A tour of **Georgia Tech's Kendeda Building** was led by Decatur resident Shan Arora. The Kendeda Building for Innovative Sustainable Design was certified with a Living Building certification. This is the first building in Georgia and 28th in the world to be certified with a Living Building stamp, supplying energy for itself and other facilities on Georgia Tech's campus.
- Preeti Jaggi, a Decatur resident and Pediatric Infectious Disease expert, led a 202 covering **Climate Change and Health** which describes how burning fossil fuels can affect community health and well-being.

GLA also provided free access to their Greenlink Equity Mapping (GEM) tool to Decatur residents. This tool visualizes energy burden, racial demographics, income, and other indicators at a census tract level across cities and states. Decatur residents and policymakers have the opportunity to identify which communities are struggling with their energy bills so that they can make informed decisions about energy efficiency and renewable energy investments.

## CREATING LASTING SOLUTIONS WITH CHARRETTES

Charrettes are collaborative opportunities for community members, business leaders, and policy makers to come together and listen to each other's lived experiences, expertise, wants, and needs. In March 2022, an in-person charrette was held for two 12-hour days at the Decatur Recreation Center. Participants of this event included Decatur residents, members of Decatur's faith community, business leaders, and City officials. Youth canvassers worked across the City to encourage community members to attend the event. Participants were invited to interact with GLA's ACES tool, provide input around the policy outcomes of the plan, and ask questions of experts.



GLA and The Southface Institute worked directly with City officials to outline the seven action areas presented throughout this plan so participants of the charrette could provide personalized inputs. Each policy or program was presented on large poster boards and residents were encouraged to vote through a 'dot voting' method. Dot voting entails placing a green dot next to policies that residents would like to see enacted and placing an orange dot next to policies that residents do not support. Participants also had the opportunity to directly write on each policy regarding input or opinions.

An open house event concluded the second day of charrettes, where Mayor Patti Garrett gave a speech detailing the importance of committing to Decatur's Clean Energy Plan. Mayor Garrett broadened the context of the Clean Energy Plan as an element of Decatur's 2020 Strategic Plan, Destination 2030, which identifies climate action, racial equity, and enhanced mobility as top community priorities.

## **ENGAGING CITY SCHOOLS THROUGH DECATUR YOUTH CANVASSING**

The Southeast Sustainability Directors Network (SSDN) awarded Southface Institute and the City of Decatur with the Community Collaboration Catalyst MicroGrant to recruit students from the City of Decatur to canvass within their community. High school students were compensated \$15 per hour for their dedication and community expertise. These students were able to communicate the plan's efforts through collaborating with

family and community members, some of whom are from historically underrepresented communities or have varying levels of income. Decatur's youth canvassing efforts reached networks that are not traditionally reached by volunteers who may be unfamiliar with these communities. Additionally, partnering with local students provided an opportunity for enrichment and education, aligning with Decatur's efforts to become a UNICEF-recognized Child-Friendly City.<sup>44</sup>

Overall, the canvassing effort was successful in multiple ways; namely, almost 40 high school students were exposed to the Decatur Clean Energy Plan, 13 of whom engaged in meaningful education sessions and discussions regarding the importance of a clean and renewable energy transition. Active recruitment and student follow-through remained challenging throughout the process. Two bonus opportunities were designed and instituted in order to increase student participation in the clean energy campaign. Firstly, students were encouraged to follow through on their commitment to attend a canvassing event by receiving a \$15 bonus if they confirmed attendance two days prior to the event, and then attended the event. Secondly, students were also provided a separate bonus opportunity to receive \$15 for every 10 emails sent (with a ceiling of \$30 bonus possible).

## LIMITATIONS AND LESSONS LEARNED

Establishing a relationship and direct communication with Decatur's school faculty and staff took longer than anticipated. Future endeavors should allot ample time to establish and strengthen partnerships to ensure adequate advertising and clear communication. Additionally, increased monetary or other incentives such as a lunch or dinner provided would bolster student participation. Consistent and clear scheduling, as well as knowledgeable leadership is imperative for a successful canvassing campaign.

Awareness and understanding of shortcomings in the process remain vital to continued improvement, transparency, and accountability. There remains recognition that the community process was not able to capture all demographics and communities due to low attendee turnout, likely related to broadband limitations for virtual community engagement events. However, it remains evident and imperative to continue community-driven conversations and participation as this plan develops in the coming years. Shortcomings were largely related to the complexities associated with virtual community engagement as a result of the COVID-19 pandemic. Most community engagement events remained virtual to ensure public safety and, in general, the numbers of registrations for community engagement events were greater than the actual attendance numbers. There remains a continuing need to be diligent in working with the community about

this process, it is advised to provide both virtual and in-person meetings for community engagement sessions.





# CLEAN ENERGY ACTIONS

The City of Decatur's commitment to 100% clean and renewable electricity by 2030 and 2035 is a critical step toward reducing emissions, improving public health, boosting job creation, and reducing energy bills for all households. Based on the different scenarios presented in Chapter G, Decatur has the potential to provide 'green' local jobs for nearly 225 individuals cumulatively by 2050. The MAX scenario can generate roughly \$550 million in net benefits. This includes \$43 million in public health savings and \$30 million in household bill savings. Choosing to shift to 100 percent clean and renewable energy in a short time span is not easy; however, the City of Decatur is progressive in regards to climate change mitigation and community development. Decatur had already made great strides toward achieving their clean and renewable energy goal before their initial decision to adopt this plan. Below is a summary of existing policies and programs in Decatur that help provide a foundation for implementation of this Plan:

## EXISTING PROGRAMS AND POLICIES

- In 2014, the City of Decatur approved a High-Performance Building Standard, requiring all new residential and commercial buildings built after 2015 to be certified under an existing green building program. Ordinances like these are meant to reduce energy consumption

in new buildings by installing energy efficient appliances and building materials.<sup>45</sup>

- The Martin Luther King Jr. Service Project was developed in 2003 to alleviate the economic hardships on Decatur's elderly and at-risk seniors by improving their homes through maintenance and repair. These repairs are free of charge for Decatur senior homeowners of all races during the MLK, Jr. holiday weekend each year. Renters are not able to participate in this programming. In 2020, this organization raised funds from private sources to repair and maintain 19 large homes and 12 smaller homes.<sup>46</sup> While helpful in keeping seniors in their homes, this is not a long-term affordable housing investment and most of these homes are replaced when the resident departs.
- The Decatur Land Trust ReHAB Program was established as a committee of the Decatur Land Trust in 2021. This committee was inspired by the Martin Luther King, Jr. Service Project and is intended to preserve smaller, older homes by addressing home maintenance that current residents may not be able to afford. Program officials see a critical need for making these homes highly energy efficient. The program focuses primarily on legacy residents with fixed or low incomes.<sup>47</sup>
- Villages at Legacy Park is an affordable housing project that will be completed by 2023. The goal of this project is to replace 8 existing substandard duplex apartments and 2 single-family homes with 132 new affordable multi-family units. This project

is a partnership between the City of Decatur and the Decatur Housing Authority. It will be carried out at no cost to local taxpayers, but will utilize low-income housing tax credits issued through the Department of Community Affairs.<sup>48</sup>

The configuration chosen does not lend itself to solar implementation.

- Many Decatur communities of faith participate in Georgia Interfaith Power and Light programs. Notably, local communities of faith are participating in Solar Energy Procurement Agreements (SEPA), where financing companies install solar power on the facilities and the communities purchase the power. These communities provide particular opportunities for offsetting energy use and local resilience. Decatur should build on these programs with a specific initiative focused on these communities.

It is important that Decatur builds off its existing foundation by making additional program and policy commitments. Throughout the community engagement sessions outlined in previous chapters, Decatur stakeholders identified seven impact areas and sets of actions that could help Decatur achieve positive community outcomes and expand local clean energy resources as modeled in ACES:

## 1. Leading By Example

- The City of Decatur recognizes that it is not reasonable to require their residents to undertake such an impactful transition to clean and renewable energy without putting in the work itself. The City of Decatur is committed to Leading by Example by transitioning all municipal buildings to 100% clean and renewable energy by 2030 and fully electrifying its vehicle fleet by 2035. Actions that would support these goals include:
  - Transitioning all City building and street lighting to more efficient light-emitting diode (LED) light bulbs.
  - Retro-commissioning existing heating, ventilation, and air-conditioning systems (HVAC) and installing high-efficiency units when they need replacement.
  - Creating a Commute Options policy and incentives program to reduce VMTs from employee commutes.
  - Installing solar arrays on City buildings and properties, either through a direct purchase or the use of a Solar Energy Procurement Agreement (SEPA).
  - Disclosing City buildings' electricity and natural gas consumption to the public through an online dashboard.
  - Replacing natural-gas systems

with high-efficiency electric systems

- Purchasing electric vehicles on a yearly basis as the City's existing internal combustion engine (ICE) vehicles reach the end of their planned service life. Technological advances will be needed to fully electrify heavy-duty municipal vehicles, such as fire trucks and refuse haulers, by this time.

## 2. Building Community Through Investment

Transitioning to 100% clean and renewable electricity by 2030 and 2035 has the potential to reap a wide number of benefits, though it does come at a cost. The City of Decatur should create a plan to equitably distribute these costs and benefits, with a focus on removing financial barriers to solar, energy efficiency, and zero-emission transportation for low-income and legacy residents. The City of Decatur commits to:

- Directing clean energy investments to those most adversely impacted by aging housing and appliances—primarily low-income and moderate-income homeowners and renters.
- Creating a mechanism for community input and review throughout the Plan's implementation, which could take the form of a Clean Energy Taskforce composed of resident volunteers. The establishment of a Clean Energy Taskforce could provide the expertise required to identify community needs and opportunities for clean energy investments, as

well as the ability to promote accountability.

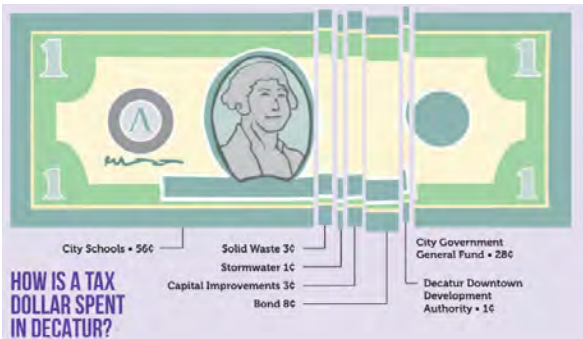
- Considering a Property Assessed Clean Energy (PACE) program to help finance energy efficiency and renewable energy improvements for commercial and residential properties.
- Building on successful program models such as Solarize and Pay As You Save(tm) to implement a community program for deep energy retrofits of Decatur homes.
- Working towards partnerships with schools, worship centers, DeKalb County, and non-profits to bulk-purchase solar installations, electric vehicle charging stations, e-bikes, and water efficiency supplies.

---

**Taxes in Decatur are used to provide essential City services and accomplish the goals set out in the City's Strategic Plan. The majority of taxes collected by the City are directed to City Schools of Decatur, with the next largest portion directed to the City's general fund. To accomplish the goals set out in this Clean Energy Plan, dedicated funding is needed. Investments by the City can help fund energy efficiency and weatherization retrofits to low-income housing, community solar projects, and renewable energy credits (RECs).**

---





SOURCE: THE CITY OF DECATUR BUDGET ALLOCATION, (2021).

### 3. Clean Energy Fund

A Clean Energy Fund is a self-replenishing revolving loan fund that can be used for various clean and renewable energy projects. Agnes Scott's successful Green Revolving Fund is a local example.<sup>49</sup> Capital could be loaned for clean energy projects and repaid with the generated savings over time. Potential fund sources include:

- Private donations (501(c)3 tax-deductible entities) from generous organizations or individuals.
- Utility franchise fees. This revenue is typically directed to the City's general fund, but a percentage could be dedicated as a sustainable funding source.
- Energy efficiency community block grants (EECBG) - a federally funded program meant to assist local governments in implementing strategies to reduce fossil fuel emissions, energy use, and improve energy efficiency in transportation and buildings.<sup>50</sup>
- Low-interest Bonds issued by private finance entities can help provide the upfront capital needed for deep energy retrofits and other clean energy projects. Public bonds would need to

overcome limitations present in Georgia Law dictating use of public financing.

- Special Purpose Local Option Sales Tax (SPLOST), which dedicates a small increase in local sales tax for specific projects, often infrastructure improvements and other larger capital projects.

### 4. Greening the Built Environment

As discussed earlier in this Plan, residential and commercial buildings account for most of Decatur's energy consumption and CO2 emissions. To reduce this energy consumption, the City of Decatur plans to take advantage of building policies such as:

- **Building Performance Standards (BPS)** to drive energy efficiency projects in Decatur's commercial, institutional, and residential buildings.
- **Zero-Energy-Ready building codes** would include required energy and water reporting standards for commercial and multifamily buildings as well as regular evaluations of energy performance improvement standards.
- **Benchmarking and transparency policies** incentivize large commercial buildings to track and publish their energy use. The purpose of this policy is to challenge building owners to evaluate their building's current energy use through behavioral and operational changes.

More information on these policies can be found in the glossary.

## 5. Moving to Low-and-No Carbon Transportation

The transportation sector accounted for roughly 38,000 tons of CO2 emissions in 2019, which is equivalent to the energy used by 4,342 homes in one year.<sup>51</sup> Reducing the use of combustion engine vehicles and improving public transportation is a top priority for Decatur's clean and renewable energy goals. The City of Decatur aims to decarbonize its transportation system and reduce vehicle miles traveled (VMTs) by 10% by 2035 while also increasing the share of bike and pedestrian commutes from 2% to 15%. Chief in achieving these targets is a transportation demand management (TDM) approach that includes:

- Reducing single-occupancy vehicle trips by expanding alternative transportation infrastructure, such as expanded local electric bus service options, "first- and last-mile" connections, improved bike paths and pedestrian walkways, and an electric shuttle service.
- Prioritizing transit-oriented development and walkable commercial districts to create "10-minute" neighborhoods
- Providing additional incentives to promote increased ridership of new and existing transit infrastructure. This could include access to free MARTA passes for Decatur residents and employer- or

City-provided vehicles available for participants in carpool programs.

- Expanding Decatur's network of low-cost or free public charging stations. This infrastructure is needed to support EV adoption among commuters, residents of multifamily housing, and other individuals unable to charge at home or work. Recruiting an electric bike (e-bike) share program to operate in Decatur. A program currently available in Atlanta could potentially be expanded as a zero-carbon transportation option for Decatur residents and visitors.

---

**First- and Last-Mile (FLM) connectivity is a concept that defines how people get to and from public transportation stations. In Atlanta and Decatur, many individuals must walk, bike, or drive over half a mile just to reach a MARTA bus or transit station. Decatur intends on improving this issue by providing improved bike lanes, providing an electric shuttle service to and from MARTA stations, and creating a more walkable City.**

---

## 6. Advocating for Larger Solutions

With the above policies, significant progress can be made towards Decatur's goal to supply its residents', visitors', and businesses' electricity needs with 100% clean and renewable energy. However, larger changes in Georgia Power's system are needed to reach the finish line. The City of Decatur plans to:

- Continue partnering with other Georgia cities to intervene in Georgia Power's Integrated Resource Planning (IRP) every 3 years. The outcomes of these interventions will hopefully include expanded energy efficiency programs offered by the utility, greater deployment of rooftop and community solar and battery storage systems, and the continued decarbonization of Georgia Power's grid.
- Advocate for the expansion of net metering or "monthly netting" in Georgia Power's rate case. This rate design compensates rooftop solar owners at a comparable retail rate for the electricity their systems deliver back to the grid, reducing the payback period of the initial investment and encouraging distributed solar resources.
- Consider options to renegotiate Decatur's Franchise Agreement with Georgia Power, which expires in 2039. At that time, if the City believes Georgia Power could be doing more to decarbonize its electricity system, it could use a renegotiated agreement to

leverage for more clean and renewable energy.

Of course, additional pathways toward broader solutions result from regular community outreach and

---

**Electric vehicles are another form of carbon-free transportation, if the fuel used to power the electric charging stations comes from a renewable resource such as solar. Electric vehicle technology is also more efficient than internal combustion engines (ICEs) – according to the Natural Resources Defense Council (NRDC), “electric motors convert over 85 percent of electrical energy into mechanical energy, or motion, compared to less than 40 percent for a gas combustion engine.”<sup>52</sup>**

**These types of vehicles are becoming more affordable each year, though limitations around charging dissuade many families from purchasing them. Renters most likely cannot install a charging system into their homes. Charging system installation may be impossible in some older homes. Decatur recognizes that at-home charging stations may not be accessible to owners of older homes or renters. Increased public charging stations that are low-cost or free will be made available so that individuals who cannot charge at home or work can still take advantage of carbon-free personal vehicles.**



engagement to ensure community values are well represented. The City of Decatur commits to revisiting its goals and re-running the numbers every 3 to 5 years. The City plans to make any updates to this plan available on the Decatur website shortly after this Plan's release.

## 7. Closing the Gap

The City of Decatur commits to reducing its energy consumption and transitioning away from fossil fuels in a financially and politically feasible way, starting with the five policy objectives previously outlined. Unfortunately, unless Georgia Power Company makes the same commitment, some electricity produced by coal and natural gas will still be supplied to Decatur in 2035. To offset the remaining electricity demand that is not able to be mitigated through energy efficiency, solar, and battery storage, the City can invest in local renewable energy credits (RECs). At the heart of this strategy is to prioritize the purchase of RECs from energy facilities as close to the City of Decatur as possible.

The City of Decatur has committed to 100% clean and renewable electricity by 2030 and 2035 by taking the first step in the planning process through the development of this plan. The policies and actions outlined throughout this document demonstrate Decatur's commitment to its residents and visitors health and economic prosperity. This Plan acts as a dynamic roadmap for Decatur to revisit every 3 to 5 years as new technologies, political influences, and funding opportunities arise.



# GLOSSARY

## **Benchmarking and Transparency Policies**

Along with new building codes, a benchmarking and transparency policy is a great way to incentivize large commercial buildings to track and publish their energy use. The purpose of this policy is to challenge building owners to evaluate their building's current energy use through behavioral and operational changes. Making energy consumption transparent gives prospective tenants more information about utility costs and energy usage, which incentivizes building owners to improve their building performance. When building performance is more visible in the marketplace, efficient building owners are rewarded in the form of attracting more tenants. Roughly 40 cities in the United States have some sort of benchmarking policy in place, including Atlanta.

## **Building Performance Standard (BPS)**

A building policy that sets an energy consumption threshold for commercial and multifamily buildings. Buildings that consume high amounts of energy will be required to lower their consumption through energy efficiency and weatherization improvements within an established compliance timeline. Penalties for non-compliance include restriction on Certificates of Occupancy and monetary fees. Those funds can be used to fund energy efficiency and weatherization projects around the City of Decatur.

## **Built Environment**

The built environment is a catch-all term for man-made structures and entities including buildings, infrastructure, and greenspace.

## **Canvassing**

Canvassing is the act of directly seeking out the perspectives of or informing community members of relevant community updates, usually through door-to-door communications.

## **Charrette**

Charrettes are collaborative opportunities for community members, business leaders, and policy makers to come together and listen to each other's lived experiences, expertise, wants, and needs. Charrettes are useful to gather perspectives and input from a variety of residents for use in planning.

## **Clean Energy Fund**

A Clean Energy Fund is a self-replenishing revolving loan fund that can be used for various clean and renewable energy projects. Capital could be loaned for clean energy projects and repaid with the generated savings over time.

## **Energy Burden (chapter C)**

Energy burden is defined as the percentage of a household's income spent on energy bills. High energy burdens are defined as allocating more than 6% of income towards energy bills, while severe energy burdens are higher than 10%.

## **Equity**

The process of correcting broken systems in order to eliminate disparate outcomes based on one's identity.

Advancing equity means the following:

- Because "business as usual" will not change by itself, equity requires transforming the culture that



produces processes and products of the organization.

- Because as individuals we operate within systems that create inequities, equity requires both individuals and systems level change.
- Because opportunities currently do not exist for everyone, equity is a corrective mechanism of redistributing benefits and burdens.

### **Greenhouse Gases (GHG)**

Gases in the Earth's atmosphere that trap or absorb infrared radiation from the sun as heat and contribute to the 'greenhouse effect'. Similar to how a blanket traps heat around your body, GHGs keep the sun's heat from reflecting back to space and instead hold it in the atmosphere. The main GHGs include water vapor, carbon dioxide, methane, nitrous oxide, and other synthetic, fluorinated gasses like CFCs and HFCs which can be used as refrigerants. GHG emissions amplify the natural greenhouse effect and contribute to subsequent global warming.<sup>53</sup>

### **Property Assessed Clean Energy (PACE)**

According to the Department of Energy, "PACE is a mechanism for financing energy efficiency and renewable energy improvements on private property", including residential and commercial properties. "Property owners that voluntarily choose to participate in a PACE program repay their improvement costs over a set time period—typically 10 to 20 years—through property assessments, which are secured by the property itself and paid as an addition to the owners' property tax bills." The assessment debt is tied to the property as opposed to the owner, so "the repayment

obligation may transfer with property ownership if the buyer agrees to assume the PACE obligation and the new first mortgage holder allows the PACE obligation to remain on the property." This can make energy improvements more appealing to property owners if they suspect that they may not retain the property long enough to accrue the savings that would cover upfront costs.<sup>54</sup>

### **Roundtable**

A roundtable is an opportunity for community members, industry experts, and policymakers to communicate and collaborate on a variety of policies. Industry experts and policymakers will typically outline applicable potential policies for feedback, and community members will in turn have the chance to vocalize their concerns, priorities, interests, and desired policy alternatives.

### **Weatherization**

Weatherization refers to the process of upgrading buildings such that they are safeguarded from the long-term effects from the elements including sunlight, wind, and precipitation. This process often involves upgrades that reduce energy consumption and improve energy efficiency of a building over time.

### **Zero Energy Ready**

A Zero-Energy-Ready building is designed to consume an amount of energy that it is able to produce on-site. These buildings can host a rooftop solar array, battery storage, and onsite greywater systems. Decatur plans to require new construction to comply with Zero Energy Ready codes by 2030. Decatur's Net-Zero Ready plans include the improvement and expansion of building codes for all new municipal, institutional, and commercial construction. This would include required energy and water reporting standards for commercial and multifamily buildings as well as regular evaluations of energy performance improvement standards.



# INDEX

## CHAPTER C

---

- 1 Ibid.
- 2 Bernstein, A. S., Sun, S., Weinberger, K. R., Spangler, K. R., Sheffield, P. E., & Wellenius, G. A. (2022). Warm season and emergency department visits to U.S. children's hospitals. *Environmental Health Perspectives*, 130(1). <https://doi.org/10.1289/ehp8083>
- 3 United States Environmental Protection Agency. (2022, March 23). Reduce Urban Heat Island Effect. Washington, DC: United States Environmental Protection Agency: Green Infrastructure. <https://www.epa.gov/green-infrastructure/reduce-urban-heat-island-effect>
- 4 Environmental Protection Agency. (n.d.). Climate Change Indicators: Heat-Related Illnesses. EPA. Retrieved May 25, 2022, from <https://www.epa.gov/climate-indicators/heat-related-illnesses>
- 5 A severe energy burden is qualified as households that pay 10% of their income or greater on electricity and natural gas bills. Greenlink Equity Map (GEM). (2022). Retrieved June 21, 2022, from <https://www.equitymap.org/>
- 6 Office of Energy Efficiency and Renewable Energy. Low-Income Community Energy Solutions. Energy.gov. Retrieved May 24, 2022 from <https://www.energy.gov/eere/slsc/low-income-community-energy-solutions>
- 7 Tourjée, D. (n.d.). The Cost of High Utility Bills Is Mental Health. *Vice*. Retrieved May 25, 2022, from <https://www.vice.com/en/article/8x44p4/the-cost-of-high-utility-bills-is-mental-health>.
- 8 Hicke, J.A., S. Lucatello, L.D., Mortsch, J. Dawson, M. Domínguez Aguilar, C.A.F. Enquist, E.A. Gilmore, D.S. Gutzler, S. Harper, K. Holsman, E.B. Jewett, T.A. Kohler, and K. Miller, 2022: North America. In: *Climate Change 2022: Impacts, Adaptation, and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press. In Press.
- 9 Agenda for the Decatur City Commission Meeting from May 17, 2021.
- 10 (2021, October 18). Decatur 2020 Strategic Plan. Decatur, GA: [ENTITY]: Destination 2030: Resources. <https://www.decaturga.com/>
- 11 Decatur Land Trust. (2022, April 22). from <https://decaturlandtrust.org/>
- 12 Martin Luther King Jr. Service Project (2022). from <https://www.mlkserviceproject.com/>
- 13 Energy STAR Portfolio Manager. (2021). Building Performance Standards: Overview for State and Local Decision Makers [Fact Sheet]. <https://www.epa.gov/>

## CHAPTER D

---

- 14 U.S. Census Bureau quickfacts: Decatur City, Georgia. (n.d.). Retrieved May 25, 2022, from <https://www.census.gov/quickfacts/fact/table/decaturcitygeorgia>
- 15 Ibid.

- 16 Ibid. 28078 www.IMPLAN.com
- 17 U.S. Census Bureau (2021). QuickFacts Decatur city, Georgia. Retrieved from <https://www.census.gov/quickfacts>
- 18 Drehobl, A., and L. Ross. 2016. Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low-Income and Under-served Communities. Washington, DC: American Council for an Energy Efficient Economy. [www.aceee.org/research-report/u1602](http://www.aceee.org/research-report/u1602).
- 19 Davis, Lucas. "Renting Inefficiency" Energy Institute Blog, UC Berkeley, November 26, 2012, <https://energyathaas.wordpress.com/2012/11/26/renting-inefficiency/>
- 20 Rothstein, R. 2017. The Color of Law: A Forgotten History of How Our Government Segregated America. Liveright Publishing.
- 21 Ibid.
- 22 Matasci, S. (2022). How solar panel cost and efficiency have changed over time [web log]. Retrieved from <https://news.energysage.com/solar-panel-efficiency-cost-over-time/>.
- 23 Harvard School of Public Health. (2022, March 22). Clean Energy & Health. Harvard T.H. Chan School of Public Health. Retrieved June 1, 2022, from <https://www.hsph.harvard.edu/c-change/subtopics/clean-energy-health/>
- 24 City of Decatur. (2019). (rep.). Next Steps Annual Report. Decatur, GA: [https://www.decaturga.com/sites/default/files/fileattachments/city\\_manager039s\\_office/page/7091/cod-annual-report-2019.pdf](https://www.decaturga.com/sites/default/files/fileattachments/city_manager039s_office/page/7091/cod-annual-report-2019.pdf)
- 25 IMPLAN® model, [2019] Data, using inputs provided by the user and IMPLAN Group LLC, IMPLAN System (data and software), 16905 Northcross Dr., Suite 120, Huntersville, NC
- 26 U.S. Census Bureau (2019). OCCUPATION BY SEX FOR THE CIVILIAN EMPLOYED POPULATION 16 YEARS AND OVER. Retrieved from <https://data.census.gov>.
- 27 Ibid.

## CHAPTER E

---

- 28 Greenlink Analytics, Advanced Clean Energy Scenario (ACES). 2022. Microsoft Excel file.
- 29 Energy consumption data from 2019 is referenced throughout this plan, as it is more representative of Decatur's actual energy usage than subsequent years in which COVID-19 took place.
- 30 Environmental Protection Agency. (n.d.). Greenhouse Gas Equivalencies Calculator. Retrieved April 26, 2022, from <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>
- 31 Enjoy the walk! City of Decatur, GA. (n.d.). Retrieved May 25, 2022, from <https://www.decaturga.com>
- 32 Biking in Decatur. City of Decatur, GA. (n.d.). Retrieved May 25, 2022, from <https://www.decaturga.com>
- 33 Environmental Protection Agency. (n.d.). EPA. Retrieved April 26, 2022, from <https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle#driving>
- 34 City of Decatur. (2018). (rep.). Community Transportation Plan . Retrieved from <https://www.decaturnext.com>.

## CHAPTER F

---

- 35 Georgia Power Company. (2020). Renewable and Nonrenewable Tariff Schedule. <https://www.georgiapower.com/content/dam/georgia-power/pdfs/residential-pdfs/residential-rate-plans/RNR-10-1.pdf>
- 36 Utility franchise fees. Institute for Local Self-Reliance. (2020, June 25). Retrieved June 21, 2022, from <https://ilsr.org/energy/utility-franchise-fees/>
- 37 (2022). General Fund Revenue Estimate Detail: Budget FY 2022-2023. City of Decatur.
- 38 Ibid.

## CHAPTER G

---

- 39 Greenlink Analytics, Advanced Clean Energy Scenario (ACES). 2022. Microsoft Excel file.
- 40 Neubauer, M. (2014). (rep.). Cracking the TEAPOT: Technical, Economic, and Achievable Energy Efficiency Potential Studies. Washington, DC: American Council for an Energy-Efficient Economy.
- 41 A 'Net-Job' considers job losses from the fossil fuel power sector as a result of investments in solar and energy efficiency. Although jobs are shifted away from the fossil fuel economy, a positive number indicates that more jobs are created than lost.
- 42 As investments in energy efficiency and solar are provided through this transition, increased jobs and household incomes are a result. As individuals experience income growth, spending into the local economy also increases, resulting in a higher gross regional product (GRP).

## CHAPTER H

---

- 43 Southface. (2022). [Decatur's 100% Clean and Renewable Energy Survey] Research. Unpublished.
- 44 UNICEF USA. (2021, March 17). Decatur Joins UNICEF USA's Child Friendly Cities Initiative. Unicefusa. <https://www.unicefusa.org>

## CHAPTER I

---

- 45 High performance building ordinance. City of Decatur, GA. (n.d.). Retrieved June 17, 2022, from <https://www.decaturga.com/dec/page/high-performance-building-ordinance>
- 46 Martin Luther King Jr. service project. Martin Luther King Jr Service Project. (n.d.). Retrieved May 26, 2022, from <https://www.mlkserviceproject.com/about/mlk-service-project/>
- 47 Decatur's Home Rehabilitation Program. Decatur Land Trust. (2022, January 6). Retrieved May 26, 2022, from <https://decaturlandtrust.org/decatur-home-rehabilitation-program>
- 48 Decatur Legacy Park. (2022, May 10). Affordable "Community of Families" now taking shape at Legacy Park. Decatur Legacy Park. Retrieved May 27, 2022, from <https://decaturlegacypark.com>
- 49 Green Revolving Fund. Agnes Scott College website. (n.d.). Retrieved June 17, 2022, from <https://www.agnesscott.edu/center-for-sustainability/energy-and-climate-action-plan/green-revolving-fund.html>
- 50 Energy Efficiency and Conservation Block Grant Program – bipartisan infrastructure law 2021. Energy.gov. (n.d.). Retrieved June 17, 2022, from <https://www.energy.gov/eere/wipo/energy-efficiency-and-conservation-block-grant-program-bipartisan-infrastructure-law-2021>



- 51 Environmental Protection Agency. (n.d.). Greenhouse Gas Equivalencies Calculator. EPA. Retrieved June 1, 2022, from <https://www.epa.gov>
- 52 Bolor, M., Garcia, S., Statler, A., & Valderama, P. (2022, May 25). Electric vehicle basics. NRDC. Retrieved June 3, 2022, from <https://www.nrdc.org/experts/madhur-bolor/electric-vehicles-101>

## GLOSSARY

---

- 53 July 16, 2019 M. D. (2022, April 27). Greenhouse effect 101. NRDC. Retrieved June 23, 2022, from <https://www.nrdc.org/stories/greenhouse-effect-101>
- 54 Property Assessed Clean Energy Programs. Energy.gov. (n.d.). Retrieved June 23, 2022, from <https://www.energy.gov/eere/slsc/property-assessed-clean-energy-programs>

# APPENDIX

---

46	ACES TABLES
48	DECATUR MUNICIPAL BUILDING SUMMARY
49	FLEET SUMMARY
50	COMMUNITY ENGAGEMENT DOCUMENTS (IN CHRONOLOGICAL ORDER)
50	KICKOFF PRESENTATION
78	JANUARY ESB
99	ROUNDTABLE-COMMUNITY AND EQUITY
124	ROUNDTABLE-CLEAN ENERGY AND ECONOMY
144	ROUNDTABLE THE BUILT ENVIRONMENT
177	YOUTH COUNCIL
193	TRAINING MATERIALS
195	CANVASSING FLYER
196	INFORMATION BOARDS
206	MIRO BOARDS, GREEN DOT VOTING & CHARRETTE PICTURES
231	FINAL CHARRETTE PRESENTATION
258	CHARRETTE TAKE-AWAY
260	TOWN HALL PRESENTATION
294	TOWN HALL TAKE-AWAY

## ENERGY EFFICIENCY (ELECTRIC)

---

Annual energy efficiency savings potentials are derived by combining Decatur's current energy demand with energy saving assumptions from the American Council for an Energy-Efficient Economy (ACEEE) and the National Renewable Energy Laboratory's (NREL) ResStock model. ResStock tells us the energy savings potentials across every state by analyzing appliances that have a positive return on investment (the most cost effective).

**RESIDENTIAL**      **MAX Savings Potential:** 1.3% annually

**COMMERCIAL**      **MAX Savings Potential:** 1.6% annually

## ENERGY EFFICIENCY (NATURAL GAS)

---

**RESIDENTIAL**      **MAX Savings Potential:** 0.8% annually

**COMMERCIAL**      **MAX Savings Potential:** 1.1% annually

## SOLAR POWER

---

Greenlink Analytics (GLA) comes up with a technical and economic potential for residential and commercial solar using project sunroof from Google Environmental Insights Explorer (EIE) and historical solar trends in Decatur.

Assumptions around Decatur's solarize campaigns, contagion effects (e.g. how much more will I want to install solar if my neighbor has it?), and Federal income tax credits (ITC) are considered for MAX solar potential analysis.

**RESIDENTIAL SOLAR POWER**      **Baseline Residential DGPV:** 6MW cumulatively  
**MAX Residential DGPV:** 12MW cumulatively

**COMMERCIAL SOLAR POWER**      **Baseline Commercial DGPV:** 11MW cumulatively  
**MAX Commercial DGPV:** 12MW cumulatively

## ENERGY STORAGE

---

GLA calculates residential and commercial energy storage potentials based on the solar power potentials described above: a portion of the residential and commercial solar installed is also paired with battery storage. The assumed portion of solar installations that also include battery storage are derived from NREL's dGEN model results, which estimates customer adoption of storage based on economics and contagion effects.

**Residential Battery Storage**      **Baseline Residential Battery:** 0.6MW cumulatively  
**MAX Residential Battery:** 2.8 MW cumulatively

**Commercial Battery Storage**      **Baseline Commercial Battery:** 1.6 MW cumulatively  
**MAX Commercial Battery:** 5.1 MW cumulatively



## RENEWABLE ENERGY CREDITS (RECS)

---

A REC is a market-based tool to offset fossil fueled energy production through certifications. Credits typically represent one megawatt-hour (MWh) of electricity produced by a renewable energy resource. This option is best for areas that cannot produce renewable energy on their own, but want to support the renewable energy market. RECs can differ in price depending on what type of renewable technology you are interested in purchasing, however a typical 1 REC/ 1 MWh of energy can be up to \$10.

## ELECTRIC VEHICLE ADOPTION | TRANSPORTATION

---

Electric vehicle potentials are based on over 10,000 simulations of potential futures based on sales projections from 5 leading EV sources. Vehicle stock turnover as vehicles reach end of life are also accounted for.

<b>BAU SCENARIO</b>	<b>EV % of passenger vehicles in 2050: 32%</b>
<b>CE SCENARIO</b>	<b>CEV % of passenger vehicles in 2050: 55%</b>
<b>SLI SCENARIO</b>	<b>EV % of passenger vehicles in 2050: 77%</b>
<b>MAX SCENARIO</b>	<b>EV % of passenger vehicles in 2050: 100%</b>

## ALTERNATIVE COMMUTE MODES | TRANSPORTATION

---

This action represents the portion of daily commutes occurring by bicycle. Higher percentages of bicycle commuting reduce the number of trips via single-occupant vehicles, thereby reducing local fuel consumption and tailpipe emissions.

<b>BAU SCENARIO</b>	<b>Percent commute by bike in 2050: 2%</b>
<b>MAX SCENARIO</b>	<b>Percent commute by bike in 2050: 33%</b>

## VMT REDUCTIONS | TRANSPORTATION

---

GLA calculates VMT reduction potential based on a package of policies designed to reduce single occupant vehicle trips. These policies include increased travel infrastructure for walking and other active travel modes, implementation of commute reduction programs that leverage partial virtual work and promote carpooling, and investment in local electric public transit service.

<b>BAU SCENARIO</b>	<b>Percent VMT growth in Decatur by 2050: 26%</b>
<b>MAX SCENARIO</b>	<b>Percent VMT growth in Decatur by 2050: 10%</b>

## Municipal Building Assessments Summary

To achieve its goal of 100% clean and renewable energy for municipal buildings by 2030, the City of Decatur assessed energy and water usage at a portfolio of its largest and most used buildings. . The assessments included utility benchmarking with ENERGYSTAR Portfolio Manager, ASHRAE\* Level 2 energy assessments, and analysis of plumbing features and water usage .

The assessments are a top-down/bottom-up analysis of energy and water usage:

- Top-down examination of actual energy and water consumption through analysis of utility bills
- Bottom-up audit of all lighting and plumbing fixtures, HVAC units, water heaters, and other equipment performed on-site

This approach helps identify where there is excessive consumption and where efficiency measures can have the largest impact. A list of potential efficiency projects is then developed, along with estimated costs and annual savings calculations, based on the above site-audit and energy/water analyses.

Southface Institute assessed 9 municipal buildings, including: the Public Works buildings A and B, City Hall, two fire stations, Beacon Municipal Police Department, Ebster Recreation Center, Decatur Recreation Center and the Legacy Park Administration Building.

The assessments found \$227,883.00 of possible annual cost savings through a combination of efficiency improvements, behavioral changes, and solar installations. Typical improvements include:

- Operations optimization
- LED Lighting and automated controls. LED lights are more efficient and have longer lifespans than fluorescent bulbs, and prices for LEDs continue to decline.
- Retrocommissioning HVAC systems to improve performance. Commercial HVAC systems, like those in municipal buildings, are complex systems made up of many sensors, controls, and pieces of mechanical equipment. Retrocommissioning addresses defects in the system that can emerge over time.
- Upgrading equipment on burnout, or when existing systems reach the end of their usable life.

These improvements could be funded through a variety of sources including:

- Decatur Capital Improvement Funds
- Energy Savings Performance Contracts
- Solar Energy Procurement Agreements
- City purchase of solar PV arrays

\*American Society of Heating Refrigeration and Air Conditioning Engineers. ASHRAE\* Level 2 energy assessments are intended to for those wishing to improve energy efficiency, hone-in on how the whole building is functioning and identify the projects that will provide the greatest energy reduction at the best return on investment (ROI).

## Decatur's Municipal Fleet Electrification Assessment

The City of Decatur's ("Decatur") fleet is comprised of 172 passenger vehicles and equipment. The non-bus fleet is critical in the operations of the city's services and revenue-producing fleets. Decatur's vehicles have been categorized into light-duty, medium-duty, heavy-duty, pursuit, and non-road engine vehicles. Decatur's fleet is fairly-evenly distributed between pursuit, light, medium, and heavy-duty vehicles. Light-duty vehicles make up 39% of Decatur's fleet, the most used type of vehicle, with medium-duty vehicles making up 22% of the fleet. Heavy-duty vehicles, all of which are types of heavy-duty trucks, make up 20% of the fleet. Additionally, police pursuit vehicles that make up 18% of the fleet.

Electric vehicle availability, duty cycles of the vehicles, infrastructure needs, and the cost to make the transition are four key factors influencing the achievability of meeting the electrification goals.

**Vehicle Availability:** Decatur's fleet is made up of a diverse array of vehicles, all of which have varying degrees of electric models currently available. Currently, light-duty vehicles have the largest number of electric models on the market, while heavy-duty vehicles, such as firetrucks and garbage trucks, have very few commercially available options. As vehicle manufacturers continue to invest in the development of electric models, the City will have a greater number of options to meet its electrification goals.

**Range:** Understanding the duty cycle of each Decatur vehicle is critical to knowing whether the range limitations of a battery electric vehicle will interrupt operations. Based on the annual mileage data provided, it seems that all non-patrol vehicles are eligible for EV replacement.

**Charging:** Decatur's fleet is spread out over 3 sites, with most of the fleet being located between the Public Works building and Police Station. Assuming there is a 1:1 charger to vehicle ratio at all locations, Decatur would need 57 chargers for the Police station, 8 chargers for the Fire Department, and 97 chargers at the Public Works building.

The analysis conducted by the Center for Transportation and the Environment assumed a 1:1 fleet replacement and 1:1 charger to vehicle ratio. Additional analysis is recommended to right-size the Decatur fleet and determine the optimal charging infrastructure and schedule to maintain operational capabilities in a cost-effective manner.





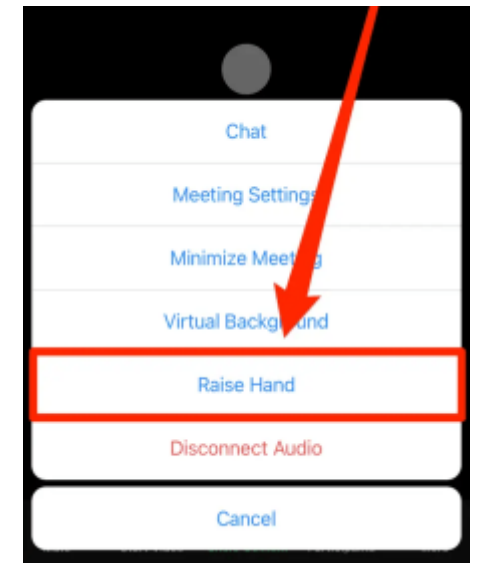
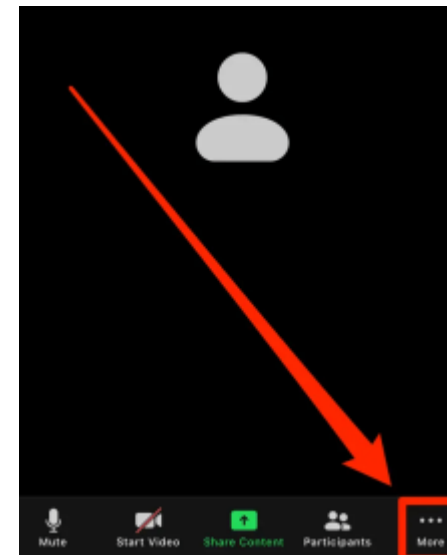
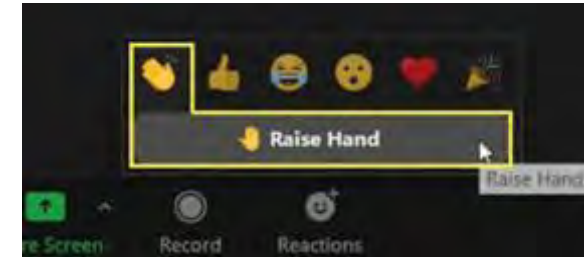
# City of Decatur Clean Energy Plan Kickoff

October 28, 2021



# HOUSEKEEPING: ZOOM LOGISTICS

- Only presenters will have video & voice during the presentation.
- After the presentation, we will start the Q & A portion.
- At this time, you can request to talk using the phone icon under your name.
- Please feel free to ask question via the chat box throughout the session, and we will answer them at the end of the session



# Kickoff Agenda

<b>6:00 – 6:10 PM</b>	Welcome and Introductions	David Nifong, City of Decatur
<b>6:10 – 6:30 PM</b>	What is Clean Energy?	Megan O’Neil, Southface
<b>6:30 – 6:50 PM</b>	Decatur Baseline	Matthew Cox, Greenlink Analytics
<b>6:50 – 6:55 PM</b>	Engagement Opportunities	Robert Reed, Southface
<b>6:55 – 7:10 PM</b>	Prioritization Exercise-Polling	Lacey Davis, Southface
<b>7:10 – 7:30 PM</b>	Questions and Next Meeting	Robert Reed, Southface



# A Message from Mayor Patti Garrett







What is a Clean Energy Plan?



# How other cities define 'Clean' and 'Renewable' energy?

---

*'Clean' sources do not emit greenhouse gas emissions (GHGs).*

*'Renewable' sources are those which can be replenished in a human timescale.*

## What is included?

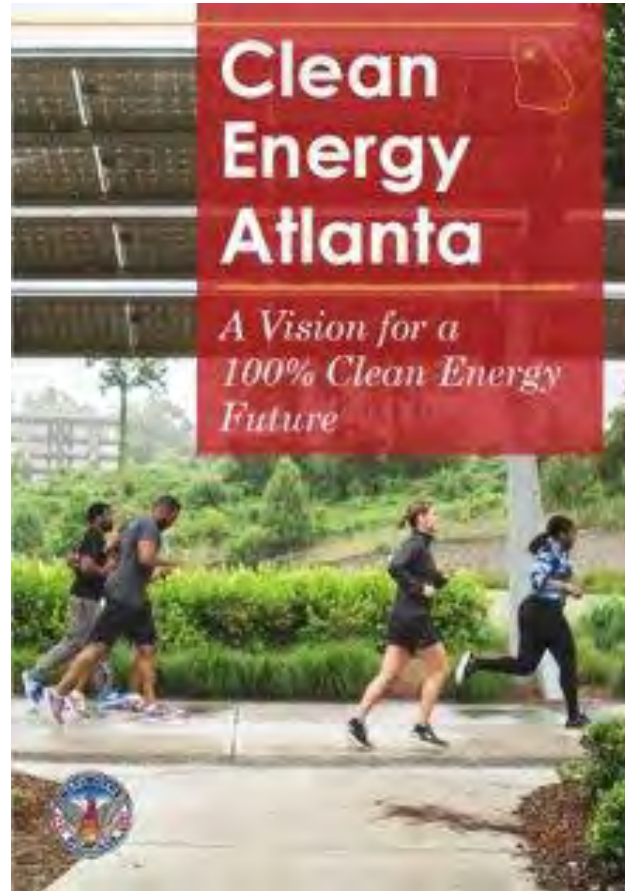
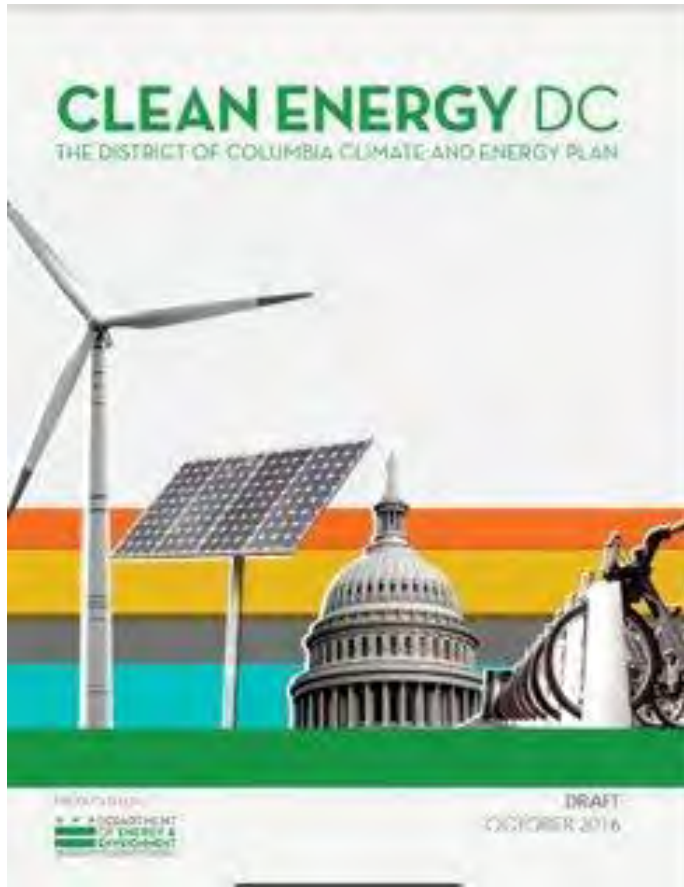
- *Energy efficiency*
- Solar power
- Wind power
- Hydropower
- Energy storage
- Renewable Energy Credits (RECs)

**EXAMPLE**

## What is not included?

- Nuclear power
- Biomass
- Natural gas
- Coal

# Creating a Clean Energy Plan



# Creating Decatur's Clean Energy Plan

How do we create the plan?



## ENGAGE

- Community-wide kickoff
- Roundtable events
- Stakeholder and community conversations
- Youth engagement through school workshops
- Meet with local leaders



## SYNTHESIZE

- Capture priorities and values of Decaturites
- Consider diverse energy system, policy and program scenarios
- Release summary findings for community review



## DEVELOP

- Select feasible scenarios based on community input, energy policy impact modeling, and City priorities
- Draft and refine Plan, publishing 3 rounds of drafts
- Finalize and deliver Clean Energy Plan



## How to transition to clean energy



Educate community  
& stakeholders



Collaborate with  
residents, businesses,  
& institutions



Set goals and track  
progress



Invest in solar energy  
& other renewable  
sources



Reduce energy use  
through efficiency  
upgrades



Reduce reliance on  
fossil fuels

# Potential Priorities of Decatur's Clean Energy Plan



# Decatur's Clean Energy Pathways: Greenlink Analytics

---



# Where are we now?

---

It can be difficult to make high quality decisions about where and how to make change if the current state is not understood

## What kind of data speaks to the values of our community?

- Many communities have inventories and some existing data, although the quality of these are highly variable
- 30% + errors are common
- In energy and climate, regular sources of error come from a lack of geographic and temporal data (buildings) and measurement errors (transportation), or a general lack of research and integration (equity)

## How up-to-date is our data?

- Things change relatively quickly – if data is more than 3 years old, it may not be reliable and likely requires a refresh.

## Tying “Where We Are Now” To “Where Are We Going”: Greenlink’s ACES Model

---

The Advanced Clean Energy Scenario Model (ACES) allows users to align outcomes with different future visions and action categories, leveraging the insights of Greenlink’s machine learning energy model ATHENIA.

- ACES is helpful in understanding and evaluating the baseline. When set to its Business as Usual (BAU) calibration, it will inform people about projected future states of the community.
- ACES is most useful in exploring which strategies will lead to recognizing and realizing public values.
- ACES provides details on costs, benefits, job creation, public health, bills, and energy burden for user-defined effort levels, without getting prescriptive about policies. It will help clarify what strategies can best help put into practice the public values uncovered as a part of a solid community-centered process.

# ACES Inputs

## Resolution's definition of clean and renewable energy

- Users input energy and transportation actions (energy efficiency, solar, wind, EVs, transit, etc.) to create pathways

## Tool uses

- Understand potential for clean energy
- Demonstrates value of energy beyond climate

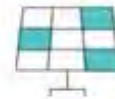


**ABOUT THE TOOL** This tool allows you to design future energy pathways in Decatur. It covers all sectors of the economy, including residential, commercial, and transportation energy use, as well as the power utility sector. The tool is powered by Greenlink's ATHENIA model, which evaluates energy actions by their economic, environmental and social impacts.

**HOW TO USE** You can create your own energy future by inputting the values in the ACTION cells. After entering your target values, your report card will give a deeper breakdown of the impact.



INPUT YOUR ACTIONS				
ELECTRICITY AND POWER PRODUCTION				
Energy Measure Input No. 1				
ENERGY EFFICIENCY (Electrical)				
	ACTION		IMPACT	
Residential Potential Achieved	100%	Residential Potential Achieved	90,000	# of homes cutting electricity by half
Commercial Potential Achieved	100%	Commercial Potential Achieved	4.7	kWh-saved per sqft.
Industrial Potential Achieved	100%	Industrial Potential Achieved	5.1	kWh-saved per sqft.
Energy Measure Input No. 2				
SOLAR POWER				
	ACTION		IMPACT	
Residential Solar Power	100%	Residential Solar Potential Achieved	300	Homes adding solar
Commercial Solar Power	100%	Commercial Solar Potential Achieved	200	Buildings adding solar





# ACES Report Card

Clean Energy Scenario



## YOUR 2050 PATHWAY REPORT CARD

*What Your Vision Would Mean for Decatur*

### COST OVERVIEW

### 2050 Decatur CLEAN ENERGY SUMMARY

Cumulative Benefits (Billion-\$)	3.616	Decatur's Electricity Offset by Building Energy Efficiency	28%
Cumulative Costs (Billion-\$)	2.067	Decatur's Renewable Electricity Supply	61%
Net Benefits (Billion-\$)	1.5	Utility Scale Solar Dedicated Capacity (MW)	1,307
Benefit/Cost Ratio	1.7	Residential Solar Capacity Installed	0.6
		Commercial Solar Capacity Installed (MW)	1
		Reduction in Gasoline Consumption from 2018	100%
		Electric Vehicles as a % of Light-duty Vehicles	100%



## ENERGY EQUITY

*Now and In 2050*

### COMMUNITY-WIDE ENERGY BURDEN

% of Income Spent on Energy Bills

Today	6.6%
2050, No Change	4.2%
2050, Selected Scenario	2.9%



## IMPACT OF YOUR PATHWAY ON DECATUR'S FUTURE

*Through 2050*

### ECONOMY

### FULL IMPACT

### EQUAL TO

Jobs Created	5,150	0.2	x Decatur Clinic Workforce
Incomes Increased	\$1,557,000,000	\$135	per Decatur resident per year

*Through 2050*

### PUBLIC HEALTH

### FULL IMPACT

### EQUAL TO

Public Health Savings	\$247,000,000	\$2	Monthly Health Insurance Savings
CO2 Emissions Avoided (Metric Tons)	19,891,894	32	Months without Cars

*In 2050*

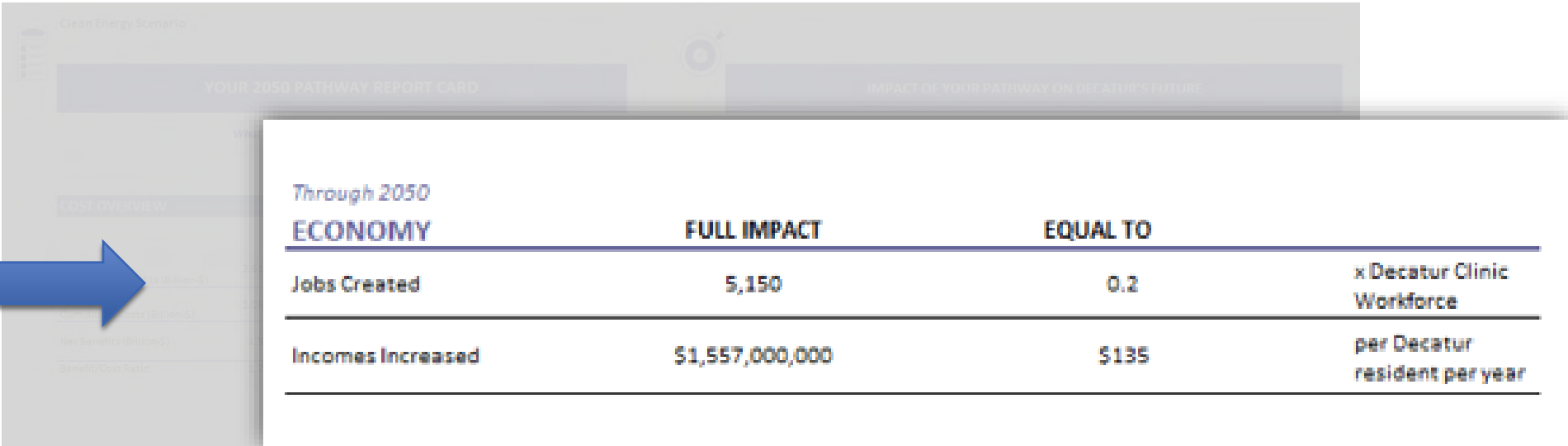
### EXPENDITURE SAVINGS

### FULL IMPACT

### EQUAL TO

Household Energy Bill Savings	\$24,000,000		
Annual Bill Savings: Participants	\$934	\$78	Savings on monthly electricity bills
Annual Bill Savings: Non Participants	\$401	\$33	Savings on monthly electricity bills
Gasoline Savings	\$213,833,899	\$20	Savings per Decatur driver per year

# ACES Report Card

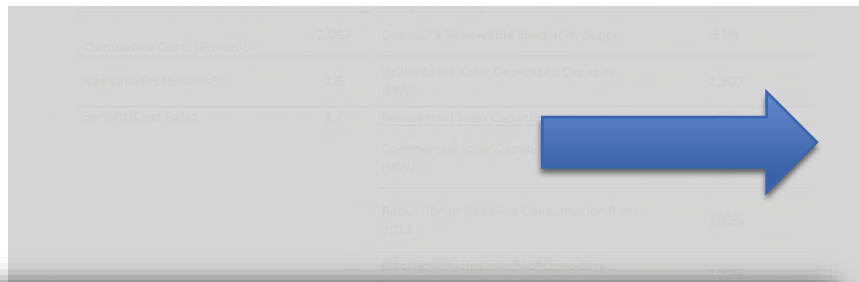


Through 2050	FULL IMPACT	EQUAL TO	
<b>ECONOMY</b>			
Jobs Created	5,150	0.2	x Decatur Clinic Workforce
Incomes Increased	\$1,557,000,000	\$135	per Decatur resident per year

**Understanding Economic Development and Cost-Effectiveness:** ACES uses location-specific characterizations of the economy to determine how clean energy policies affect job creation, GDP, and income. Job creation is projected for twelve different industries that are closely affiliated with clean energy. Finally, ACES provides estimates of each scenario’s cost effectiveness by showing the net present value of all costs and benefits as well as the cost-benefit ratio.

# ACES Report Card

**Determining Energy Burden and Public Health Impacts:** ACES estimates the community-wide energy burden by assessing changes in bills and incomes and the public health impacts of different strategies by analyzing where and when emissions change, how air pollution is dispersed, and the associated healthcare costs of exposure.



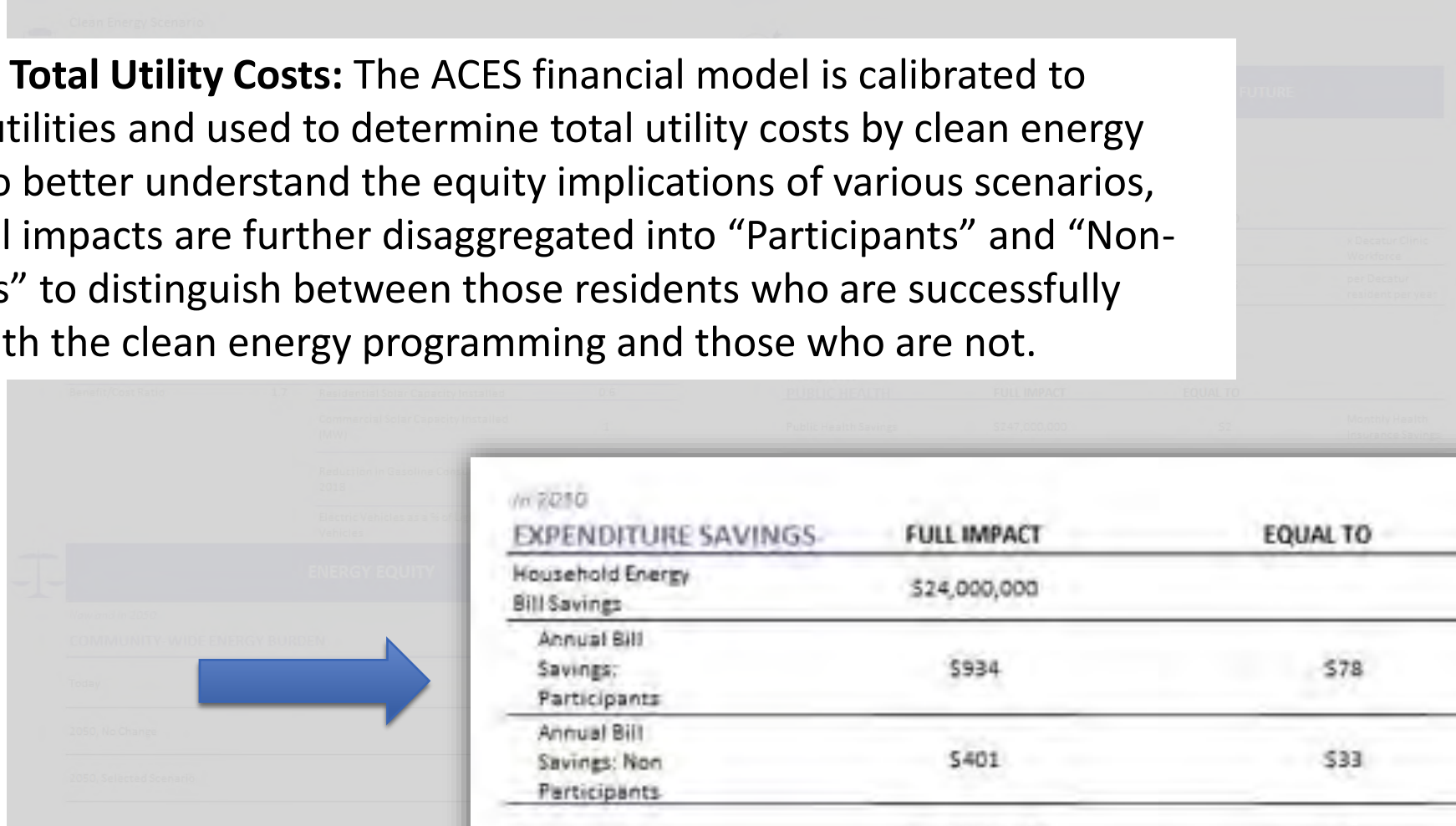
Through 2050 PUBLIC HEALTH	FULL IMPACT	EQUAL TO	
Public Health Savings	\$247,000,000	\$2	Monthly Health Insurance Savings
CO2 Emissions Avoided (Metric Tons)	19,891,894	32	Months without Cars

ENERGY EQUITY	
Now and in 2050	
COMMUNITY-WIDE ENERGY BURDEN	% of Income Spent on Energy Bills
Today	6.6%
2050, No Change	4.2%
2050, Selected Scenario	2.9%

EXPENDITURE SAVINGS	FULL IMPACT	EQUAL TO	
Household Energy Bill Savings	\$24,000,000		
Gas Bill Savings	\$224	\$70	Savings on monthly electricity bills
Electricity Savings	\$401	\$33	Savings on monthly electricity bills
Gasoline Savings	\$213,822,895	\$30	Savings on Decatur driver per year

# ACES Report Card

**Calculating Total Utility Costs:** The ACES financial model is calibrated to individual utilities and used to determine total utility costs by clean energy scenario. To better understand the equity implications of various scenarios, rate and bill impacts are further disaggregated into “Participants” and “Non-Participants” to distinguish between those residents who are successfully engaged with the clean energy programming and those who are not.

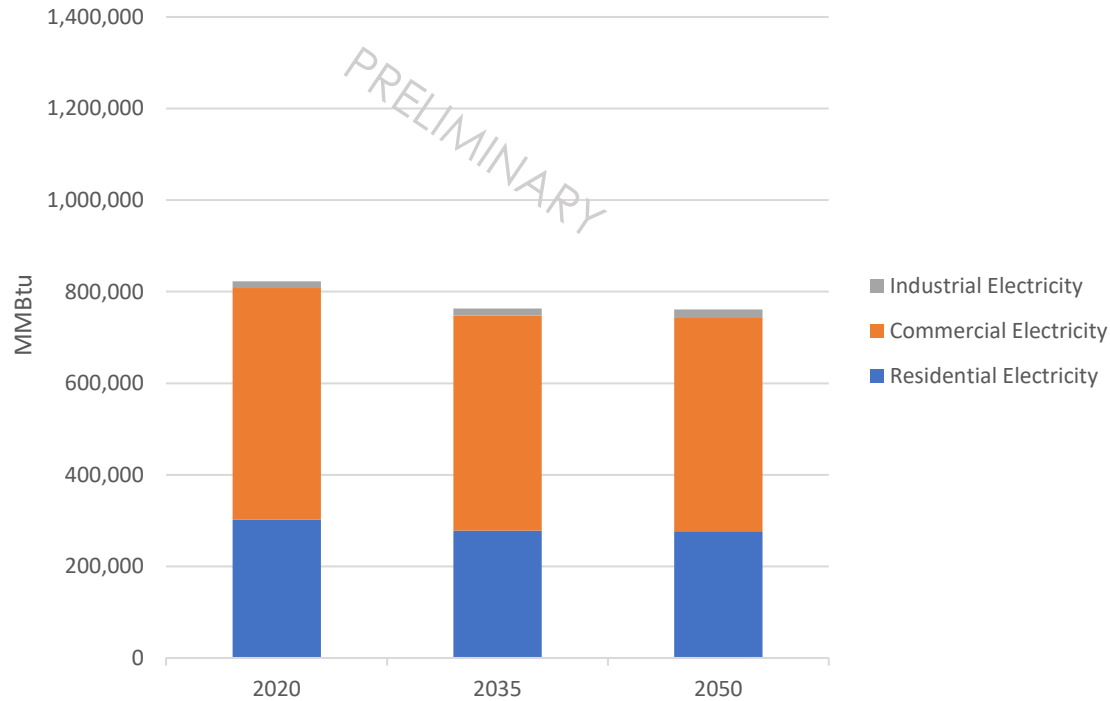


<i>in 2010</i>	EXPENDITURE SAVINGS	FULL IMPACT	EQUAL TO
	Household Energy Bill Savings	\$24,000,000	
	Annual Bill Savings: Participants	\$934	\$78 Savings on monthly electricity bills
	Annual Bill Savings: Non-Participants	\$401	\$33 Savings on monthly electricity bills
	Gasoline Savings	\$213,833,899	\$20 Savings per Decatur driver per year

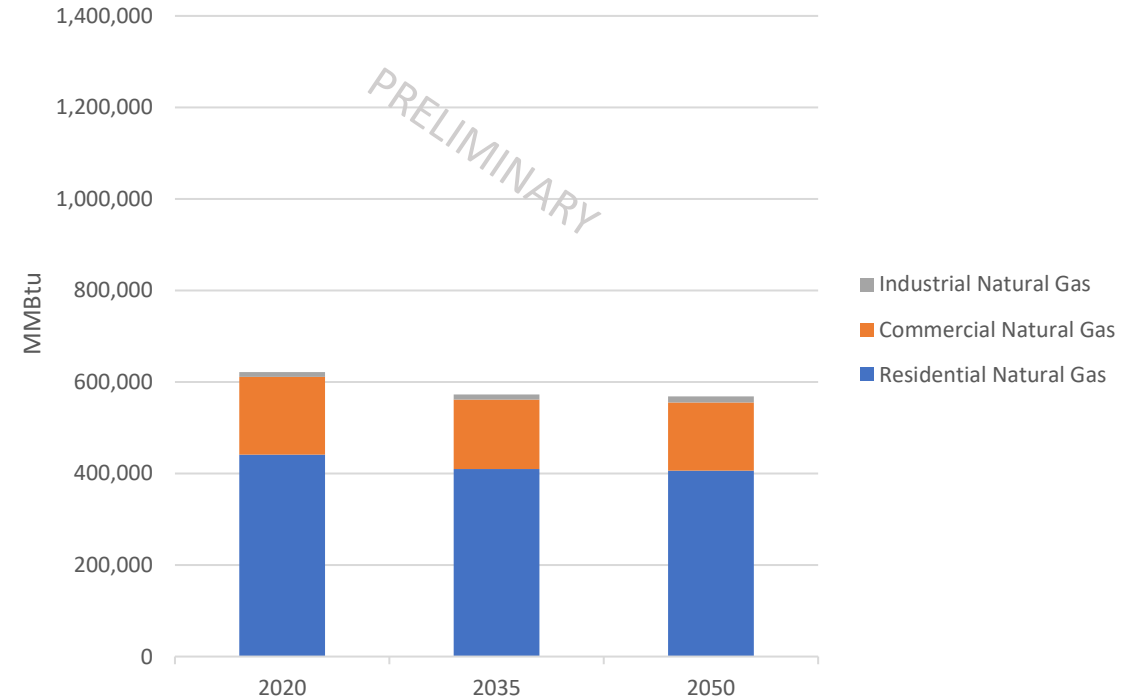


# Baseline and Forecast Energy Consumption for Decatur

Electricity consumption for Decatur's residential, commercial, and industrial sector



Natural gas consumption for Decatur's residential, commercial, and industrial sector

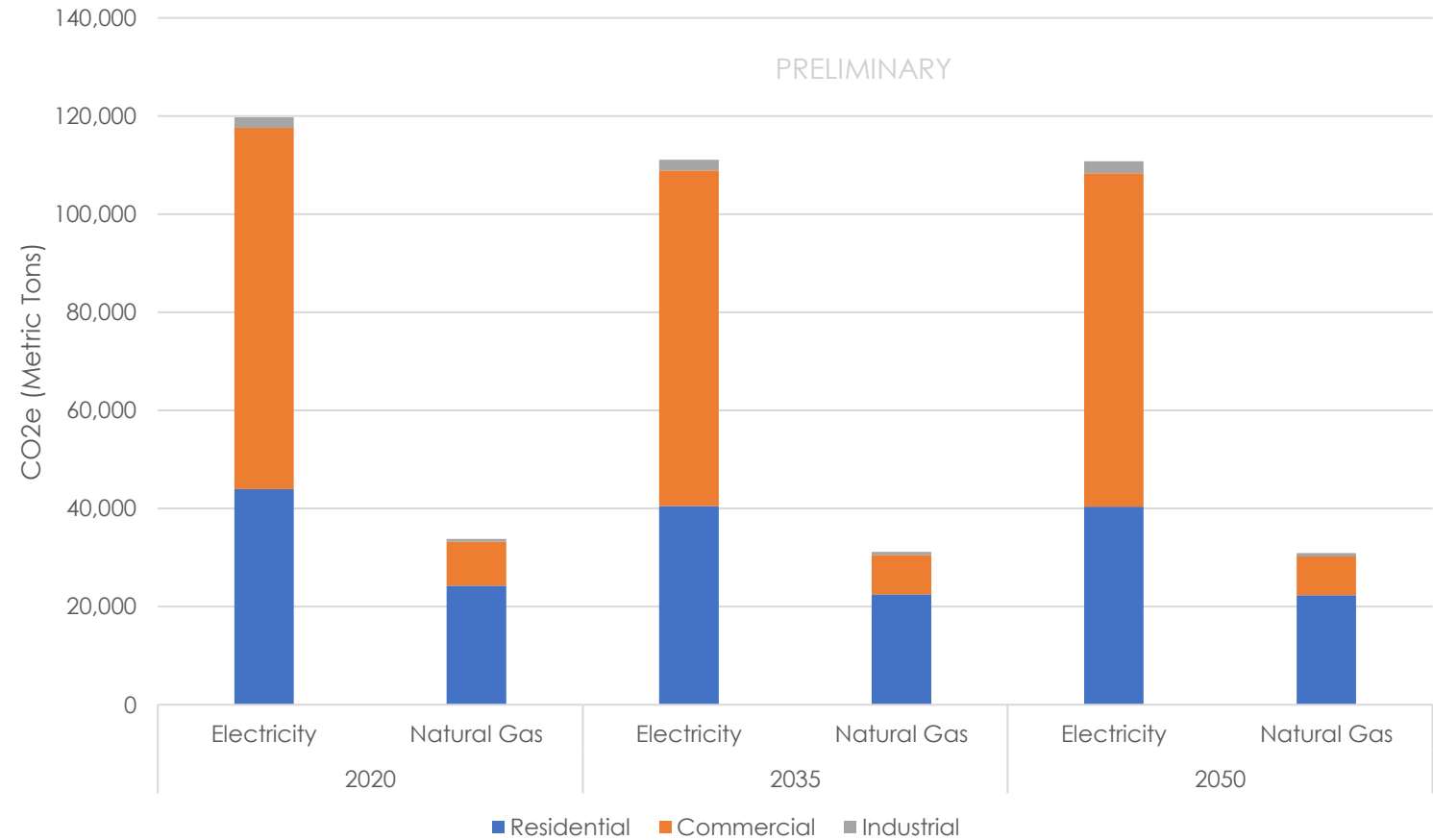


Residential and commercial buildings account for 1.5 million MMBtus of electricity and natural gas in 2020 – that number is reduced by 8% in the business-as-usual scenario.

# Greenhouse Gas Emissions in Decatur

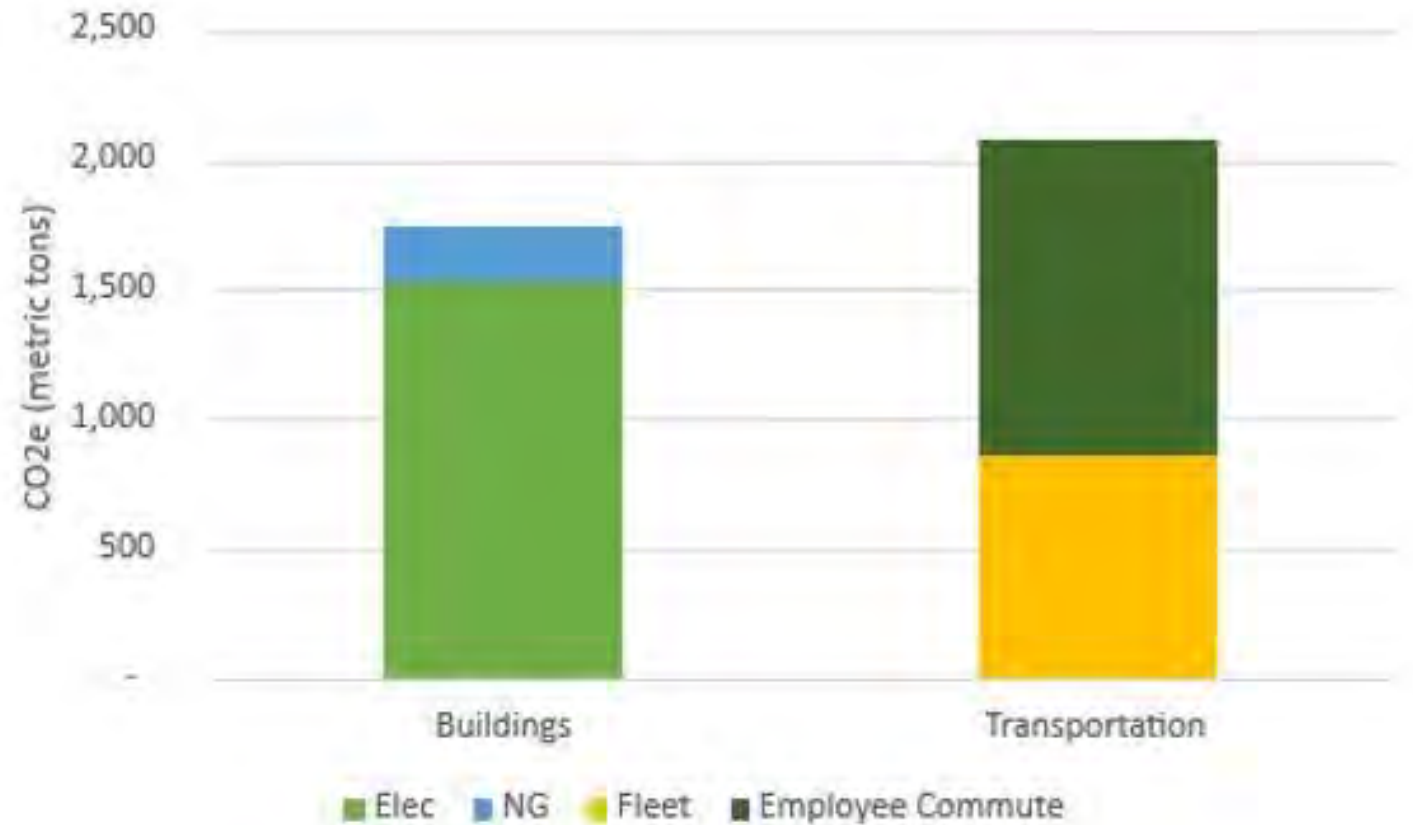
Residential buildings consume a majority of Decatur's energy demand (51%) but produce 17% times less CO2e emissions than commercial buildings.

Total emissions reduce by 8% from 2020 to 2050 if Decatur continues with business as usual.

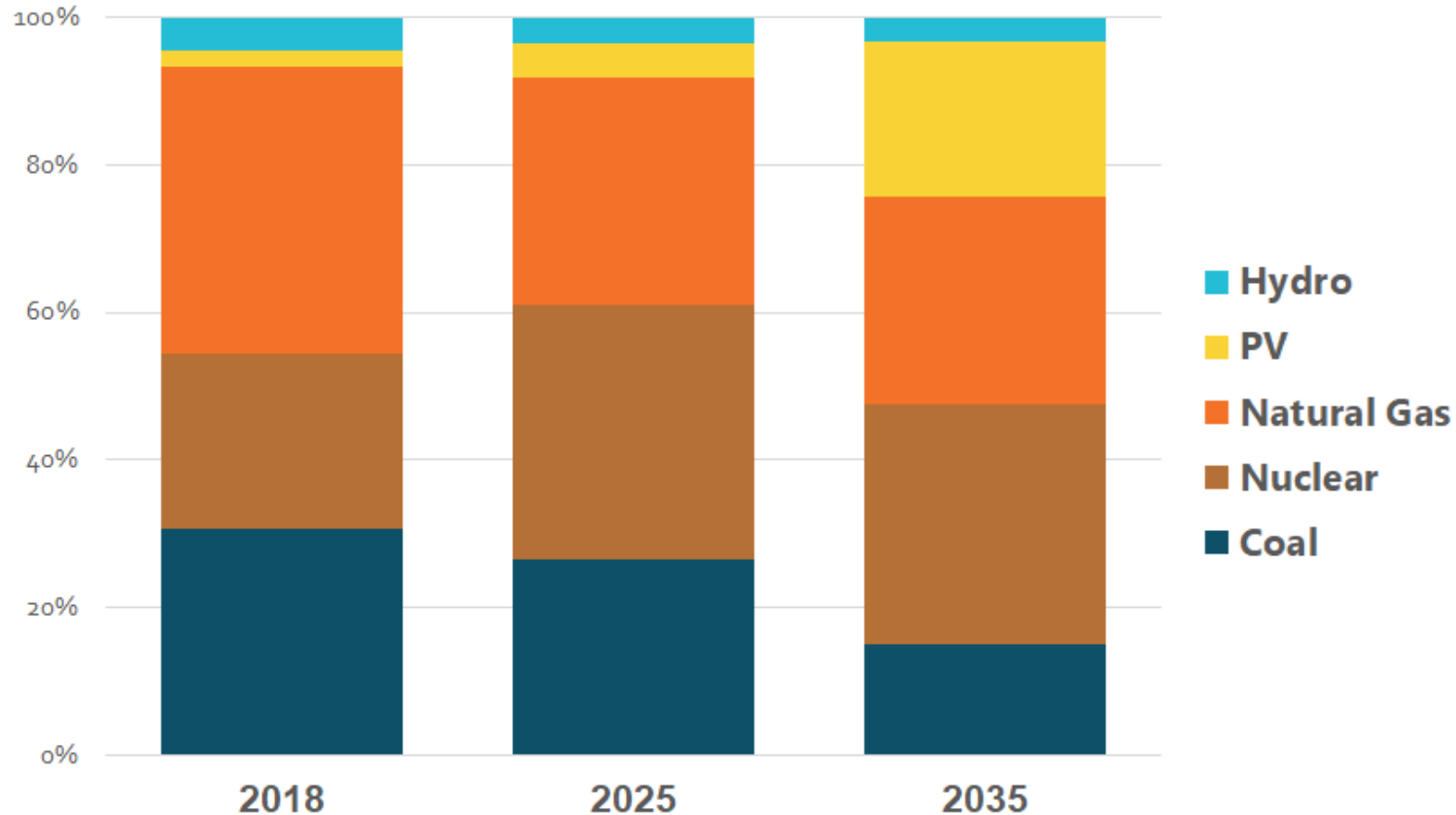


# Decatur's Municipal Emissions

Electricity use is responsible for 87% of municipal building emissions



# Georgia Power Generation Fuel Mix



Coal is reduced by roughly 50% by 2035 in the business-as-usual scenario, whereas solar increases to make up 23% of the entire energy mix.



# Engagement Opportunities: Roundtables and 202s

## Clean Energy 202s

- Local experts
- Recorded webinars
- Q&A Session

## Roundtables: Webinar format

- Community and Equity
  - November 17, 2021, 6:00 – 7:30pm
- Clean Energy and Economy,
  - January 19, 2022, 6:00 – 7:30pm
- The Built Environment
  - February 24, 2022, 6:00 – 7:30pm



# Engagement Opportunities

---

## Public Integrated Planning Charrette, Mid-March

- Open house on the Square
- Drop-in hours
- Closing open house

## Virtual Open House

- Review plan draft
- Additional input opportunity

## Website

- [www.cleanenergydecatour.com](http://www.cleanenergydecatour.com)



# Prioritization Exercise

---

**Residential Energy Usage** (single-family homes and multi-family housing)

Total Usage

Combination of Efficiency and Solar

Greatest Potential Equity impact

**Commercial Energy Usage** (government facilities, service-providing facilities and equipment, and other public and private organizations)

Total Usage

Multiple proven programs

Greatest emissions impact

**Transportation Energy Usage**

Less control

MARTA Partnership





# Prioritization Exercise

---

1. What percent GHG reduction should the Clean Energy Plan prioritize for the **residential** sector by 2030?

- a. 25%
- b. 50%
- c. 75%
- d. 100%

2. What percent GHG reduction should the Clean Energy Plan prioritize for the **commercial** sector by 2030?

- a. 25%
- b. 50%
- c. 75%
- d. 100%

3. What percent GHG reduction should the Clean Energy Plan prioritize for the **transportation** sector by 2030?

- a. 25%
- b. 50%
- c. 75%
- d. 100%



# Prioritization Exercise

---

4. What percentage of the future Decatur Clean Energy budget should be applied to the **residential** sector?

- a. 25%
- b. 50%
- c. 75%
- d. 100%

6. What percentage of the future Decatur Clean Energy budget should be applied to the **transportation** sector?

- a. 25%
- b. 50%
- c. 75%
- d. 100%

5. What percentage of the future Decatur Clean Energy budget should be applied to the **commercial** sector?

- a. 25%
- b. 50%
- c. 75%
- d. 100%

# Questions?

VISIT US at [cleanenergydecatur.com](https://cleanenergydecatur.com)

And take the survey

<https://survey.alchemer.com/s3/6585655/Clean-Energy-Decatur>





# Clean Energy Decatur: Environmental Sustainability Board Meeting

January 28, 2022



# Agenda

<b>Welcome and Introductions</b>	David Nifong, City of Decatur
<b>Clean Energy Plan Process</b>	Robert Reed, Southface Institute
<b>ACES Demo and Energy Efficiency Discussion</b>	Etan Gumerman, Greenlink Analytics
<b>Questions and Closing</b>	David Nifong, City of Decatur



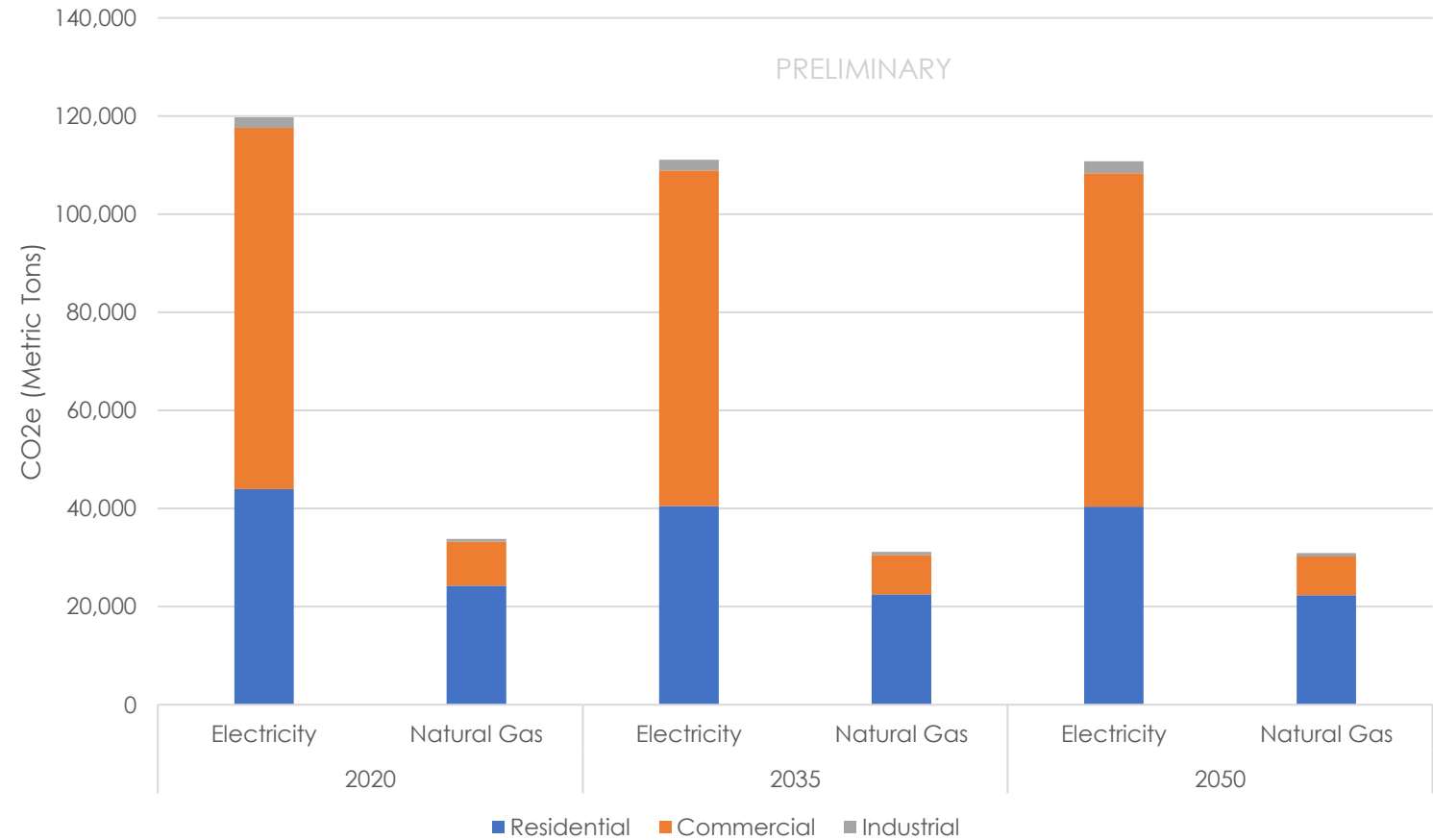


Why Are We Here?

# Greenhouse Gas Emissions in Decatur

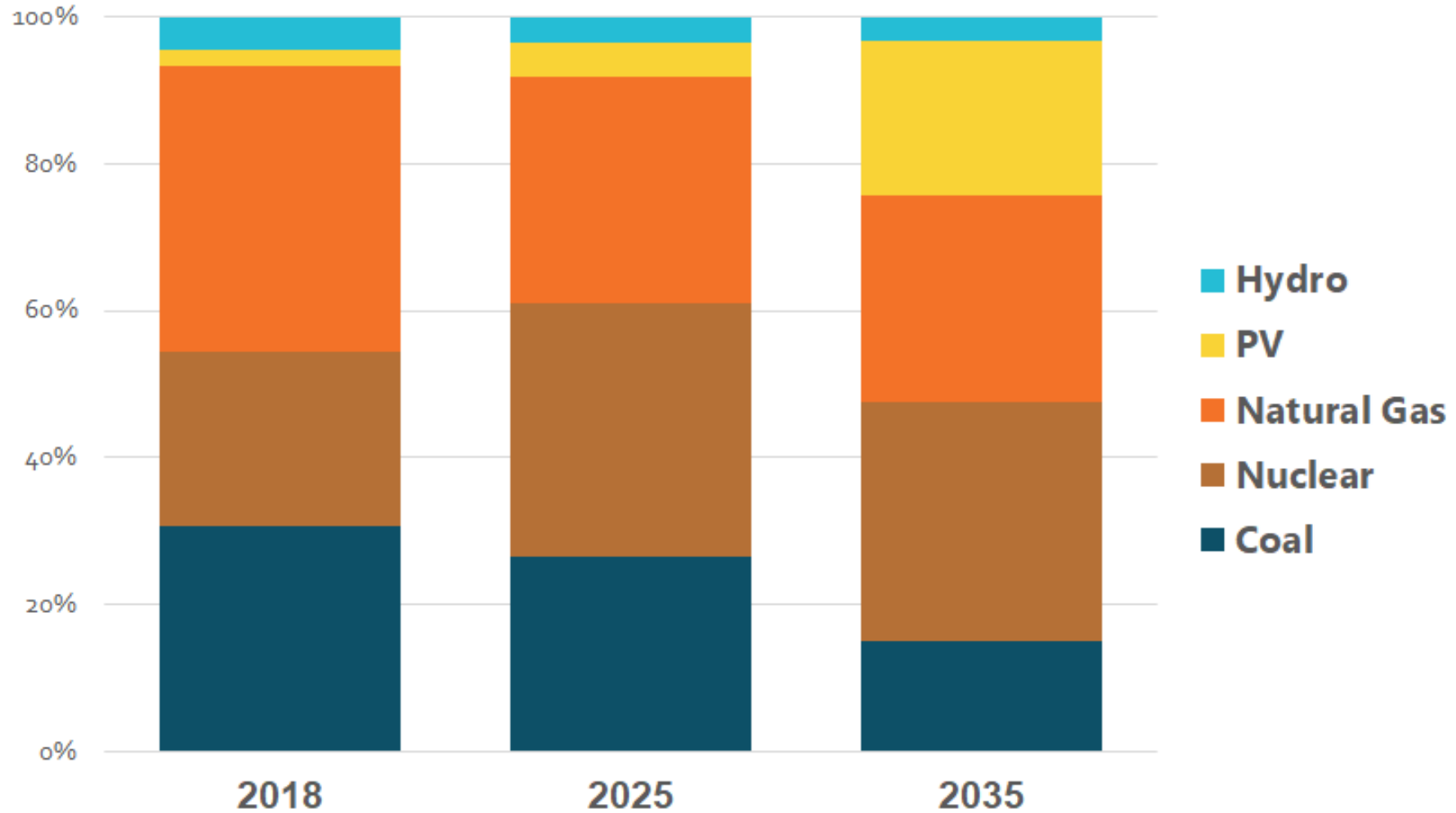
Residential buildings consume a majority of Decatur's energy demand (51%) but produce 17% less CO<sub>2</sub>e emissions than commercial buildings.

Total emissions reduce by 8% from 2020 to 2050 if Decatur continues with business as usual.



# Our Current Sources of Energy

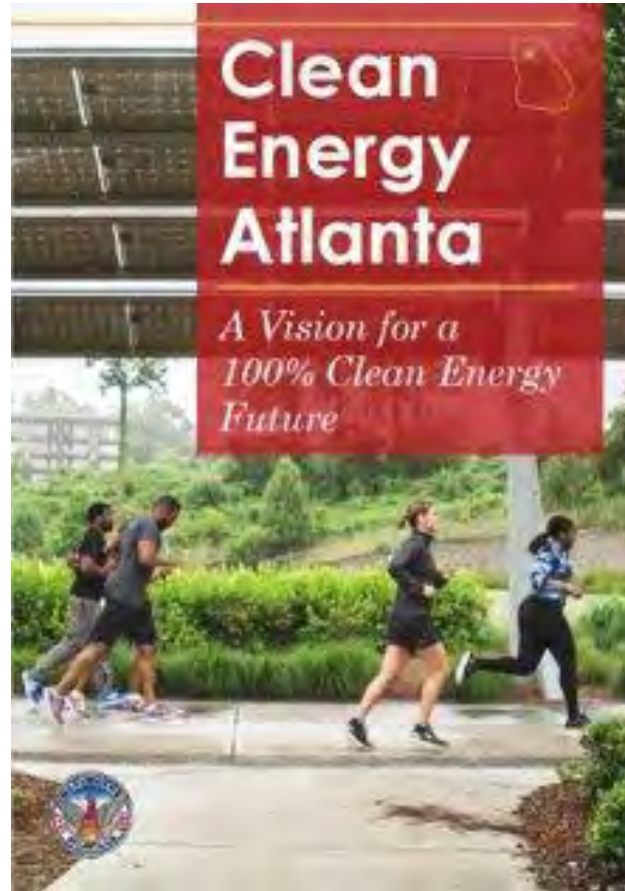
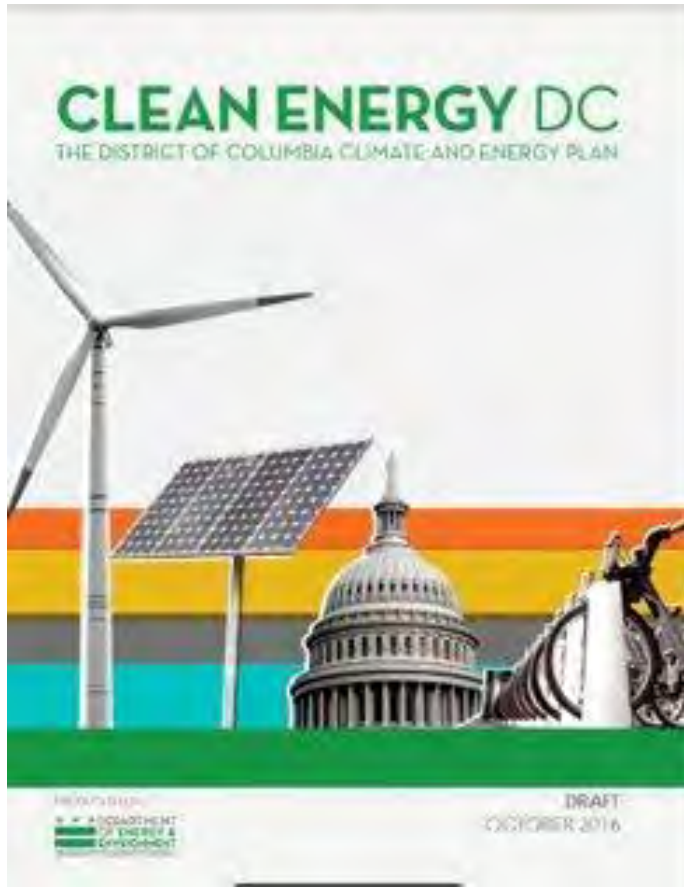
---





# Creating a Clean Energy Plan

---





# The Process

---



Initiate stakeholder and community engagement:

- Develop stakeholder engagement approach
- Develop community engagement approach using previous Decatur processes and the engagement squad ensuring a diverse engagement

Host stakeholder and community conversations (depending on COVID realities - can be held virtually or in-person)

- 1:1s with businesses and orgs
- Community-wide kickoff and roundtables with facilitators
- Youth engagement through school workshops

Review feedback from community and stakeholders

- Capture priorities and values of Decaturites
- Consider diverse energy system, policy, and program scenarios
- Release summary findings for community review

Develop Plan

- Select feasible scenarios based on engagement input, analytics from Greenlink, and team knowledge
- Draft and refine Clean Energy Plan, publishing 3 rounds of drafts
- Finalize and deliver Clean Energy Plan

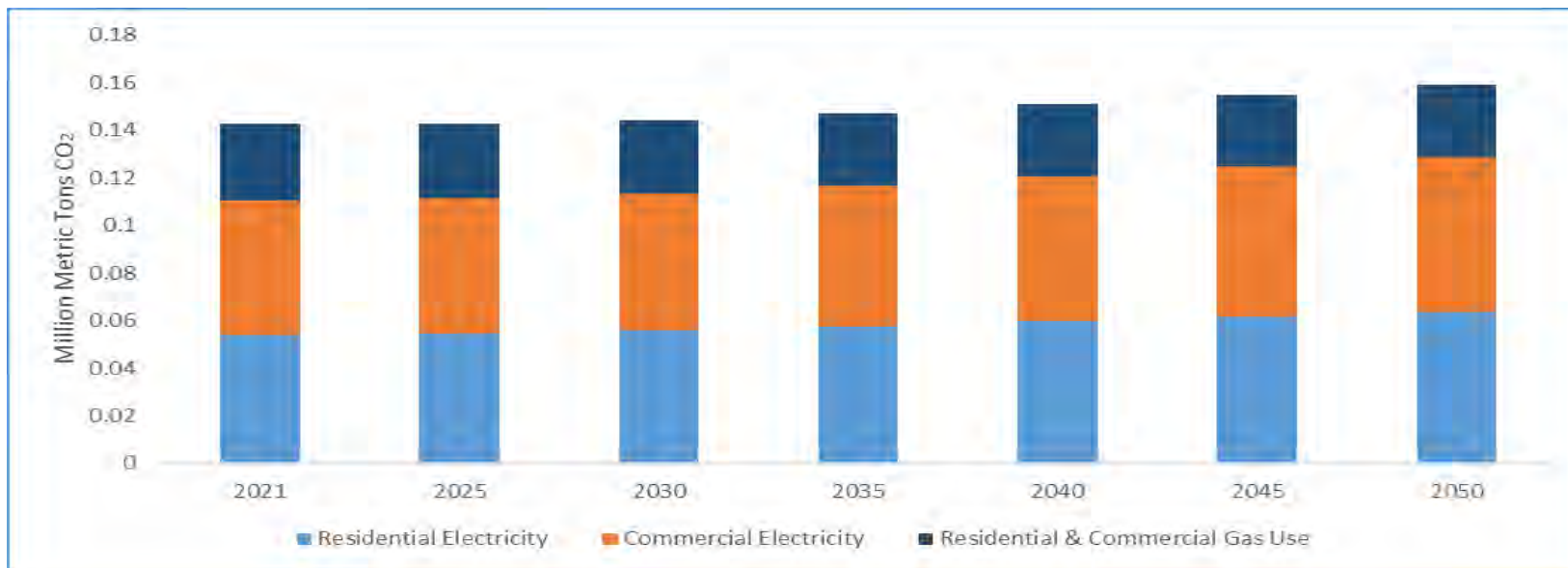
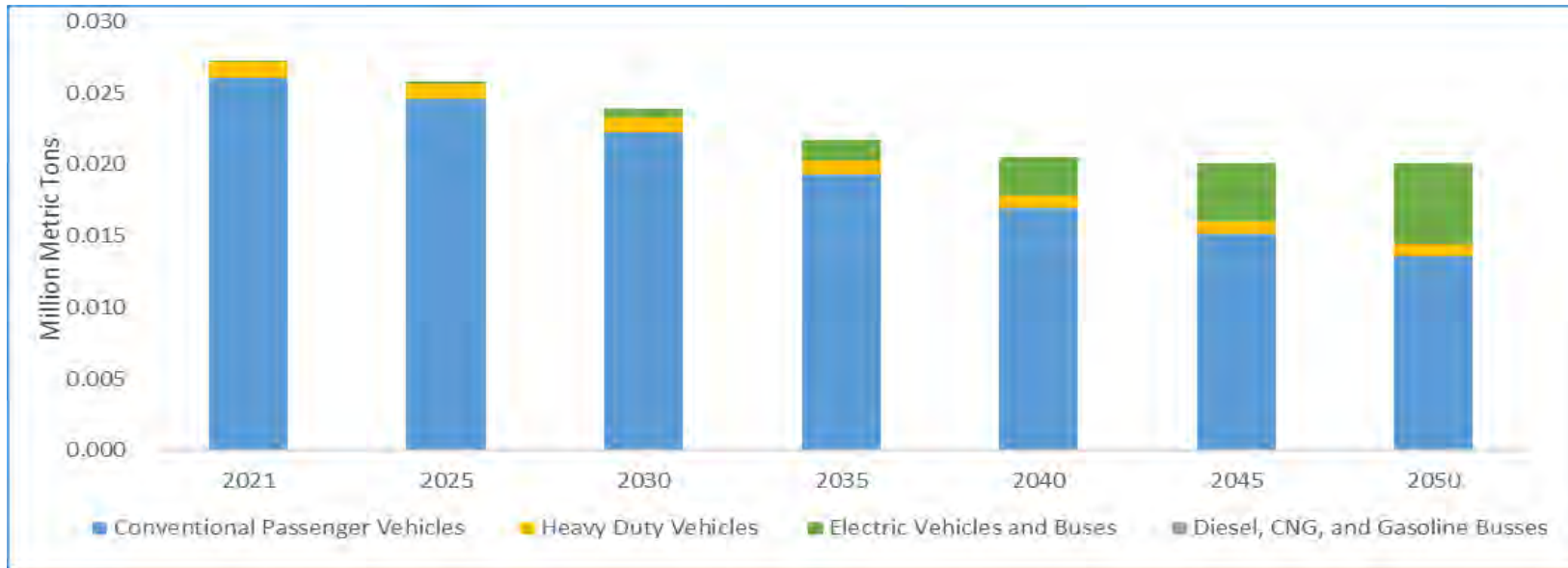
Plan Enactment and Implementation

- Next Steps
- Develop and finalize toolkit and resources for education
- Policy, Programs & Technology



# Clean Energy Planning: Using Greenlink's ACES Tool

# Start with Baseline (NOTE: Transportation is ~ 20% of Building)





# Identify Actions/Resource Options to Explore

## Examples:

- Energy Efficiency
- Distributed Generation
- Programs to Reduce Travel via Single-Occupancy Vehicles



**ABOUT THE TOOL** This tool allows you to design future energy pathways in Decatur. It covers all sectors of the economy, including residential, commercial, and transportation energy use, as well as the power utility sector. The tool is powered by Greenlink's ATHENIA model, which evaluates energy actions by their economic, environmental and social impacts.

**HOW TO USE** You can create your own energy future by inputting the values in the ACTION cells. After entering your target values, your report card will give a deeper breakdown of the impact.

INPUT YOUR ACTIONS				
ELECTRICITY AND POWER PRODUCTION				
Energy Measure Input No. 1				
ENERGY EFFICIENCY (Electrical)				
	ACTION		IMPACT	
Residential Potential Achieved	<input type="text" value="100%"/>	Residential Potential Achieved	<input type="text" value="90,000"/>	# of homes cutting electricity by half
Commercial Potential Achieved	<input type="text" value="100%"/>	Commercial Potential Achieved	<input type="text" value="4.7"/>	kWh-saved per sqft.
Industrial Potential Achieved	<input type="text" value="100%"/>	Industrial Potential Achieved	<input type="text" value="5.1"/>	kWh-saved per sqft.
Energy Measure Input No. 2				
SOLAR POWER				
	ACTION		IMPACT	
Residential Solar Power	<input type="text" value="100%"/>	Residential Solar Potential Achieved	<input type="text" value="300"/>	Homes adding solar
Commercial Solar Power	<input type="text" value="100%"/>	Commercial Solar Potential Achieved	<input type="text" value="200"/>	Buildings adding solar



# Use ACES Report Card to Compare Outcomes

## YOUR 2050 PATHWAY REPORT CARD

*What Your Vision Would Mean for Decatur*

COST OVERVIEW		2050 DECATUR CLEAN ENERGY SUMMARY	
Cumulative Benefits (Mill)	500	Decatur's Electricity Offset by Building Energy Efficiency	34%
Cumulative Costs (Million)	172	Decatur's Renewable Electricity Supply	28%
Net Benefits (Million-\$)	328	Utility Scale Solar Dedicated Capacity (MW)	23
Benefit/Cost Ratio	2.9	Additional Residential Solar Capacity Installed (MW)	12
		Additional Commercial Solar Capacity Installed (MW)	13
		Reduction in Gasoline Consumption from 2020	100%
		Electric Vehicle as a % of Light-duty Vehicles	100%



## IMPACT OF YOUR PATHWAY ON DECATUR'S FUTURE

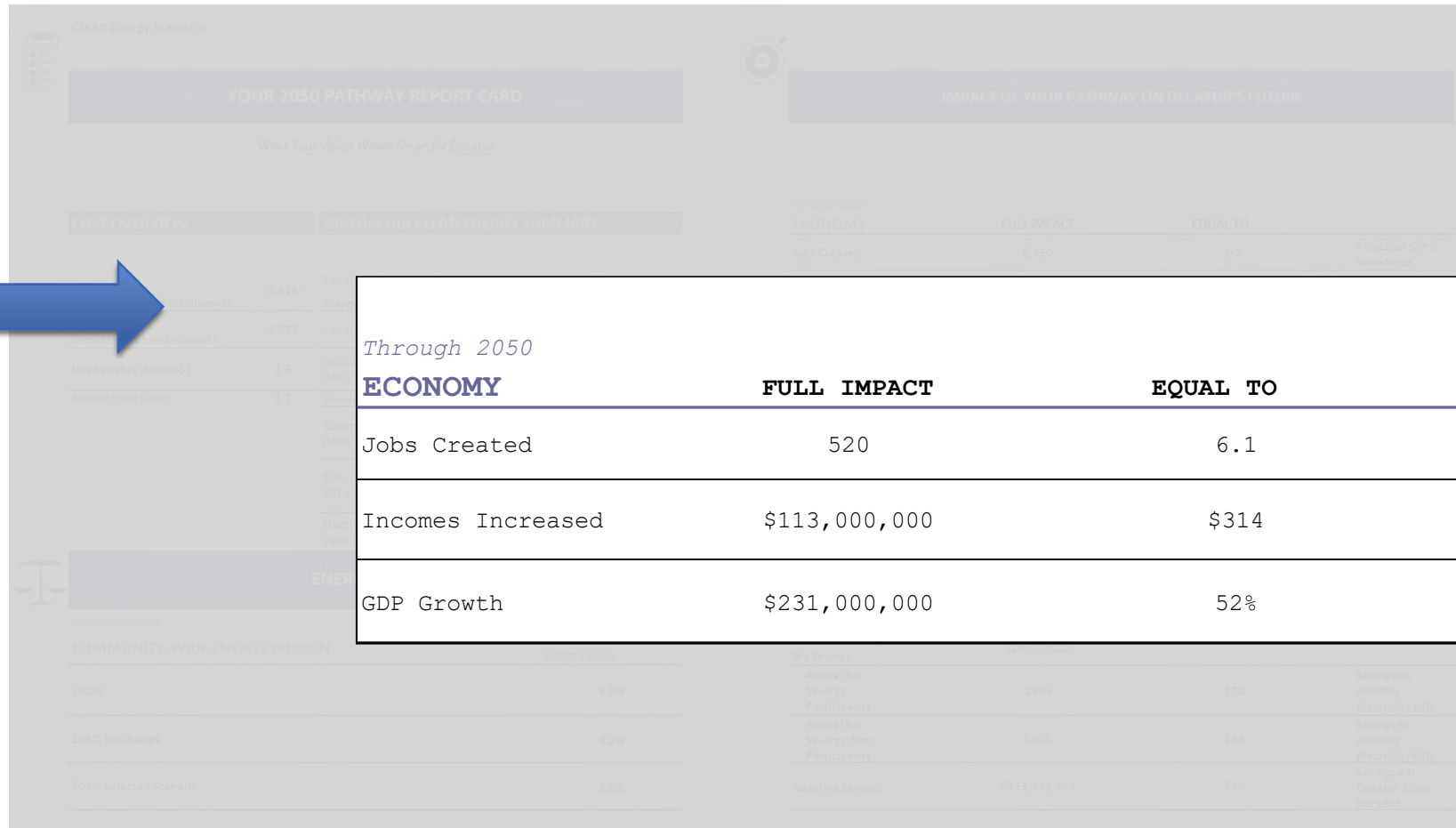
*Through 2050*

ECONOMY	FULL IMPACT	EQUAL TO	
Jobs Created	520	6.1	x Agnes Scott Workforce
Incomes Increased	\$113,000,000	\$314	per Decatur's resident per year
GDP Growth	\$231,000,000	52%	of Hartsfield-Jackson Atlanta International

*Through 2050*

PUBLIC HEALTH	FULL IMPACT	EQUAL TO	
Public Health Savings	\$37,000,000	\$4	Monthly Health Insurance Savings
CO2 Emissions Avoided (Metric)	950,000	123	Months without Cars

# ACES Report Card



**Understanding Economic Development and Cost-Effectiveness:**

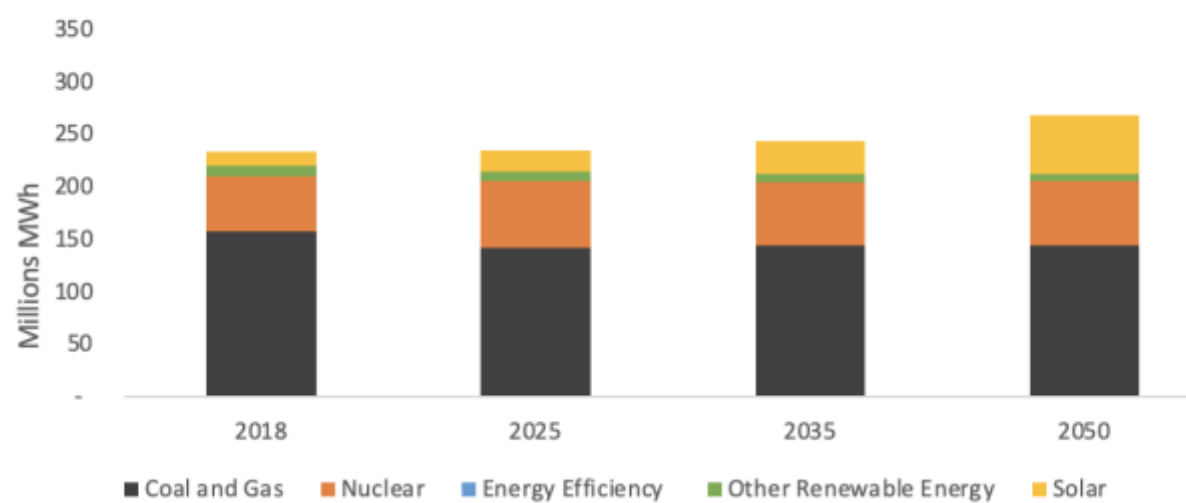
# ACES Report Card

## Calculating Total Utility Costs:

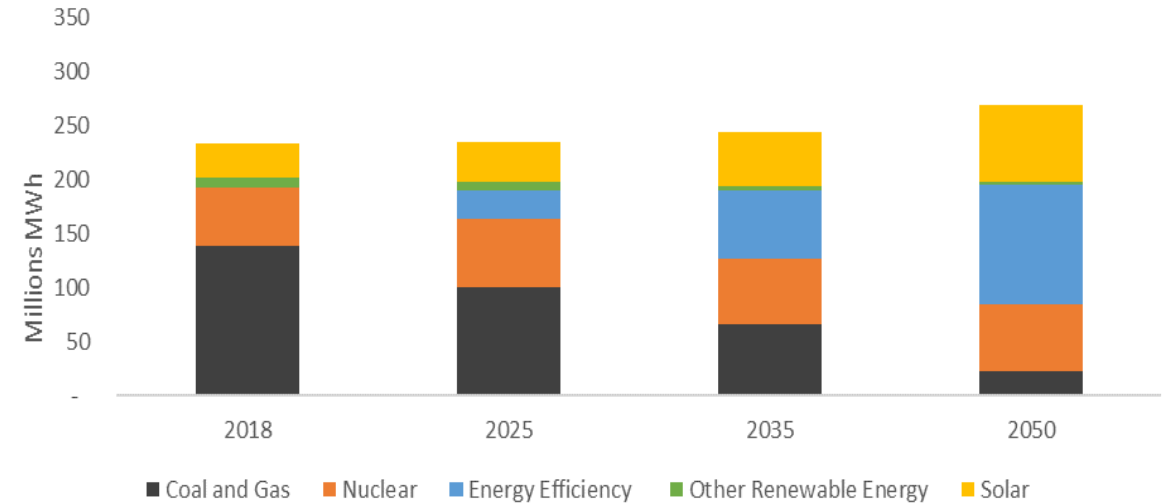


In 2050			
EXPENDITURE	FULL IMPACT	EQUAL TO	
SAVINGS			
Household Energy Bill Savings	\$24,764,000		<i>Avg electric bill today: \$120/month. 2035 avg, no change: \$220/month</i>
Annual Bill Savings: Participants	\$96	\$8	Savings on monthly electricity bills
Annual Bill Savings: Non Participants	-\$2	\$0	Savings on monthly electricity bills
Gasoline Savings	\$93,000,490	\$532	Savings per Decatur's driver per year

# Use Case: Context, Electricity in 2 Futures



Baseline Scenario



Maximum Scenario



# Comparing Approaches: Solar and Storage to Energy Efficiency

---

Real time ACES Example

# Comparing Energy Efficiency and Solar & Storage

Scenario	Cumulative Costs (Millions- \$)	Cumulative Benefits (Millions- \$)	Decatur's Renewable Electricity Supply	Electricity Offset by Energy Efficiency	CO2 Emissions Avoided (MT)
Energy Efficiency (electricity only)	\$16	\$272	21%	23%	480,000
Solar + Storage	\$14	\$36	30%	0%	40,000

## Comparing Different ACES Scenarios Leads to Different Results

---

Scenario	Jobs	Incomes Increased (\$- Millions)	Public Health Benefits (\$-Millions)	RECS needed in 2050
Energy Efficiency (electricity only)	48	\$14	\$14	90,000
Solar + Storage	53	\$11	\$1	125,000



# Upcoming Engagement Opportunities



# Virtual Engagement Opportunities

---

## Upcoming Events

Decatur Clean Energy Roundtable 3: The Built Environment  
February 24, 2022  
6:00-7:30

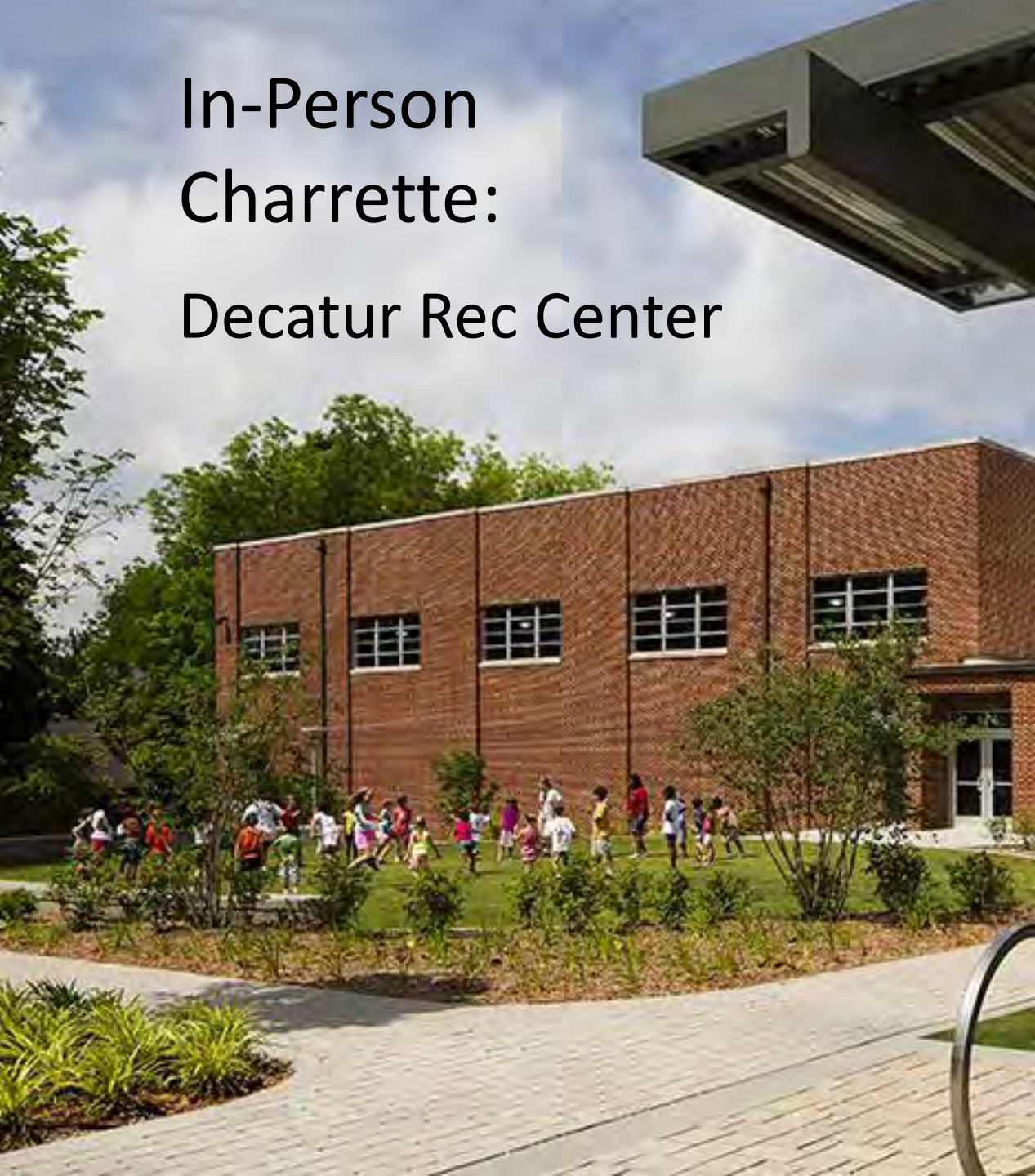


## Past Events

Decatur Clean Energy Roundtable 1: Community and Equity: November 17, 2021

Decatur Clean Energy Roundtable 2: Clean Energy and Economy: January 19, 2022

# In-Person Charrette: Decatur Rec Center



<b>March 8</b>	<b>7:00am -10:00am</b>	Opening public session: Come hear about the Decatur Clean Energy Plan’s progress and findings to date
	<b>11:00am – 6:30pm</b>	Lobby open for walk-ins for all community members
<b>March 9</b>	<b>8:00am – 3:00pm</b>	Lobby open for walk-ins for all community members
	<b>4:00pm - 7:00pm</b>	Open House: Decatur and its team members will review the completed plan elements

# Thank You and Next Steps

VISIT US at [cleanenergydecatur.com](https://cleanenergydecatur.com)

And take the survey

<https://survey.alchemer.com/s3/6585655/Clean-Energy-Decatur>







# City of Decatur Roundtable: Community and Equity

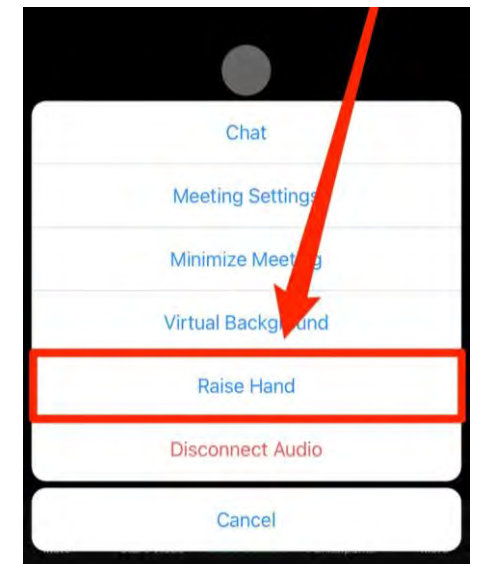
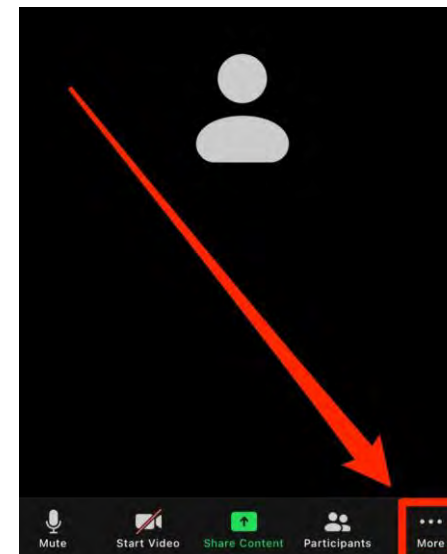
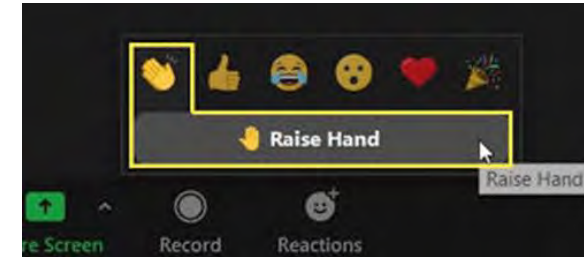
November 17, 2021





# HOUSEKEEPING: ZOOM LOGISTICS

- Only presenters will have video & voice during the presentation.
- After the presentation, we will start the Q & A portion.
- At this time, you can request to talk using the phone icon under your name.
- Please feel free to ask question via the chat box throughout the session, and we will answer them at the end of the session



# Roundtable Agenda

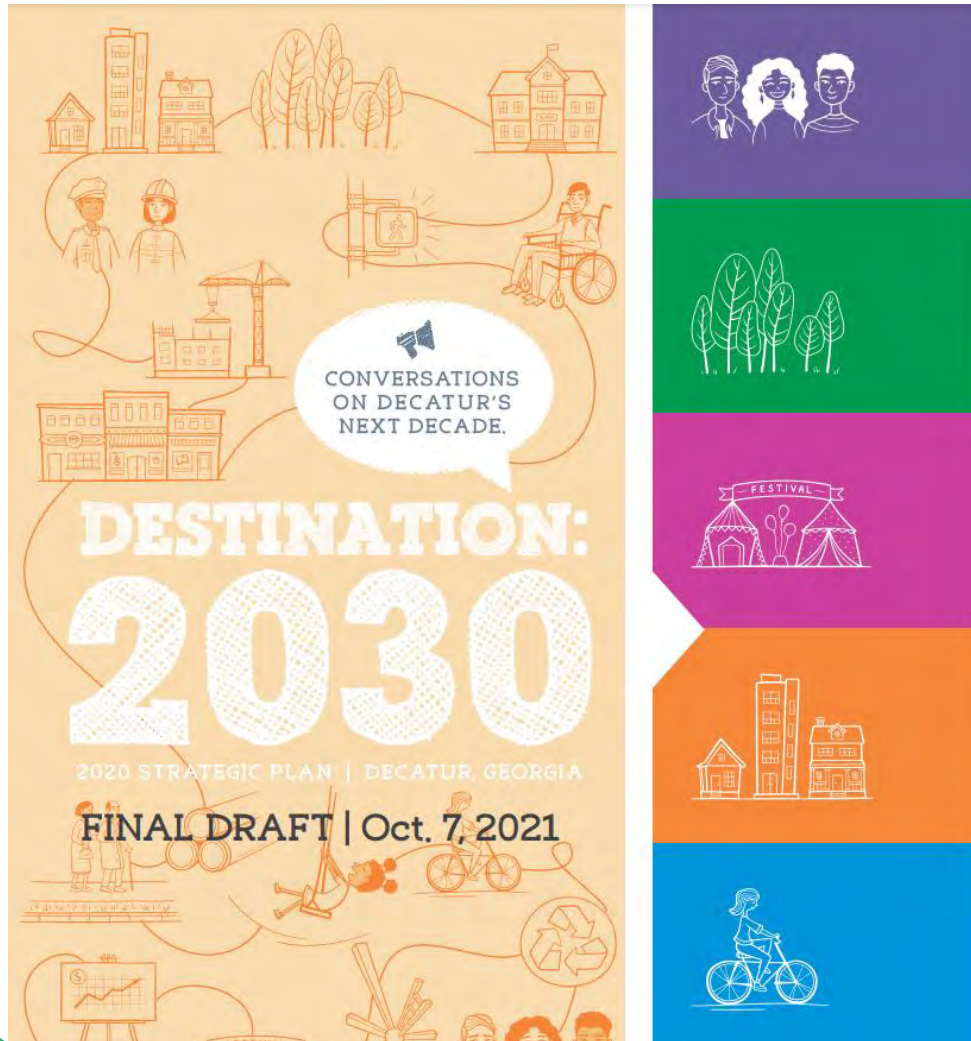
<b>6:00 – 6:05 PM</b>	Welcome and Introductions	David Nifong, City of Decatur
<b>6:05 – 6:20 PM</b>	Project Overview	David Nifong, City of Decatur; Megan O'Neil, Southface; Etan Gumerman, Greenlink Analytics
<b>6:20 – 6:35 PM</b>	Community Challenges Listening	Robert Reed, Southface
<b>6:35 – 6:55 PM</b>	Potential Policies Discussion	Mike Barcik, Amelia, Godfrey, Diana Burk, Nathaniel Horadam, Blythe Coleman-Mumford
<b>6:55 – 7:25 PM</b>	Engagement Activity	Robert Reed, Southface
<b>7:25 – 7:30 PM</b>	Thank You and Next Steps	Robert Reed, Southface



Why Are We Here?



# How did we get here?



## Climate Action

### KEY ACTION ITEMS:

- » Establish clean energy targets
- » Be transparent about measuring progress
- » Evaluate carbon impact of City decisions
- » Consider mitigation and adaptation
- » Construct green buildings and infrastructure

- » Reduce waste and recover resources
- » Increase the city's tree canopy goal

All action items start on page 56!



## CLEAN ENERGY TARGETS

Decatur must transition away from fossil fuels to clean energy in order to do its part to fight climate change. Many public comments were received on this topic, but since the Clean Energy Plan is currently underway to determine the feasibility and timeline for this transition, the Strategic Plan defers to that effort to set specific targets and timelines to achieve them.





# What does clean energy mean to you?

---

Please drop a comment in the Zoom chat telling us what clean energy means to you

# How other cities define 'Clean' and 'Renewable' energy?

---

*'Clean' sources do not emit greenhouse gas emissions (GHGs).*

*'Renewable' sources are those which can be replenished in a human timescale.*

## What is included?

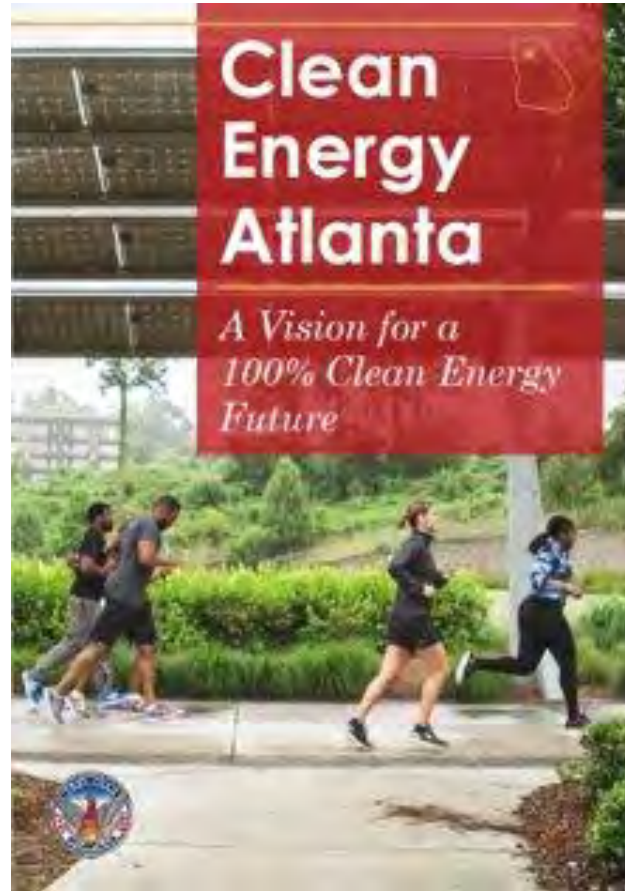
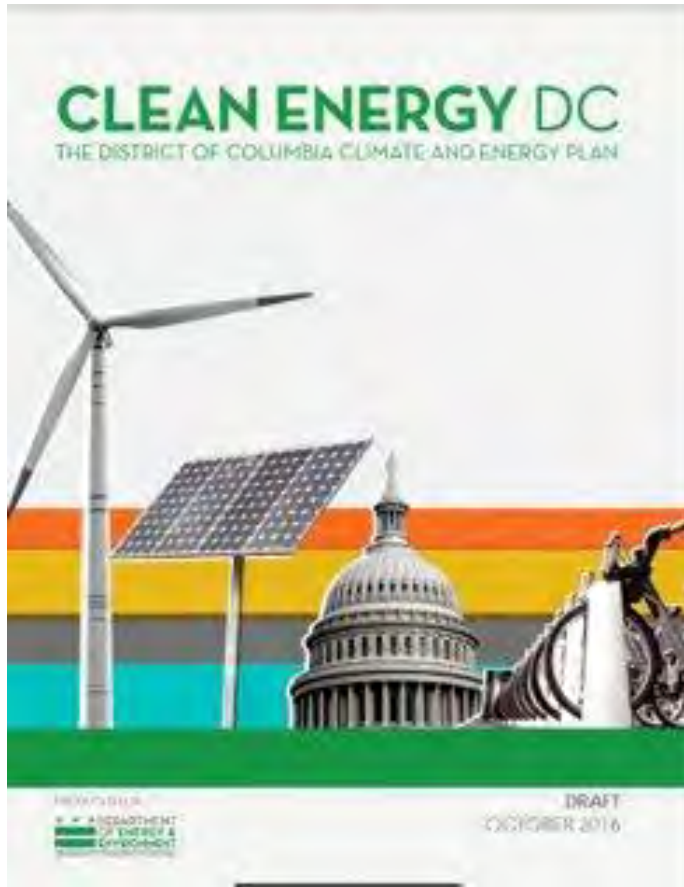
- *Energy efficiency*
- Solar power
- Wind power
- Hydropower
- Energy storage
- Renewable Energy Credits (RECs)

**EXAMPLE**

## What is not included?

- Nuclear power
- Biomass
- Natural gas
- Coal

# Creating a Clean Energy Plan



# Benefits of Clean Energy

## Improved public health

Improved outdoor air quality

Improved indoor air quality

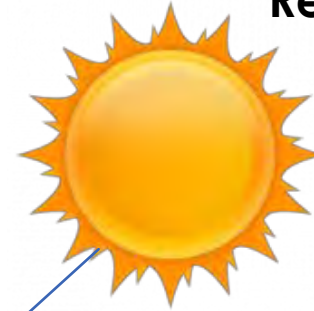


## Reduced energy burden

Increased savings for owners and renters

Reduced economic stress

Increased disposable income



## Economic Development

Improved local economy

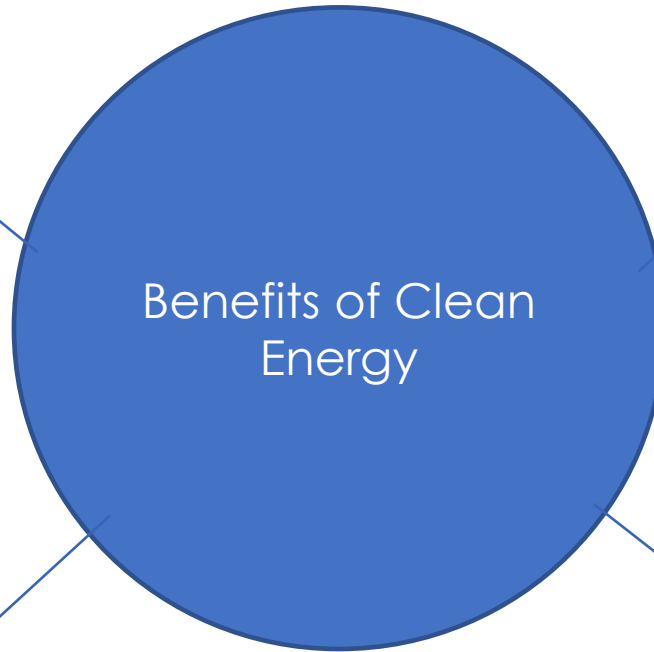
The solar industry provides job opportunities, with solar panel installer jobs projected to grow 51% in the next 10 years.



## Improved housing quality

Safer, more affordable and comfortable homes

Increased housing satisfaction

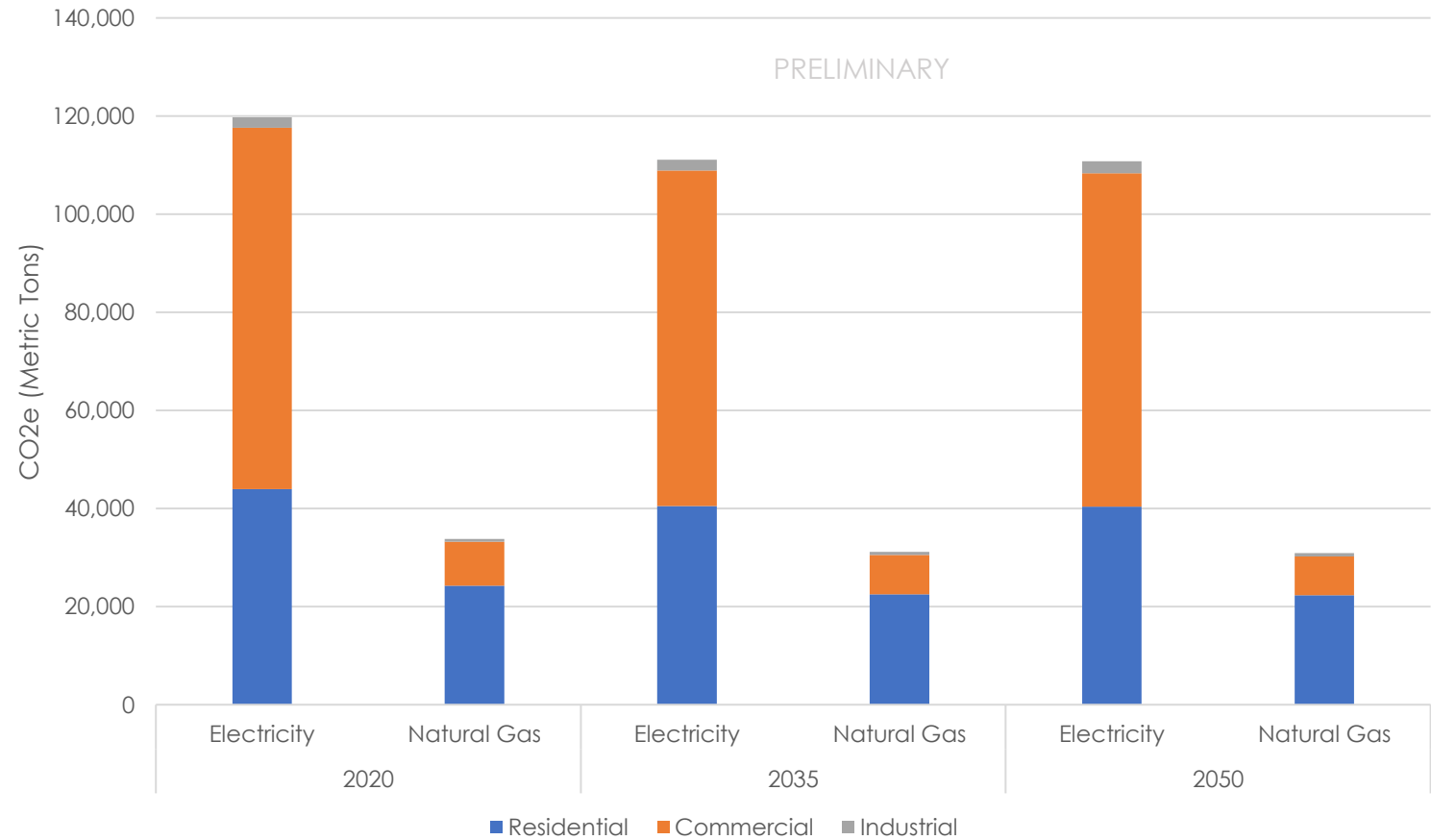




# Greenhouse Gas Emissions in Decatur

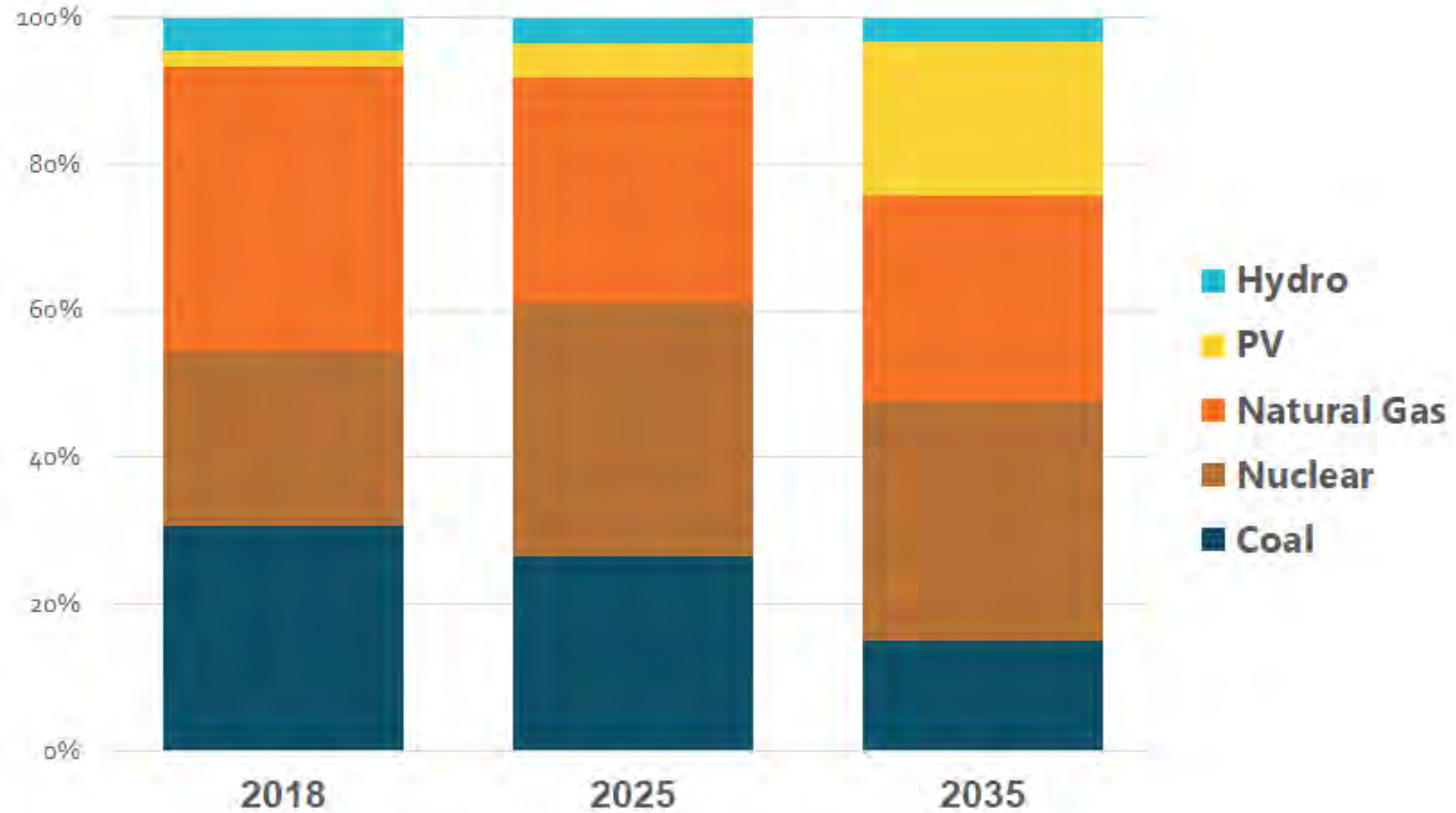
Residential buildings consume a majority of Decatur's energy demand (51%) but produce 17% times less CO2e emissions than commercial buildings.

Total emissions reduce by 8% from 2020 to 2050 if Decatur continues with business as usual.



# Our Current Sources of Energy

---





# Energy Burden

# What Is Energy Burden?

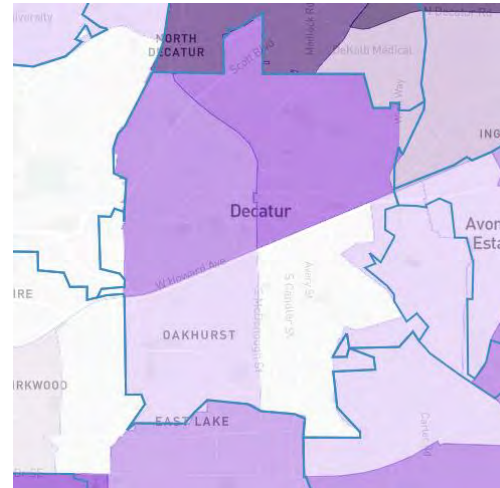
Energy burden is defined as the percentage of gross household income spent on energy costs.

National Median - 3.6% (2019)

Georgia Median - 5.4% (2019)

DeKalb Median - 4.1% (2018)

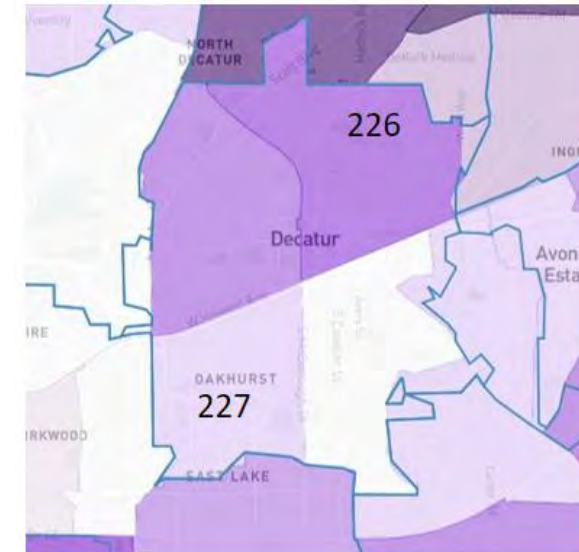
Decatur - 1.6% to 3.1% (2018)



Definitions:

High Energy Burden > 6%

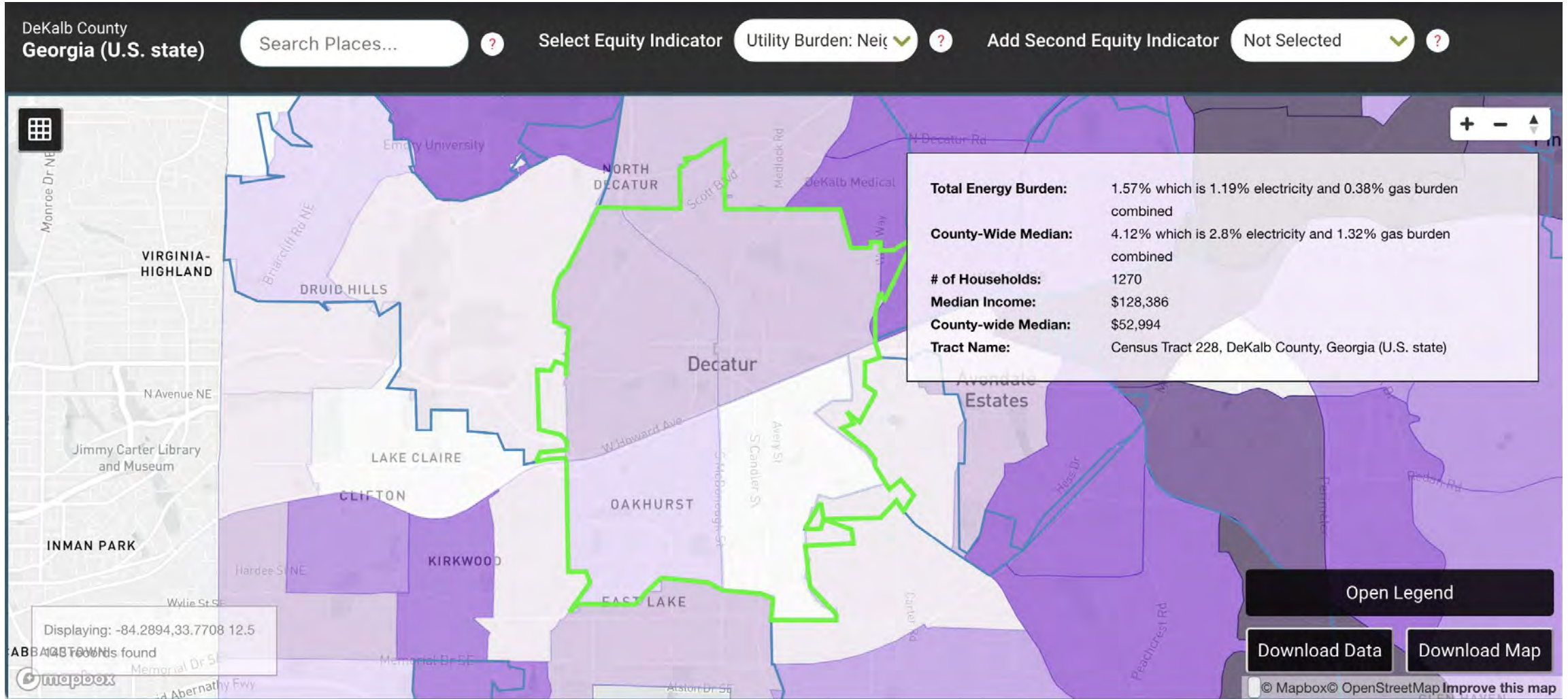
Severe Energy Burden > 10%



Census Tract	Households with Severe EB	Median Income
226	370 (~13%)	\$79,800
227	375 (~23%)	\$103,000



# Decatur

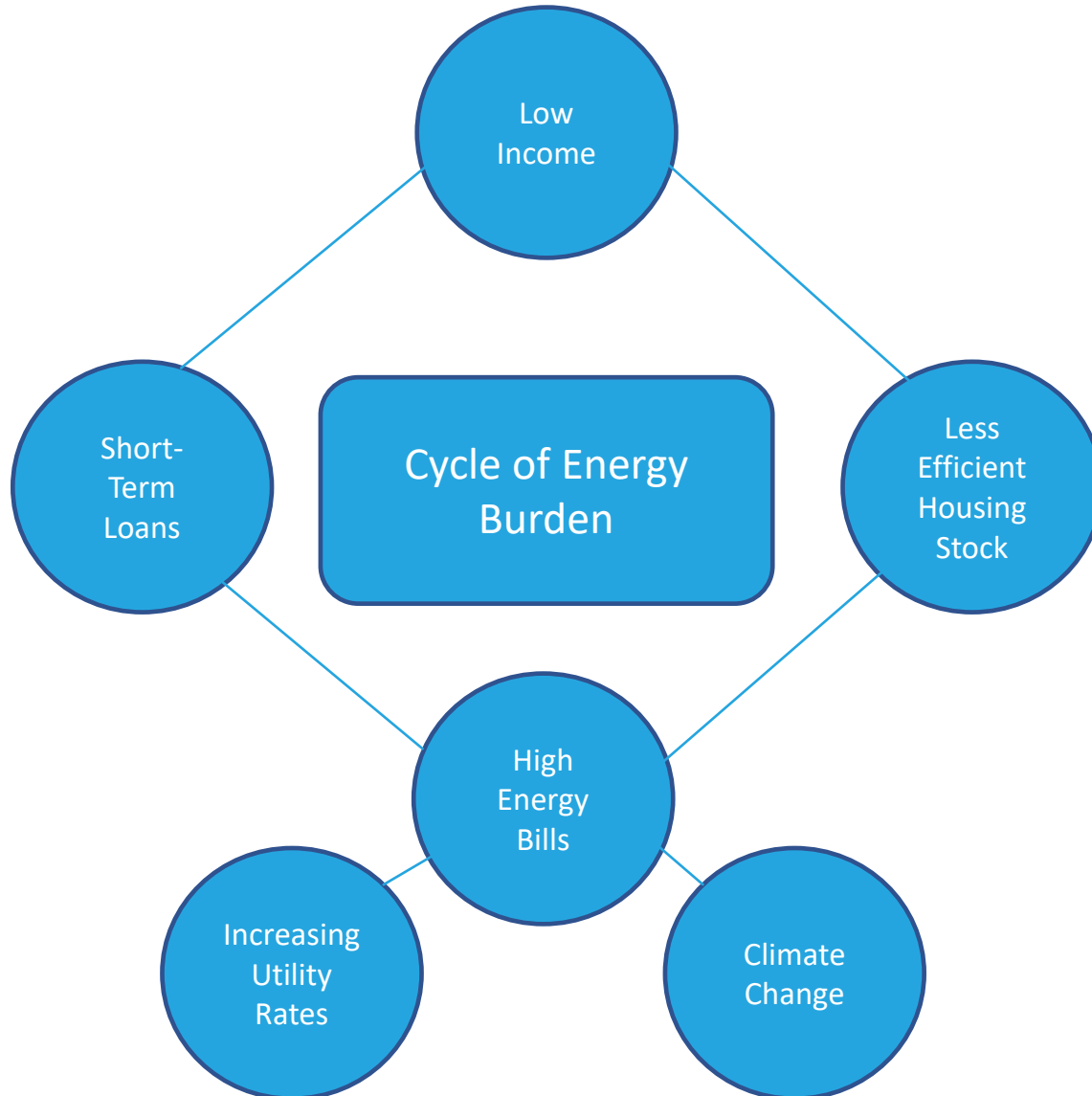


# Energy Burden

# #1

## REASON

For a short-term loan is a to pay a utility bill



# 31%

## OF AMERICANS

Have gone without a meal or a prescription to pay a utility bill

# Why Care About Energy Burden?

---

Because it's about so much more than energy burden.



Health  
Implications



Economic Barriers



Environmental  
Burdens

# Why Care About Energy Burden?

---

Health Implications	Economic Barriers	Environmental Burdens
Extreme heat	High utility bills	Climate Change: Extreme weather conditions (cold winters, hot summers)
Food security	Neglecting other essential costs (i.e. insurance, food, prescriptions, hygienic needs, education)	Extreme heat vulnerability: not having places to cool down, spending time outdoors on very hot days, extreme heat being more prominent
Cold weather conditions	Taking out loans	Energy Efficiency: weatherization, alternative forms of energy, age of the home, etc.
COVID deaths		
Mental Stress		
Lack of sleep		

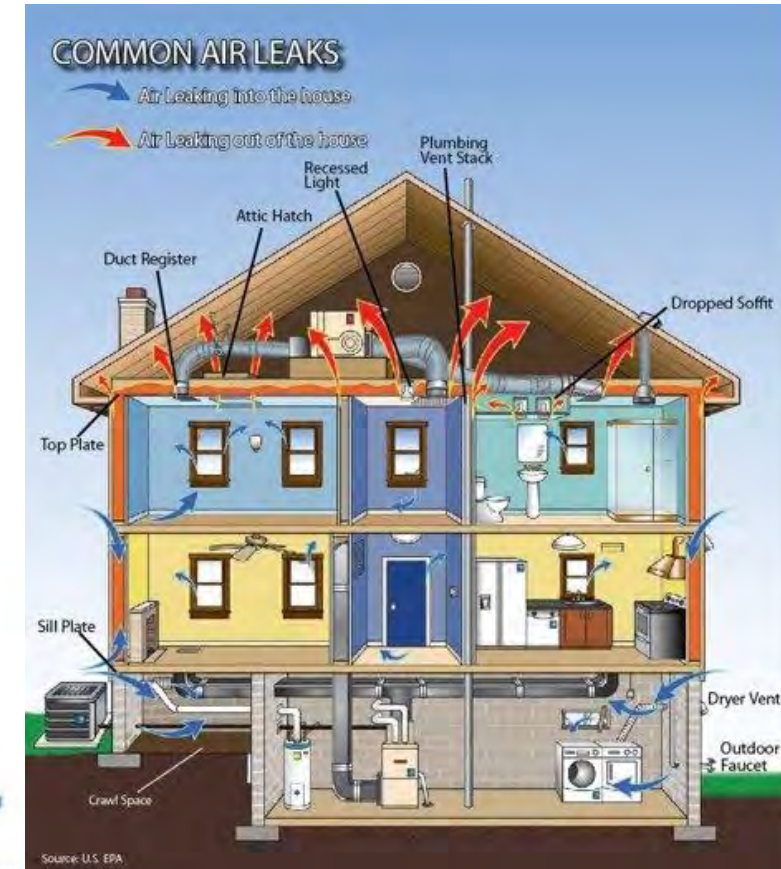
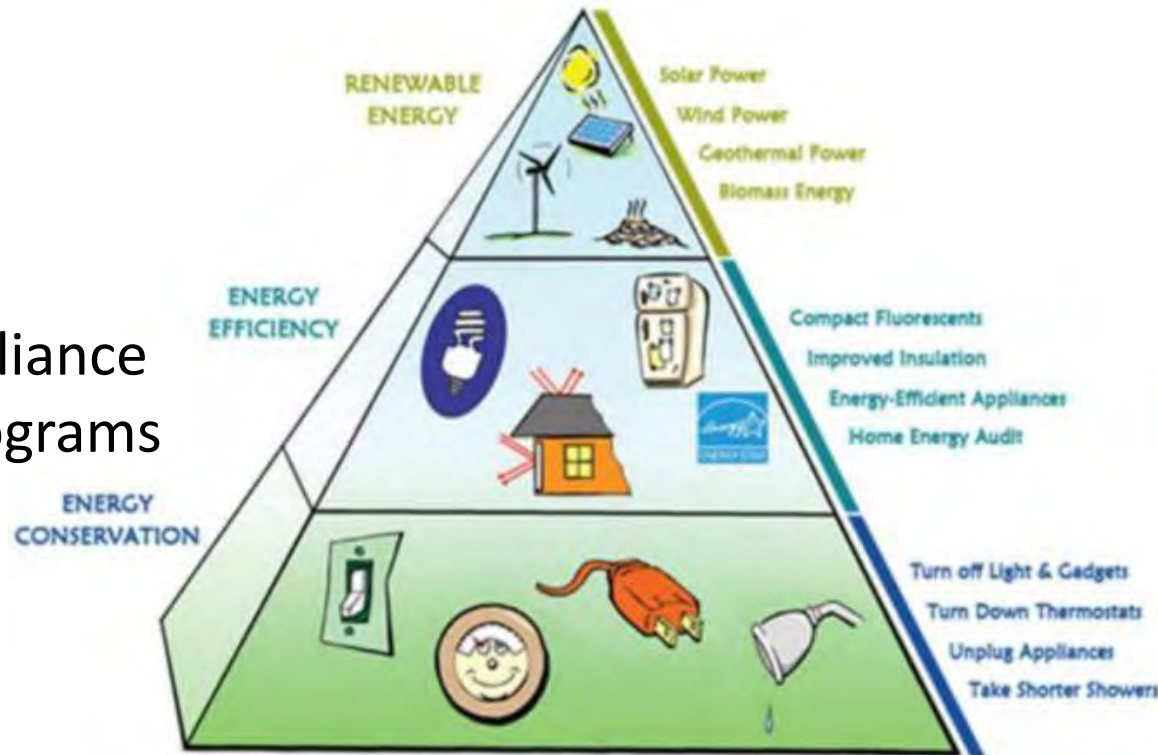


# Reducing Energy Burden

*For a family making \$60,000, with "high energy burden" (6%, \$300 / month), their energy bills would have to be reduced \$1,500/year to reach national average 3.5%*

## Energy savings measures:

- Low-no-cost measures
- Weatherization
- Deep retrofits
- Renewable energy
- Utility programs
- Energy code compliance
- Green building programs



# Energy Bills vs. Energy Rates

- Bills are not the same thing as rates
- Certain investments will reduce energy bills (i.e., energy efficiency investments) but may increase rates
- Investments in new power plants like those associated with Plant Vogtle, are investments that increase rates and bills.

Current Electric Service - Residential						
Next Scheduled Read Date: On or after Dec 8, 2021						
Service Period	Meter #	Reading Type	Meter Reading			
			Current	-	Previous	x
Oct 8 - Nov 3	7763151	Tot kWh	36210		35785	1
<hr/>						
Billing Period						
Oct 8, 2021 - Nov 3, 2021						
<hr/>						
Current Service						\$ 46.27
Environmental Compliance Cost						6.98
Nuclear Construction Cost Recovery						2.08
Municipal Franchise Fee						1.69
Sales Tax						5.08
<hr/>						
<b>Total Current Electric Service</b>						<b>\$ 62.08</b>



# Community Challenges Listening Session



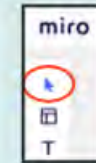
## Miro 101

### Objectives

1. Ensure a clear understanding of Decatur's clean energy options
2. Identify any critical concerns
3. Identify priorities and values
4. Collect language

### Miro 101

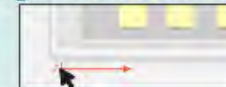
- Use the "select" mouse to select a sticky note and start typing your thoughts



- Need to add a sticky note? Use this button:



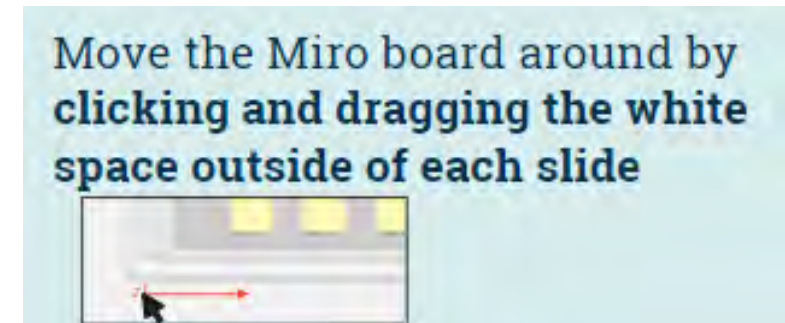
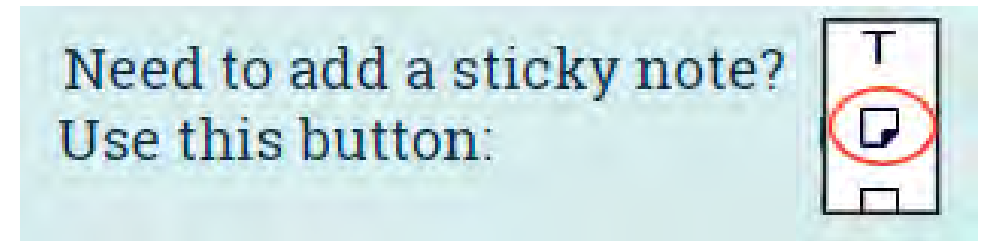
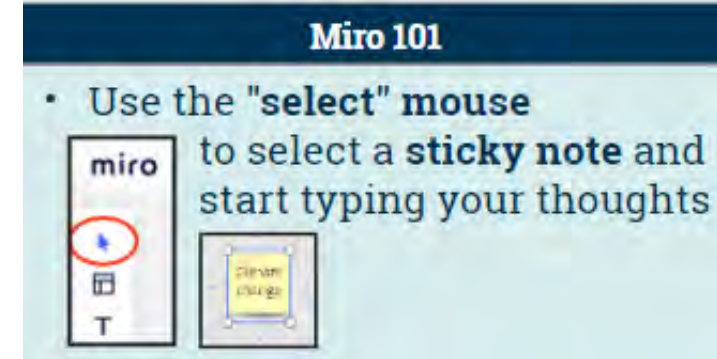
- Move the Miro board around by clicking and dragging the white space outside of each slide



[Miro Board 1](#)

# MIRO LOGISTICS

- Click on the link provided in the Zoom chat to have real time access to the shared Miro board.
- Zoom out as needed to view the entire board or zoom in to view sections of the board.
- Move the Miro board around by clicking and dragging the white space outside each section.
- Inside each section: double click on a sticky note to type your comments directly onto the board.
- Need to add a sticky note? Use this button





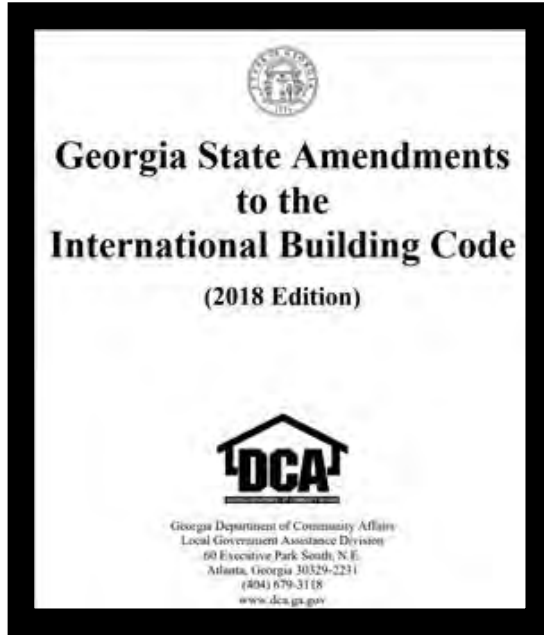
# Potential Policy Solutions



*Solar – Shan Arora*



*Workforce training –  
Amelia Godfrey*



*Building Codes – Diana Burk*



*Community Engagement – Blythe Coleman-Mumford*






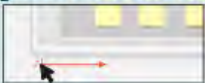
*Sustainable Mobility – Nathaniel Horadam*



*Energy Efficiency –  
Mike Barcik*



# Engagement Activity

Miro 101	
<b>Objectives</b>	<b>Miro 101</b>
<ol style="list-style-type: none"><li>1. Ensure a clear understanding of Decatur's clean energy options</li><li>2. Identify any critical concerns</li><li>3. Identify priorities and values</li><li>4. Collect language</li></ol>	<ul style="list-style-type: none"><li>• Use the "select" mouse to select a sticky note and start typing your thoughts  </li><li>• Need to add a sticky note? Use this button: </li><li>• Move the Miro board around by clicking and dragging the white space outside of each slide </li></ul>

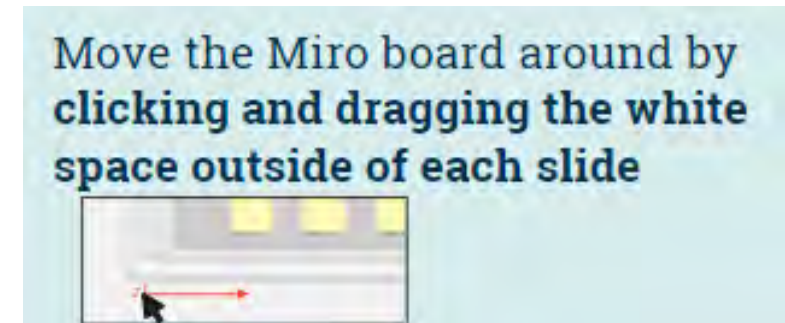
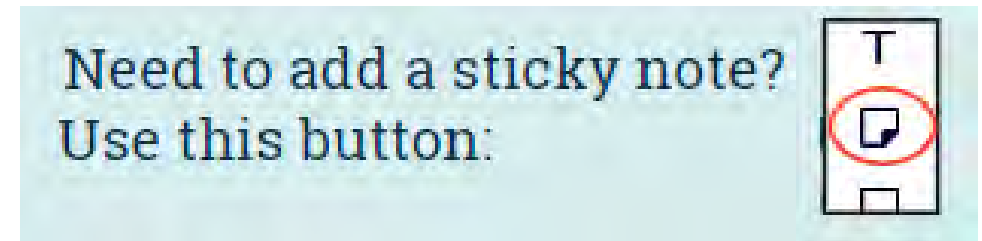
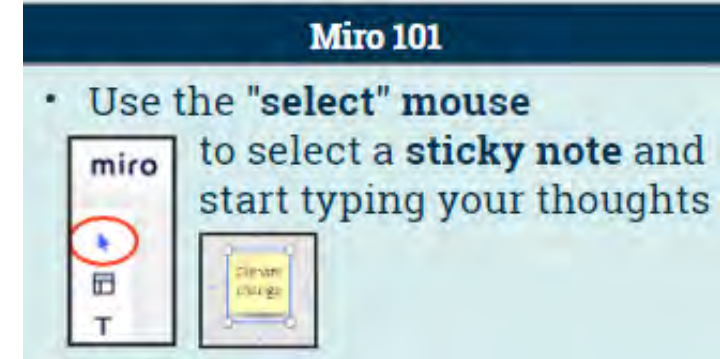
[Miro Board 2: Breakout Room 1](#)

[Miro Board 2: Breakout Room 2](#)



# MIRO LOGISTICS

- Click on the link provided in the Zoom chat to have real time access to the shared Miro board.
- Zoom out as needed to view the entire board or zoom in to view sections of the board.
- Move the Miro board around by clicking and dragging the white space outside each section.
- Inside each section: double click on a sticky note to type your comments directly onto the board.
- Need to add a sticky note? Use this button



# Thank You and Next Steps

VISIT US at [cleanenergydecat.com](https://cleanenergydecat.com)

And take the survey

<https://survey.alchemer.com/s3/6585655/Clean-Energy-Decatur>





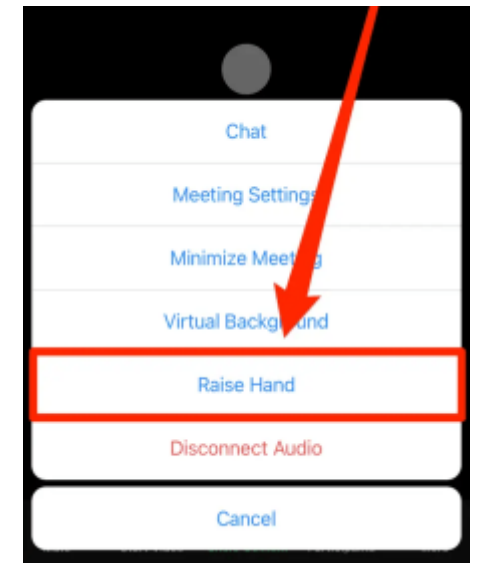
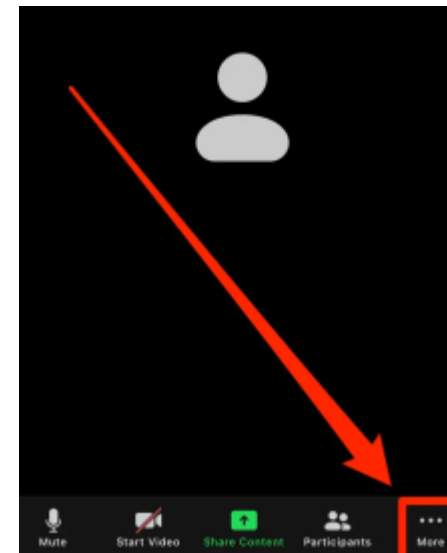
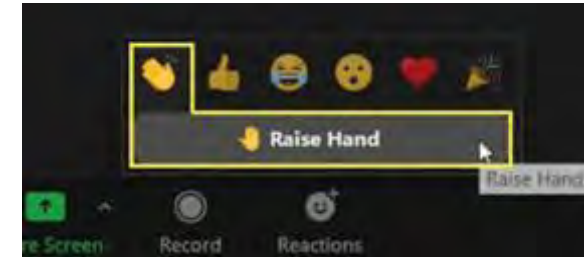


# City of Decatur Roundtable: Clean Energy and Economy January 19, 2022



# HOUSEKEEPING: ZOOM LOGISTICS

- Only presenters will have video & voice during the presentation.
- After the presentation, we will start the Q & A portion.
- At this time, you can request to talk using the phone icon under your name.
- Please feel free to ask question via the chat box throughout the session, and we will answer them at the end of the session



# Roundtable Agenda

---

<b>6:00 – 6:05 PM</b>	Welcome and Introductions	David Nifong, City of Decatur
<b>6:05 – 6:20 PM</b>	Project Overview	David Nifong, City of Decatur; Robert Reed, Southface
<b>6:25 – 6:45 PM</b>	Potential Policies Discussion	Lindy Miller, Sumner Pomeroy, Misty Fernandez, Diana Burk, George Buchannan, Carl Seville
<b>6:45 - 7: 25 PM</b>	Engagement Activity	Robert Reed, Southface
<b>7:25 – 7:30 PM</b>	Thank You and Next Steps	Robert Reed, Southface

---

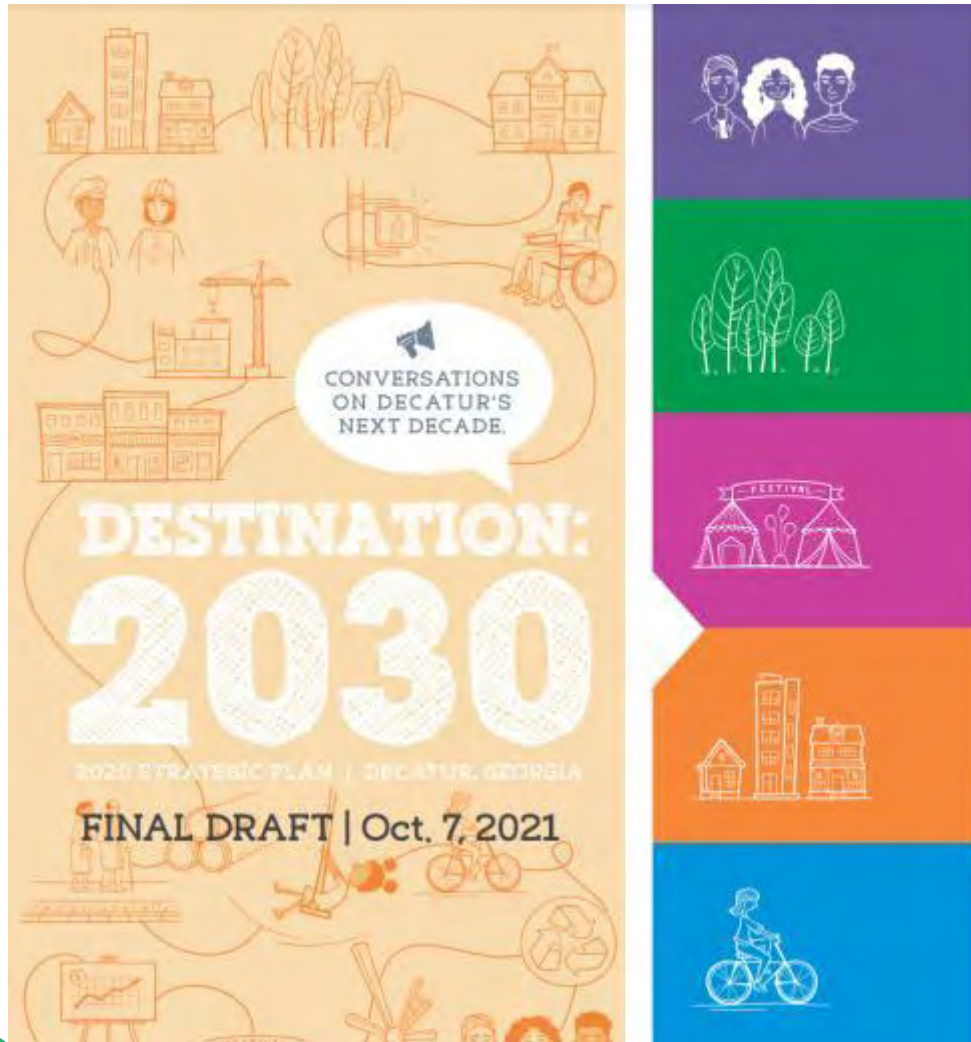




Why Are We Here?



# How did we get here?



## Climate Action

**KEY ACTION ITEMS:**

- › Establish clean energy targets
- › Be transparent about measuring progress
- › Evaluate carbon impact of City decisions
- › Consider mitigation and adaptation
- › Construct green buildings and infrastructure
- › Reduce waste and recover resources
- › Increase the city's tree canopy goal

All action items start on page 56!



## CLEAN ENERGY TARGETS

Decatur must transition away from fossil fuels to clean energy in order to do its part to fight climate change. Many public comments were received on this topic, but since the Clean Energy Plan is currently underway to determine the feasibility and timeline for this transition, the Strategic Plan defers to that effort to set specific targets and timelines to achieve them.



# What is clean energy?

---



# Benefits of Clean Energy

## Improved public health

Improved outdoor air quality

Improved indoor air quality

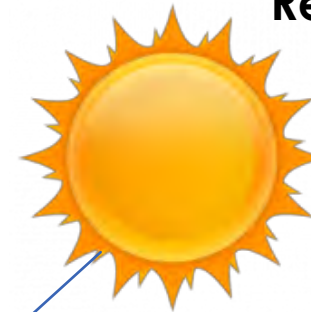


## Reduced energy burden

Increased savings for owners and renters

Reduced economic stress

Increased disposable income



## Economic Development

Improved local economy

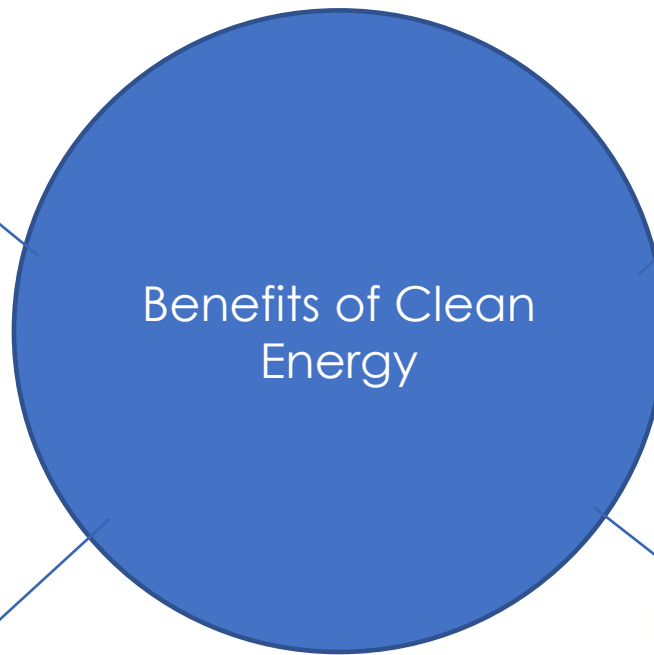
Most every dollar spent on efficiency stays in the local economy



## Improved housing quality

Safer, more affordable and comfortable homes

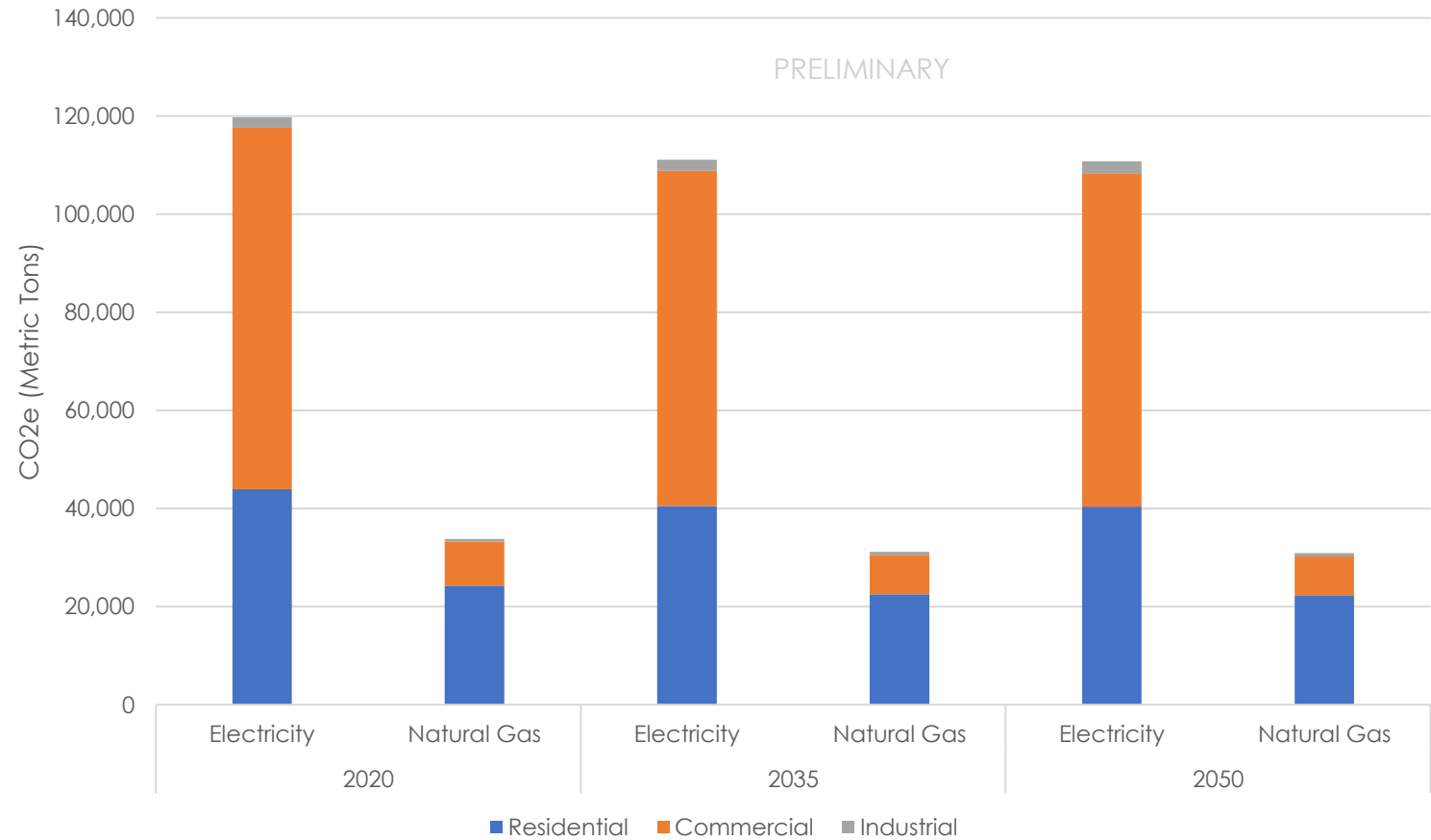
Increased housing satisfaction



# Greenhouse Gas Emissions in Decatur

Residential buildings consume a majority of Decatur's energy demand (51%) but produce 17% less CO<sub>2</sub>e emissions than commercial buildings.

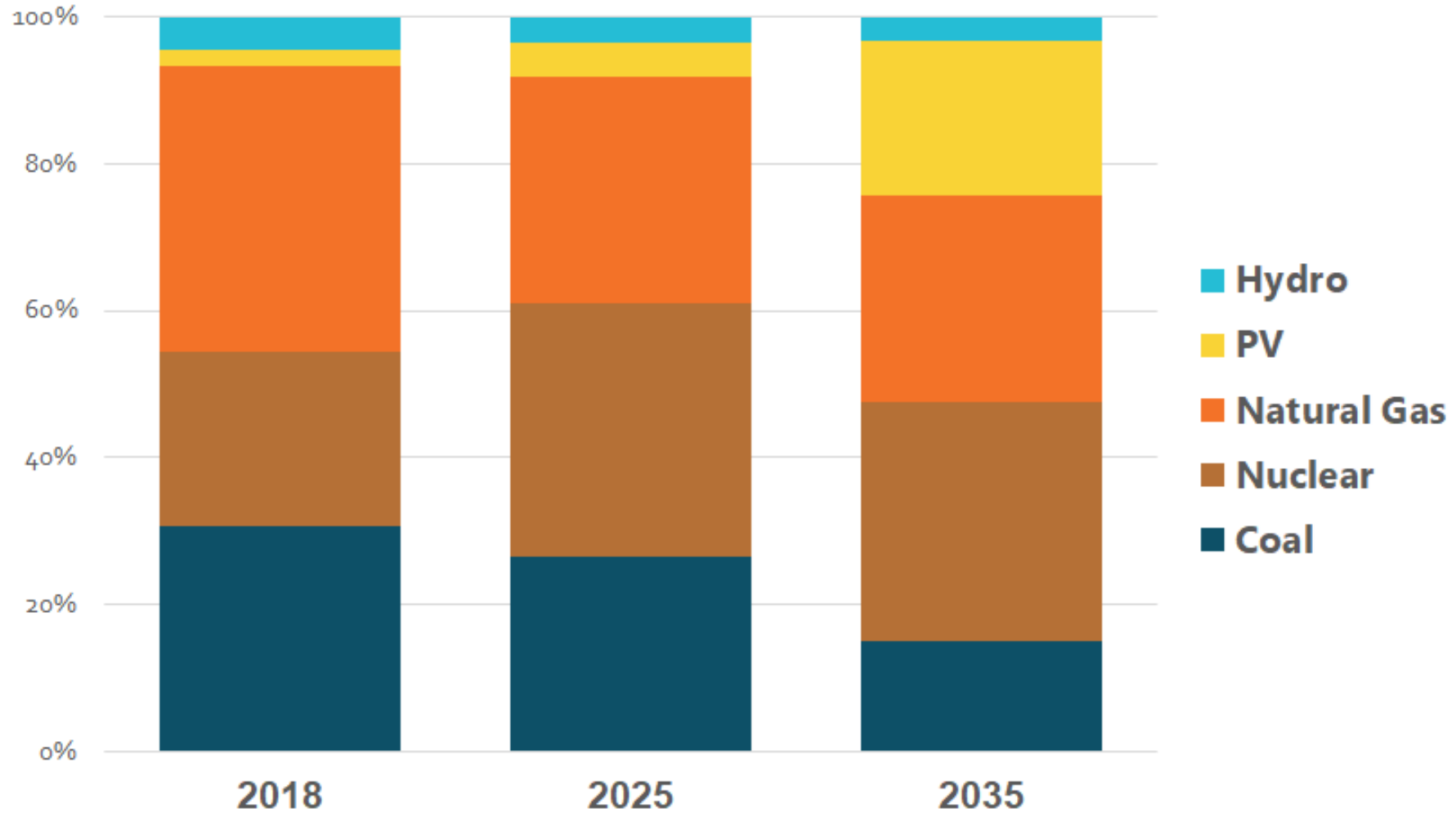
Total emissions reduce by 8% from 2020 to 2050 if Decatur continues with business as usual.





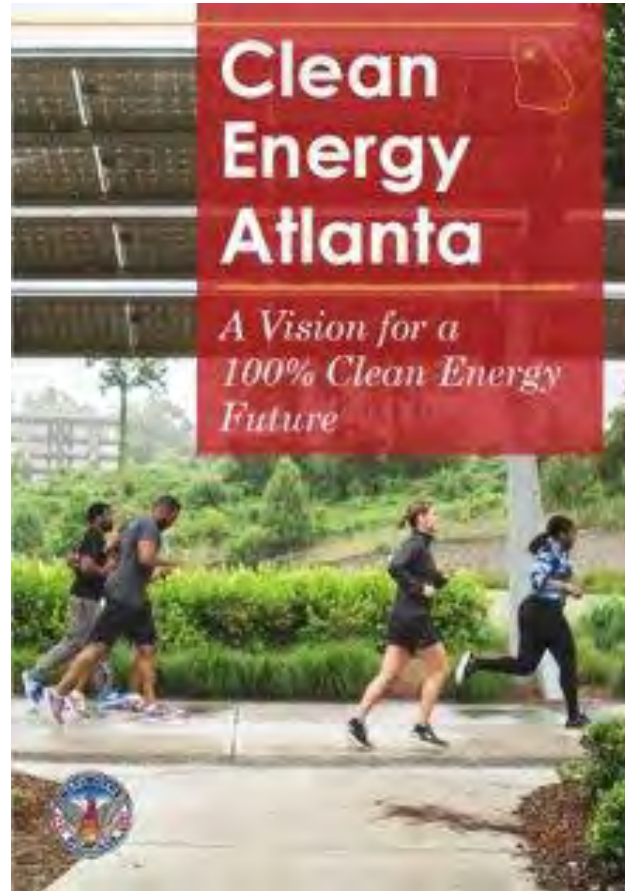
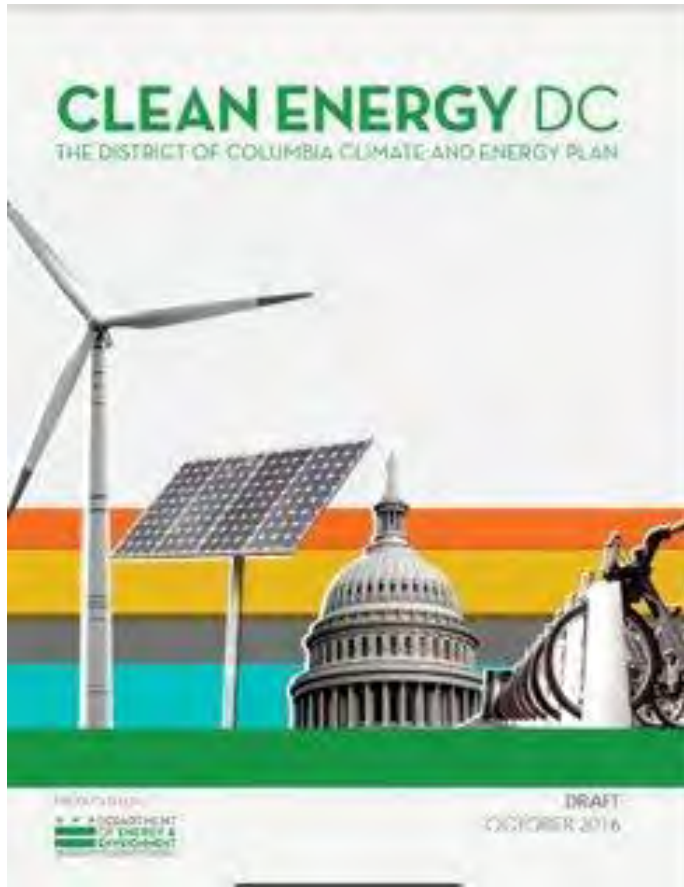
# Our Current Sources of Energy

---



# Creating a Clean Energy Plan

---



# The Process

---



## Project Launch

## Input & Awareness

## Action Identification and Prioritization

## Develop & Refine Plan

## Implementation

Initiate stakeholder and community engagement:

- Develop stakeholder engagement approach
- Develop community engagement approach using previous Decatur processes and the engagement squad ensuring a diverse engagement

Host stakeholder and community conversations (depending on COVID realities - can be held virtually or in-person)

- 1:1s with businesses and orgs
- Community-wide kickoff and roundtables with facilitators
- Youth engagement through school workshops

Review feedback from community and stakeholders

- Capture priorities and values of Decaturites
- Consider diverse energy system, policy, and program scenarios
- Release summary findings for community review

Develop Plan

- Select feasible scenarios based on engagement input, analytics from Greenlink, and team knowledge
- Draft and refine Clean Energy Plan, publishing 3 rounds of drafts
- Finalize and deliver Clean Energy Plan

Plan Enactment and Implementation

- Next Steps
- Develop and finalize toolkit and resources for education
- Policy, Programs & Technology



Economy



# Clean Energy Jobs Opportunities

---

- HVAC professionals
- Electricians
- Engineers
- Researchers / scientists
- Solar installers
- Green building workforce
- Building energy raters
- Factory workers – appliances, building materials, hybrid/electric vehicles

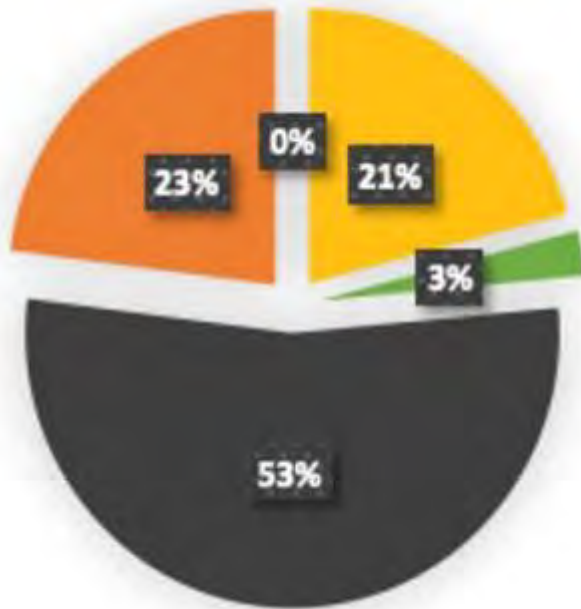


**475 new clean energy jobs**  
(5.6x greater than the Agnes Scott workforce)

**\$295 income increase** potential per Decatur resident per year

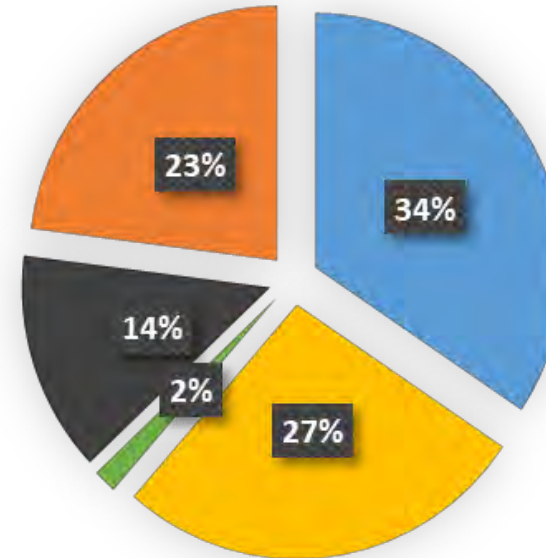
**Up to \$4** in monthly health savings for Decatur's residents

# Decatur's Fuel Mix in 2050



- Energy Efficiency
- Solar
- All Other Renewables
- Coal and Gas
- Nuclear

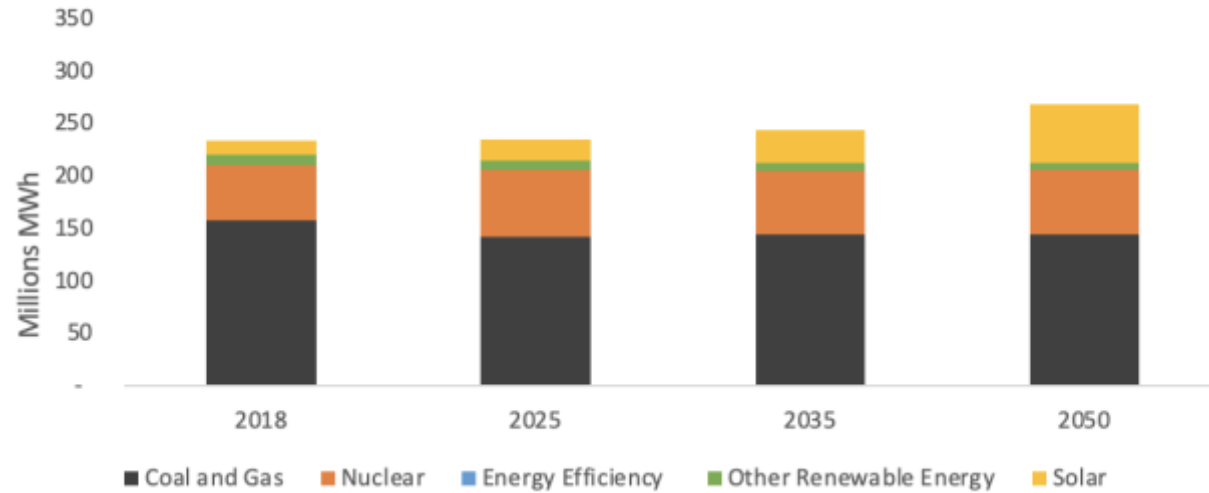
Baseline Scenario



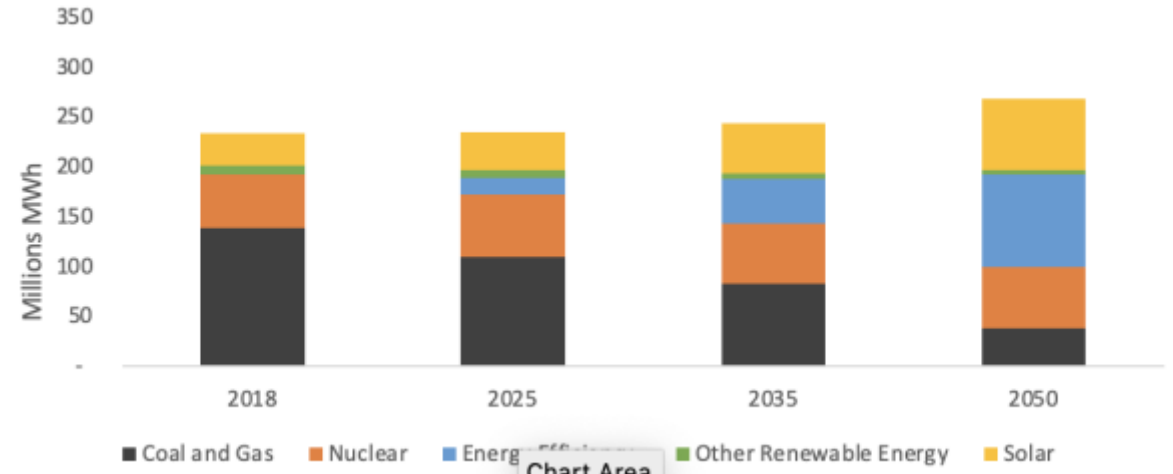
- Energy Efficiency
- Solar
- All Other Renewables
- Coal and Gas
- Nuclear

MAX Scenario

# How Electricity is Met Over Time



Baseline Scenario



MAX Scenario

# Clean Energy In Private Sector

---

*Businesses demonstrating an interest in clean energy*





# Potential Policies Discussion

---



CHERRY STREET  
ENERGY

*Solar Installations- Lindy Miller*



*Mobility Options - Sumner Pomeroy*



2KB ENERGY  
SERVICES

*Energy Performance Contracting  
George Buchanan*



*Electrification- Diana Burk*



*Utilities & Economic Development –Misty Fernandez*



*Energy Efficiency Consulting-Carl Seville*

# Engagement Activity

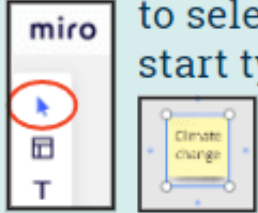


# MIRO LOGISTICS

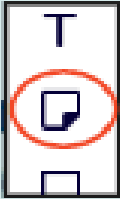
- Click on the link provided in the Zoom chat to have real time access to the shared Miro board.
- Zoom out as needed to view the entire board or zoom in to view sections of the board.
- Move the Miro board around by clicking and dragging the white space outside each section.
- Inside each section: double click on a sticky note to type your comments directly onto the board.
- Need to add a sticky note? Use this button

**Miro 101**

- Use the "select" mouse to select a **sticky note** and start typing your thoughts



Need to add a sticky note?  
Use this button:



Move the Miro board around by **clicking and dragging the white space outside of each slide**



# Thank You and Next Steps

VISIT US at [cleanenergydecat.com](https://cleanenergydecat.com)

And take the survey

<https://survey.alchemer.com/s3/6585655/Clean-Energy-Decatur>







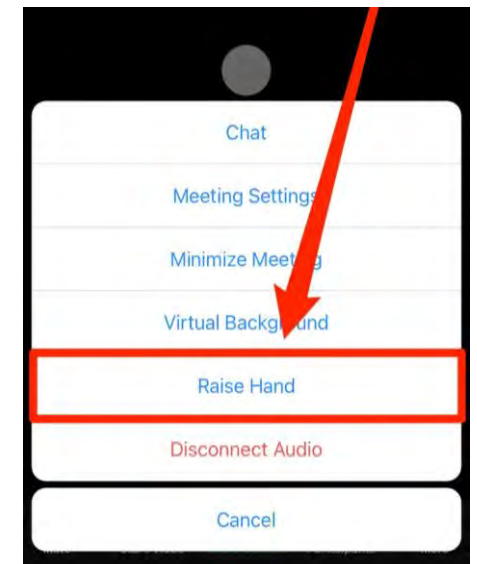
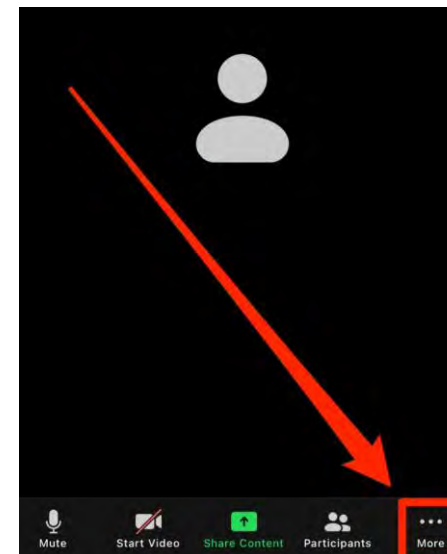
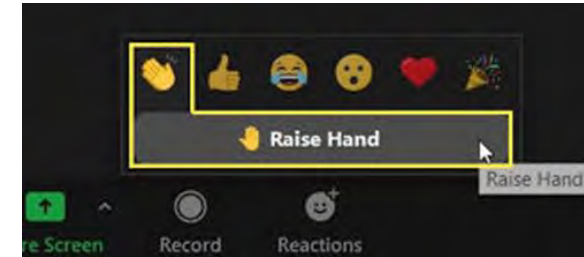
# City of Decatur Roundtable: The Built Environment

February 24, 2022



# HOUSEKEEPING: ZOOM LOGISTICS

- Only presenters will have video & voice during the presentation.
- After the presentation, we will start the Q & A portion.
- At this time, you can request to talk using the phone icon under your name.
- Please feel free to ask question via the chat box throughout the session, and we will answer them at the end of the session



# Roundtable Agenda

<b>6:00 – 6:05 PM</b>	Welcome and Introductions	David Nifong, City of Decatur
<b>6:05 – 6:15 PM</b>	Project Overview	David Nifong, City of Decatur; Robert Reed, Southface
<b>6:15 – 6:25 PM</b>	Efficiency and the Built Environment	Samantha McDonald
<b>6:25 – 6:45 PM</b>	Potential Policies Discussion	George Buchannan, Carl Seville, Bryant Haines, Denis Blackburn, Diana Burk, Shan Arora
<b>6:45 - 7: 25 PM</b>	Engagement Activity	Robert Reed, Southface
<b>7:25 – 7:30 PM</b>	Thank You and Next Steps	David Nifong, City of Decatur

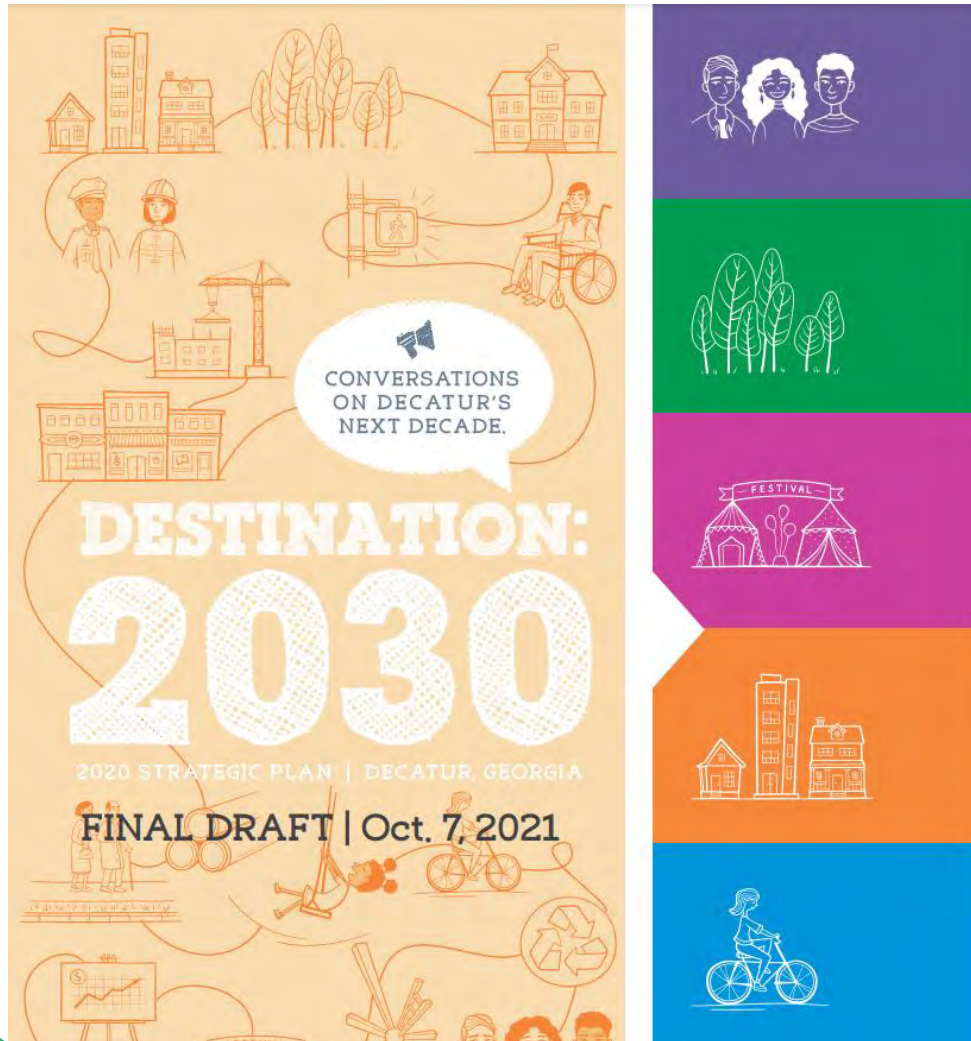




Why Are We Here?



# How did we get here?



## Climate Action

### KEY ACTION ITEMS:

- » Establish clean energy targets
- » Be transparent about measuring progress
- » Evaluate carbon impact of City decisions
- » Consider mitigation and adaptation
- » Construct green buildings and infrastructure

- » Reduce waste and recover resources
- » Increase the city's tree canopy goal

All action items start on page 56!



## CLEAN ENERGY TARGETS

Decatur must transition away from fossil fuels to clean energy in order to do its part to fight climate change. Many public comments were received on this topic, but since the Clean Energy Plan is currently underway to determine the feasibility and timeline for this transition, the Strategic Plan defers to that effort to set specific targets and timelines to achieve them.



# What is clean energy?

---





# Benefits of Clean Energy

## Improved public health

Improved outdoor air quality

Improved indoor air quality

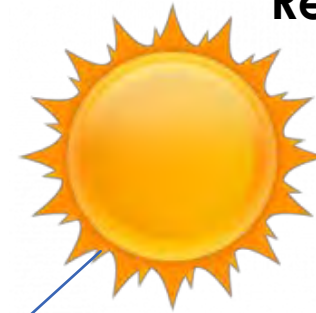


## Reduced energy burden

Increased savings for owners and renters

Reduced economic stress

Increased disposable income



## Economic Development

Improved local economy

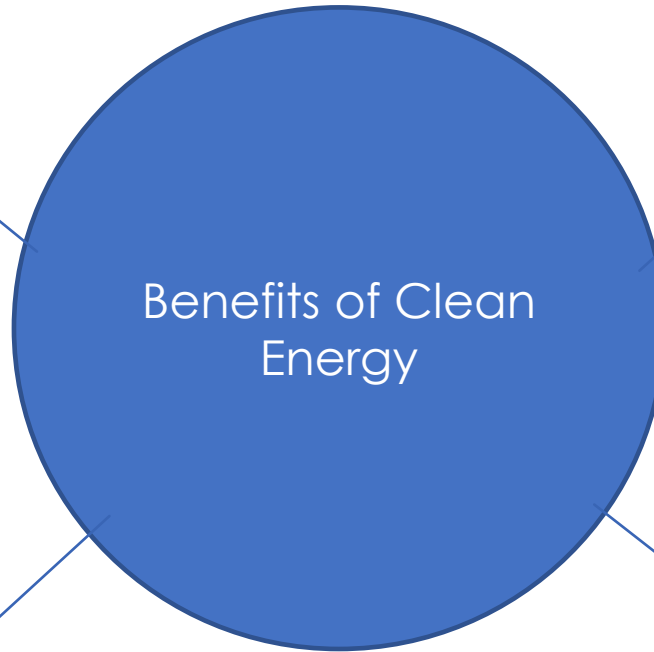
The solar industry provides job opportunities, with solar panel installer jobs projected to grow 51% in the next 10 years.



## Improved housing quality

Safer, more affordable and comfortable homes

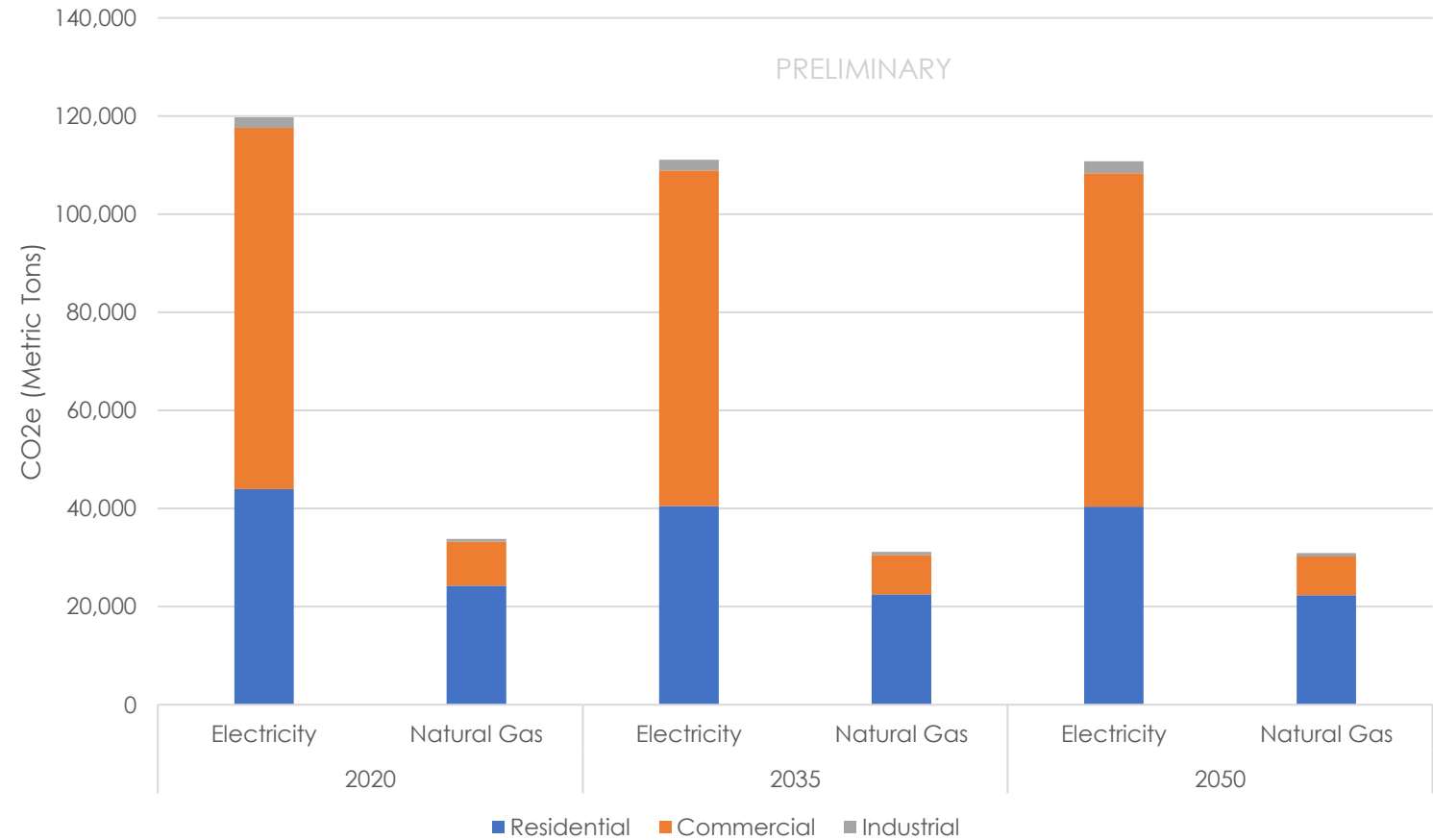
Increased housing satisfaction



# Greenhouse Gas Emissions in Decatur

Residential buildings consume a majority of Decatur's energy demand (51%) but produce 17% times less CO<sub>2</sub> emissions than commercial buildings.

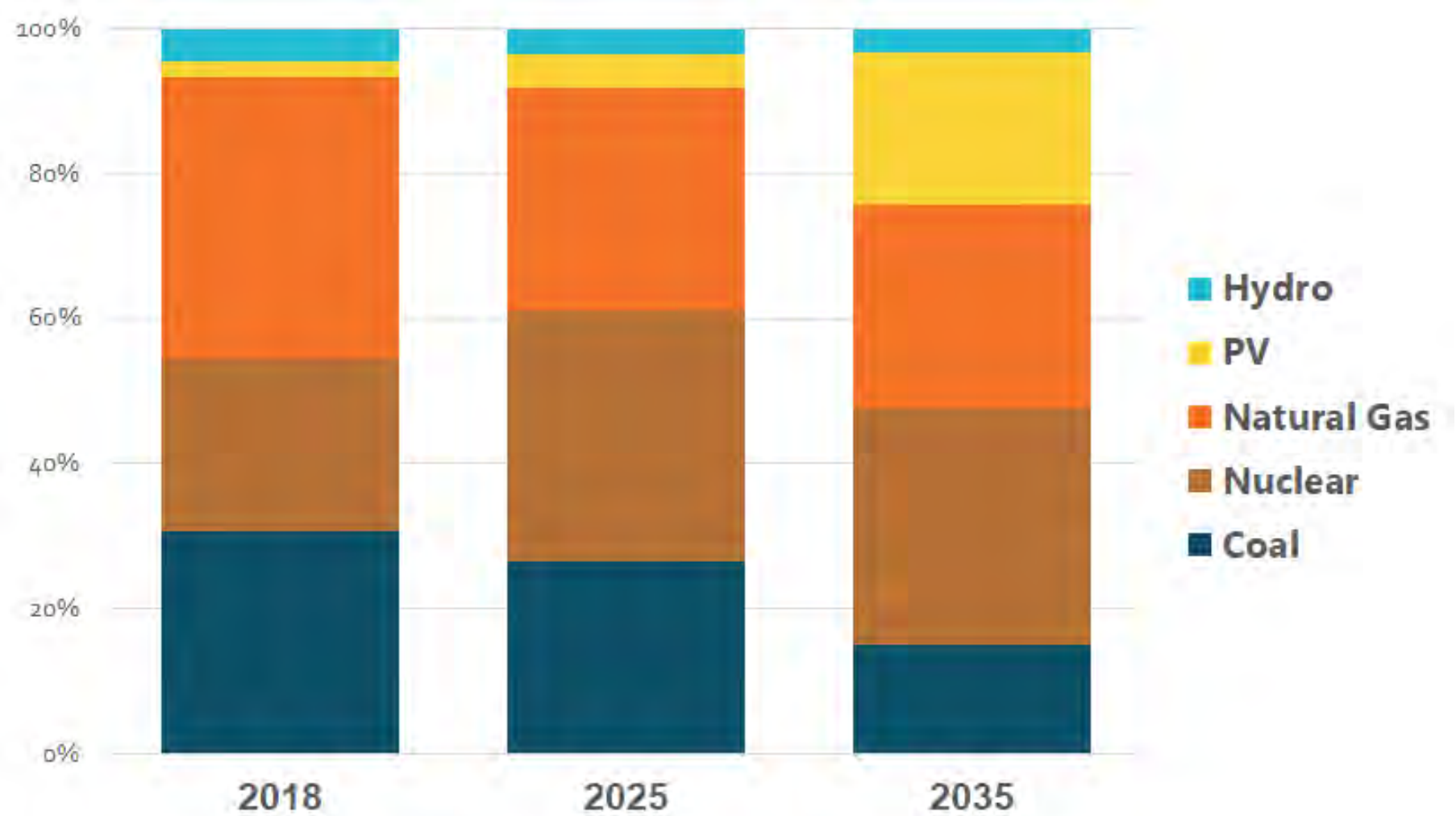
Total emissions reduced by 8% from 2020 to 2050 if Decatur continues with business as usual.



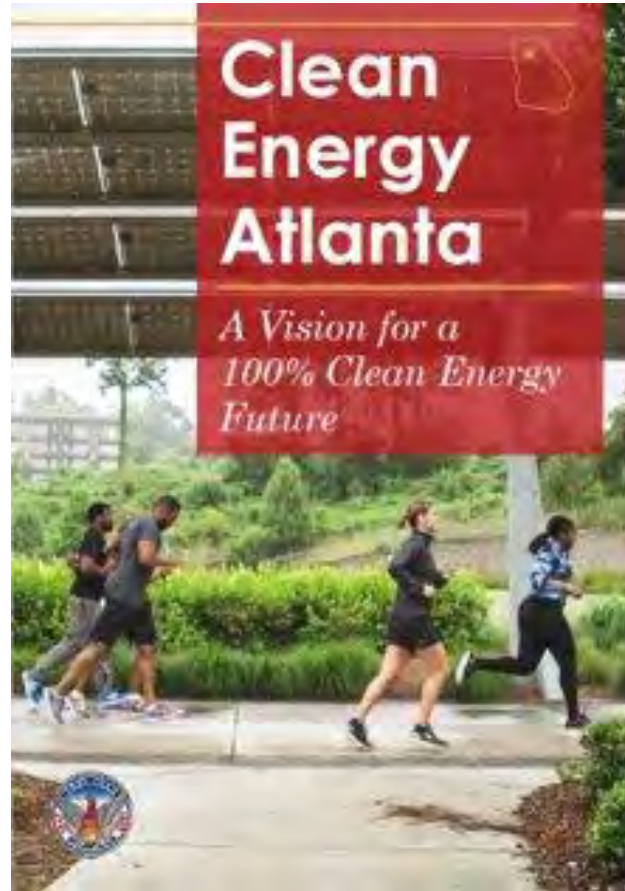
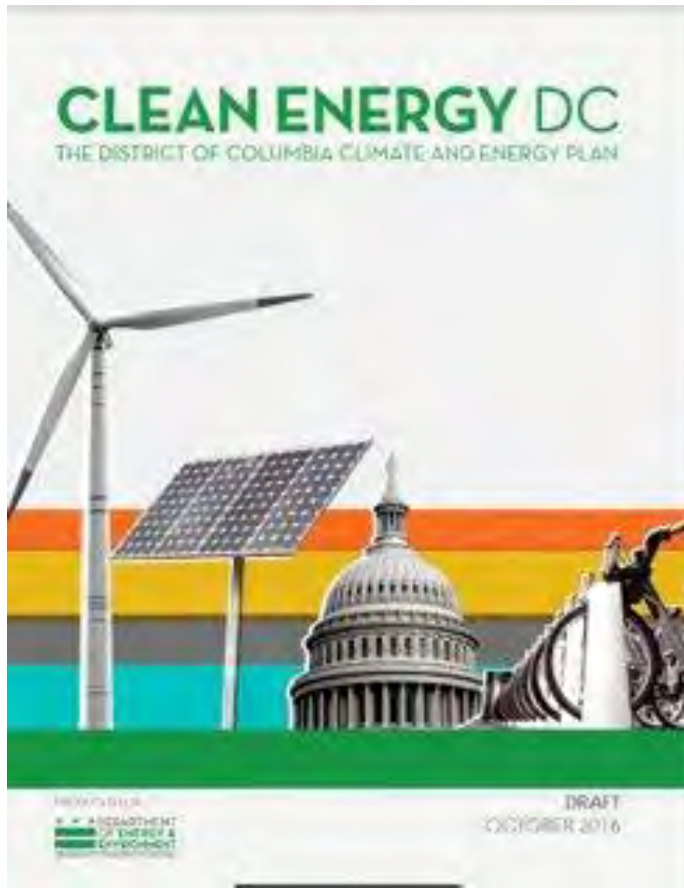


# Our Current Sources of Energy

---



# Creating a Clean Energy Plan



# The Process

---



## Project Launch

Initiate stakeholder and community engagement:

- Develop stakeholder engagement approach
- Develop community engagement approach using previous Decatur processes and the engagement squad ensuring a diverse engagement

## Input & Awareness

Host stakeholder and community conversations (depending on COVID realities - can be held virtually or in-person)

- 1:1s with businesses and orgs
- Community-wide kickoff and roundtables with facilitators
- Youth engagement through school workshops

## Action Identification and Prioritization

Review feedback from community and stakeholders

- Capture priorities and values of Decaturites
- Consider diverse energy system, policy, and program scenarios
- Release summary findings for community review

## Develop & Refine Plan

Develop Plan

- Select feasible scenarios based on engagement input, analytics from Greenlink, and team knowledge
- Draft and refine Clean Energy Plan, publishing 3 rounds of drafts
- Finalize and deliver Clean Energy Plan

## Implementation

Plan Enactment and Implementation

- Next Steps
- Develop and finalize toolkit and resources for education
- Policy, Programs & Technology

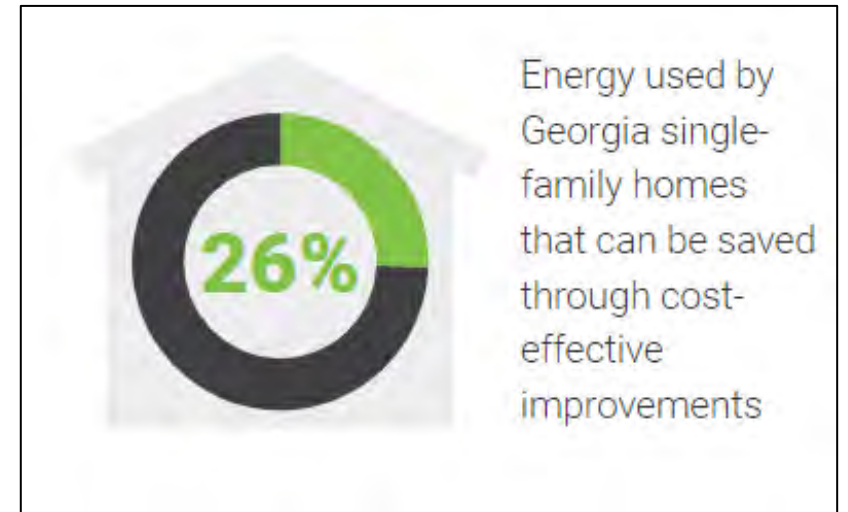


# The Built Environment

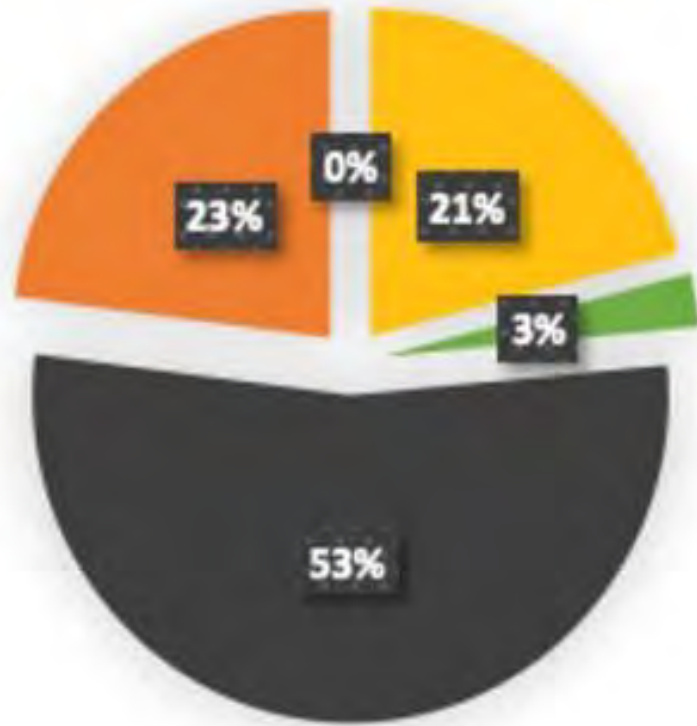


# Energy Efficiency is Cost-Effective

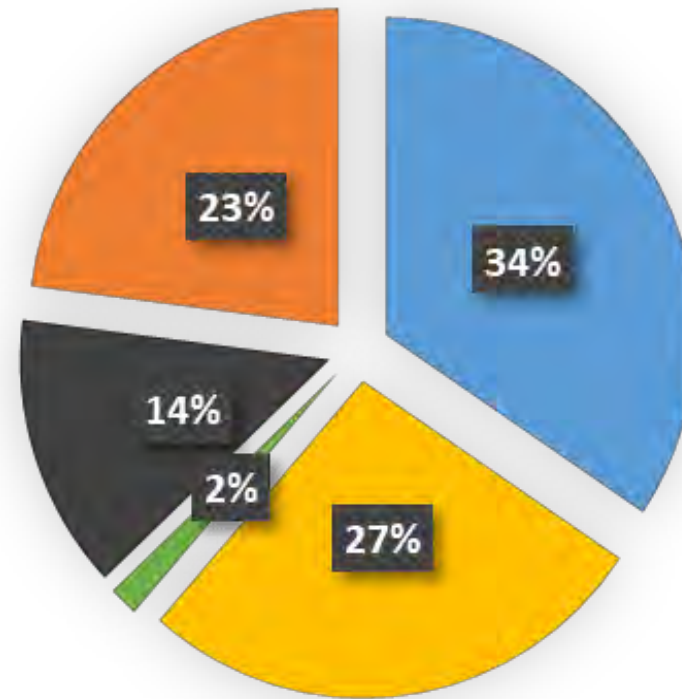
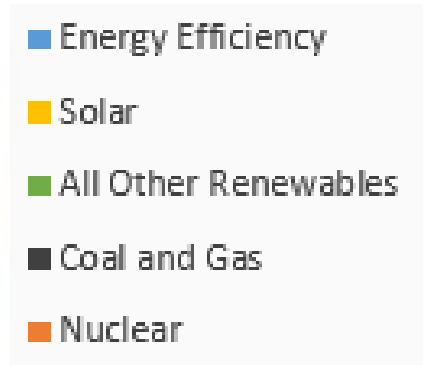
- Energy efficiency means using less energy to keep the same level (or more) of comfort within the home
- Often referred to as "low-hanging fruit" because it is generally more cost-effective than renewable energy and provides high levels of energy savings, improved air quality, and jobs
- Energy efficiency improvements range from appliance improvements to complete home retrofits



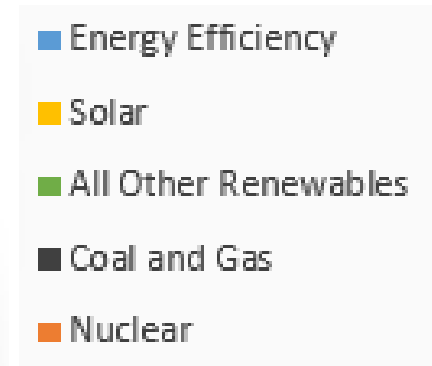
# Energy Efficiency Drives Decatur's Fuel Mix in 2050



Baseline Scenario



MAX Scenario



# Energy Efficiency in Decatur

---

Technologies	Programs and Policies
<ul style="list-style-type: none"><li>• High efficiency heat pumps</li><li>• Drill and fill wall cavity</li><li>• LED lightbulbs</li><li>• Attic insulation</li><li>• Duct Sealing and Insulating</li><li>• Energy efficiency water heater</li><li>• Storm Windows</li></ul>	<ul style="list-style-type: none"><li>• On-bill financing</li><li>• Energy Savings Performance Contracts (ESPCs)</li><li>• Workforce Training Collaboration</li><li>• Revolving Clean Energy Loan Fund</li></ul>

# What Is Energy Burden?

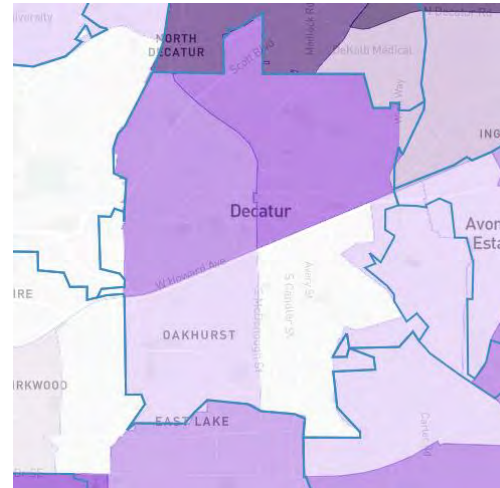
Energy burden is defined as the percentage of gross household income spent on energy costs.

National Median - 3.6% (2019)

Georgia Median - 5.4% (2019)

DeKalb Median - 4.1% (2018)

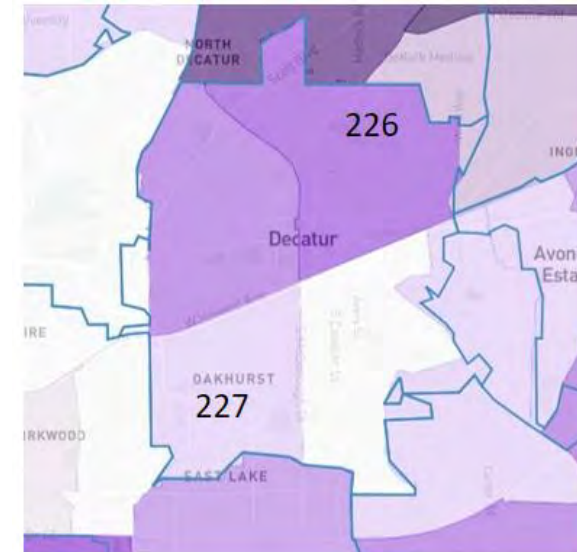
Decatur - 1.6% to 3.1% (2018)



Definitions:

High Energy Burden > 6%

Severe Energy Burden > 10%



Census Tract	Households with Severe EB	Median Income
226	370 (~13%)	\$79,800
227	375 (~23%)	\$103,000

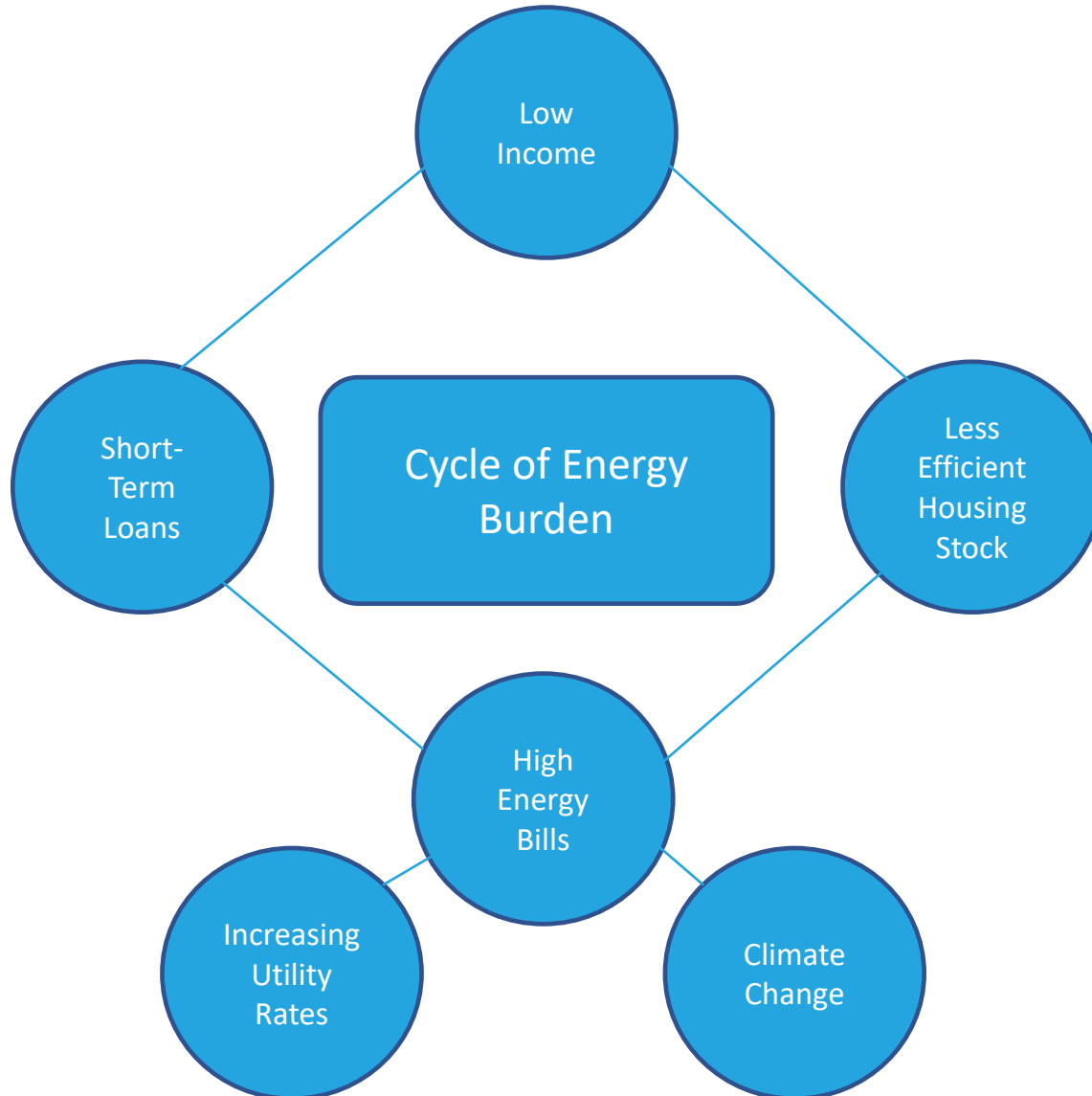


# Energy Burden

# #1

## REASON

For a short-term loan is a to pay a utility bill



# 31%

## OF AMERICANS

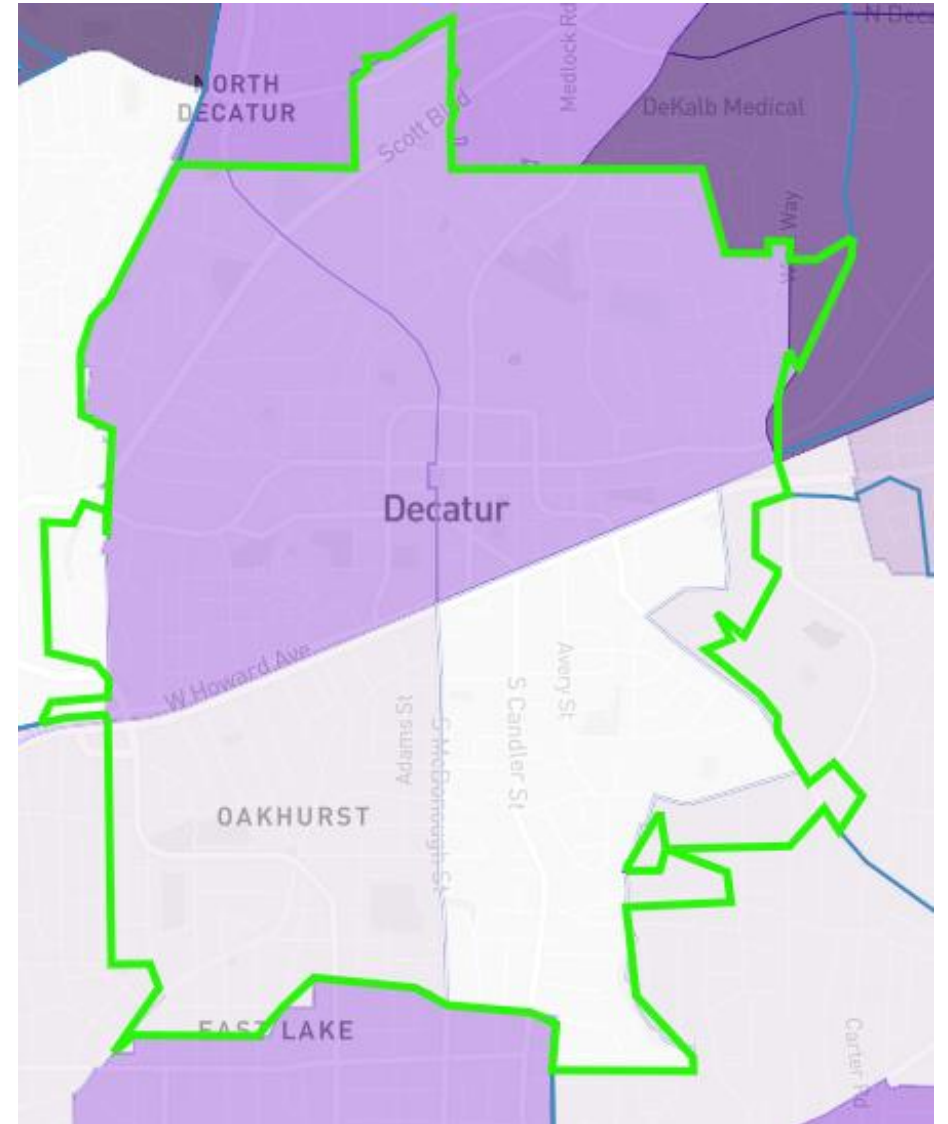
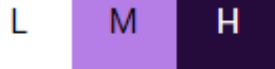
Have gone without a meal or a prescription to pay a utility bill

# Energy Efficiency can Improve Equity Issues

- Due to administrative and financial complications, energy efficiency programs are often not programmed toward low-income rental housing.
- Split-incentive between owner and renter to address efficiency investment needs
- It is important to consider the needs of low-income, renting households when moving forward with clean energy planning

## Legend

Housing: Renter  
Shows the median percentage of owner-occupied households compared to renter-occupied households.



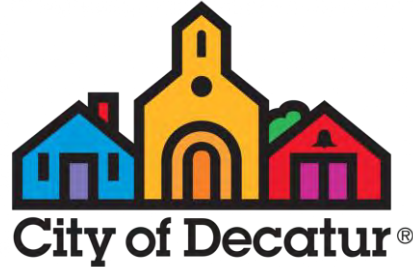
# Potential Policies Discussion

---



CHERRY STREET  
ENERGY

*Community Solar/SEPA*  
*Lindy Miller*



*Decatur Specific*  
*Bryant Haines*



*Incentives for Electrification*  
*Diana Burk*



*Retro-Commissioning*  
*George Buchanan*



*Zero Energy Ready*  
*Denis Blackburn*



*Solarize*  
*Shan Arora*



*Energy Retrofits*  
*Carl Seville*

# What to Do With Your Old House

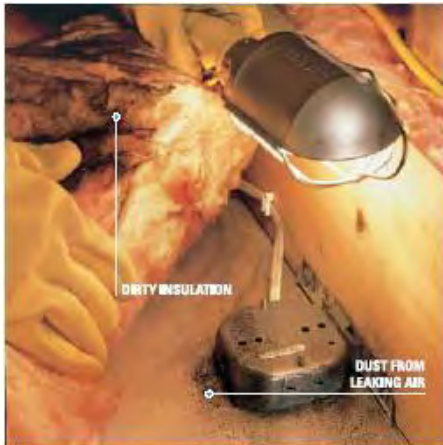
Carl Seville  
SK Collaborative





# Attic

- Seal Holes
- Then Insulate



# HVAC

- Seal Ducts



(c) SK Collaborative, LLC

# HVAC

- Vent Kitchens and Bathrooms
- To The Exterior



(c) SK Collaborative, LLC



# Walls

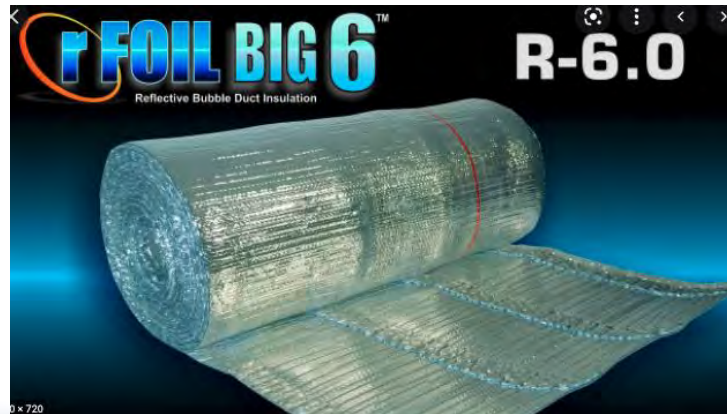
- Seal Holes
- Outlets
- Baseboard





# What Not to Do

- Window Replacement
- Reflective Paint
- Bubble Wrap Insulation



# Cautions

- Carbon Monoxide



# Cautions

- **Wall Insulation**



# Get an Energy Audit

- Hire an Expert
  - Identify Problems
  - Offer Solutions
- 
- Georgia Power
  - Home Energy Improvement Program





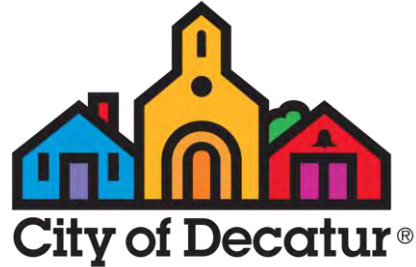
# Potential Policies Discussion

---



CHERRY STREET  
ENERGY

*Community Solar/SEPA*  
*Lindy Miller*



*Decatur Specific*  
*Bryant Haines*



*Incentives for Electrification*  
*Diana Burk*



*Retro-Commissioning*  
*George Buchanan*



*Zero Energy Ready*  
*Denis Blackburn*



*Solarize*  
*Shan Arora*



*Energy Retrofits*  
*Carl Seville*



# Engagement Activity

# MIRO LOGISTICS

## Decatur Clean, Renewable Energy Stakeholder Engagement

The screenshot shows a Miro board with the following sections:

- Start-Up**: A slide titled "Miro 101" with instructions on how to use the tool.
- Section 1: Energy Landscape**: A slide asking for examples of clean energy projects, with sticky notes and a "What shouldn't we include?" section.
- Section 2: Policy or Program Options**: A slide with a grid of sticky notes and a "What shouldn't we include?" section.
- Section 3: Pathways to Clean & Renewable Energy**: A slide asking how businesses can advance goals, with sticky notes and a "What shouldn't we do?" section.
- Section 4: Community-Wide Goals**: A slide asking what is important to the community, with sticky notes and a "What shouldn't we do?" section.
- Section 5: Next Steps**: A slide asking how the city can support and attract businesses, with sticky notes and a "What shouldn't we include?" section.

Annotations on the board include:

- A blue arrow pointing to the left toolbar with the text: "Need to add a sticky note?"
- A blue arrow pointing to a sticky note in Section 2 with the text: "Double click on a sticky note to type your comments directly onto the board."
- A blue arrow pointing down to the zoom controls with the text: "Zoom In or Out"
- Text at the bottom center: "Move the Miro board around by clicking and dragging the white space outside each section."

The bottom of the board shows a toolbar with various icons and a zoom level of 18%.



# In-Person Charrette: Decatur Rec Center



<b>March 8</b>	<b>7:00am -10:00am</b>	Opening public session: Come hear about the Decatur Clean Energy Plan’s progress and findings to date
	<b>11:00am – 6:30pm</b>	Lobby open for walk-ins for all community members
<b>March 9</b>	<b>8:00am – 3:00pm</b>	Lobby open for walk-ins for all community members
	<b>4:00pm - 7:00pm</b>	Open House: Decatur and its team members will review the completed plan elements



# Thank You and Next Steps

VISIT US at [cleanenergydecatgur.com](https://cleanenergydecatgur.com)

And take the survey

<https://survey.alchemer.com/s3/6585655/Clean-Energy-Decatur>





# City of Decatur Clean Energy Plan: Youth Council Meeting

December 8, 2021



# Agenda

Welcome and Introductions	David Nifong, City of Decatur
Project Overview	10 minutes
Engagement Activity	20 minutes
Questions and Closing	10 minutes

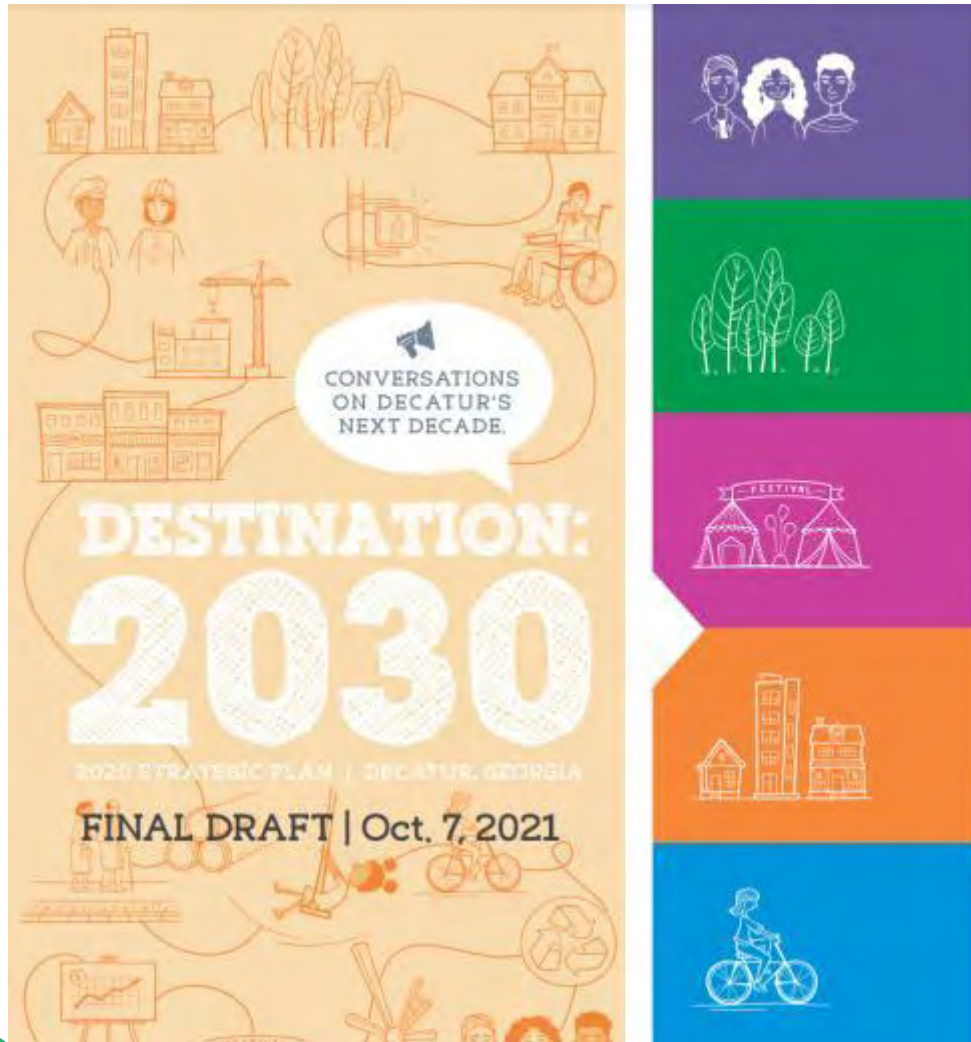




Why Are We Here?



# How did we get here?



## Climate Action

### KEY ACTION ITEMS:

- › Establish clean energy targets
- › Be transparent about measuring progress
- › Evaluate carbon impact of City decisions
- › Consider mitigation and adaptation
- › Construct green buildings and infrastructure

- › Reduce waste and recover resources
- › Increase the city's tree canopy goal

All action items start on page 56!



## CLEAN ENERGY TARGETS

Decatur must transition away from fossil fuels to clean energy in order to do its part to fight climate change. Many public comments were received on this topic, but since the Clean Energy Plan is currently underway to determine the feasibility and timeline for this transition, the Strategic Plan defers to that effort to set specific targets and timelines to achieve them.



# What is clean energy?

---

*'Clean' sources do not emit greenhouse gas emissions (GHGs).*

*'Renewable' sources are those which can be replenished in a human timescale.*



# Benefits of Clean Energy

## Improved public health

Improved outdoor air quality

Improved indoor air quality

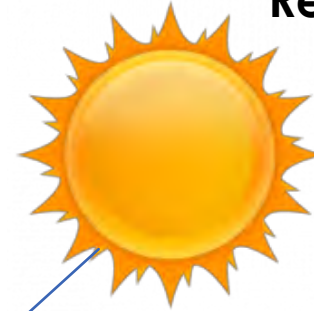


## Reduced energy burden

Increased savings for owners and renters

Reduced economic stress

Increased disposable income



Click to add text  
Benefits of Clean Energy

## Economic Development

Improved local economy

The solar industry provides job opportunities, with solar panel installer jobs projected to grow 51% in the next 10 years.



## Improved housing quality

Safer, more affordable and comfortable homes

Increased housing satisfaction

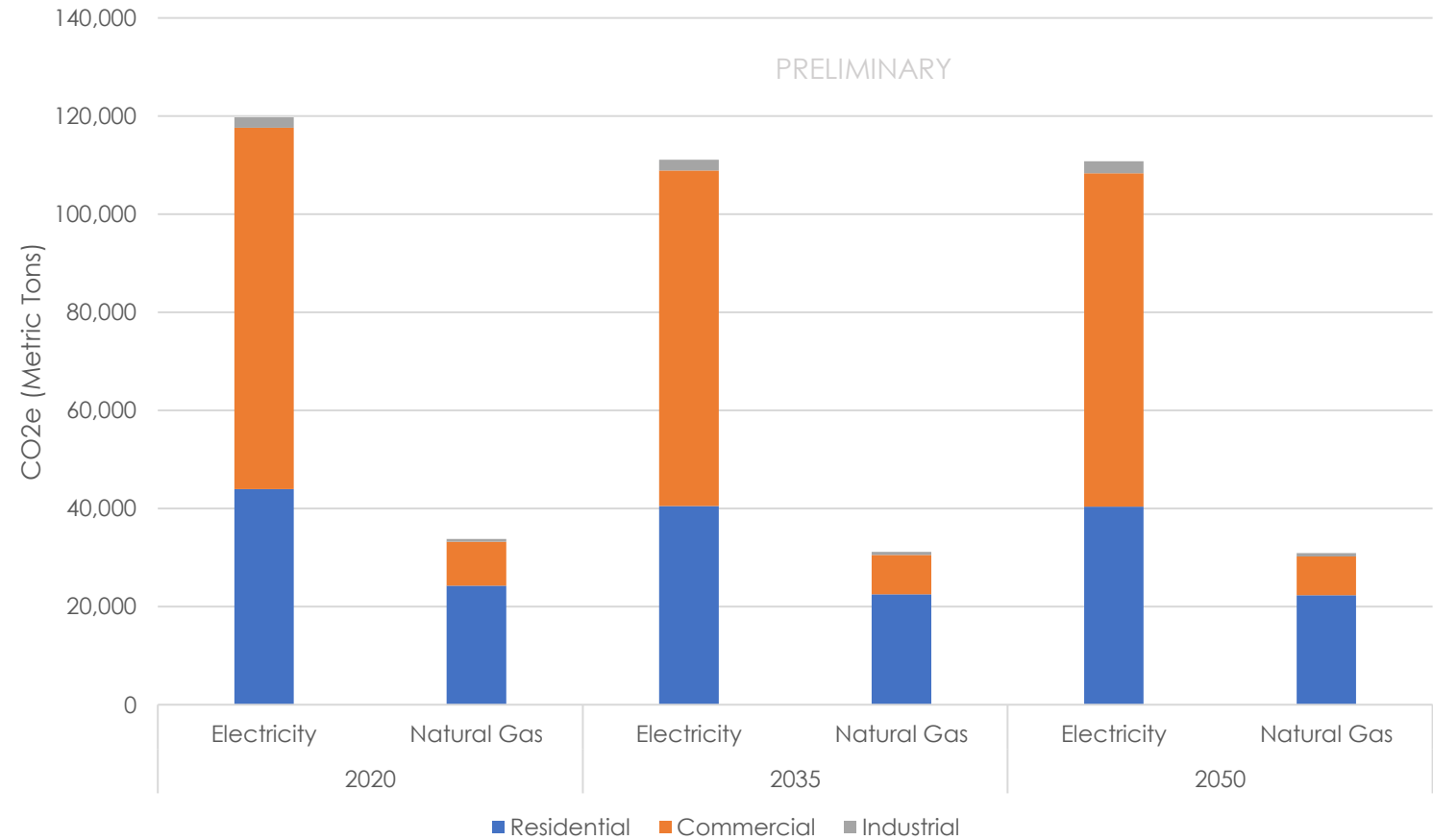




# Greenhouse Gas Emissions in Decatur

Residential buildings consume a majority of Decatur's energy demand (51%) but produce 17% times less CO2e emissions than commercial buildings.

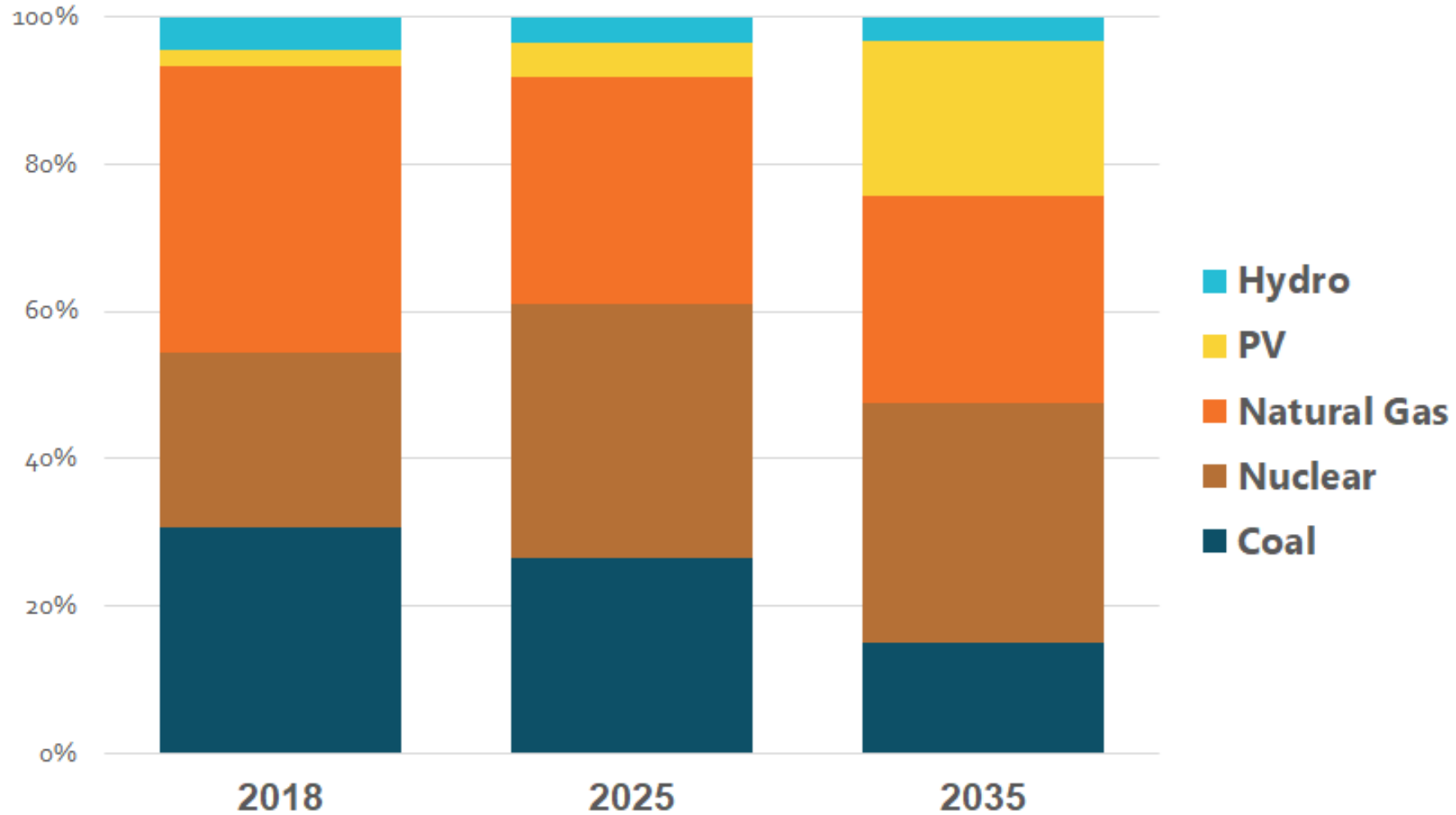
Total emissions reduce by 8% from 2020 to 2050 if Decatur continues with business as usual.



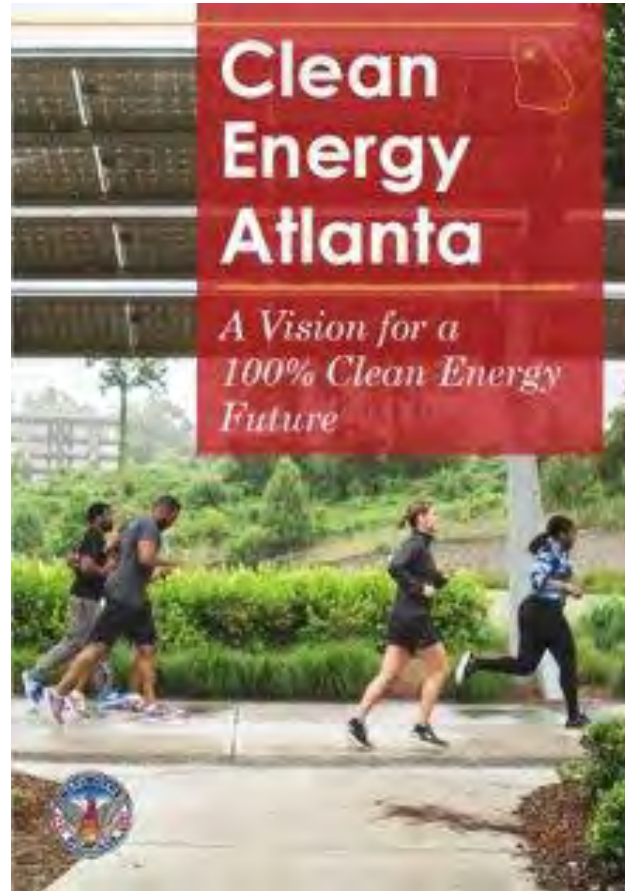
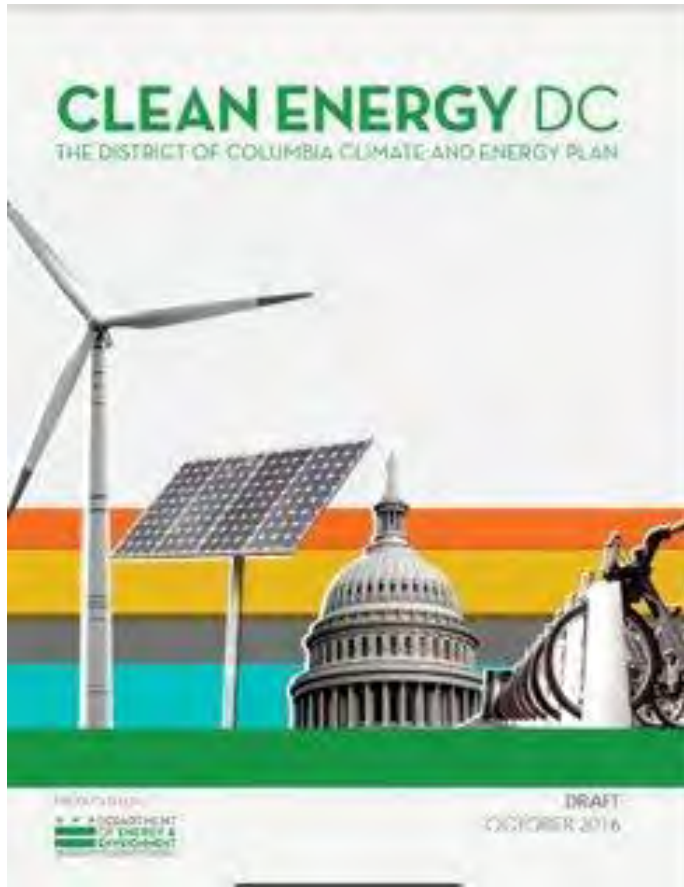


# Our Current Sources of Energy

---



# Creating a Clean Energy Plan



# The Process

---



## Project Launch

Initiate stakeholder and community engagement:

- Develop stakeholder engagement approach
- Develop community engagement approach using previous Decatur processes and the engagement squad ensuring a diverse engagement

## Input & Awareness

Host stakeholder and community conversations (depending on COVID realities - can be held virtually or in-person)

- 1:1s with businesses and orgs
- Community-wide kickoff and roundtables with facilitators
- Youth engagement through school workshops

## Action Identification and Prioritization

Review feedback from community and stakeholders

- Capture priorities and values of Decaturites
- Consider diverse energy system, policy, and program scenarios
- Release summary findings for community review

## Develop & Refine Plan

Develop Plan

- Select feasible scenarios based on engagement input, analytics from Greenlink, and team knowledge
- Draft and refine Clean Energy Plan, publishing 3 rounds of drafts
- Finalize and deliver Clean Energy Plan

## Implementation

Plan Enactment and Implementation

- Next Steps
- Develop and finalize toolkit and resources for education
- Policy, Programs & Technology



# Energy Burden



# What Is Energy Burden?

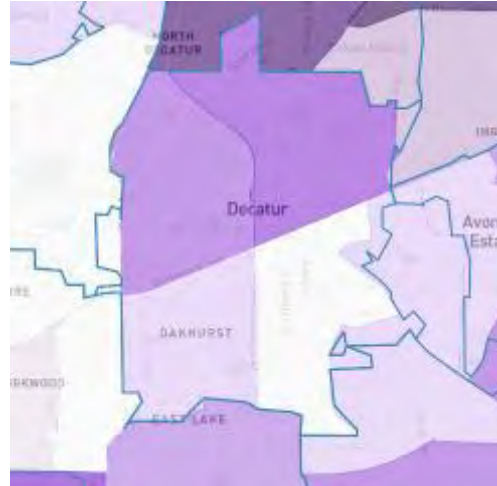
Energy burden is defined as the percentage of gross household income spent on energy costs.

National Median - 3.6% (2019)

Georgia Median - 5.4% (2019)

DeKalb Median - 4.1% (2018)

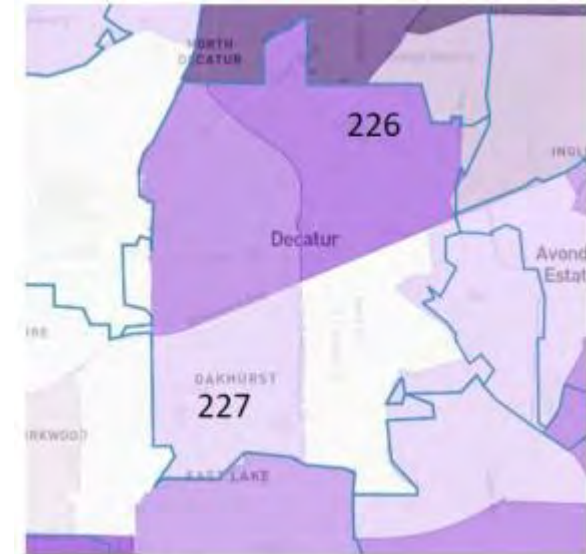
Decatur - 1.6% to 3.1% (2018)



Definitions:

High Energy Burden > 6%

Severe Energy Burden > 10%



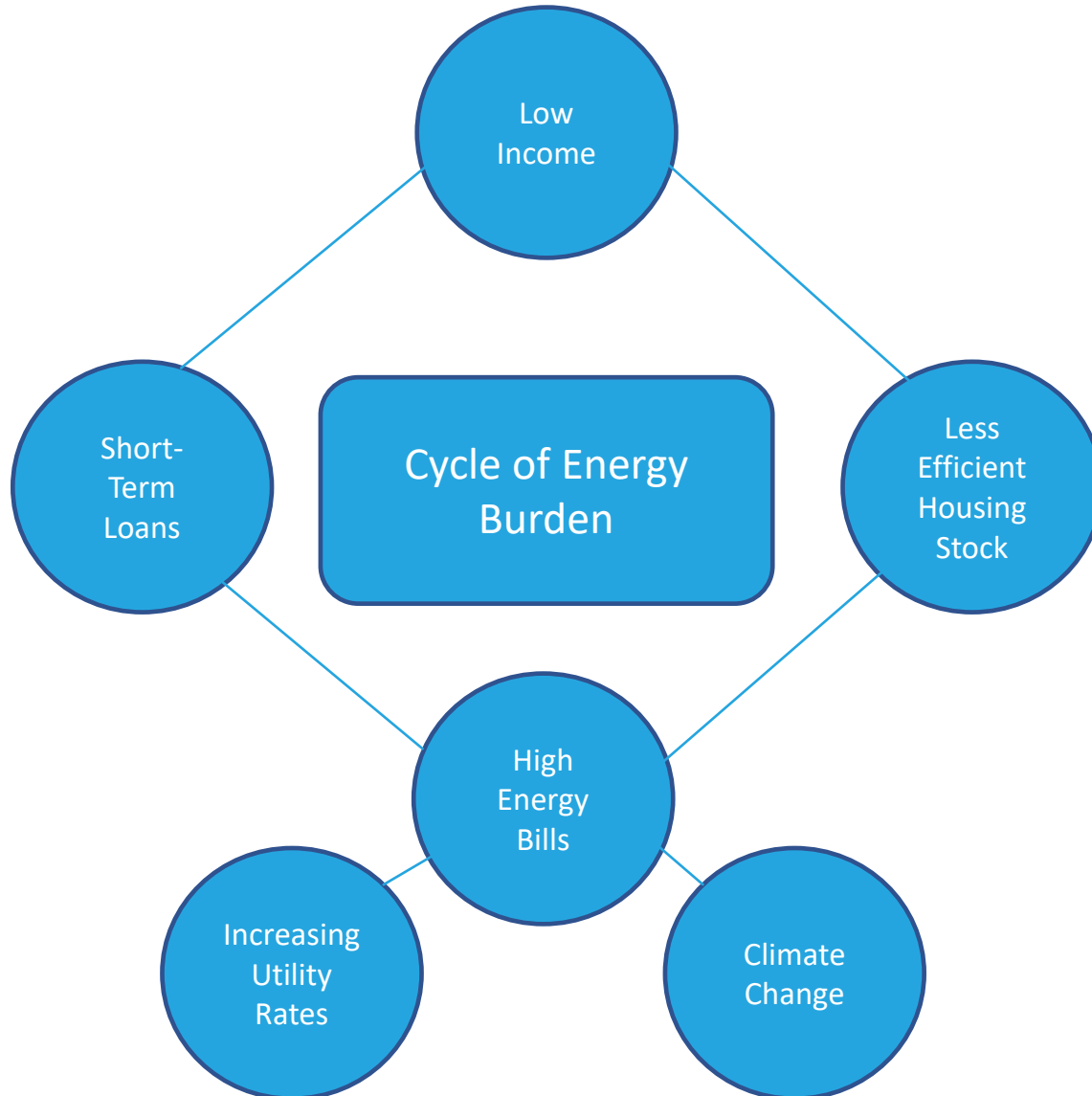
Census Tract	Households with Severe EB	Median Income
226	370 (~13%)	\$79,800
227	375 (~23%)	\$103,000

# Energy Burden

# #1

## REASON

For a short-term loan is a to pay a utility bill



# 31%

## OF AMERICANS

Have gone without a meal or a prescription to pay a utility bill

# Energy Bills vs. Energy Rates

- Bills are not the same thing as rates
- Certain investments will reduce energy bills (i.e., energy efficiency investments) but may increase rates
- Investments in new power plants like those associated with Plant Vogtle, are investments that increase rates and bills.

Current Electric Service - Residential						
Next Scheduled Read Date: On or after Dec 8, 2021						
Service Period	Meter #	Reading Type	Meter Reading			
			Current	-	Previous	x
Oct 8 - Nov 3	7763151	Tot kWh	36210		35785	1
<hr/>						
Billing Period						
Oct 8, 2021 - Nov 3, 2021						
<hr/>						
Current Service						\$ 46.27
Environmental Compliance Cost						6.98
Nuclear Construction Cost Recovery						2.08
Municipal Franchise Fee						1.69
Sales Tax						5.08
<hr/>						
<b>Total Current Electric Service</b>						<b>\$ 62.08</b>

# Engagement Activity





# Thank You and Next Steps

VISIT US at [cleanenergydecat.com](https://cleanenergydecat.com)

And take the survey

<https://survey.alchemer.com/s3/6585655/Clean-Energy-Decatur>



## **Clean Energy Decatur Canvassing**

### **Why are we all here today?**

As part of an ongoing effort to protect the city and community against the negative impacts of climate change, Decatur is creating a Clean Energy Plan to help the City move away from its reliance on fossil fuels and towards a clean energy future. As part of this project, the City of Decatur has hired Decatur City Schools students to canvass in their communities and help spread the word about the Clean Energy Plan.

### **What is a Clean Energy Plan?**

Simply put, a clean energy plan is a document created by cities that outlines pathways and policies which help the city transition away from using fossil fuels, curb carbon emissions, and prioritize renewable energy.

### **Canvasser responsibilities**

- Educate Decatur residents about Decatur's Clean Energy Plan
- Encourage Decatur residents to take the Decatur Clean Energy survey
- Distribute informational flyers

### **Safety Protocols**

- Do not enter anyone's house or apartment while canvassing
- Do not enter any apartment complexes while canvassing
- All canvassers will canvass in pairs to maintain safety
- COVID Safety Protocols
  - Masks must be worn at all times when canvassing and during trainings
  - Tell field captain ASAP if you have or develop a fever etc. during the canvassing campaign
- Inclement weather
  - If light rain/pop up shower - Possible rain delay, canvassing will resume once showers have stopped. If showers continue for 20 mins, canvassing will be cancelled or rescheduled.
  - If inclement weather (thunderstorm, lightning, hail, tornado watch) - Cancel event and schedule an alternate day or resume schedule pending no further inclement weather
- A field captain will be on-site to manage on the ground canvassing during the entirety of each canvassing day.

### General Script Draft

Hi! My name is \_\_\_\_\_ and I'm one of your neighbors in [neighborhood]. I'm out here with several other canvassers spreading the word about Decatur's Clean Energy Plan. The City recently launched *Clean Energy Decatur*, its initiative to develop Decatur's plan for a clean energy future. Decatur is committed to protecting its community against the negative impacts of climate change and reducing its contributions to the climate crisis, and this Clean Energy Plan will guide those efforts. Community members are central to this effort and are invited to participate in a community-wide survey to help guide this process.

#### **Ask: Would you be interested in taking the anonymous and brief Decatur Clean Energy survey?**

[If Yes] Great! I'm glad that you're interested. Here's a flyer with QR code where you can take the survey online, or you can take the survey with me now. Thank you!

[If No] Thanks for your time.

If they seem genuinely interested direct them to: Check out our website [cleanenergydecatur.com](http://cleanenergydecatur.com) to learn more about the Plan.

# Shape Decatur's Future



## What is a Clean Energy Plan?

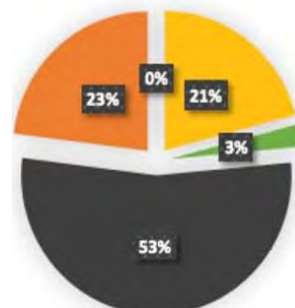
As part of an ongoing effort to protect the city and community against the negative impacts of climate change, Decatur is creating a Clean Energy Plan to help the City move away from its reliance on fossil fuels and towards a resilient, renewable future. Based on extensive community input, the Decatur Clean Energy Plan will identify clean energy priorities, such as:

- Equity
- Energy efficiency and renewable energy in affordable housing
- Community-wide clean energy education
- Workforce training opportunities
- Increasing alternative transportation and mobility options
- Establishing a deadline to achieve a clean energy transition
- Outlining actionable steps towards a clean energy future

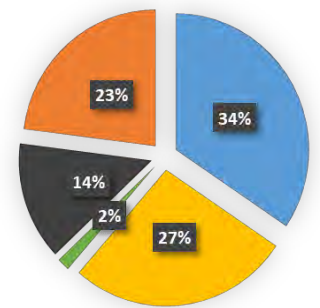
Want to share your thoughts?  
Take the survey here!



## Decatur's Fuel Mix in 2050



Business As Usual



Maximum Clean Energy



For more information, check out  
<https://cleanenergydecatur.com/>







<b>Beacon Municipal Center</b> 420 W Trinity Pl. Decatur, GA 30030	
<b>Facility Size</b>	<b>34,367 sq ft</b>
<b>Annual Utility Usage (kWh)</b>	<b>804,267</b>
<b>Annual Utility Cost (USD)</b>	<b>\$85,906</b>
<b>Potential Annual Energy Savings (USD)</b>	<b>\$48,577</b>
<b>Potential Annual Energy Savings (kWh)</b>	<b>494,120</b>



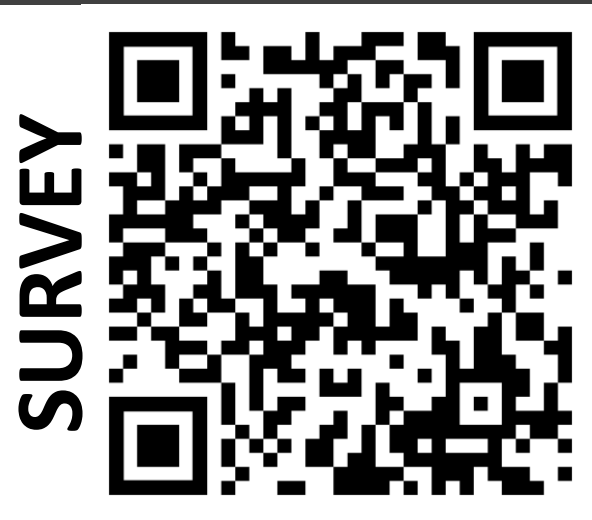
<b>Ebster Recreation Center</b> 105 Electric Ave. Decatur, GA 30030	
<b>Facility Size</b>	<b>23,010 sq ft</b>
<b>Annual Utility Usage (kWh)</b>	<b>339,630</b>
<b>Annual Utility Cost (USD)</b>	<b>\$49,822</b>
<b>Potential Annual Energy Savings (USD)</b>	<b>\$37,537</b>
<b>Potential Annual Energy Savings (kWh)</b>	<b>301,080</b>



<b>Decatur Recreation Center</b> 231 Sycamore St. Decatur, GA 30030	
<b>Facility Size</b>	<b>39,990 sq ft</b>
<b>Annual Utility Usage (kWh)</b>	<b>395,187</b>
<b>Annual Utility Cost (USD)</b>	<b>\$58,695</b>
<b>Potential Annual Energy Savings (USD)</b>	<b>\$37,780</b>
<b>Potential Annual Energy Savings (kWh)</b>	<b>277,380</b>







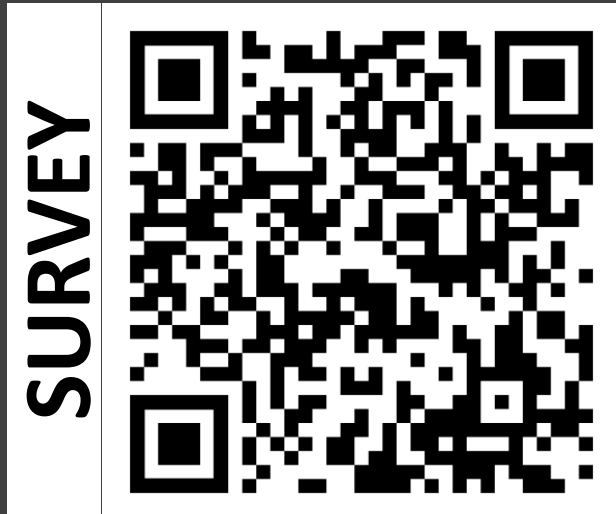
Beacon Municipal Center Proposed Improvements		Annual Cost Savings		Possible Financing		
Solar PV (170 kW)		\$21,875		<input type="checkbox"/> Solar Energy Procurement agreement		<input type="checkbox"/> Purchase by City
LED Lighting and Controls		\$12,328				
RCx HVAC and BAS		\$11,715				
Ebster Recreation Center Proposed Improvements		Annual Cost Savings		Possible Financing		
Solar PV (89 kW)		\$14,147		<input type="checkbox"/> City's Capital Improvements Fund		<input type="checkbox"/> Guaranteed Savings Performance Contract
RCx HVAC and BAS		\$10,924				
Highest Efficiency Gym RTUs		\$4,566				
Decatur Recreation Center Proposed Improvements		Annual Cost Savings		Possible Financing		
Solar (80 kW)		\$13,540		<input type="checkbox"/> City's Capital Improvements Fund		<input type="checkbox"/> Guaranteed Savings Performance Contract
RCx Non-unitary HVAC		\$7,784				
LED Lighting and Controls		\$5,473				

## Methodology

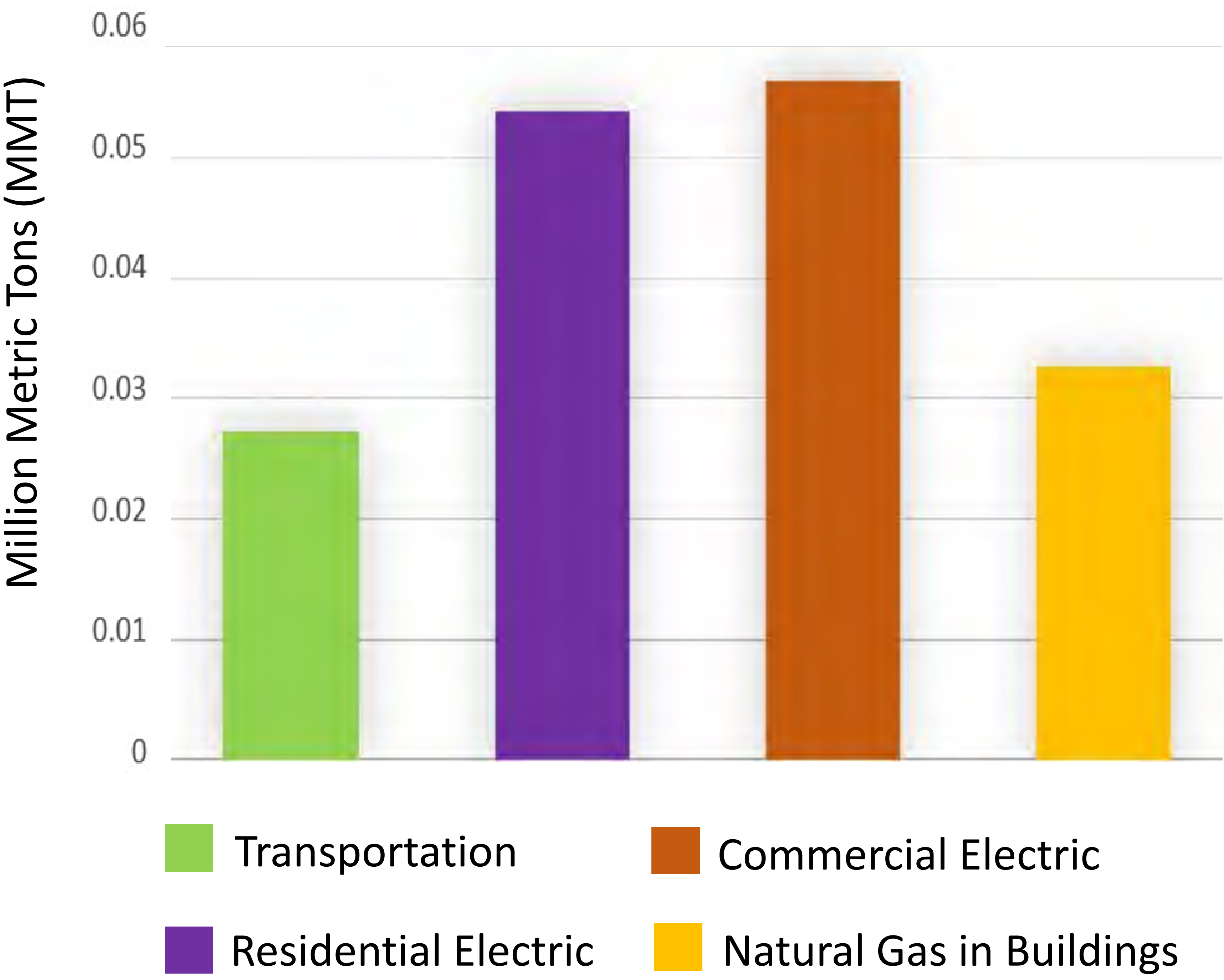
Each Decatur municipal building's energy performance was benchmarked using ASHRAE Level 2 energy assessments and ENERGY STAR Portfolio Manager tool. Benchmarking is the process of evaluating energy performance indicators, including the performance of peers and the historic performance of one's own facility. ASHRAE Level 2 audits utilize a top-down (analyzing the actual energy consumption through a utility bill) and bottom-up analysis (an audit of all lighting fixtures, HVAC units, etc.). The savings estimates were estimated by utilizing one of 3 major methods: 1) Standard industry algorithms such as found in statewide or regional Technical Reference Manuals (TRMs), including Georgia's, using site-gathered information for specific site-level variables (e.g. LED lighting upgrades), 2) A savings % ratio, based on either manufacturer performance data or independent studies, applied to the existing annual consumption of that end-use (e.g. air conditioning replacement), 3) An energy simulation using dimensions and attributes from the building (e.g. building envelope measures or solar panel installation). Lastly, cost estimates were calculated by averaging the gas, electric, or water rate multiplied by the savings estimates. Time-of-use (TOU) to the electric savings was not factored in.



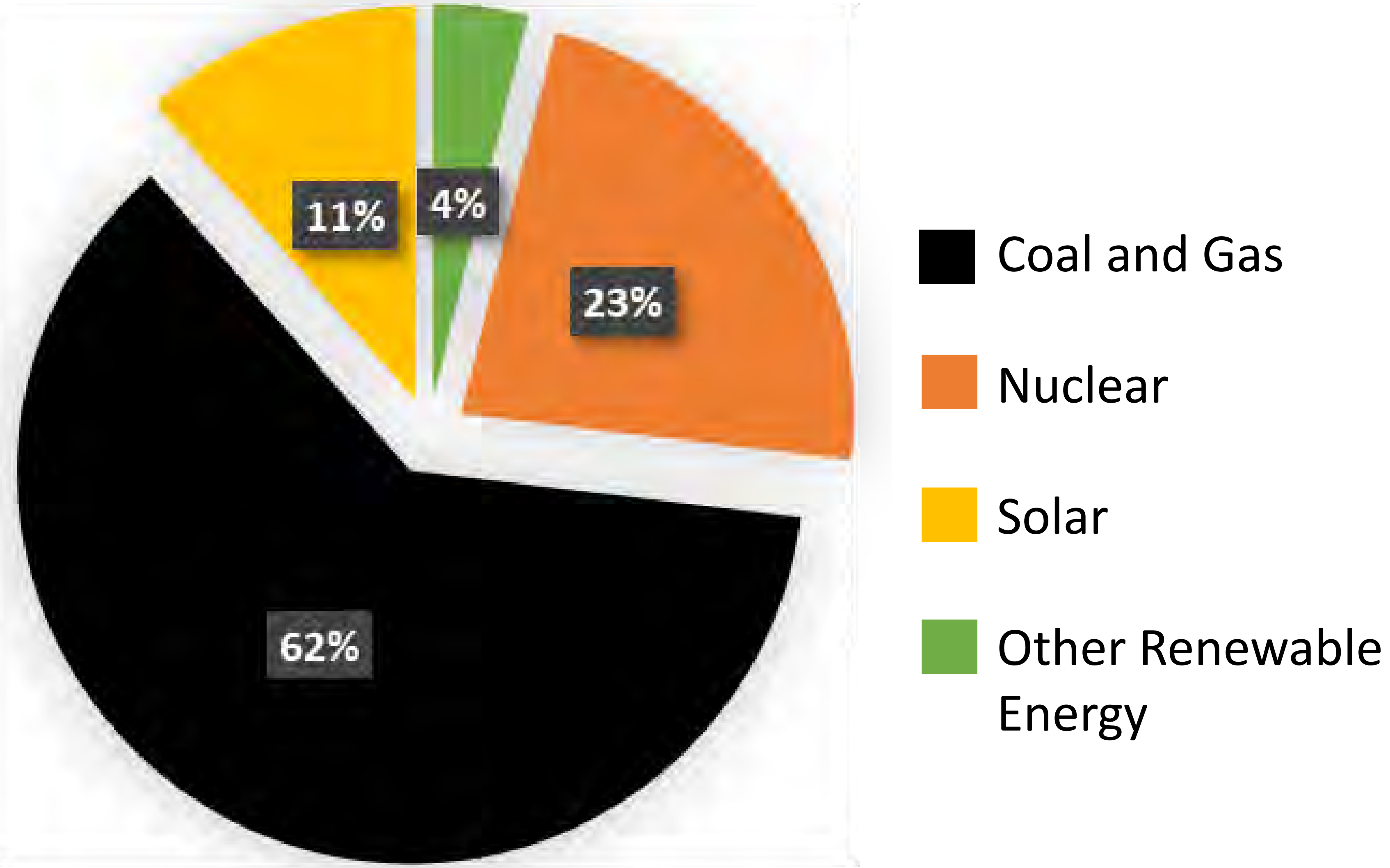
# Current Energy & Greenhouse Gases



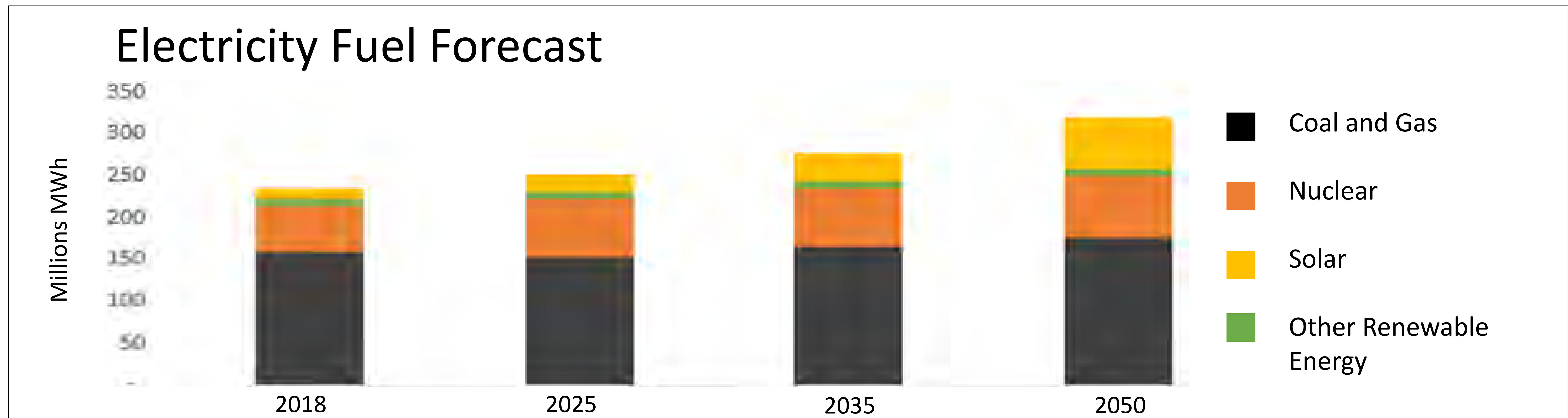
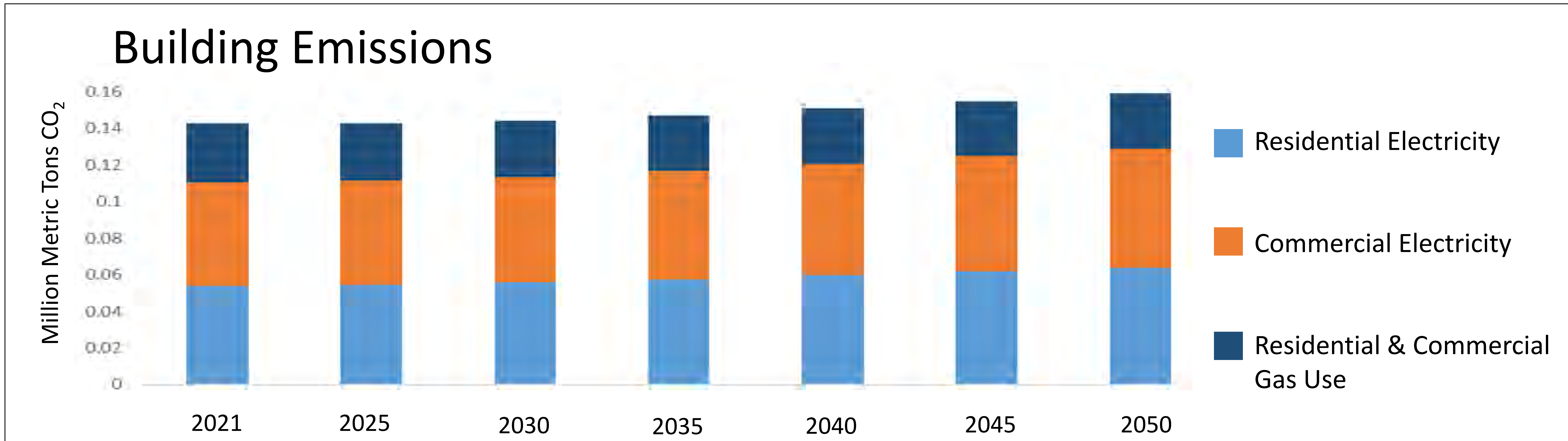
## Sources of Greenhouse Gases, 2021



## Electricity Generation Mix by Resource, 2018



# Building Energy & Greenhouse Gases Baseline Forecast



\*Baseline Forecast is defined as the expected future based on trends identified for building turnover and the electricity sector. This includes plans undertaken related to the previous Georgia Power Integrated Resource Plan (IRP).



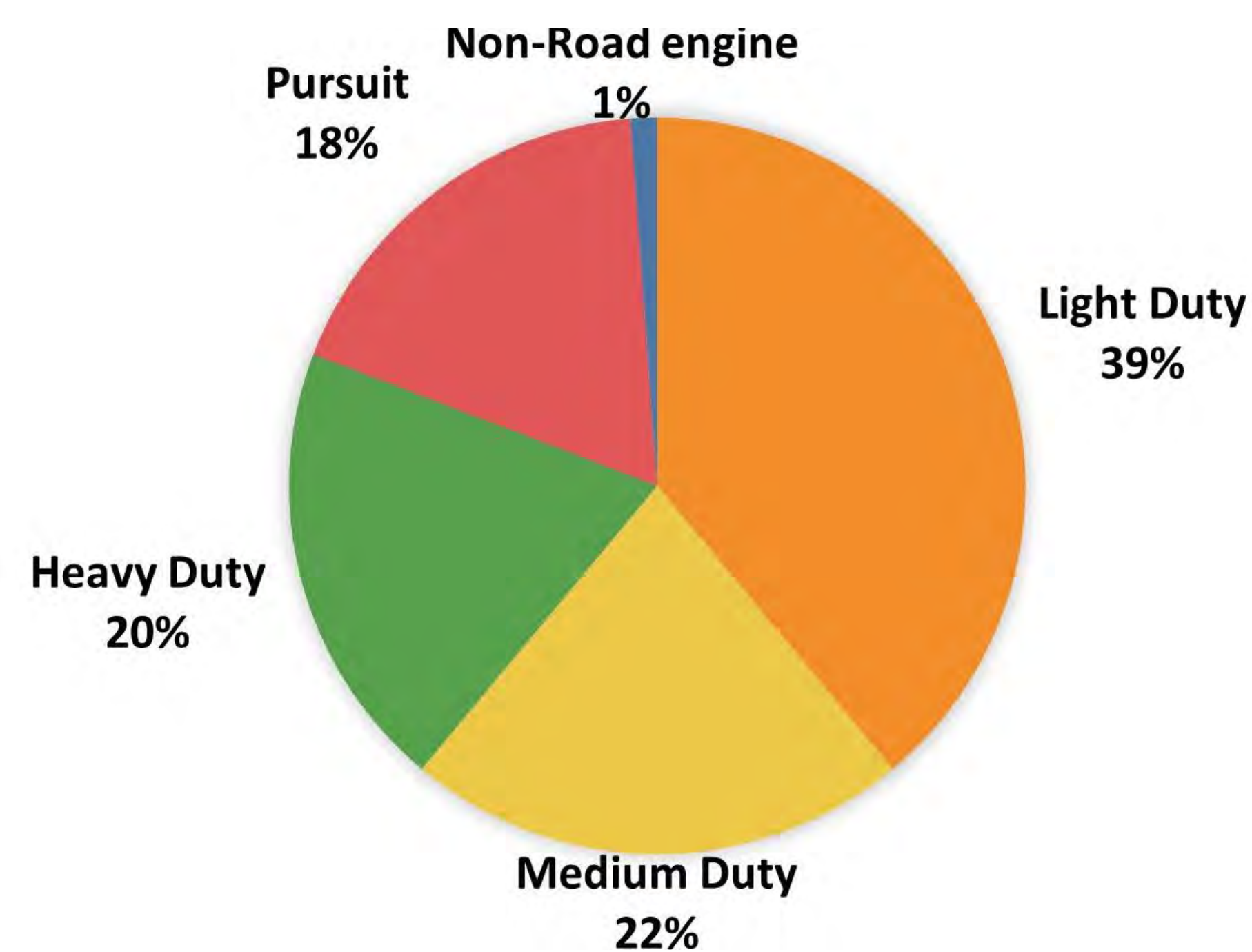
## Summary of Findings

If ICE (internal combustion engine) vehicles are converted to electric when they reach the end of life,

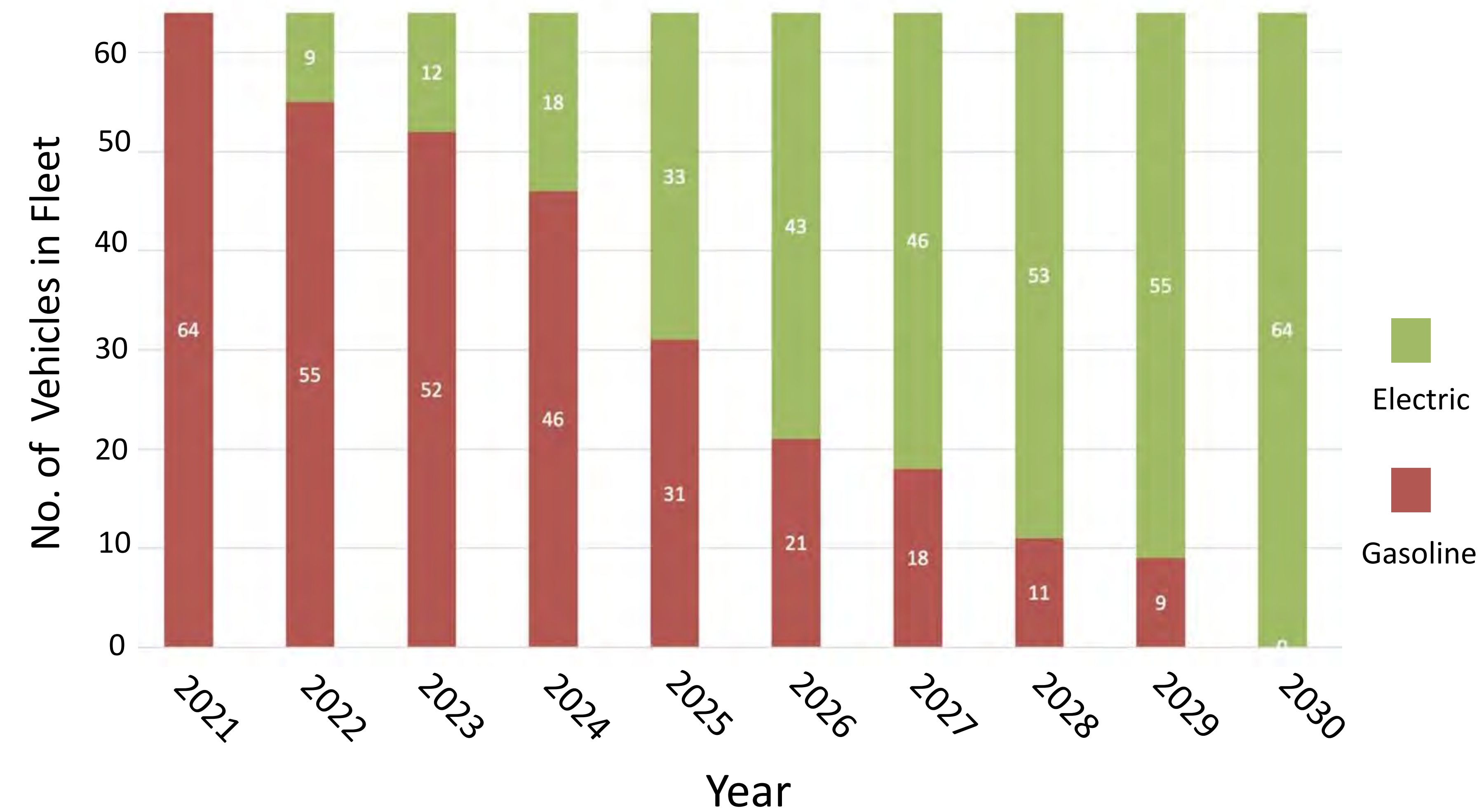
- Light-duty vehicles will be 100% electric by 2030
- Medium-duty vehicle fleet will be fully converted by 2040
- Challenges associated with heavy-duty and pursuit vehicles
- Assuming a 1:1 charger to vehicle ratio, the City would need to install 162 chargers throughout the transition

Vehicles in Fleet	Type of Vehicle	Quantity
<b>Light Duty</b>	Motorcycles	1
	Sedans	18
	Pickup Trucks	8
	Sport Utility Vehicles	25
	Utility Vehicle	1
	Refuse Hauler	14
<b>Medium Duty</b>	Medium-Duty Trucks	30
	Medium Duty Vans/Buses	8
<b>Heavy Duty</b>	Heavy Duty Trucks	34
<b>Pursuit Vehicles</b>	Sedans	25
	Sport Utility Vehicles	5
	Vans	1
<b>Non-Road Engines</b>	Brush Chipper	1
	Truck Chassis	1

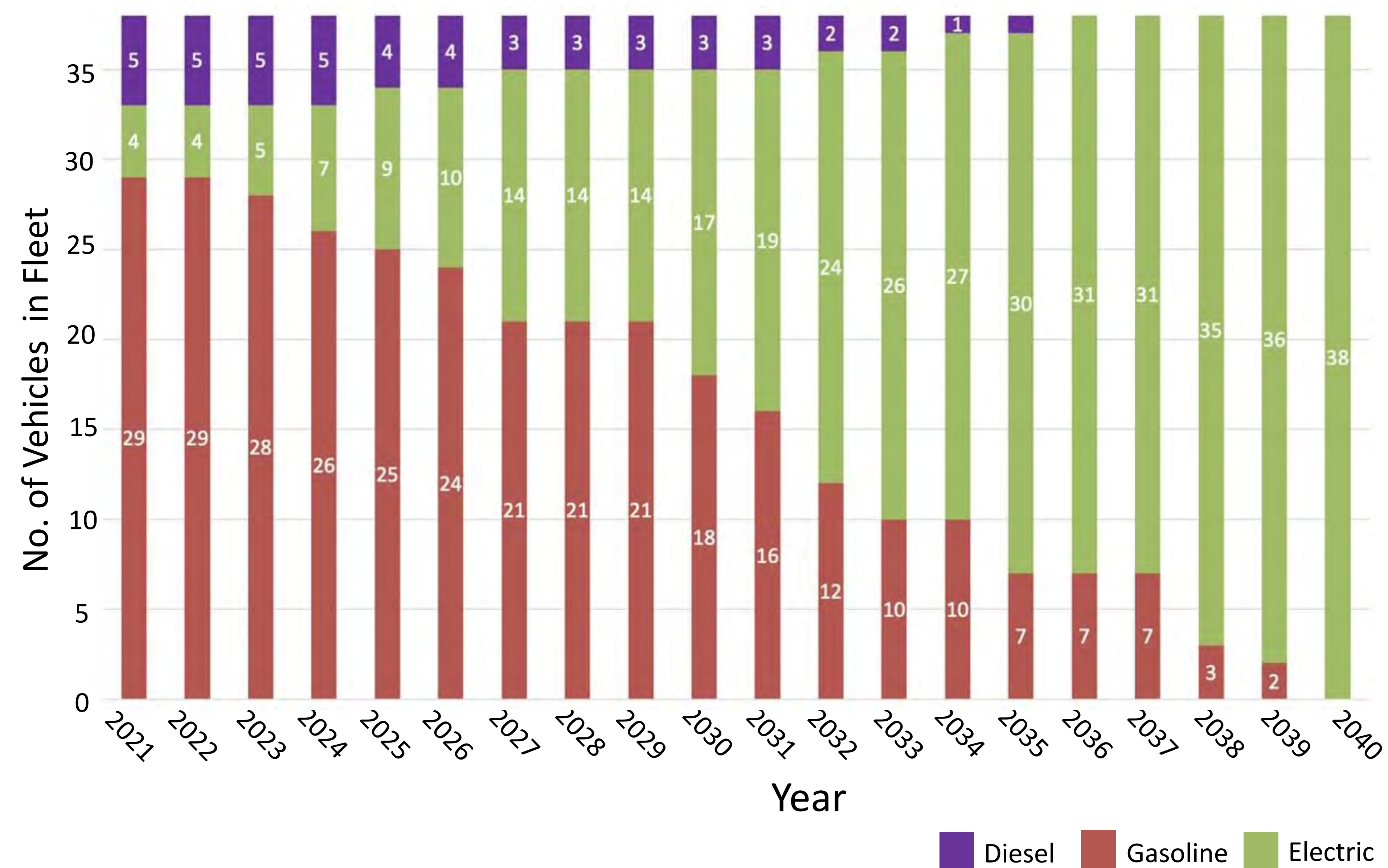
City of Decatur Fleet by Vehicle and Equipment Type



## Fleet Composition: Light Duty Vehicles




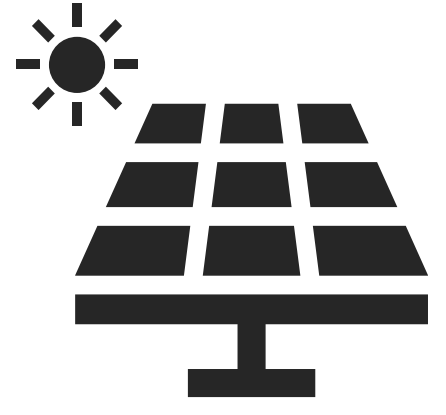

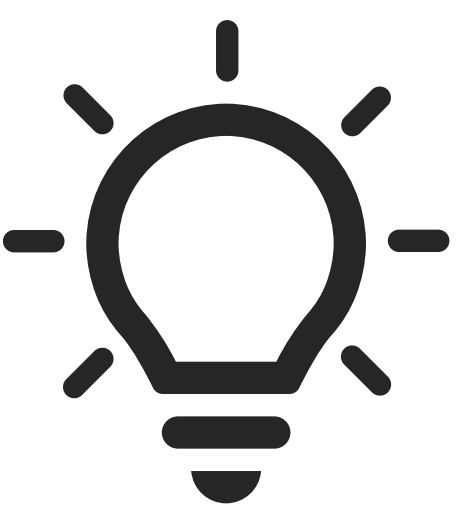

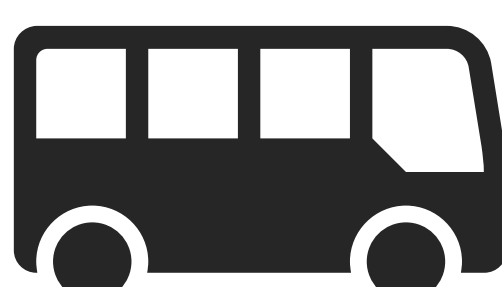
## Fleet Composition: Medium Duty Vehicles





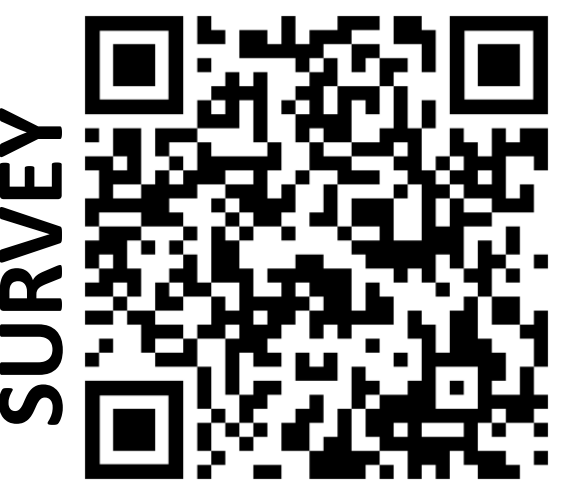
# Example of a City Energy Toolkit



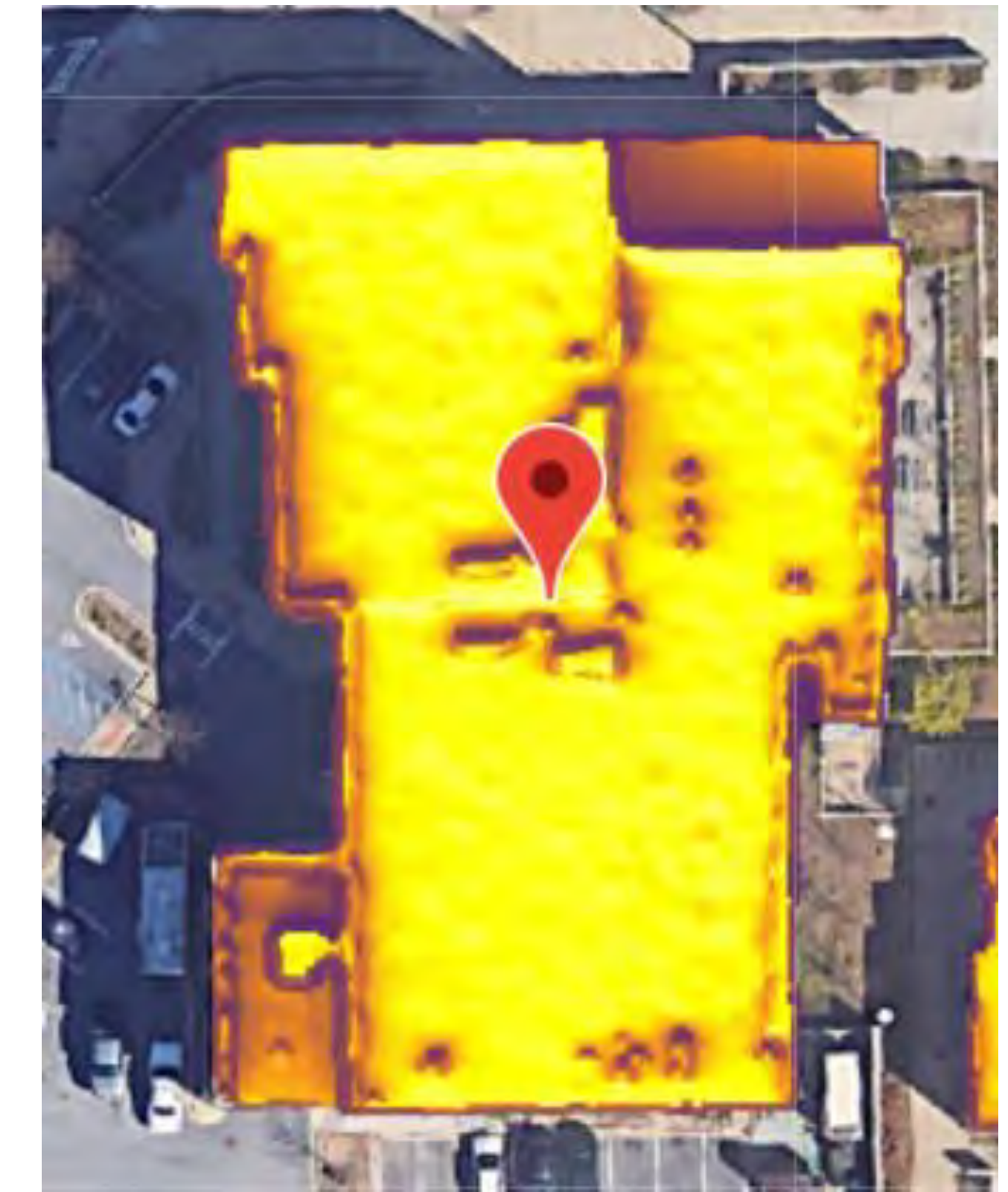
	Policy	Description
	<b>Revolving Clean Energy Loan Fund</b>	Self-replenishing clean energy fund from the municipality or state
	<b>Solar Energy Purchase Agreement (SEPA)</b>	Sign a long-term contract to buy solar built on municipal and commercial rooftops
	<b>Track, Publish and Review Municipal Energy Usage</b>	Provide energy efficiency planning and design approaches for local government operations through benchmarking, transparency and auditing
	<b>Improve Lighting in Municipal Buildings</b>	Take advantage of savings opportunities through high-efficiency interior and exterior lighting solutions in municipal properties
	<b>Low-Income Weatherization &amp; Workforce Development</b>	Reduce energy consumption in low-income homes by providing home retrofits. Support this product by working with technical colleges and the community to create an equitable workforce development program
	<b>Electrify City Fleets and Buses</b>	Electrify municipal internal combustion vehicles and buses



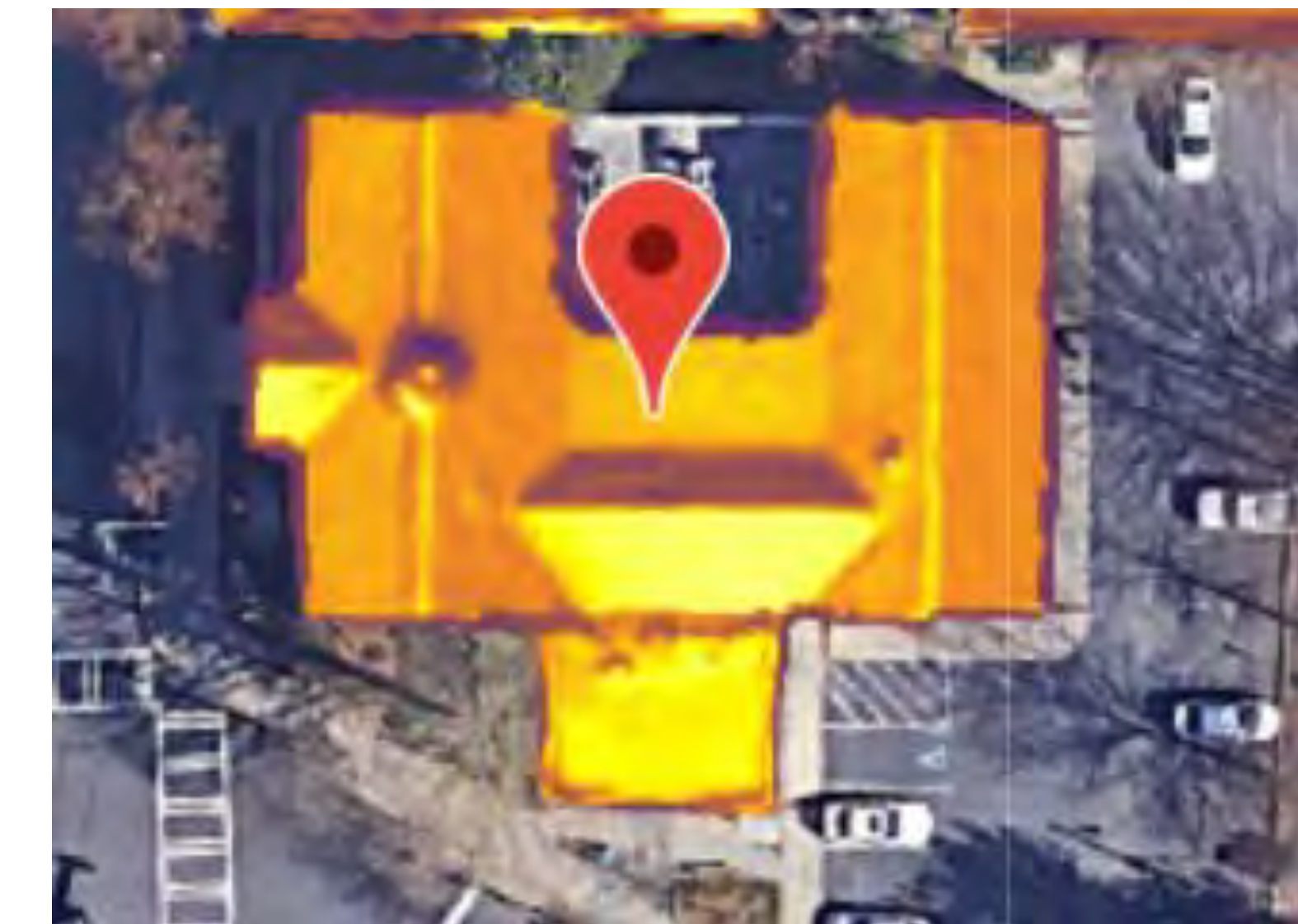
# City Facility Solar Assessments



Beacon Municipal Center 420 W Trinity Pl. Decatur, GA 30030		Recommended Capacity: 100 kW
		Average Annual Savings: \$12,000
	Direct Purchase	SEPA
Net Present Value	\$(21,800)	\$(61,400)
Lifetime IRR	3.9%	-
Simple Payback Period	15	15



Decatur City Hall 509 N McDonough St. Decatur, GA 30030		Recommended Capacity: 20 kW
		Average Annual Savings: \$3,400
	Direct Purchase	SEPA
Net Present Value	\$10,300	\$1,900
Lifetime IRR	7.3%	2.2%
Simple Payback Period	11	11




Decatur Recreation Center 231 Sycamore St. Decatur, GA 30030		Recommended Capacity: 80 kW
		Average Annual Savings: \$11,100
	Direct Purchase	SEPA
Net Present Value	\$30,800	\$3,000
Lifetime IRR	7.1%	3.5%
Simple Payback Period	11	11





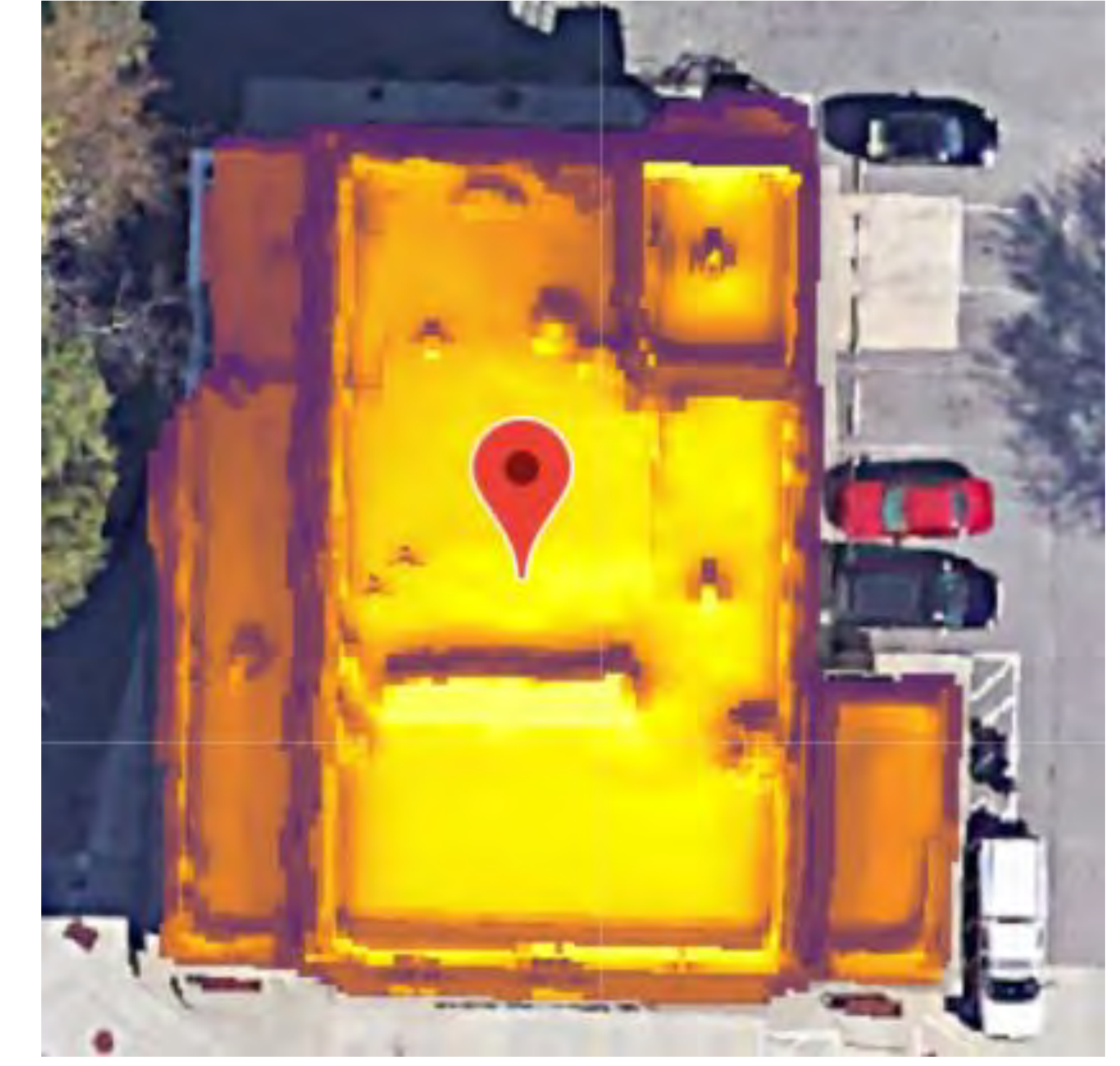
# City Facility Solar Assessments



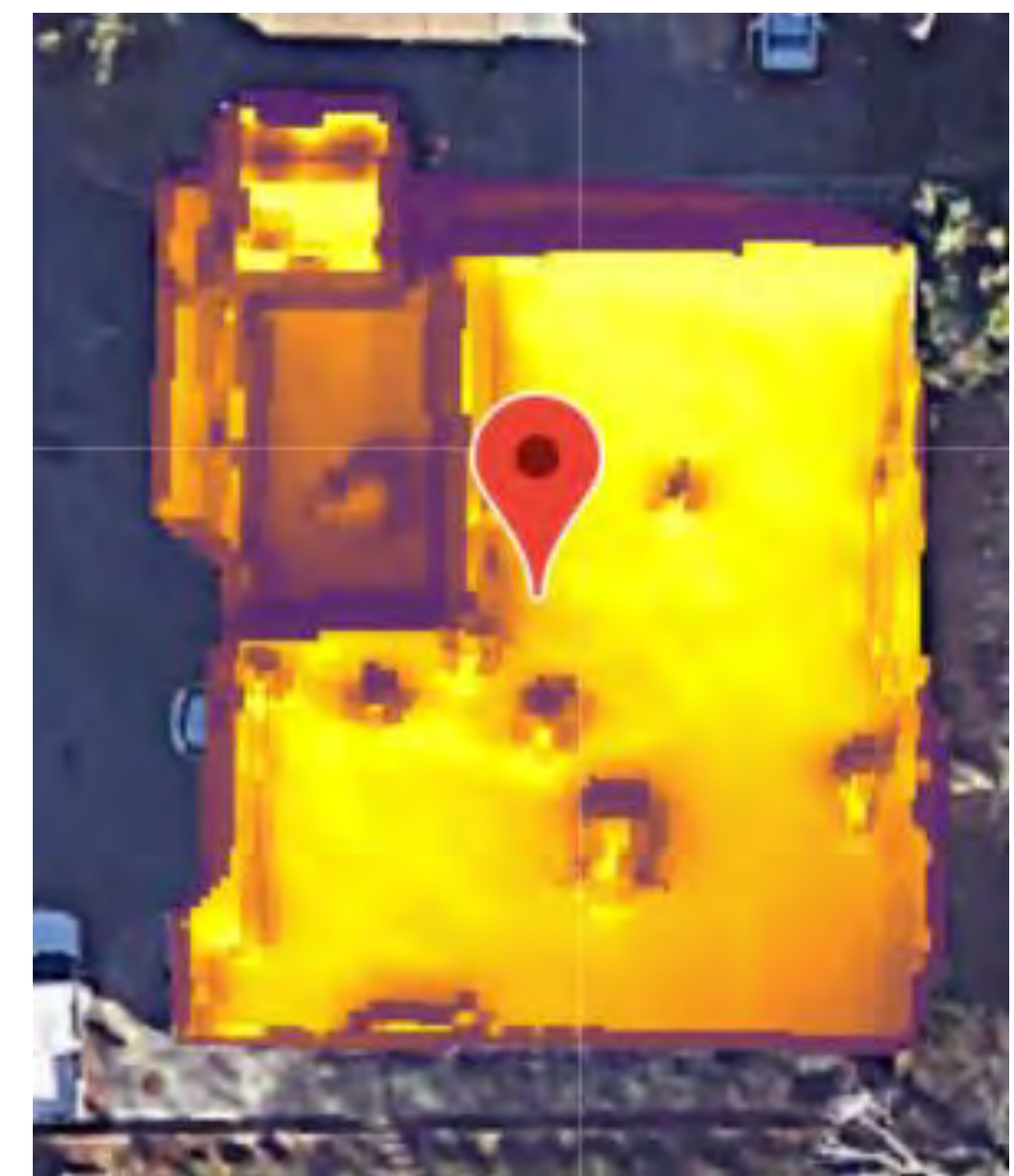
<b>Ebster Recreation Center</b> 105 Electric Ave. Decatur, GA 30030		<b>Recommended Capacity:</b> 50 kW
		<b>Average Annual Savings:</b> \$6,800
	<b>Direct Purchase</b>	<b>SEPA</b>
<b>Net Present Value</b>	\$12,200	\$(6,100)
<b>Lifetime IRR</b>	6.3% 	-
<b>Simple Payback Period</b>	12	12



<b>Fire Station #1</b> 230 E Trinity Pl. Decatur, GA 30030		<b>Recommended Capacity:</b> 20 kW
		<b>Average Annual Savings:</b> \$2,400
	<b>Direct Purchase</b>	<b>SEPA</b>
<b>Net Present Value</b>	\$(1,200)	\$(8,600)
<b>Lifetime IRR</b>	4.7%	-
<b>Simple Payback Period</b>	14	14

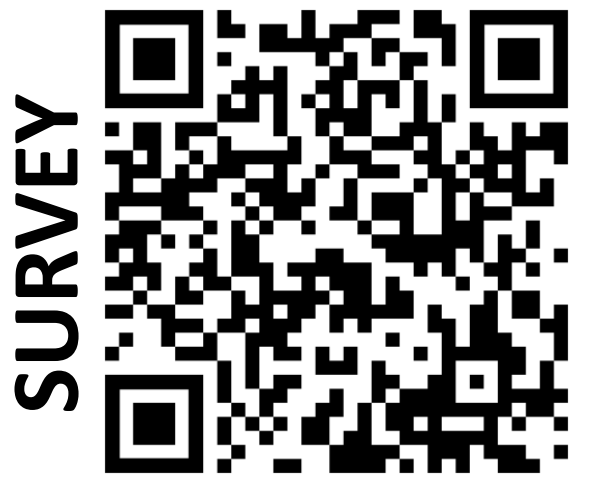


<b>Fire Station #2</b> 356 W Hill St. Decatur, GA 30030		<b>Recommended Capacity:</b> 20 kW
		<b>Average Annual Savings:</b> \$2,000
	<b>Direct Purchase</b>	<b>SEPA</b>
<b>Net Present Value</b>	\$(1,000)	\$(7,400)
<b>Lifetime IRR</b>	4.7%	-
<b>Simple Payback Period</b>	14	14

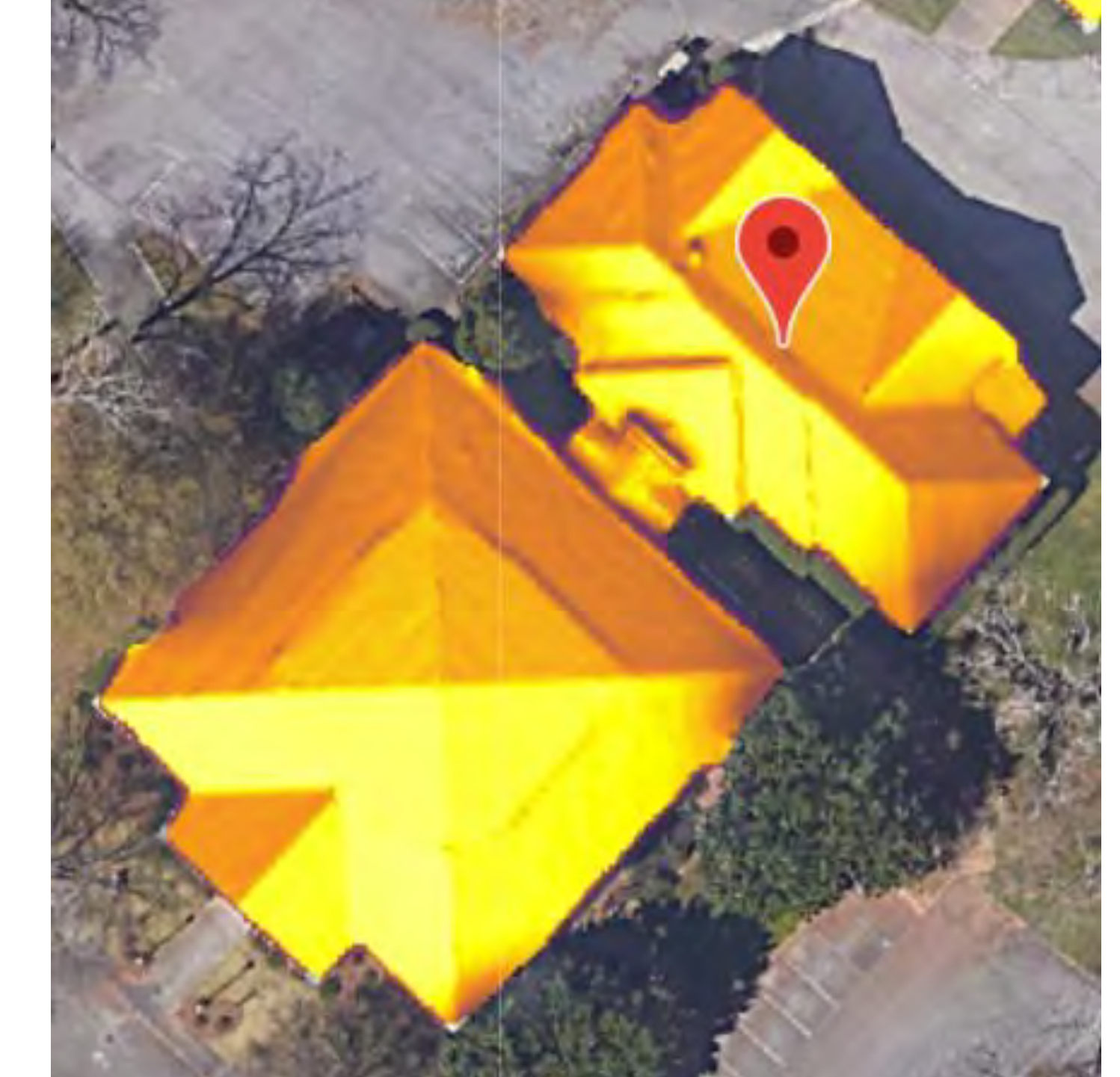




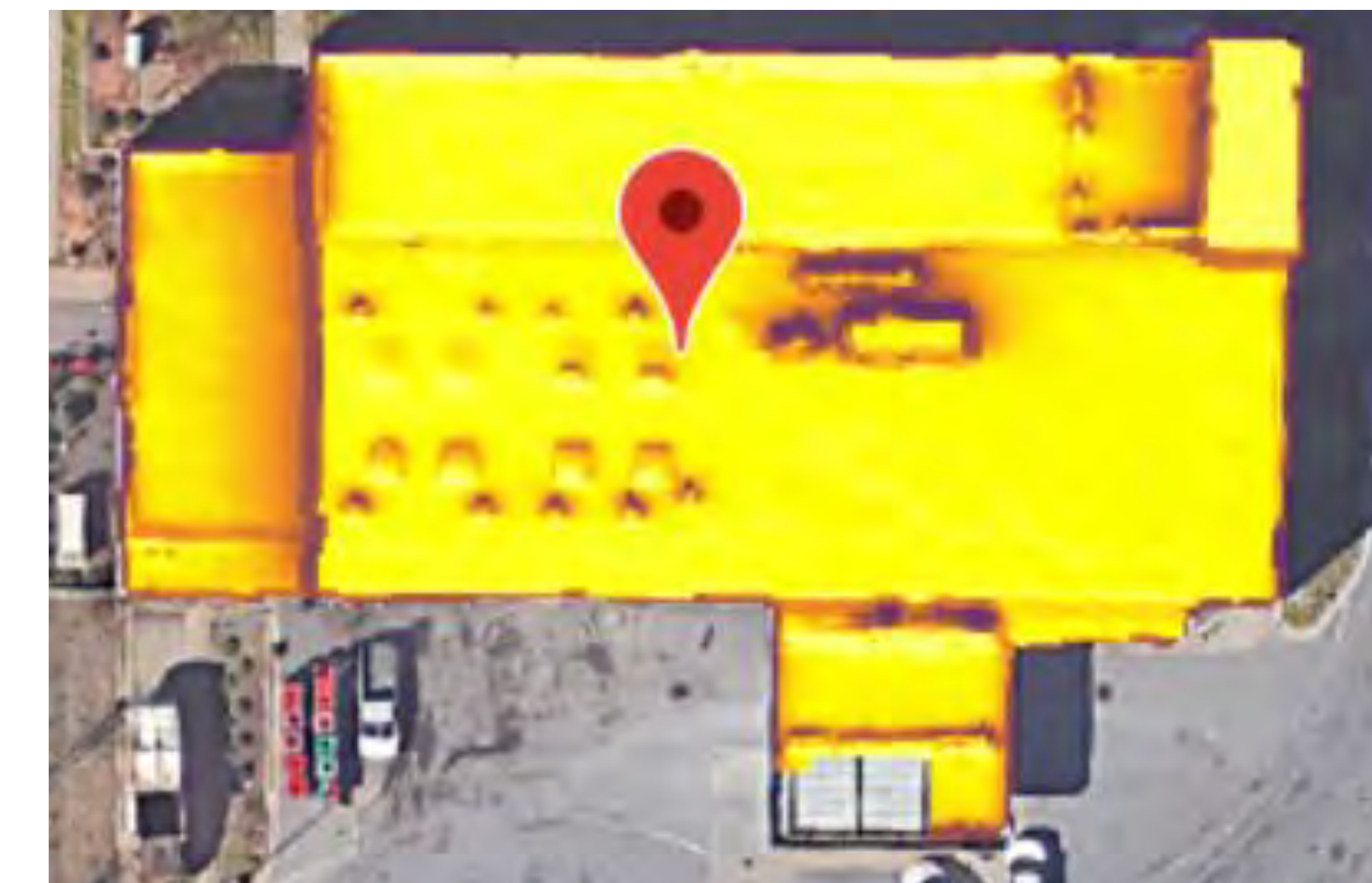
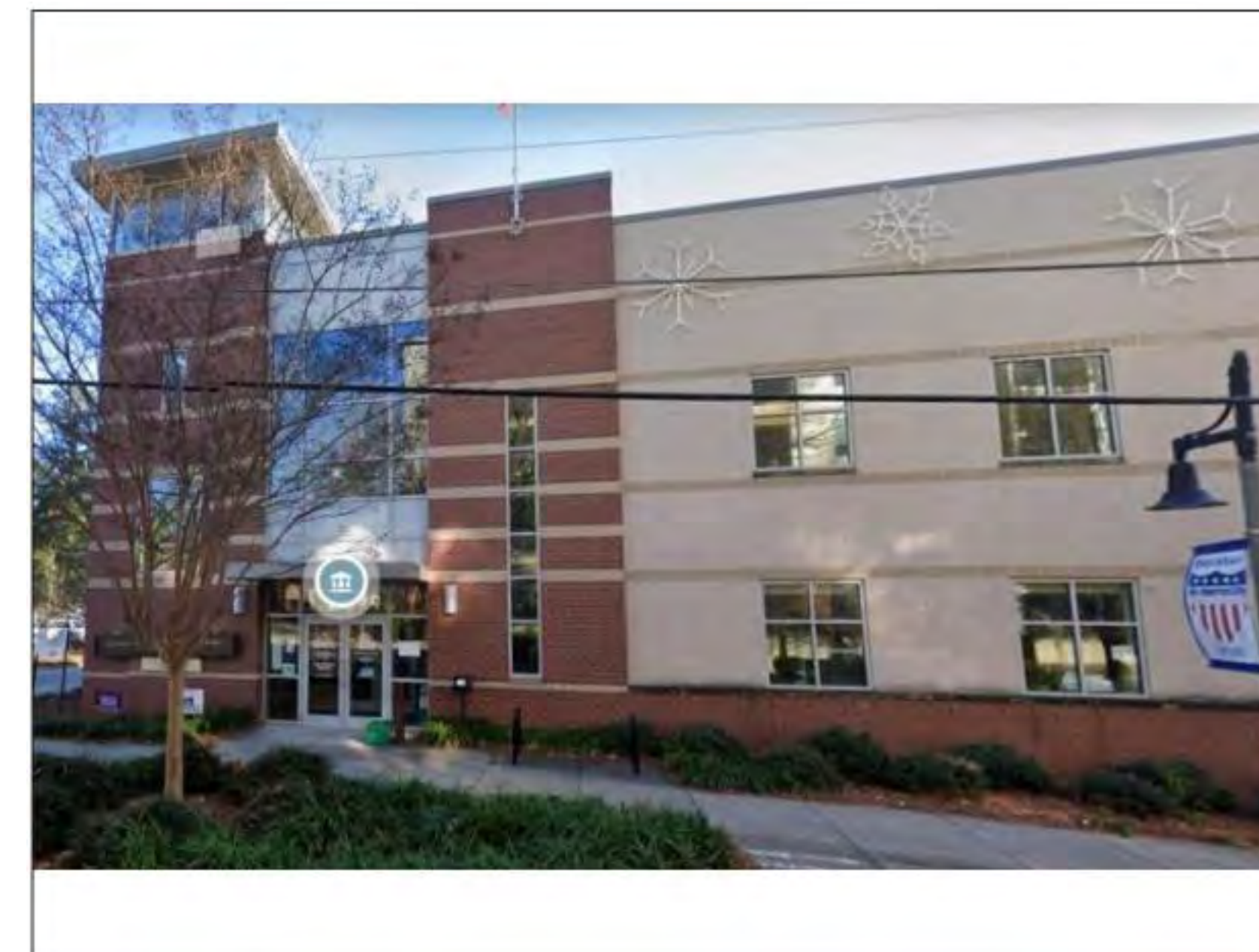
# City Facility Solar Assessments



<b>Legacy Park Admin.</b> 500 South Columbia Dr. Decatur, GA 30030		<b>Recommended Capacity:</b> 70 kW
		<b>Average Annual Savings:</b> \$11,800
	<b>Direct Purchase</b>	<b>SEPA</b>
<b>Net Present Value</b>	\$65,000	\$41,000
<b>Lifetime IRR</b>	10.1%	-
<b>Simple Payback Period</b>	9	9



<b>Public Works Building A</b> 2635 Talley St. Decatur, GA 30030		<b>Recommended Capacity:</b> 90 kW
		<b>Average Annual Savings:</b> \$11,600
	<b>Direct Purchase</b>	<b>SEPA</b>
<b>Net Present Value</b>	\$2,000	\$(32,400)
<b>Lifetime IRR</b>	5.1%	-
<b>Simple Payback Period</b>	13	13



<b>Public Works Building B</b> 2635 Talley St. Decatur, GA 30030		<b>Recommended Capacity:</b> 40 kW
		<b>Average Annual Savings:</b> \$5,800
	<b>Direct Purchase</b>	<b>SEPA</b>
<b>Net Present Value</b>	\$7,200	\$(9,000)
<b>Lifetime IRR</b>	5.9%	-
<b>Simple Payback Period</b>	12	12





# Where are you Coming From?



Place a pin on your residence, place of business, or community center





## Appendix A

### Public Engagement

# Personal Challenges with Energy Costs

Please take a moment to describe any personal challenges you have experienced regarding your energy costs.

- Conflict between tree ordinance and installing solar
- financing and financing mechanisms
- GA's miniscule incentives for EE upgrades
- Net metering
- Poor electric vehicle and charging incentives
- I've had 3 or 4 different rates from Georgia Power but never have they provided an analysis of how my rates/bills compare on the different rates... TOD, EV charging rates, standard rates, etc
- Desire to keep historic/original windows which are single pane wood with sash weights
- Homes ready to electrification and solar. Recognized in the market
- Old and poor performing roofs
- GA's deregulated gas means high monthly "meter" fee but relatively low price per therm. Thus, reducing gas usage only delivers marginal \$ savings
- needed investments in improving energy efficiency improvements
- I was a renter and the landlord had no incentive to reduce my utility bills or install an outlet for our electric car.
- Bought solar panels but didn't initially have net metering so takes longer to pay it off
- Georgia Power doesn't pay for excess energy pushed to grid from solar
- I feel stuck using Georgia Power- I wish I could choose to use community solar (if my house has too much shade for solar)
- Have a Working gas furnace good for years. Installing a heat pump would probably be a feel good action only. Also gas water heater works during power outages. This situation probably true for many
- If my residence is any indication of energy efficiency, the City of Decatur is very leaky. Fixed my issue but worried about others.
- Would love to choose a more progressive utility than GA Power - one that is committed to moving away from coal, nat gas and nuclear.

Roundtable 1 Miro Board: Community and Equity

# Community Challenges with Energy Costs

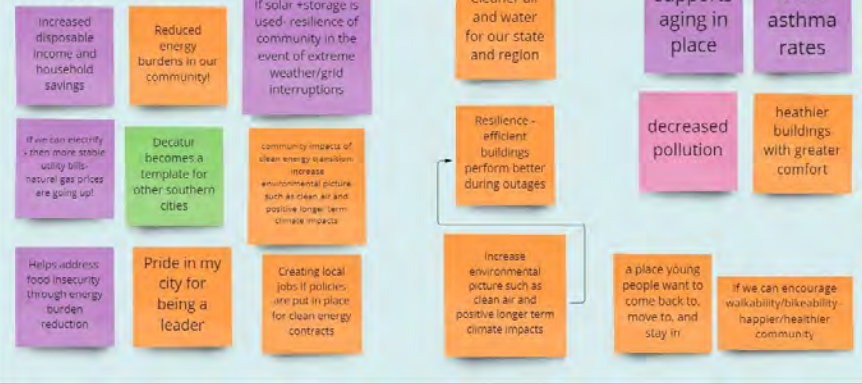
Please take a moment to describe any community challenges you are aware of regarding energy costs.

- Challenge. Low income renters are energy burdened but landlords have no financial incentives to improve efficiency
- being a renter
- chosing between food and related food insecurity
- Fossil fuel prices are high now and so volatile- gas and natural gas prices are going up dramatically
- lack of knowledge about high efficiency items such as heat pumps, induction stoves, etc
- all affordable housing should be as close as possible to net zero
- Inertia - making upgrades and changes can take a degree of commitment
- Poor performing housing that must also be improved concurrently
- Homeowner forced to choose between utilities and medication
- people often need assistance in weatherizing, putting in a programmable thermostat, etc.
- Intelligent upgrades require knowledgeable and unbiased assessment - will people pay for this?
- Lack of financial options for low income to incentivize an equitable transition. This also applies to people can afford to make the transition.
- Missed opportunities for upgrades
- owners of apartments might worry more about getting profit instead of making change.
- Challenge. Behavioral change tricky to implement and may fall off after initial improvement. I.e. Turn down thermostat when not at home.
- Conversion to electric heat pumps from gas furnaces if home has not been made more efficient
- Seems like HB150 requires us to use gas. We need to transition away from methane. If we are going to electrify we need to overcome this.

Roundtable 1 Miro Board: Community and Equity

# Community Impact

Please take a moment to describe potential community impacts of a clean energy transition.



Roundtable 1 Miro Board: Community and Equity

# Section 1: Policy or Program Options

Please provide feedback, concerns and suggestions for the below policies.

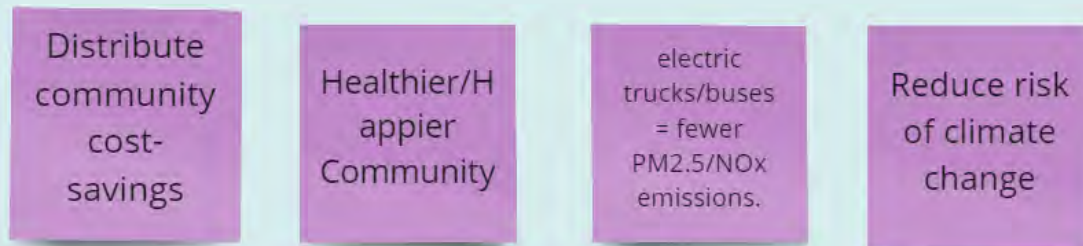


Roundtable 1 Miro Board: Community and Equity



## Section 2: Advancement of Equity

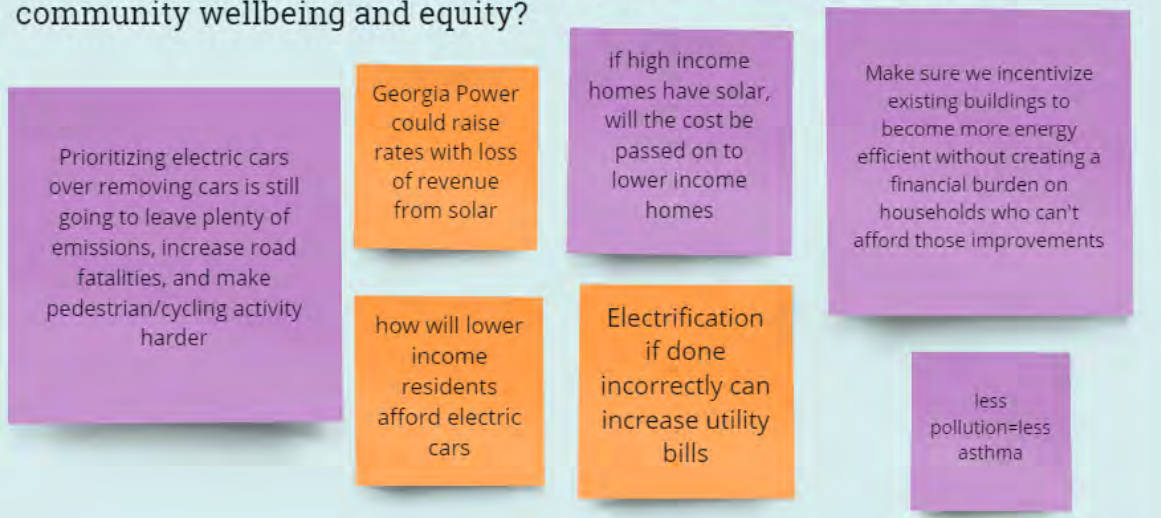
How can these potential clean energy policies also advance community wellbeing and equity?



Roundtable 1 Miro Board: Community and Equity

## Section 3: Hinderances to Equity

How might these potential clean energy policies interfere with achieving community wellbeing and equity?



Roundtable 1 Miro Board: Community and Equity

# Section 1: Policy or Program Options

Please provide feedback, concerns and suggestions for the below policies.

## Solar

SEPPAs - advertising opportunity to businesses, residences

PV panels shade street parking

It seems we are focused on residential (need to consider Commercial) but why not code requiring solar or solar ready for new residential and commercial construction?

Permanent Solarize incentives for Decatur

PV panels on all parking lots and commercial roofs

## Building Codes

Stretch standards! Add retrofitting efficiency for all remodels.

Incentives to voluntarily bring existing buildings up to code - especially health

Would like for Decatur's High Perf Building Ordinance to be MUCH more impactful

## Workforce Training

youth training

How about a policy for some local jobs requirement on any large energy projects or solar/efficiency projects

EE and WY training to improve Decatur's buildings

## Mobility

EV bike sharing

circulator shuttle

What about a take an EV home program for the city fleet?

## Community Engagement

Work of MLK gets done on more year-round basis

Let's add a student to the ESB

Engage and partner with Partnership for southern equity to ensure just energy approach considered and advanced

Engage GIPL and afith based orgs and churches to engage those communities that have not had a meaningful voice at the table

Also partner with living building center on construction material reuse and food well on local food systems as part of connecting the dots on addressing energy insecurity

## Weatherization

Would like serious incentives for Whole Building EE upgrades (not one-offs)

Don't let incentives ignore rental units

Let's do "Weatherize" just like we do polarize

Would like dual incentives (carrots and sticks) to push and pull EE

Roundtable 1 Miro Board: Community and Equity



## Section 2: Advancement of Equity

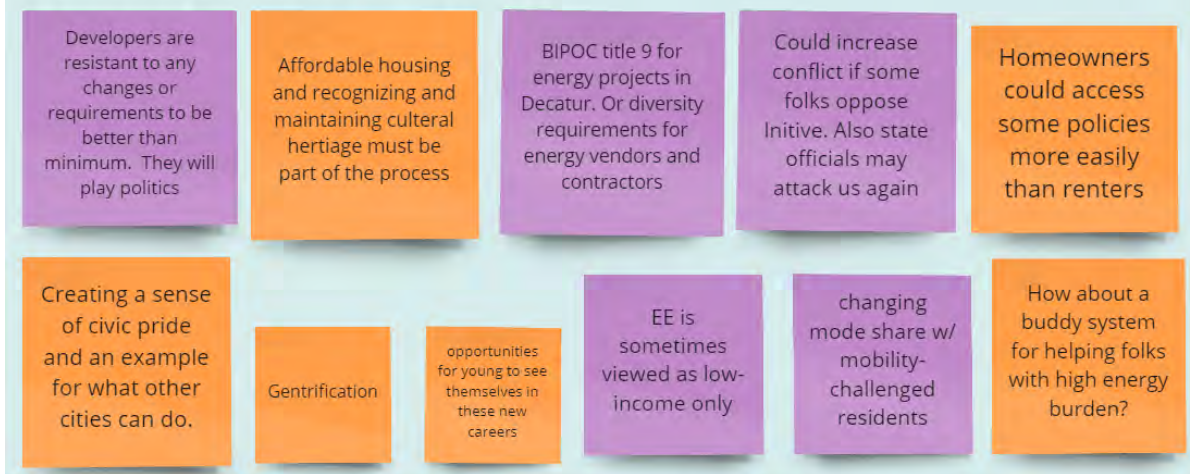
How can these potential clean energy policies also advance community wellbeing and equity?



Roundtable 1 Miro Board: Community and Equity

## Section 3: Hinderances to Equity

How might these potential clean energy policies interfere with achieving community wellbeing and equity?



Roundtable 1 Miro Board: Community and Equity

## Section 1: Built Environment

What are examples of clean energy projects that you have undertaken in your home or business?

Examples of clean energy projects undertaken:

- Building net-zero ready house
- Nights and weekend power plan with GA Power
- Window inserts
- Replaced all bulbs with LED.
- May have gotten rebate with audit
- on demand water heater
- Ventilation rationalization, heat pump water heater, geothermal, cellulose, induction stove, heat pump drier, LEDs, deciduous shade tree, reflective shingle color, Earthcraft when built 10 years ago (including blower door test)
- programmable thermostat
- Energy audit with blower door
- electric only appliances
- LEDs
- Insulated attic

Feedback sections:

- What shouldn't we include?** (4 orange sticky notes)
- Other thoughts?** (4 orange sticky notes)

Roundtable 2 Miro Board: The Built Environment

## Section 2: Policy or Program Options

Please provide feedback, concerns and suggestions for the below policies.

Policy categories and feedback:

- Energy Upgrades- Existing Homes**
  - On my power bill, they give me an idea of my power usage relative to neighbors. Good! Does it take into account gas use or not? Is there a way to make that on a per person basis? I assume not.
  - weatherization and audits through MLJ Service Project
  - financing source
  - smart home
  - Work with ACTION
- Zero Energy Ready- New Construction**
  - Adding to HPBS
  - Community education campaigns
- Commercial Retro-Commissioning**
  - benchmarking standards
- Community Solar/SEPA**
  - SEPA at city buildings
- Incentives for Electrification**
  - Engage with builders to present them with information about electrification that they can pass on to clients. Maybe free workshops?
  - incentives for electric cars outlets
  - municipal rebates
  - Provide information to homebuilders about the benefits of electrification during the permit process.
- Solarize**
  - Continue with solarize programs.

Roundtable 2 Miro Board: The Built Environment



## Section 3: Personal Actions

What would it take for you to take action?

Tax Breaks

free/reduced cost home audit/blower door test

Trying to prevent worsening of air quality. Preventing imminent death !

Information on when to replace appliances if existing gas ones are still working

What do you refuse to do?



Roundtable 2 Miro Board: The Built Environment

## Section 4: Community-Wide Goals

What goals for the community should we set?

Examples:

- XX% homes retrofitted
- XX% increase in commercial efficiency in 5 year increments
- New construction Zero Energy ready in 202X

- Energy Upgrades
- Zero Energy Ready
- Retro Commissioning
- Electrification
- SEPA
- Solarize

Set the bar high for retrofitting homes.

New Construction Zero Energy ready in 2023.

Electric charging stations added to parking lots.

90% of existing commercial converted to all electric by 2035

Roundtable 2 Miro Board: The Built Environment

## Section 5: Next Steps

How else can Decatur support more clean energy for the built environment?

carrot and stick approach to building performance

How can the tops of the parking garages and government parking lots have solar covers? Visible, functional (cool cars), power lighting (security) etc.

Ensure City of Decatur buildings are all electric

Solar panels over outdoor parking lot spaces.

Replace school buses with electric

Do any of the restaurants use induction? If so, can it get free marketing in conjunction with the message, "The pros use induction."

Is there an available outdoor light that is solar for parks, restaurant awnings etc? Visible benefit

### Other thoughts?



Roundtable 2 Miro Board: The Built Environment

## Section 1: Built Environment

What are examples of clean energy projects that you have undertaken in your home or business?

More insulation in roof, knee-walls.

solarize

window insulation kits

Replacement of all CFLs as they burned out with LEDs.

Densepacked walls with cellulose (paid attention to moisture details)

Installed 20 SEER Heat Pump with condensing natural gas furnace as backup

ERV for safe and efficient fresh air

Weather seal cracks, added weather strip where windows meet frame.

DC motor ceiling fans - 70% less energy

Solar panels with battery backup/load shedding

Solar on my house.

Foamed attic And encapsulated crawl space.

I have dramatically improved the envelope and mech equipment + Solarize 1.0

Sealed attic; brought attic to R-50

### Other thoughts?

I wish I would have known about induction stoves

Roundtable 2 Miro Board: The Built Environment



# Section 2: Policy or Program Options

Please provide feedback, concerns and suggestions for the below policies.

## Energy Upgrades- Existing Homes

Vision is for a "Renovise" program - deep energy retrofit - turnkey, much more than GP HEIP

Want to investigate incentives for participation in this deep energy retrofit - include radon, ventilation, etc.

Include technical support hotline (staffed by Carl, MikeB, others) to provide knowledge and comfort to prospects

Health, comfort, durability, resilience are all marketable benefits

Need a city sponsored source to give people good advice when something breaks down. Otherwise we are at the mercy of contractors

Like the idea of pre-vetted contractors and Scope of work - Renovise

## Zero Energy Ready- New Construction

There will be tension between preservation of tree canopy and ample light for solar. Need to recognize that sometimes it does make sense to cut down a taller tree for solar access and replace with shorter trees that still have a nice canopy.

Zero Energy Ready new construction should be standard policy for government / school buildings. They have the most solar access.

This should be in next iteration of Decatur HPB program

No, I'm saying that sometimes it does make sense to cut down the tree. It is site specific.

## Commercial Retro-Commissioning

can we target churches, YMCA and other larger buildings that are not city of Decatur owned

## Incentives for Electrification

Fine.

Connect understanding of switching to ASHP with need to weatherize home first.

offer / promote swapping programs for gas appliances

## Community Solar/SEPA

Encourage this!

Solar art installations

Decatur schools should have SEPA! It is a proven product.

## Solarize

combine solarize and revolving fund for investing in high energy burdened households residential solar

I agree with Renovise. Great name. Does Solarize Decatur 3.0 make sense? How many more homes have solar access?

Tie this with Renovise - solar is attractive but weatherization gets it done!

Roundtable 2 Miro Board: The Built Environment

## Section 3: Personal Actions

What would it take for you to take action?

i personally am motivated - want to get my neighbors to value this.

competitive programs for community involvement

**What do you refuse to do?**

participate in solar greenwashing by gas power - paying more for them to install the solar they should be utilizing anyways

incentives offered by city- raffle, etc

community competitions

Roundtable 2 Miro Board: The Built Environment

## Section 4: Community-Wide Goals

What goals for the community should we set?

- Energy Upgrades
- Zero Energy Ready
- Retro Commissioning
- Electrification
- SEPA
- Solarize

Homes that are gutted should still have to comply with High Perf Building Ordinance

Create a "Climate Warrior" designation (with incentives) that recognize participation in Renovise & Solarize

Why have zero energy ready goal if we need rooftop solar to get to zero energy? And we have a beautiful tree canopy in our City.

All new multi-family developments have to be LEED Platinum (or better) with rooftop solar

Focus on pre-2004 homes (although all are eligible) 2004 required low-e windows

set a goal for training people with the skills and knowledge to do this. current labor shortage may continue

all affordable housing should be net zero or at least all electric and highly efficient

Annually, have x% of residents call their state elected leader and PSC Commissioner letting them know we want state-level clean energy policy.

50% of homes retrofitted by 2030

new construction zero energy ready by 2025

Incentives to keep existing but not exempt from EE action

Annual energy saving contest???

Roundtable 2 Miro Board: The Built Environment



## Section 5: Next Steps

How else can Decatur support more clean energy for the built environment?



Roundtable 2 Miro Board: The Built Environment

## Section 1: Energy Landscape

What are examples of clean energy projects that you, your community, or business are undertaking?



Roundtable 3 Miro Board: Clean Energy and the Economy

## Section 2: Policy or Program Options

Please provide feedback, concerns and suggestions for the below policies.

### Solar

work with churches, schools and other large buildings to get solar. they have lots of potential

GA Power IRP to increase capacity of "net-metering" for solar (city as intervenor on IRP?)

How about solar covered parking? It will also protect against alot of heat.

### Mobility

E-bikeshare programs

complete PATH Decatur

More protected bike lanes/connectivity/sidewalks

Circulator

### Energy Efficiency

Create a funding mechanism for energy efficiency improvements

Green revolving loan fund with project applications?

### Electrification

can you work with builders to incentivize all electric homes? do they realize it is cheaper to build these?

### Economic Development

Protect low-income residents from any increase in utility bills

Continuing TOD

At the state level working with community colleges and technical schools there has been some success

employse highschoolers to help weatherize homes

One of our biggest challenges in execution of pipeline is workforce / skilled labor supply...thinking of roles CoFD could play...

Policy to encourage hiring low-income resident. See HUD's Section 3 program.

for EV charging, I think it might be more beneficial to put chargers in neighborhoods where they have to street park.

Require new buildings to install EV-chargers and/or be EV-ready (especially multifamily)

### Energy Performance

Energy performance can be self-implemented.

Rewards-based energy performance programs.

Roundtable 3 Miro Board: Clean Energy and the Economy



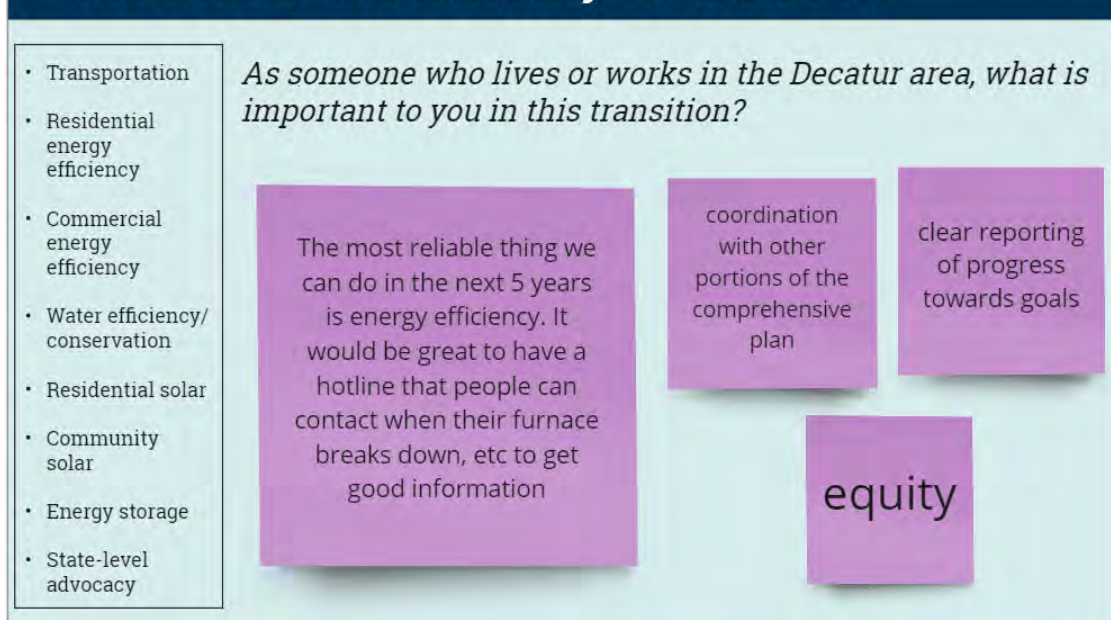
## Section 3: Pathways to Clean & Renewable Energy

How can businesses advance Decatur's clean energy goals?



Roundtable 3 Miro Board: Clean Energy and the Economy

## Section 4: Community-Wide Goals

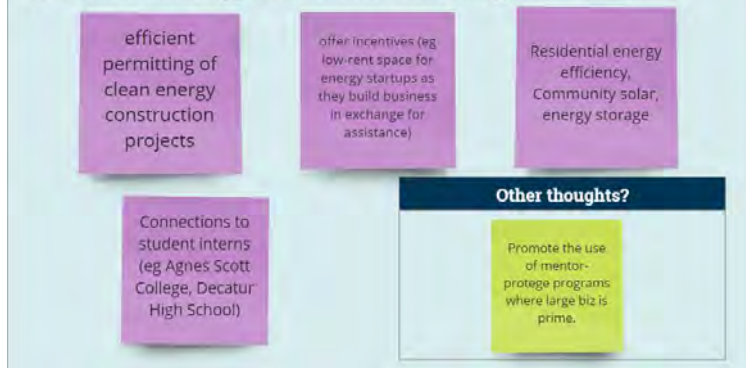


Roundtable 3 Miro Board: Clean Energy and the Economy



## Section 5: Next Steps

How can Decatur support and attract clean energy businesses?



Roundtable 3 Miro Board: Clean Energy and the Economy

## Section 2: Policy or Program Options

Please provide feedback, concerns and suggestions for the below policies.



Roundtable 3 Miro Board: Clean Energy and the Economy

## Section 3: Pathways to Clean & Renewable Energy

How can businesses advance Decatur's clean energy goals?

Here are Georgia Power's rebates/incentives for residential customers: <https://www.georgiapower.com/residential/save-money-and-energy/rebates-and-discounts.html>

And for business customers: <https://www.georgiapower.com/business/save-money-and-energy/commercial-rebates-and-incentives.html>

Promotion of GA Power incentives, pursue resources from Federal programs

Residents performing their own energy audit

Clean Energy Assessments

Incentives for building assessments and upgrades

### What shouldn't we do?

We need to review ideas and policies with equity lense

Disincentive requirements for upgrades for EE without securing the payback in cost savings

Roundtable 3 Miro Board: Clean Energy and the Economy

## Section 4: Community-Wide Goals

- Transportation
- Residential energy efficiency
- Commercial energy efficiency
- Water efficiency/conservation
- Residential solar
- Community solar
- Energy storage
- State-level advocacy

*As someone who lives or works in the Decatur area, what is important to you in this transition?*

Electric Public shuttle within Decatur

Making a just transition that works for all of us

Having benchmarks

utility is leader in transition to clean energy, and city advocates for that in IRP

Going big rather than business as usual

Involving businesses in making their transition to clean energy and sustainability

Electric school buses

Lots of public examples of solar PV installs

Solar PV Art exhibits

Equity

No gas leaf blowers

Visitors are in awe of how Decatur is a model of clean energy

No gas powered lawn equipment - especially gas leaf blowers

Roundtable 3 Miro Board: Clean Energy and the Economy



# Section 5: Next Steps

How can Decatur support and attract clean energy businesses?

- low cost loans and grants available to clean energy business
- (incentive) making retail and commercial space available to clean energy businesses at a rate less than market
- Using Agnes Scott College as a training base and example
- grants to small business to transition
- Agree to purchase business' products upfront before establishment

### What shouldn't we include?

### Other thoughts?

- greenjobs pipeline
- How to generate funding to support initiatives

Roundtable 3 Miro Board: Clean Energy and the Economy

**Top Policy Options**

- Integrated Resource Plan (IRP) Intervention and Advocacy
- Renewable Energy Credit Strategy

**Energy Efficiency:**

- Update high-performance building standards by 2023
- Implement Electrification and Performance Regulations
- Reduce Municipal Energy Consumption by 25% by 2030
- Electrification - find energy efficiency in low-income households
- Community energy fund

**Municipal Solar:**

- 100% Renewable Energy for Municipal Operations by 2037
- 4 Municipal Resiliency Hubs by 2032

**Lead by Example: Municipal Energy Goals**

- 100% Clean Energy for municipal operations by 2037
  - Reduce municipal energy consumption 25% by 2023
  - REC procurement phase-out for light/medium duty vehicles by 2025 to ensure 2027 full EV goal
  - Internal training for behavioral efficiency/conservation programming
  - Update City of Decatur green building policy for new City facilities perhaps beyond LEED
- Municipal Clean Energy Transition (Guaranteed Performance Contracting and BIPAC metrics)
  - Rate optimization in 2022/2024
  - Energy benchmarking for buildings by 2024
  - LED upgrades by 2025
  - Gas boiler phase out by 2027
  - REC acquisition completed by 2027
- General Energy Efficiency Upgrades (roofs, retrofits, insulation, etc) by 2030
- Save retrofits on municipal buildings by 2030
- Buy purchase energy storage with automated usage optimization by 2030
  - Resiliency Hubs (PV+BESS) - Esther, Decatur Rec Center, Public Works, Oakhurst Rec Center by 2032

**Sticky Notes:**

- Education/ Outreach - proactive outreach Decatur issues each month Day on goal to be progressive
- Should be higher than 25% by 2020 - the timeline and REC will be a little more than target minimum
- Develop positive school culture - school culture matters energy efficiency is important for schools
- Perhaps Quarterly Bulk purchase with OTHER cities/communities
- Don't forget Building Commission! make sure they are working right!

Charrette Planning Session: Green Dot Exercise



### Building Community Through Investment


Weatherization: improving physical aspects of a building to reduce energy costs, increase efficiency, and support health and safety measures.

#### Approach 1: Well-Established Programs

- Decatur's Community and Economic Development department can form a partnership with ACTION\*. The partnership will focus on ensuring that low-income residents receive appropriate benefits and weatherization aid.
- MLK Service Project and Decatur Land Trust Home Rehab Program

#### Approach 2: 'RENOVIZE' Decatur

- Based on the success of 'Solarize Decatur', stakeholders have indicated an interest in a similarly structured weatherization program in which they can participate.
- Deep retrofits: Will identify and fix all magnitudes of issues.
- Incentive for analysis of households.
- Turkey can be sold as a whole package for individuals.
- Neighborhood Competition.
- Free for neighbor in need.



*Notes:* Do Solarize Decatur #3 only by self with weather policy. The City should allocate capital to target the work. Solarize Decatur is a model. Do Solarize Decatur #3 only by self with weather policy. Plan to invest for commercial sector. Incentive for improvement like Solarize Electricity. Decatur property tax rebates for Solar & other energy efficiency. CEF? Not in GA? State? Where do things come from? Green code (net)? For increase contribution to CEF. Also make this fund something that can be used for other things like energy audits and weatherization. What could we fund? Residential and Commercial Solar, Energy Audits and Weatherization, primarily for low-income households, Appliance Electrification.

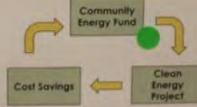
---

### Community Energy Fund (CEF)

A Community Energy Fund is a source of loans, rebates, and other financing for clean energy projects in municipal buildings and the Decatur community. A CEF can be supported by:

- Dedicating 10% of Electricity Franchise Fee Revenues (~\$100,000) per year to the Fund
- Directing increase in Electricity Franchise Fee Revenues over 2022 baseline to the Fund

Local Example - Agnes Scott College (ASC)



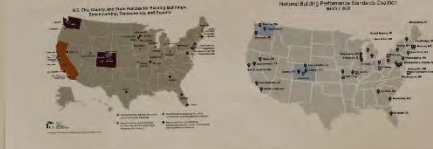
*Notes:* From 2011-2020, the ASC Green Revolving Fund supported close to \$2,000,000 of clean energy projects campus-wide. From 2011-2020, the ASC Green Revolving Fund supported close to \$2,000,000 of clean energy projects campus-wide. What could we fund? Residential and Commercial Solar, Energy Audits and Weatherization, primarily for low-income households, Appliance Electrification.

Charrette Planning Session: Green Dot Exercise

### Building Policy Options and Goals

**Benchmarking and Performance Standards**

- Benchmarking: Require commercial and multifamily buildings to track and report energy and water consumption.
- Performance Standards: Require periodic energy performance improvements.



*Notes:* Benchmarking for Multifamily (what change the cost for small multifamily buildings?). Building Electrification - Does the grid is prepared for that? Electricity Load capacity - What about the grid is prepared for that? Building Electrification - Does the grid is prepared for that? Implement passive solar design which is not doing anything needs. Who implements and follows up? more high-performing Bldg (zero energy). Go faster.

---

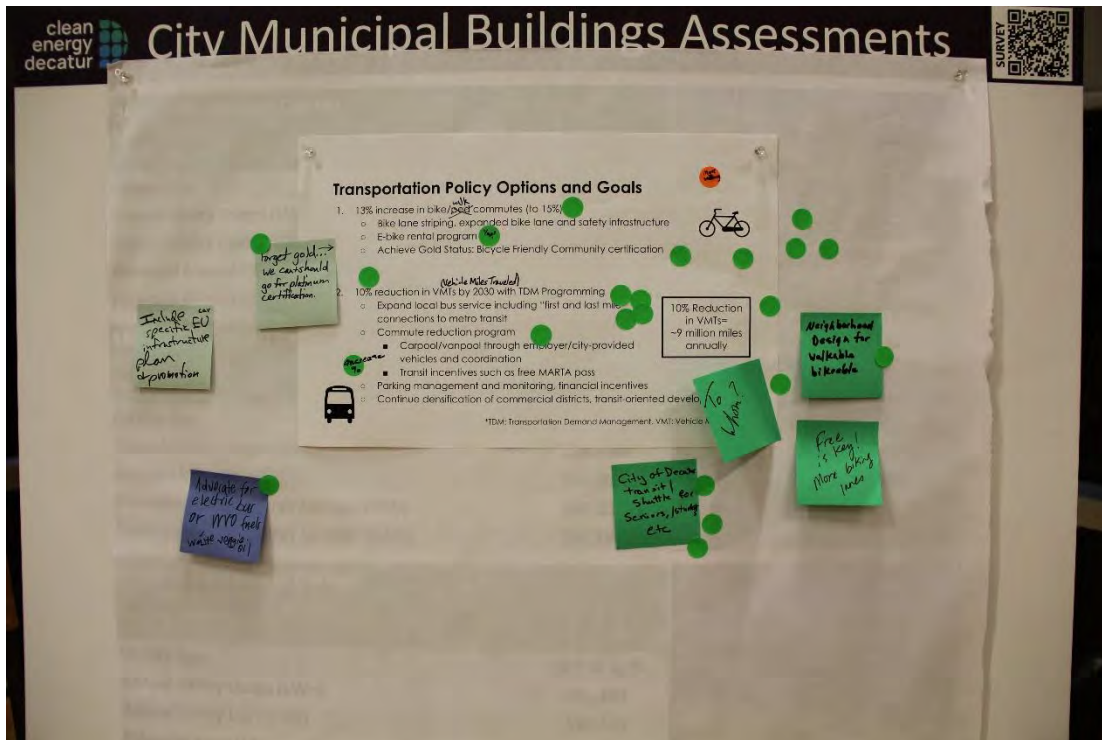
### Building Policy Options and Goals

1. High Performance Building Standard policy update: improving and advancing code towards net-zero energy requirements for new municipal, institutional, and commercial construction in the 2030s (2035 Net Zero-Ready, 2038 Net Zero).

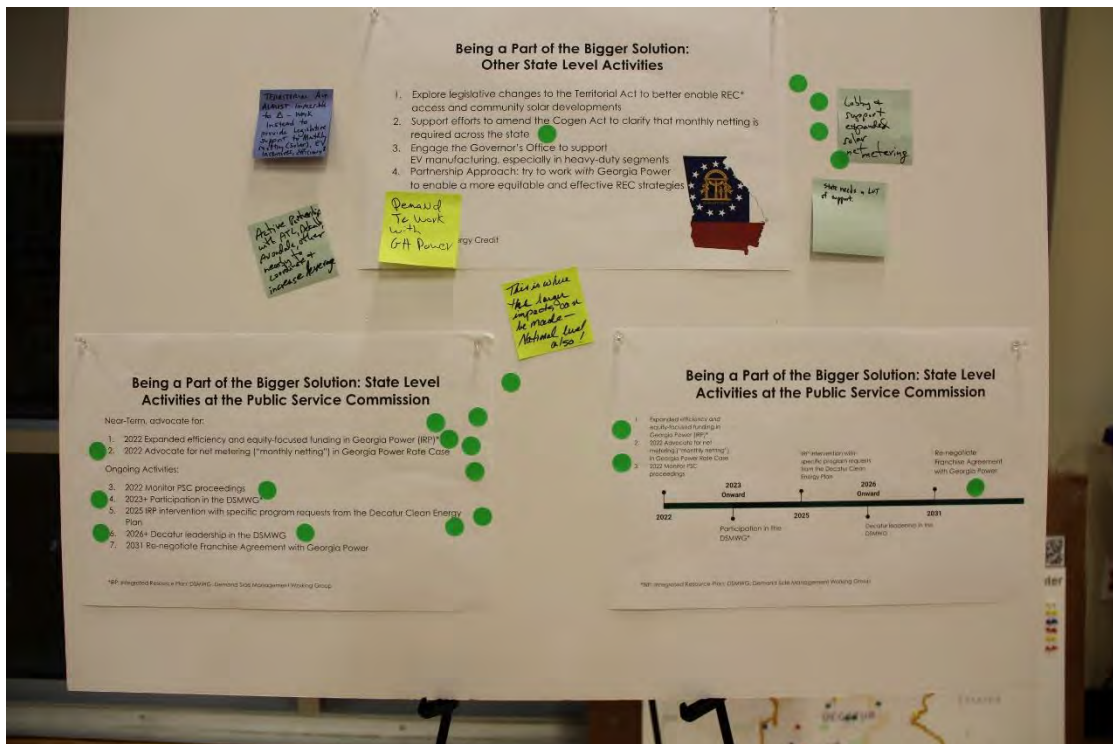
	2023	2026	2029	2032	2035	2038
Energy efficiency	2017 IECC	2024 IECC + amendments to meet 10% target	2027 IECC + amendments to meet 15% target	2030 IECC + amendments to meet 20% target	Max tech efficiency	Max tech efficiency
Renewable energy resources	3.25 million ft <sup>2</sup> of Solarized Roofs	6.5 million ft <sup>2</sup> of Solarized Roofs	10% solar energy use	20% solar energy use	50% solar energy use	Offsetting the energy use that "leaks"
Building electrification	None and no planning	Strong and basic building	All residential applications	Tall building grid integration	Tall building grid integration	Tall building grid integration

*Notes:* Why not reduced capex costs also? Yes. Ensure that Building Electrification are fully included in latest codes. Implement passive solar design which is not doing anything needs. Who implements and follows up? more high-performing Bldg (zero energy). Go faster.

Charrette Planning Session: Green Dot Exercise

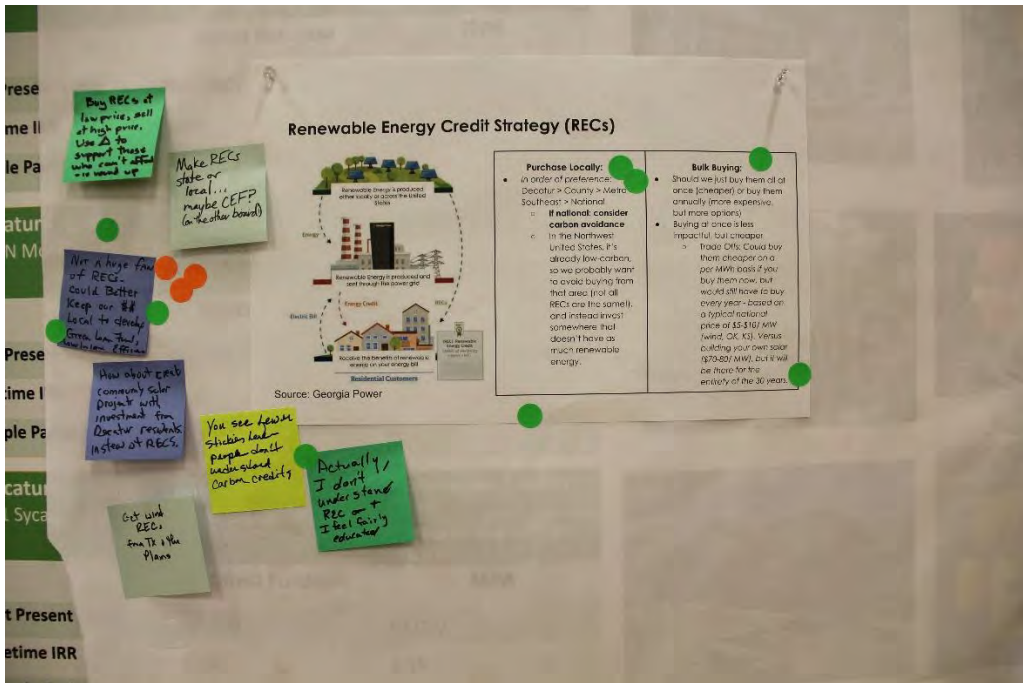


Charrette Planning Session: Green Dot Exercise



Charrette Planning Session: Green Dot Exercise





Charrette Planning Session: Green Dot Exercise



Charrette: Decatur City Schools Youth Canvassing Training





Charrette: Decatur City Schools Youth Canvassing Training



Charrette: Consulting Teams and Decatur Residents Discuss the Plan



Charrette: The Consulting Teams and Decatur Residents Discuss the Plan



Charrette: Mayor Pattie Garrett Introduces the Plan





Charrette Planning Session with Decatur City Staff: Photo Credit, Greg White



Charrette Planning Session with Decatur City Staff: Photo Credit, Greg White

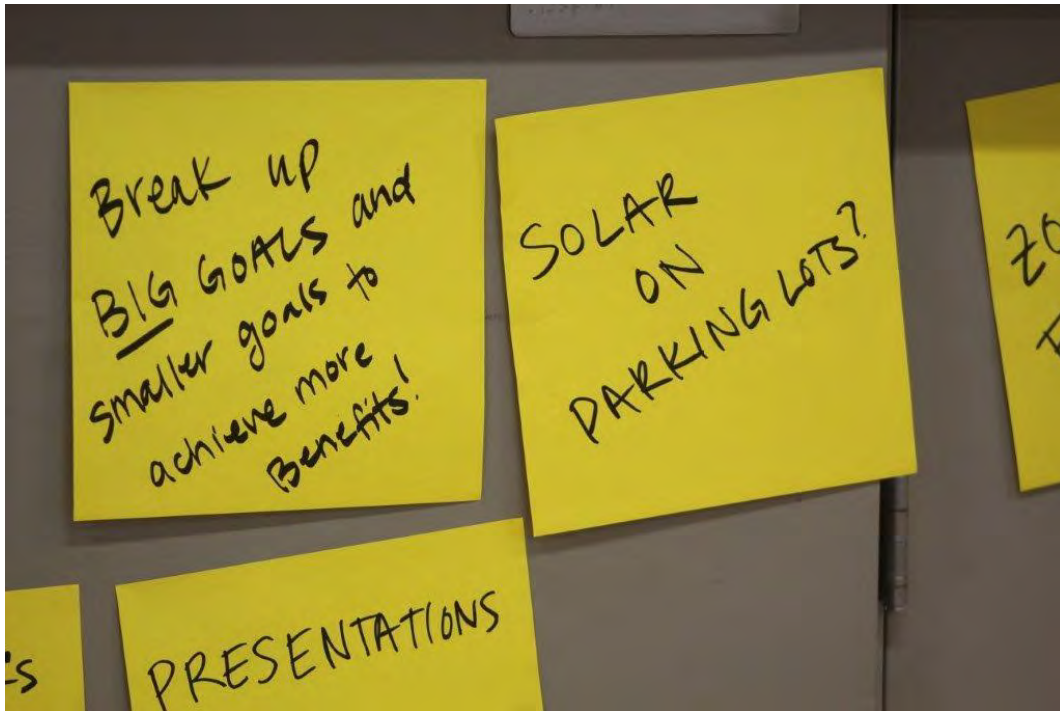




Charrette Planning Session with Decatur City Staff: Photo Credit, Greg White



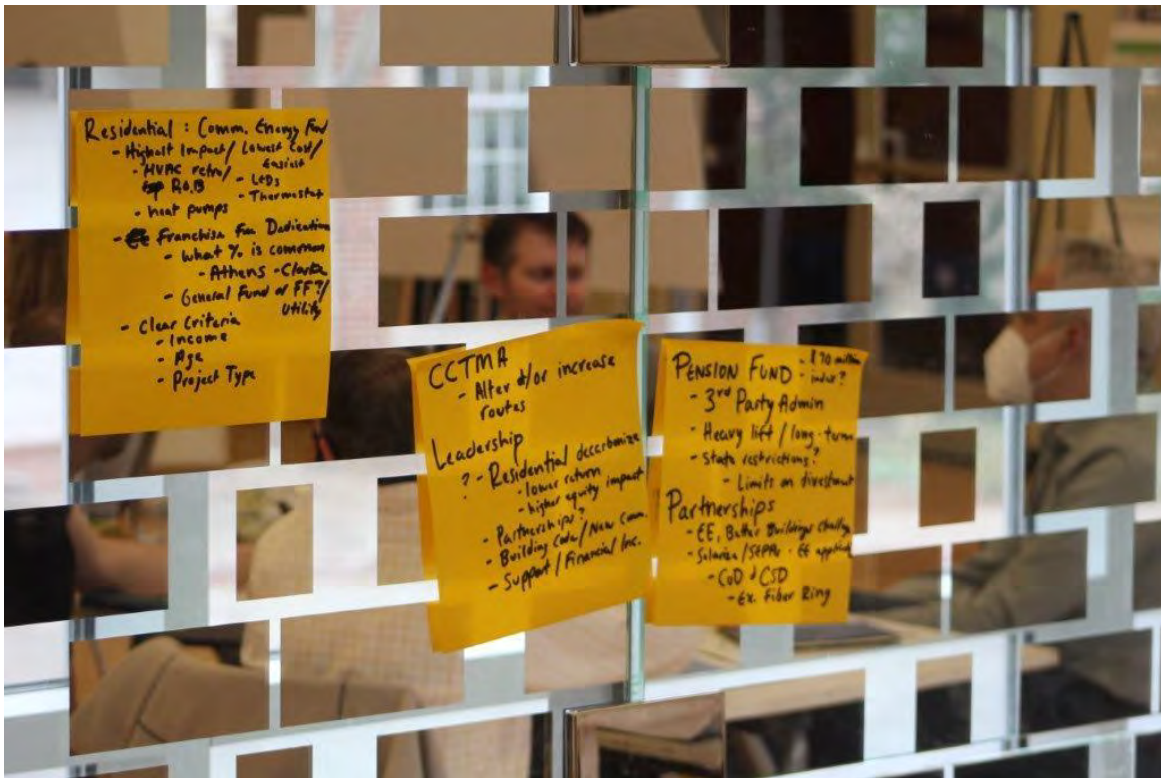
Charrette Planning Session with Decatur City Staff: Photo Credit, Greg White



Charrette: Direct Community Feedback



Charrette: Direct Community Feedback



Residential: Comm. Energy Aud  
- Highest Impact / Lowest Cost /  
- HVAC retro / Assist  
- LED's  
- Heat pumps - Thermostat  
- Franchise for Dedication  
- What % is common  
- Athens - Clark  
- General Fund or FF? /  
- Clear Criteria Utility  
- Income  
- Age  
- Project Type

CCTMA  
- Alter &/or increase  
- Routes  
Leadership  
? - Residential decarbonize  
- lower return  
- higher equity impact  
- Partnerships  
- Building Code / New Code  
- Support / Financial Inc.

PENSION FUND - 170 million  
- 3rd Party Admin  
- Heavy lift / long term  
- State restrictions  
- Limits on investment  
Partnerships  
- EE, Better Buildings Challenge  
- Solarize / SEPA - EE applied  
- CUD & CSD  
- Ex. Fiber Ring

Charrette: Direct Community Feedback





# City of Decatur

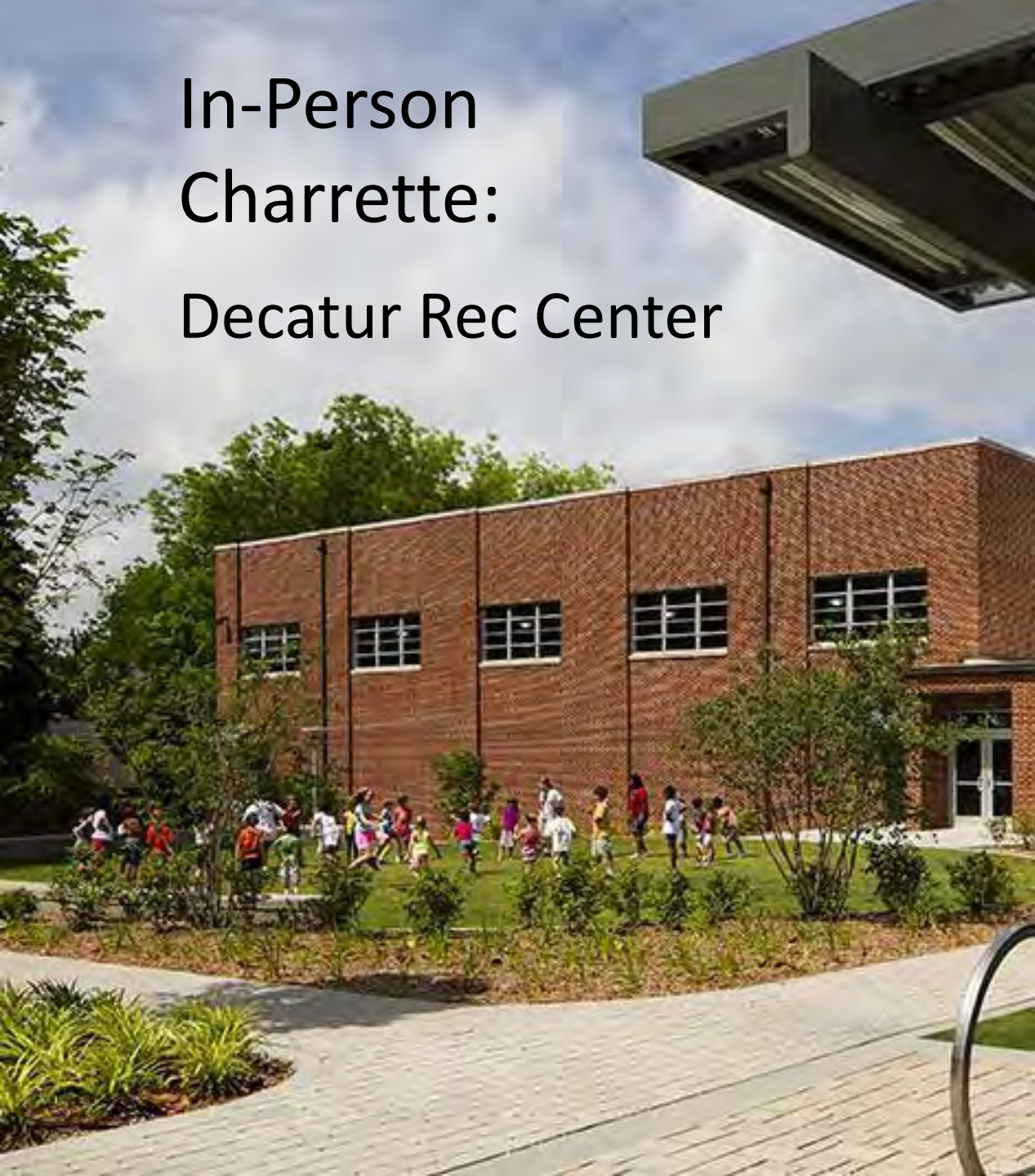
# Charrette

March 8 & 9, 2022





# In-Person Charrette: Decatur Rec Center



<b>March 8</b>	<b>7:00am -10:00am</b>	Opening public sessions: Come hear about the Decatur Clean Energy Plan’s progress and findings to date
	<b>11:00am – 6:30pm</b>	Lobby open for walk-ins for all community members
<b>March 9</b>	<b>8:00am – 3:00pm</b>	Lobby open for walk-ins for all community members
	<b>4:00pm - 7:00pm</b>	Open House: Decatur and its team members will review the completed plan elements

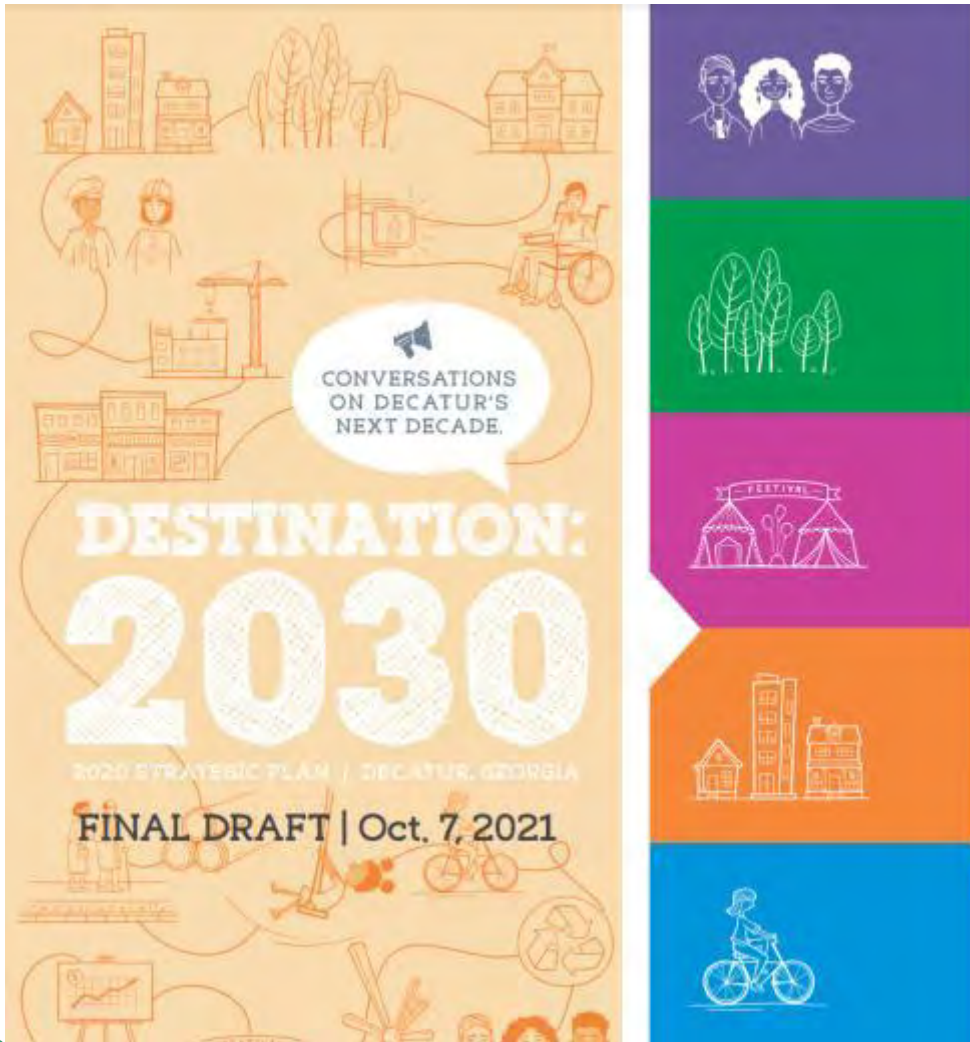




Why Are We Here?



# How did we get here?



## Climate Action

### KEY ACTION ITEMS:

- › Establish clean energy targets
- › Be transparent about measuring progress
- › Evaluate carbon impact of City decisions
- › Consider mitigation and adaptation
- › Construct green buildings and infrastructure

- › Reduce waste and recover resources
- › Increase the city's tree canopy goal

All action items start on page 56!



## CLEAN ENERGY TARGETS

Decatur must transition away from fossil fuels to clean energy in order to do its part to fight climate change. Many public comments were received on this topic, but since the Clean Energy Plan is currently underway to determine the feasibility and timeline for this transition, the Strategic Plan defers to that effort to set specific targets and timelines to achieve them.



# What is clean energy?

---



# Benefits of Clean Energy

## Improved public health

Improved outdoor air quality

Improved indoor air quality

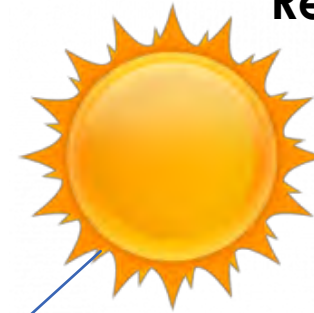


## Reduced energy burden

Increased savings for owners and renters

Reduced economic stress

Increased disposable income



## Economic Development

Improved local economy

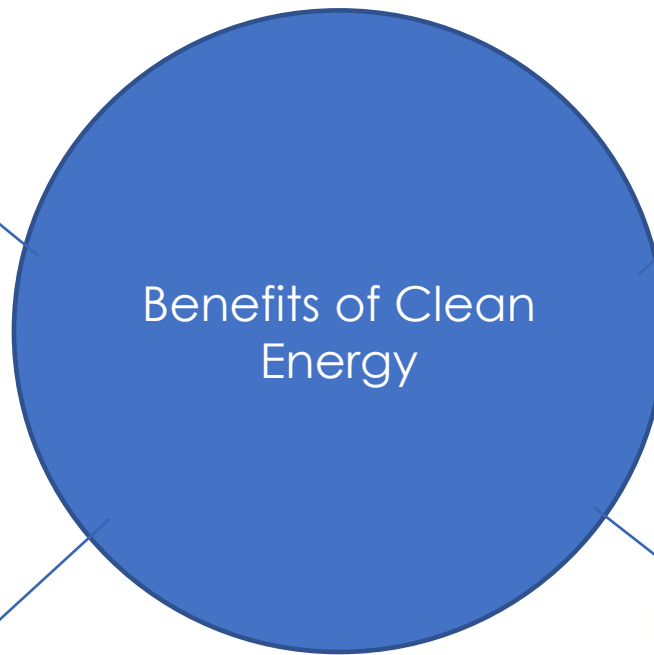
The solar industry provides job opportunities, with solar panel installer jobs projected to grow 51% in the next 10 years.



## Improved housing quality

Safer, more affordable and comfortable homes

Increased housing satisfaction

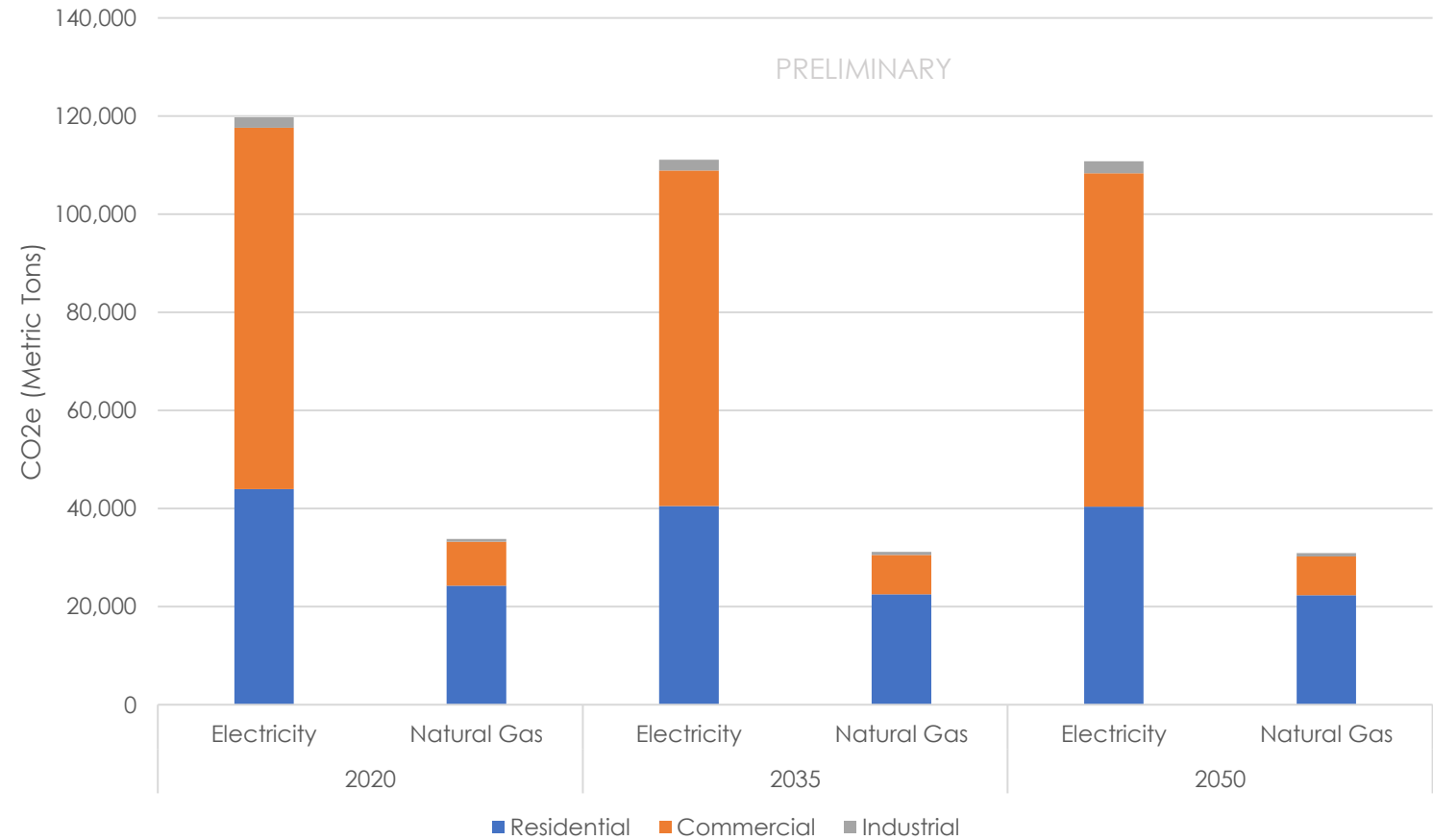




# Greenhouse Gas Emissions in Decatur

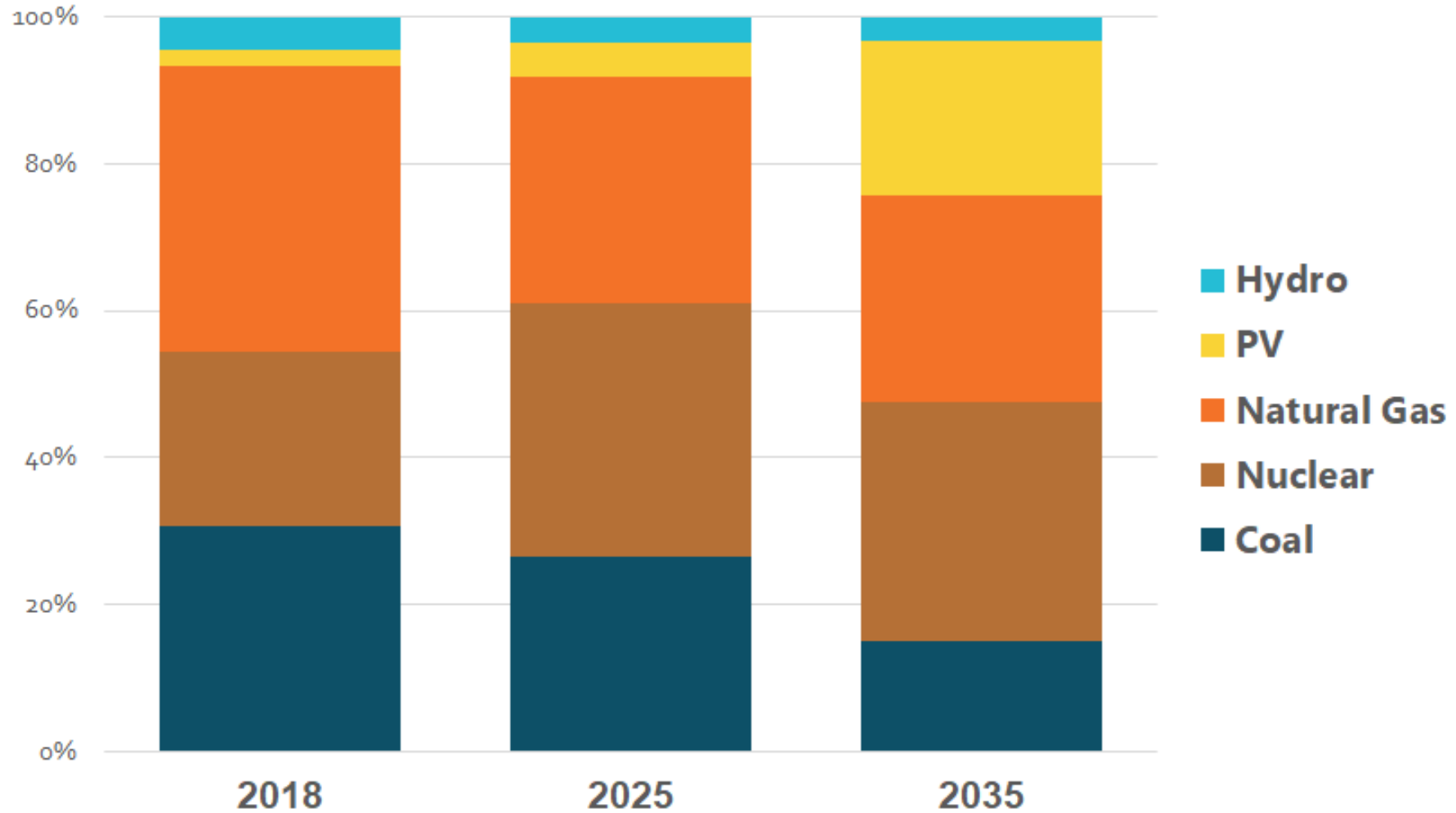
Residential buildings consume a majority of Decatur's energy demand (51%) but produce 17% times less CO2e emissions than commercial buildings.

Total emissions reduce by 8% from 2020 to 2050 if Decatur continues with business as usual.



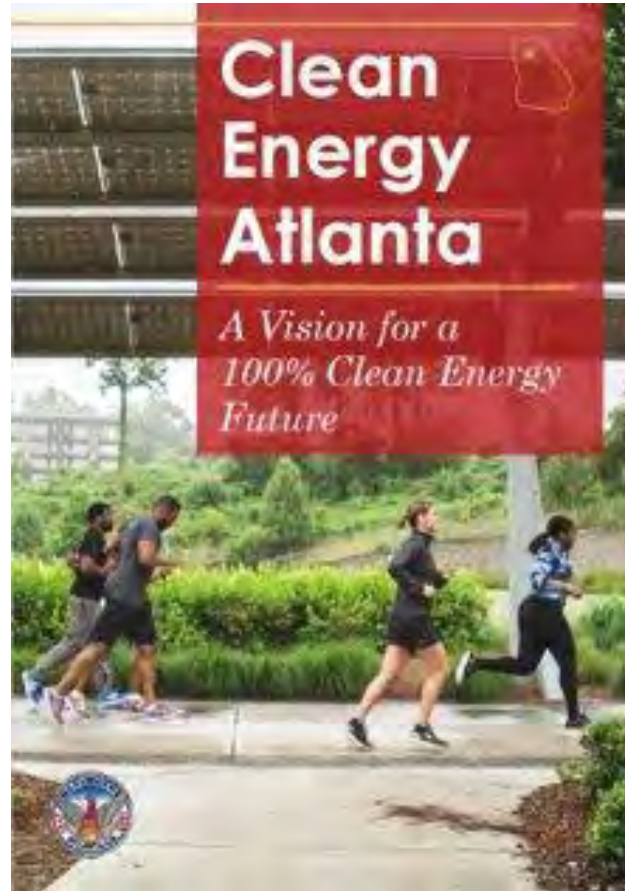
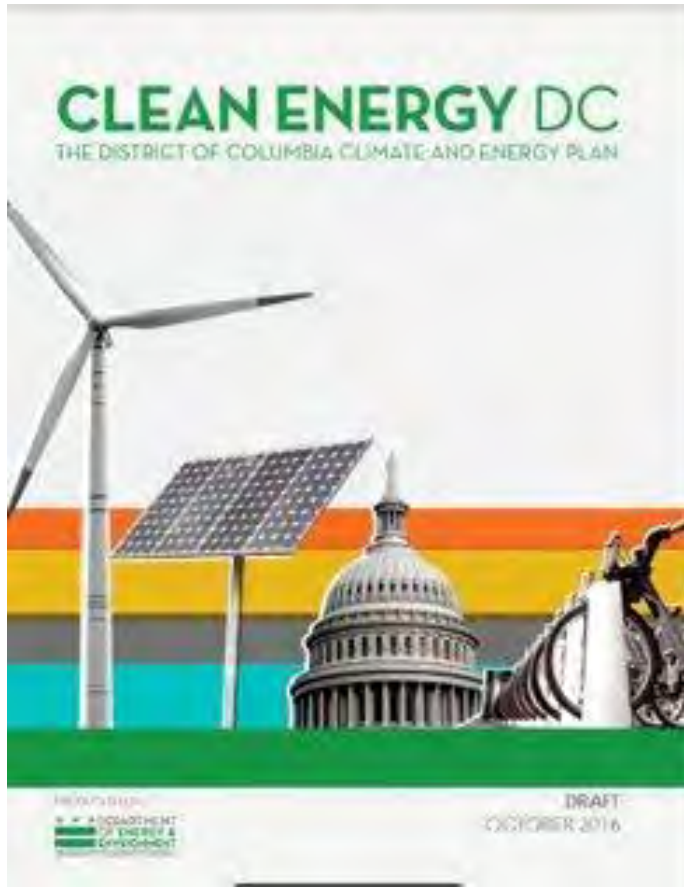
# Our Current Sources of Energy

---



# Creating a Clean Energy Plan

---





# Purposes of a Clean Energy Plan

---

<b>Education</b>	Educate about the goal and the processes to achieve the goal.
<b>Advocacy</b>	Make the case for why the goal is important for the environment, health, economics, energy burden. Serve as a resource for residents, and political leadership at municipal, state, and federal levels.
<b>Transparency</b>	Detail how the Plan was created, who funded it, who participated, how the community was engaged, and how community feedback was incorporated.
<b>Value and Goal Setting</b>	Demonstrate how the process for community, stakeholder, and expert engagement enabled the organization to discover the values and priorities guide the plan and evaluation of commitments.
<b>Analysis</b>	Provide data to define and achieve the goal, identifying current baseline, milestones, and pathways to achieving the goals.
<b>Evaluation</b>	Evaluate policies and programs to determine which will help us achieve the goal, informed by community engagement.
<b>Accountability</b>	Describe a plan to keep the City accountable to its goals and commitments.

# The Process

---



Initiate stakeholder and community engagement:

- Develop stakeholder engagement approach
- Develop community engagement approach using previous Decatur processes and the engagement squad ensuring a diverse engagement

Host stakeholder and community conversations (depending on COVID realities - can be held virtually or in-person)

- 1:1s with businesses and orgs
- Community-wide kickoff and roundtables with facilitators
- Youth engagement through school workshops

Review feedback from community and stakeholders

- Capture priorities and values of Decaturites
- Consider diverse energy system, policy, and program scenarios
- Release summary findings for community review

Develop Plan

- Select feasible scenarios based on engagement input, analytics from Greenlink, and team knowledge
- Draft and refine Clean Energy Plan, publishing 3 rounds of drafts
- Finalize and deliver Clean Energy Plan

Plan Enactment and Implementation

- Next Steps
- Develop and finalize toolkit and resources for education
- Policy, Programs & Technology



# Community Engagement



# Engagement Opportunities: Roundtables

**Roundtables: Webinar format**  
120 total participants

**Community and Equity**  
November 17, 2021

**Clean Energy and Economy**  
January 19, 2022

**The Built Environment**  
February 24, 2022



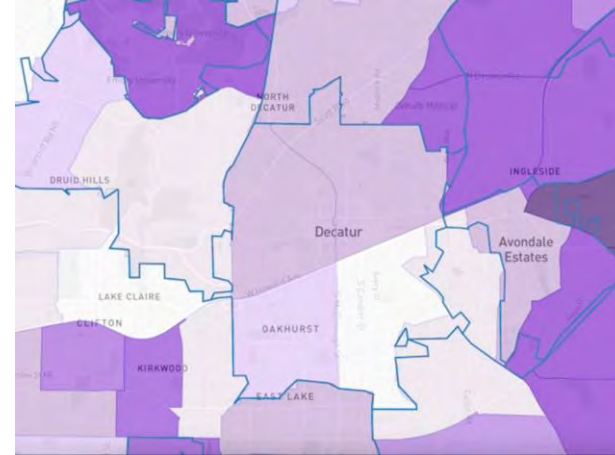
# Engagement Opportunities: Educational 202s

---

GA Tech's Kendeda Building Tour



Greenlink Equity Map Tutorial



Climate Change and Public Health



Weatherization and Equity



# Engagement Opportunities: Stakeholder Interviews

Priorities	General
	Start with proven, effective programs
	Active partnerships with Decatur City Schools, Agnes Scott, Emory, the Housing Authority
	Be more proactive with the Public Service Commission and Georgia Power
	Need to raise trust in City of Decatur
	Update High Performance Building Standard (Most comprehensive way to move the needle)

Advanced policies	
	Time of Sale Disclosure
	Weatherization Analysis Incentive
	REC Strategy
	Solarize
	SEPA's
	Electrification Incentives
	Green Bank



# Engagement Opportunities: Stakeholder Interviews

---

Priorities	Equity and Economic Development
	Technological barriers
	Access to improvement capital
	Analyze potential incentives or waivers for weatherization programs
	Workforce development
	Limit impact of new building requirements on affordable housing
	Sub-metering models for residents to access community solar

Priorities	Education
	Education on climate and energy and its importance
	Education that asks what people need to know or interested in
	Behavior changes/nudging with education
	Hotline for weatherization/efficiency upgrades

# Engagement Opportunities: Stakeholder Interviews

---

Priorities	Transportation
	Prioritization of low energy mobility
	Acknowledge low-income commuter access to Decatur jobs
	Electrify GO60+ shuttle for seniors
	Micro-transportation options within Decatur
	Extend light-rail from Emory to Decatur
	Fleet conversion and increase EV infrastructure
	Increase ridership of CCTMA Emory shuttle

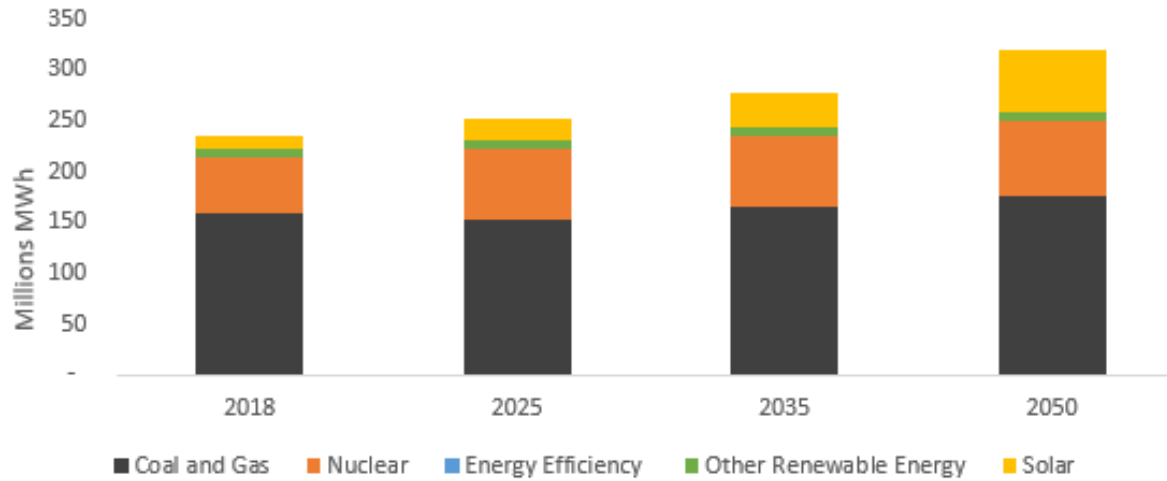
Priorities	Data Transparency
	Public and private sectors
	City progress reporting
	Community efficiency challenges
	Benchmarking



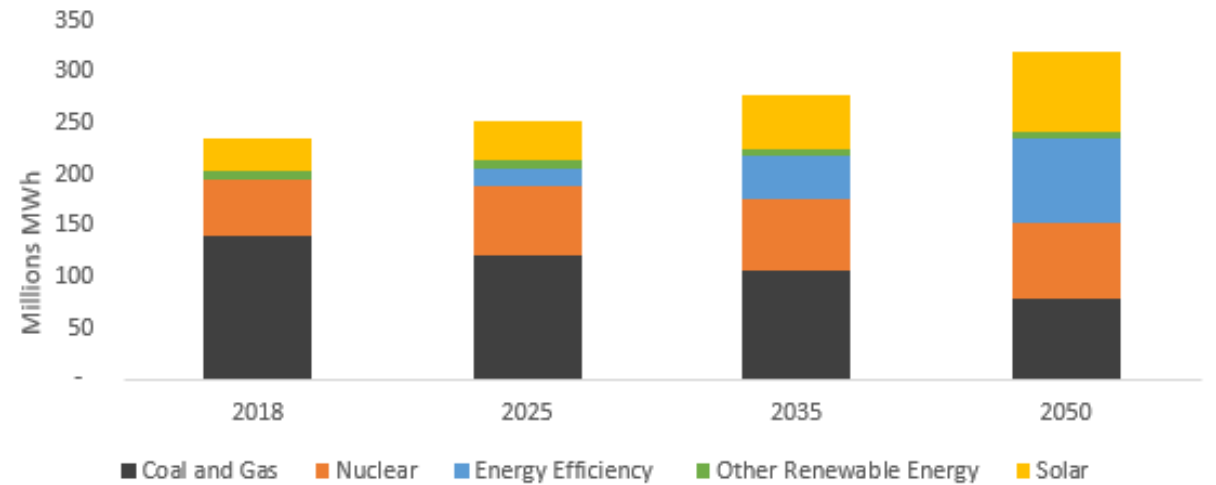
What we've learned



# How Electricity is Met Over Time

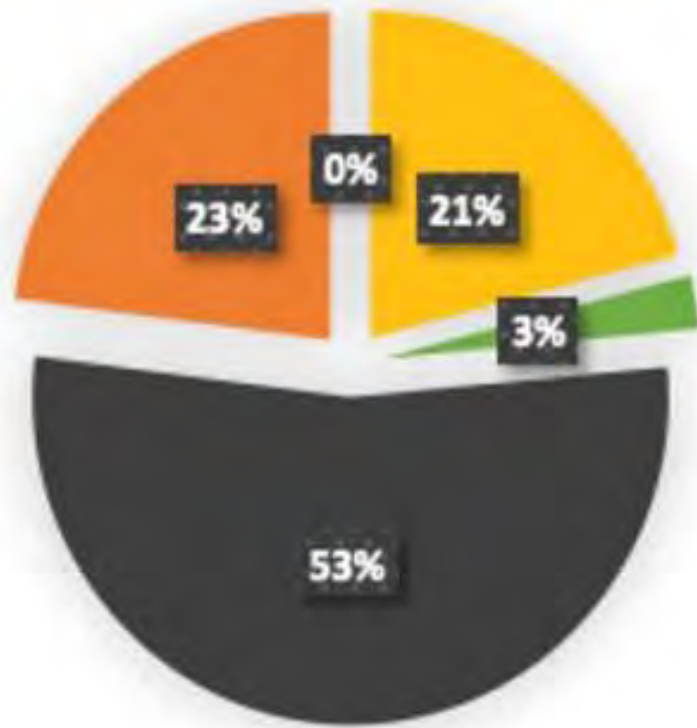


Baseline Scenario

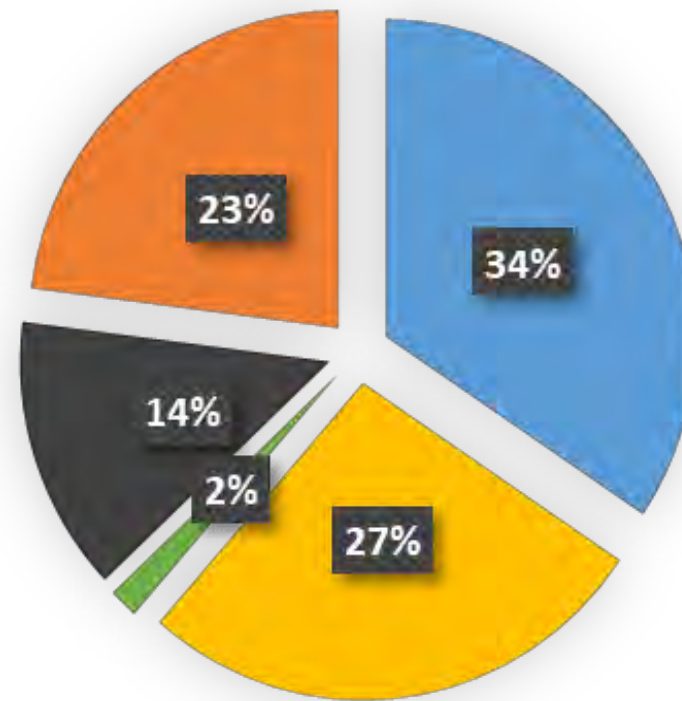
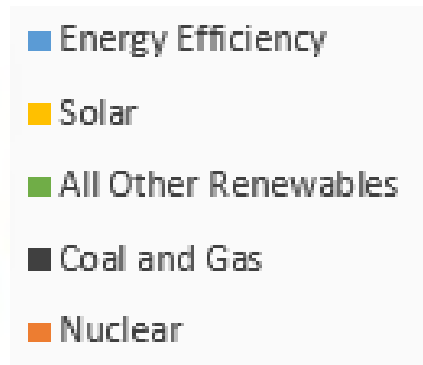


MAX Scenario

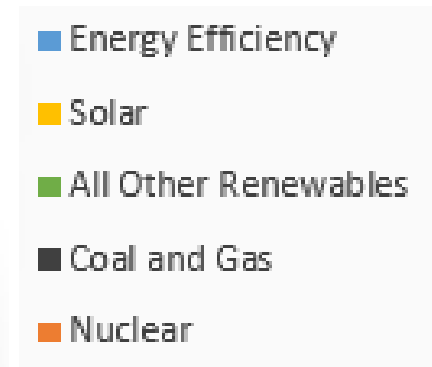
# Decatur's Fuel Mix in 2050



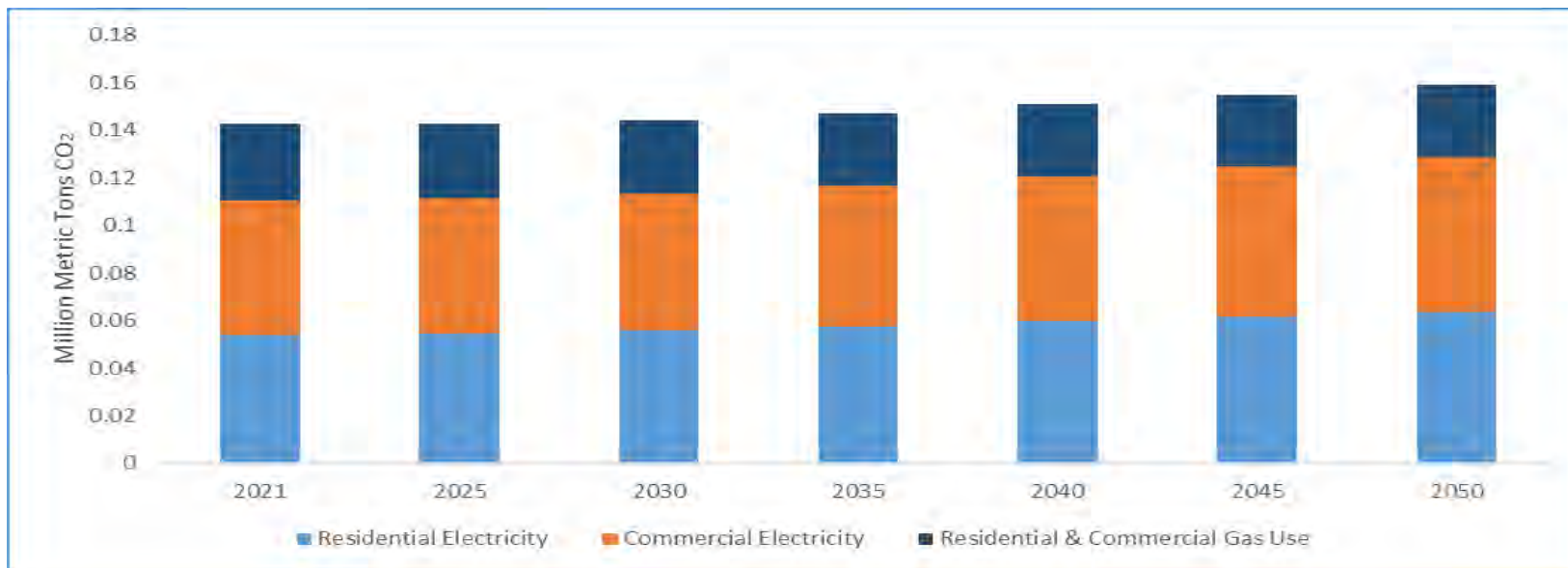
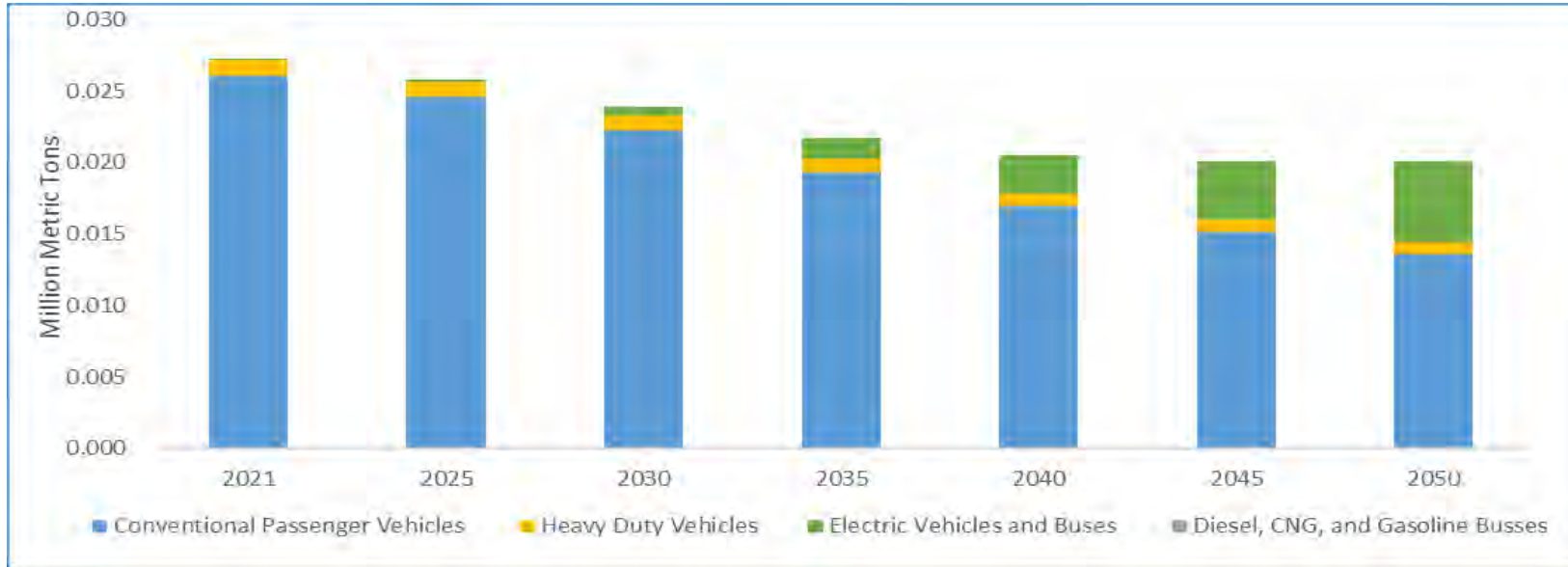
Baseline Scenario



MAX Scenario



# Start with Baseline (SCALE NOTE: Transportation is ~ 20% of Building)







How do we get there?

# Energy Mix Scenarios

---

## **Business As Usual**

Decatur makes no changes to its current policies and utilities follow the current Integrated Resource Plan (IRP) filings.

## **Local Social Impact**

\*w/in Decatur Control

Decatur chooses pathways that maximize social impact with emphasis on reduction of energy burden and local job creation.

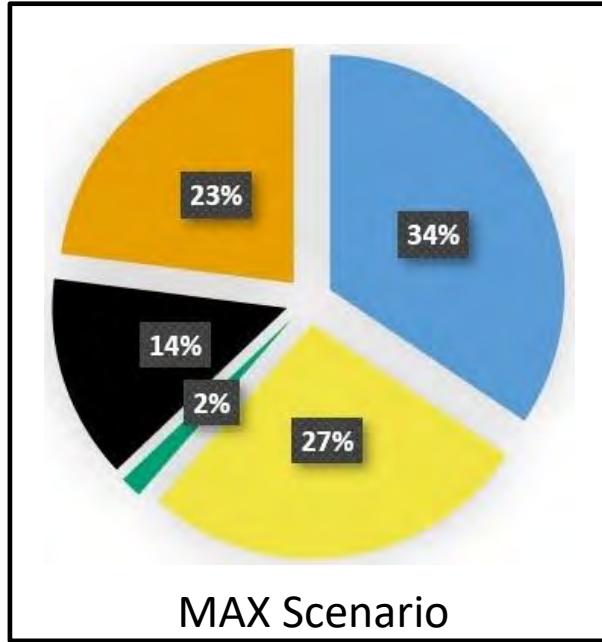
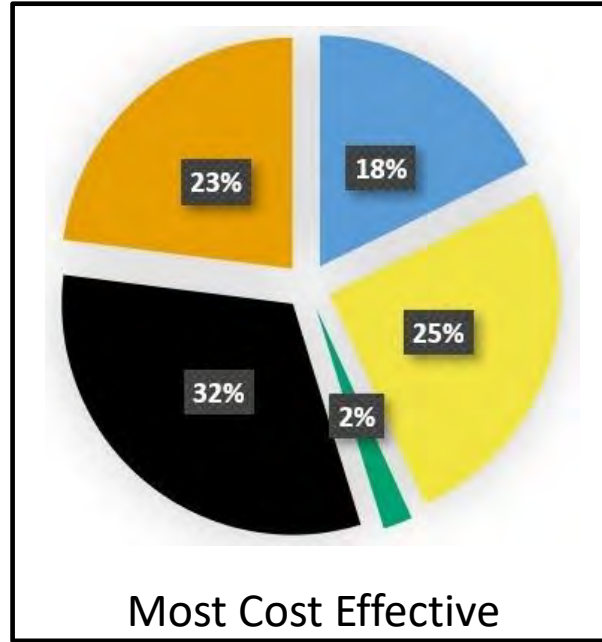
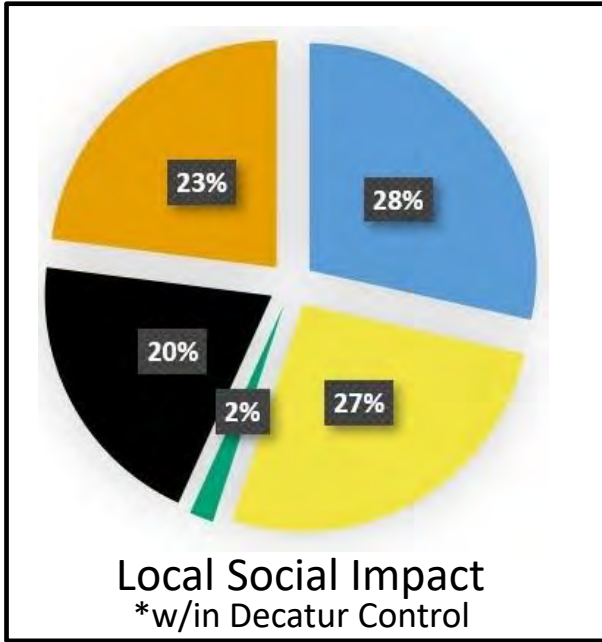
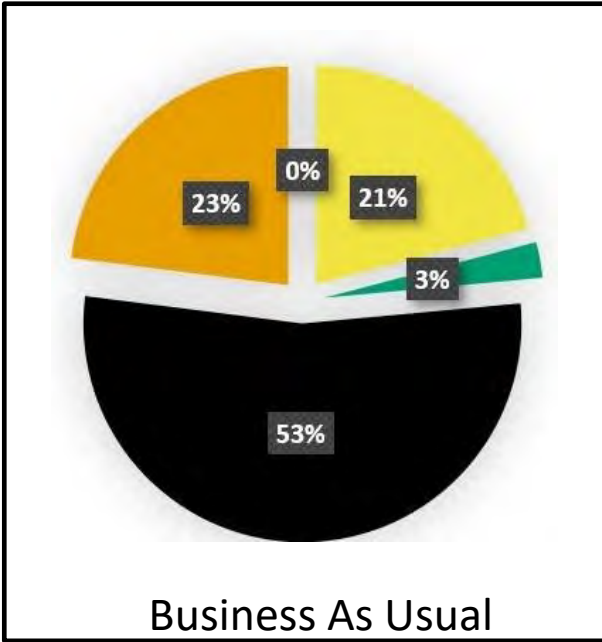
## **Most Cost Effective**

Decatur chooses all the pathways but invests in them only to the level of the highest cost benefit ratio.

## **MAX Scenario**

Decatur chooses all the pathways and invests in the maximum level of cost effectiveness.

# Energy Mix in Decatur's Power Sector in 2050

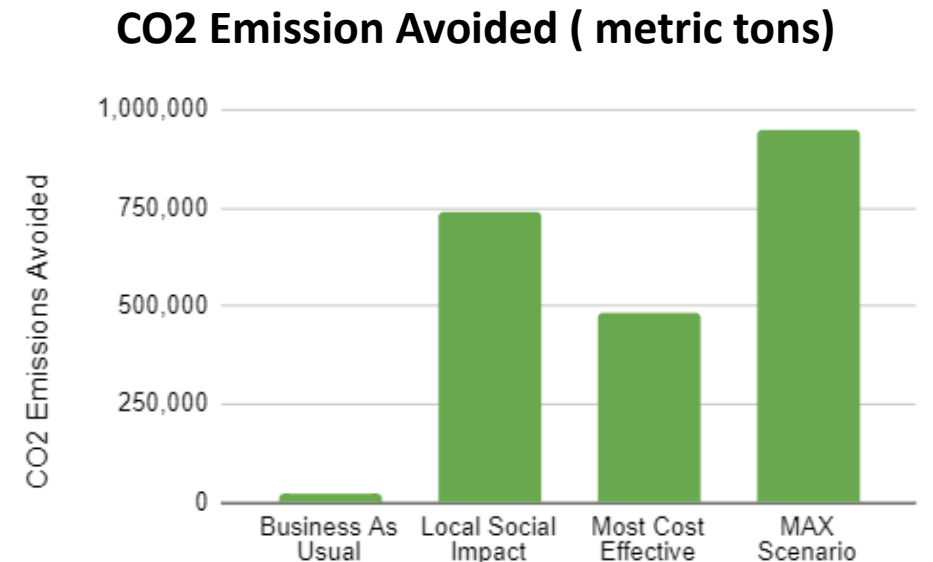
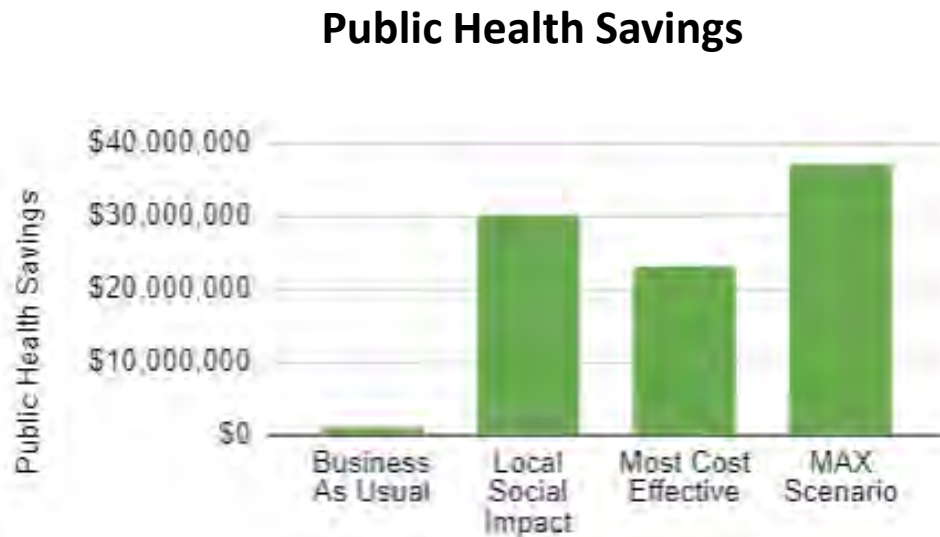
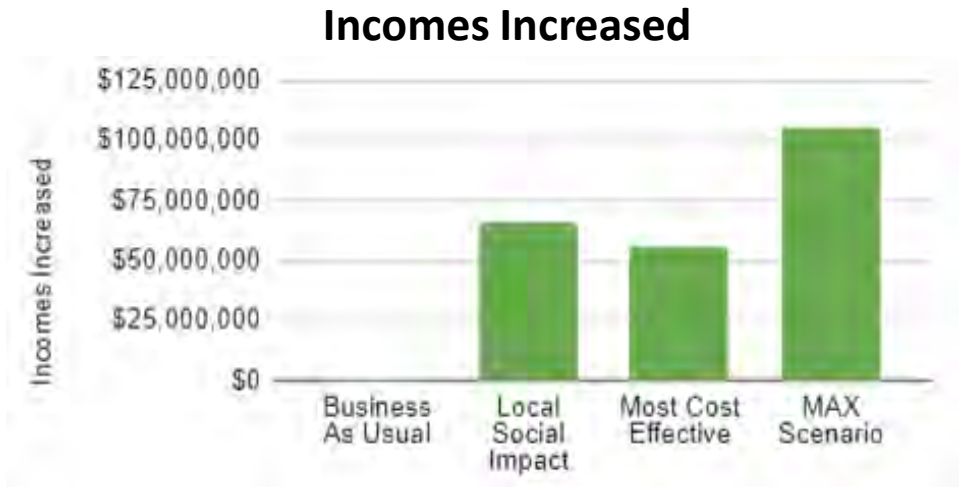
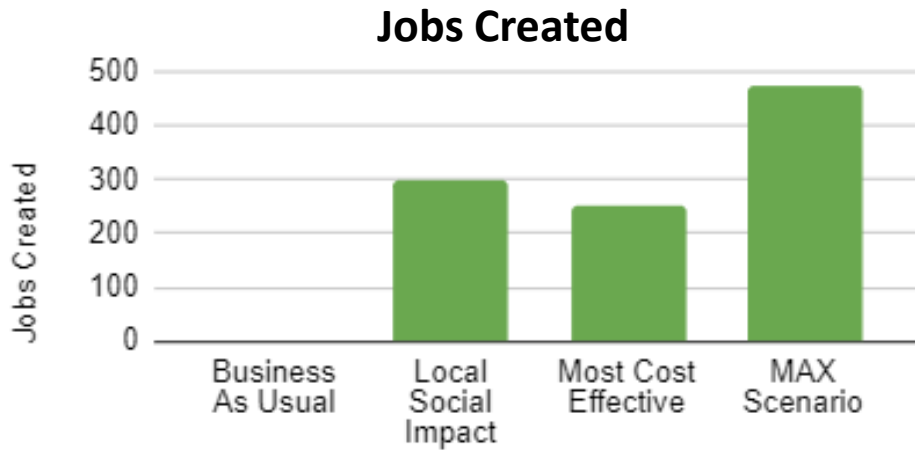




# Cost Analysis

Business As Usual		Local Social Impact*		Most Cost Effective		MAX Scenario	
<b>COST OVERVIEW</b>		<b>COST OVERVIEW</b>		<b>COST OVERVIEW</b>		<b>COST OVERVIEW</b>	
Cumulative Benefits (Million-\$)	6	Cumulative Benefits (Million-\$)	85	Cumulative Benefits (Million-\$)	72	Cumulative Benefits (Million-\$)	101
Cumulative Costs (Million-\$)	5	Cumulative Costs (Million-\$)	81	Cumulative Costs (Million-\$)	65	Cumulative Costs (Million-\$)	138
Net Benefits (Million-\$)	1	Net Benefits (Million-\$)	3	Net Benefits (Million-\$)	7	Net Benefits (Million-\$)	(37)
Benefit/Cost Ratio	1.2	Benefit/Cost Ratio	1.0	Benefit/Cost Ratio	1.1	Benefit/Cost Ratio	0.7

# IMPACT OF THE FOUR ENERGY MIX SCENARIOS



# Thank You and Next Steps

VISIT US at [cleanenergydecatur.com](https://cleanenergydecatur.com)

And take the survey

<https://survey.alchemer.com/s3/6585655/Clean-Energy-Decatur>

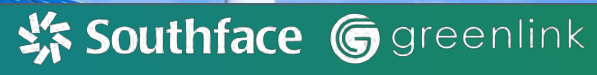




# Decatur Public Forum

March 8-9, 2022

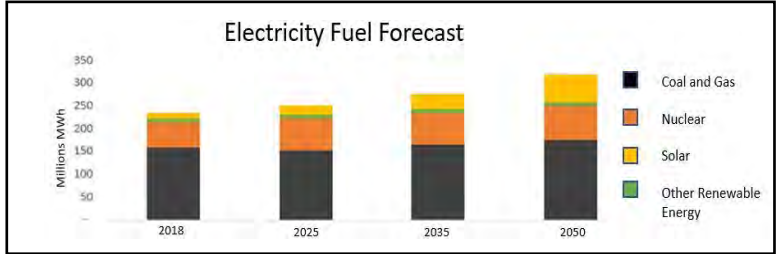
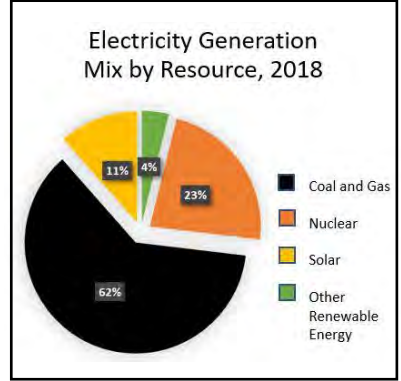
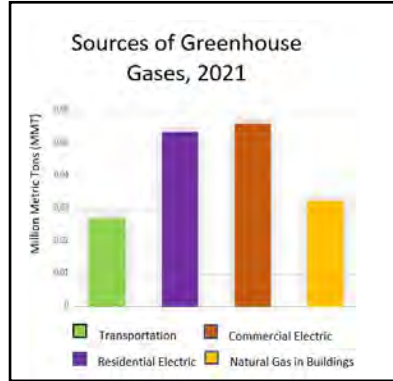
Decatur Recreation Center



## What is a Clean Energy Plan?

As part of an ongoing effort to protect the city and community against the negative impacts of climate change, Decatur is creating a Clean Energy Plan to help the City move away from its reliance on fossil fuels and towards a resilient, renewable future. Based on extensive community input, the Decatur Clean Energy Plan will identify clean energy priorities, such as:

- Equity
- Energy efficiency and renewable energy in affordable housing
- Community-wide clean energy education
- Workforce training opportunities
- Increasing alternative transportation and mobility options
- Establishing a deadline to achieve a clean energy transition
- Outlining actionable steps towards a clean energy future



## Clean Energy Toolkit

Policy	Description
Revolving Clean Energy Loan Fund	Self-replenishing clean energy fund from the municipality or state
Solar Energy Purchase Agreement (SEPA)	Sign a long-term contract to buy solar built on municipal and commercial rooftops
Track, Publish and Review Municipal Energy Usage	Provide energy efficiency planning and design approaches for local government operations through benchmarking, transparency and auditing
Improve Lighting in Municipal Buildings	Take advantage of savings opportunities through high-efficiency interior and exterior lighting solutions in municipal properties
Low-Income Weatherization & Workforce Development	Reduce energy consumption in low-income homes by providing home retrofits. Support this product by working with technical colleges and the community to create an equitable workforce development program
Electrify City Fleets and Buses	Electrify municipal internal combustion vehicles and buses

## How to Stay Involved!

EMAIL QUESTIONS OR COMMENTS TO CLEANENERGYDECATUR@GMAIL.COM



Beacon Municipal Center Proposed Improvements	Annual Cost Savings
Solar PV (170 kW)	\$21,875
LED Lighting and Controls	\$12,328
RCx HVAC and BAS	\$11,715
Ebster Recreation Center Proposed Improvements	Annual Cost Savings
Solar PV (89 kW)	\$14,147
RCx HVAC and BAS	\$10,924
Highest Efficiency Gym RTUs	\$4,566
Decatur Recreation Center Proposed Improvements	Annual Cost Savings
Solar (80 kW)	\$13,540
RCx Non-unitary HVAC	\$7,784
LED Lighting and Controls	\$5,473

# Municipal Buildings Assessment

Possible Financing
<input type="checkbox"/> Solar Energy Procurement Agreement <input type="checkbox"/> Purchase by City <input type="checkbox"/> City's Capital Improvements Fund <input type="checkbox"/> Guaranteed Savings Performance Contract

Vehicles in Fleet	Type of Vehicle	Quantity
Light Duty	Motorcycles	1
	Sedans	18
	Pickup Trucks	8
	Sport Utility Vehicles	25
	Utility Vehicle	1
	Refuse Hauler	14
Medium Duty	Medium-Duty Trucks	30
	Medium Duty Vans/Buses	8
Heavy Duty	Heavy Duty Trucks	34
Pursuit Vehicles	Sedans	25
	Sport Utility Vehicles	5
	Vans	1
Non-Road Engines	Brush Chipper	1
	Truck Chassis	1

# Fleet Assessment

Summary of Findings
<p>If ICE (internal combustion engine) vehicles are converted to electric when they reach the end of life,</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Light-duty vehicles will be 100% electric by 2030</li> <li><input type="checkbox"/> Medium-duty vehicle fleet will be fully converted by 2040</li> <li><input type="checkbox"/> Challenges associated with heavy-duty and pursuit vehicles</li> <li><input type="checkbox"/> Assuming a 1:1 charger to vehicle ratio, the City would need to install 162 chargers throughout the transition</li> </ul>



Legacy Park Admin. 500 South Columbia Dr. Decatur, GA 30030		Recommended Capacity: 70 kW
		Average Annual Savings: \$11,800
	Direct Purchase	SEPA
Net Present Value	\$65,000	\$41,000
Lifetime IRR	10.1%	-
Simple Payback Period	9	9
Public Works Building A 2635 Talley St. Decatur, GA 30030		Recommended Capacity: 90 kW
		Average Annual Savings: \$11,600
	Direct Purchase	SEPA
Net Present Value	\$2,000	(\$32,400)
Lifetime IRR	5.1%	-
Simple Payback Period	13	13

# Solar Assessment







# City of Decatur

## Clean Energy Plan

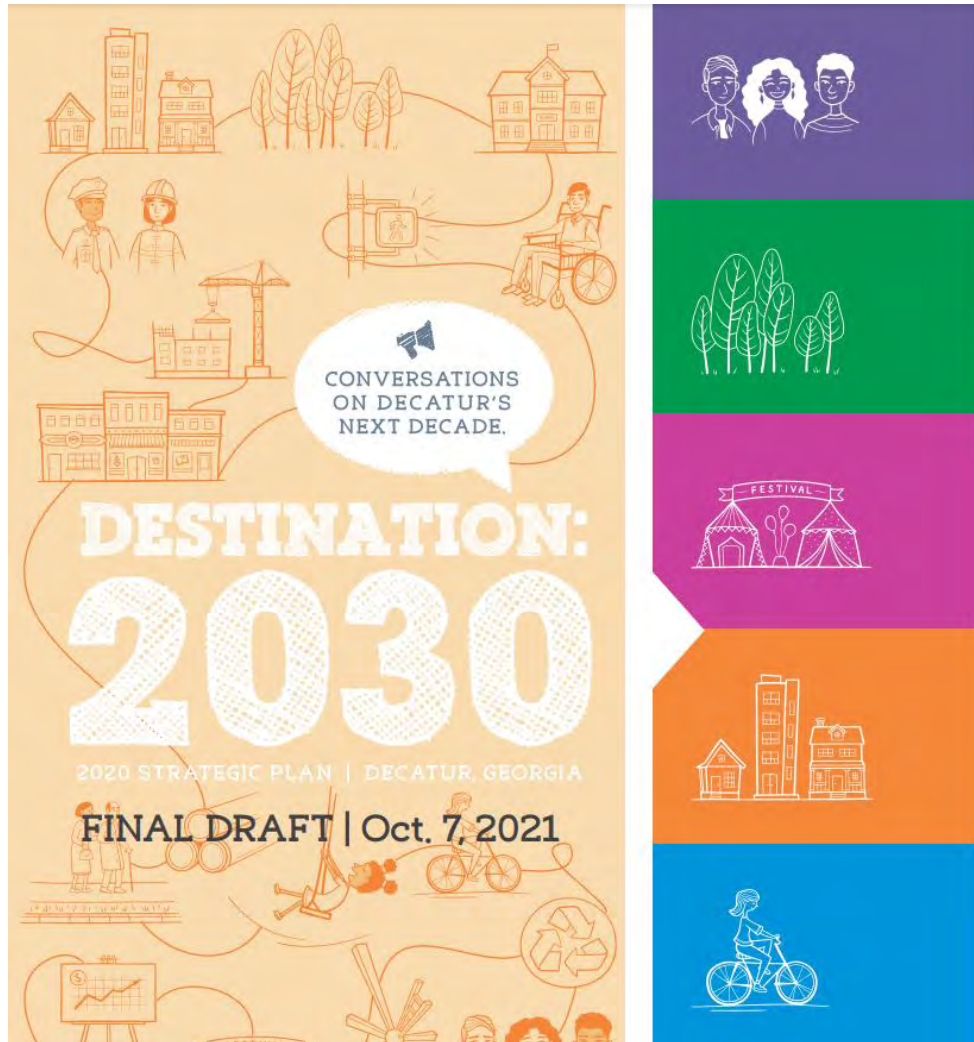
City Commission Work Session

August 15, 2022





# Planning Context: 2020 Strategic Plan

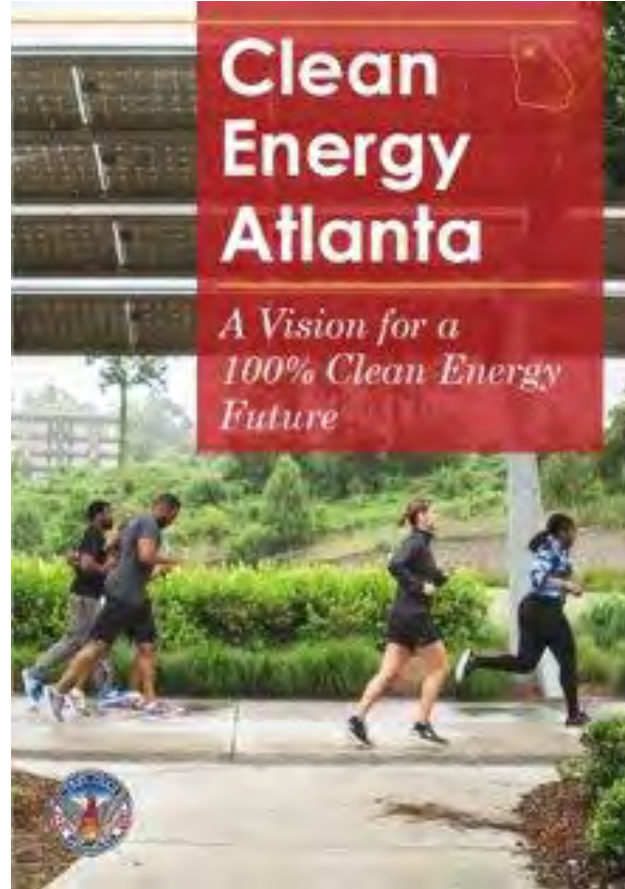
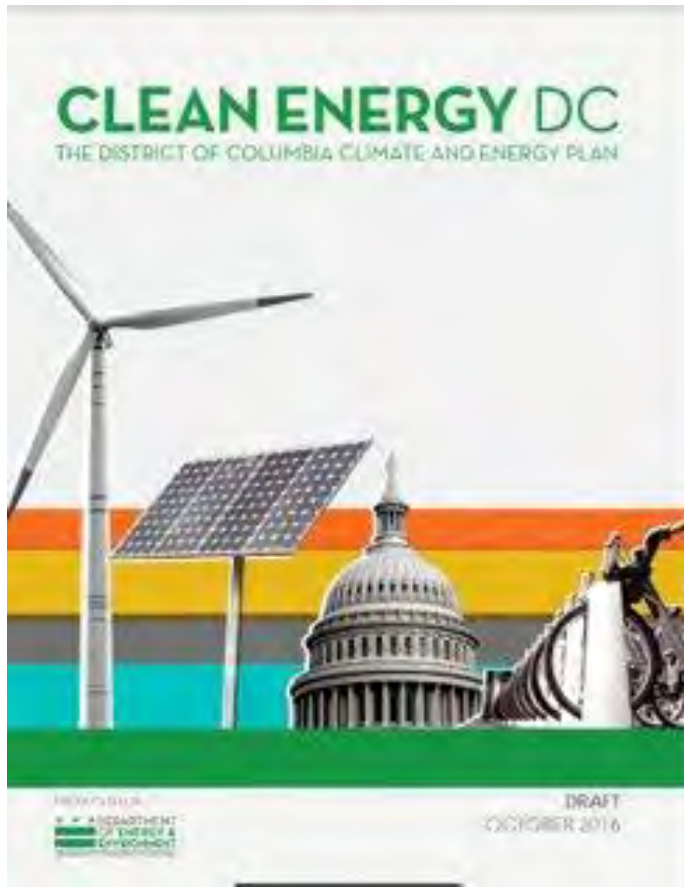


**Vision:** Decatur will foster an equitable, thriving, and welcoming community for all, today and in the future.

**We Will:**

1. Think holistically
2. Confront climate challenges
3. Work together
4. Embrace accountability
5. Pioneer Innovation

# Creating a Clean Energy Plan



# The Process

---



Initiate stakeholder and community engagement:

- Develop stakeholder engagement approach
- Develop community engagement approach using previous Decatur processes and the engagement squad ensuring a diverse engagement

Host stakeholder and community conversations (depending on COVID realities - can be held virtually or in-person)

- 1:1s with businesses and orgs
- Community-wide kickoff and roundtables with facilitators
- Youth engagement through canvassing

Review feedback from community and stakeholders

- Capture priorities and values of Decaturites
- Consider diverse energy system, policy, and program scenarios
- Release summary findings for community review

Develop Plan

- Select feasible scenarios based on engagement input, analytics from Greenlink, and team knowledge
- Draft and refine Clean Energy Plan, publishing 3 rounds of drafts
- Finalize and deliver Clean Energy Plan

Plan Enactment and Implementation

- Next Steps
- Develop and finalize toolkit and resources for education
- Policy, Programs & Technology



# Community Engagement

## 3 Community Roundtables

- Community and Equity
- Clean Energy and the Economy
- The Built Environment

## 3 Learning Opportunities

- Weatherization and Equity
- Georgia Techs' Kendeda Building
- Climate Change and Health

**2 day In-Person Charrette**

**260+ Survey Respondents**

**5 Youth Canvassing Events**



# Stakeholders and Partners of the Plan

---

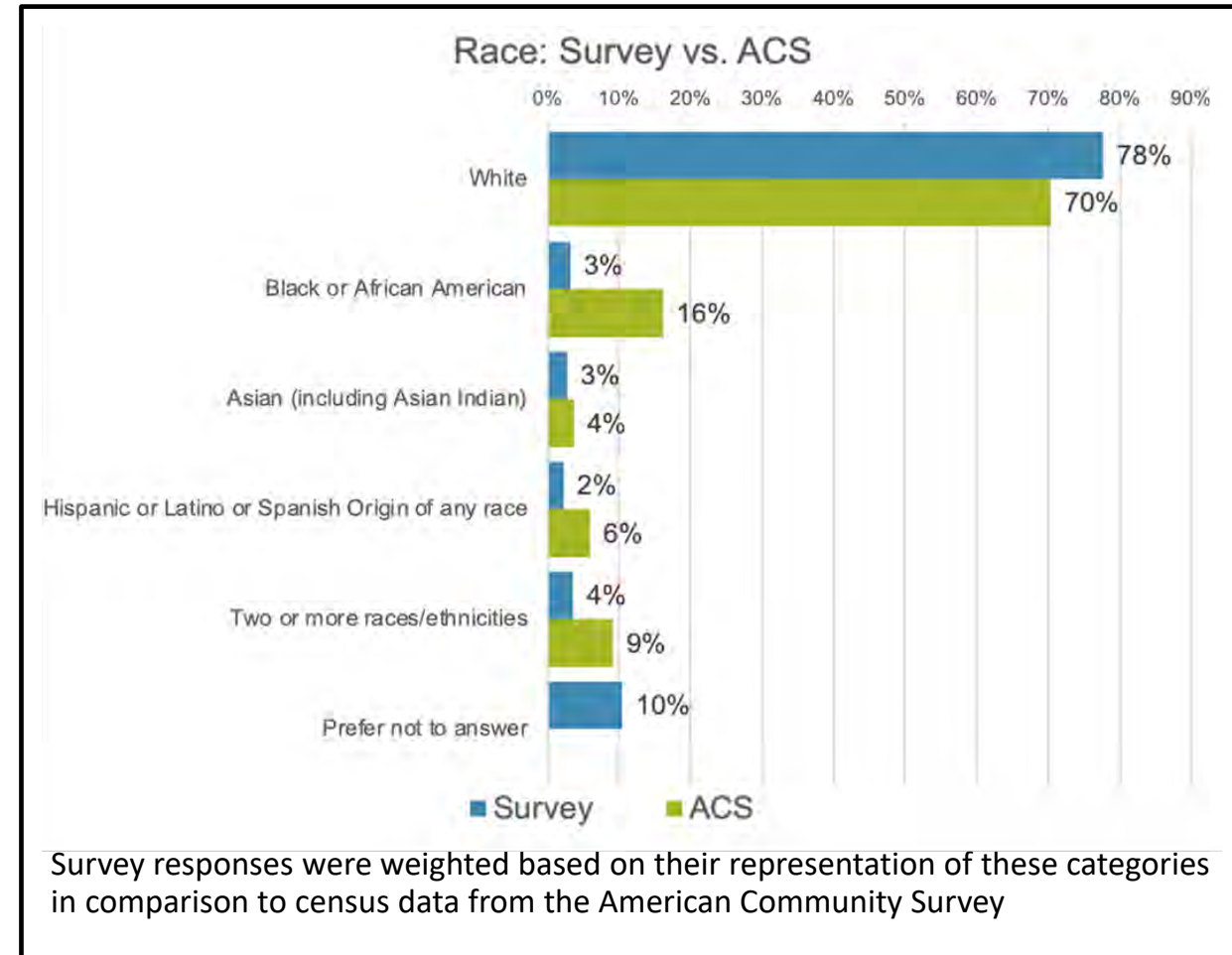
Community Engagement Stakeholders		
Agnes Scott Center for Sustainability	Georgia Environmental Finance Authority	Active Living Advisory Board
City Schools of Decatur	Emory University Transportation Office	Better Together Advisory Board
Decatur Housing Authority	Decatur Land Trust	Lifelong Community Advisory Board
Georgia Interfaith Power and Light	CoD Staff	Environmental Sustainability Board
Georgia Tech Kendeda Building	MLK Project	Georgia Clinicians for Climate Action
All in for Decatur 100	Decatur Business Association	Decatur Cares about Climate
DeKalb County		

# Survey Results

Over 260 people took Decatur's survey around the city's decision to move toward 100% clean and renewable energy

Of those respondents, 222 were Decatur residents and 41 were Atlanta residents.

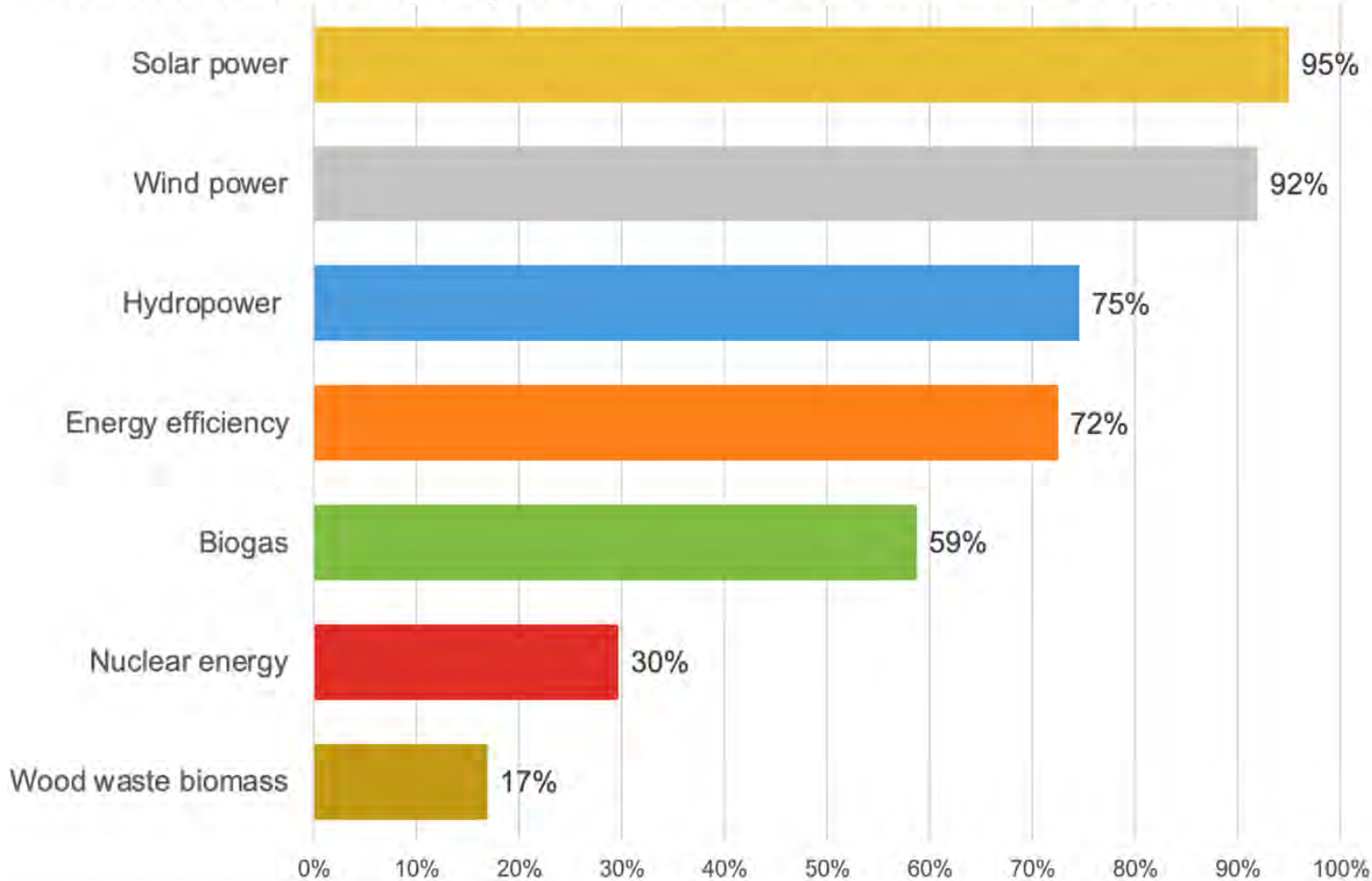
- **Race:** 196 White, 13 Black, 9 Asian Pacific, 5 Hispanic or Latino respondents
- **Gender:** 50% female, 44% male
- **Age:** 70% of respondents were 40+, where 30% were 60+ and 11% were under 30
- **Income:** Over half reported a household income of \$100k+ in 2019
- **Owner/renter status:** 85% owners, 11% renters





# Survey Results: What is considered clean and renewable?

Which of the following do you consider clean and renewable energy sources?



Respondents overwhelmingly consider **solar, wind, hydropower, and energy efficiency** to be clean and renewable energy sources

Nuclear energy lacks a strong endorsement from respondents

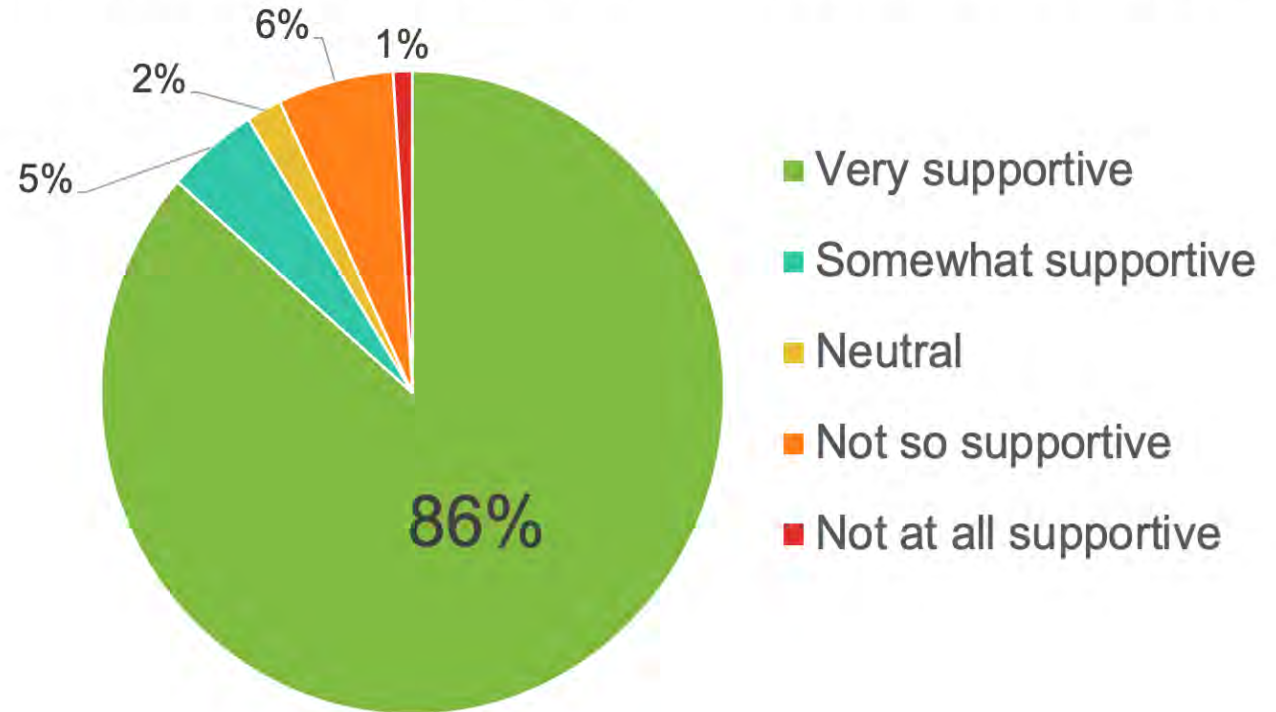
# Survey Results: Key Questions

# 86%

Respondents are **very supportive** of a transition to cleaner energy

Not counting write-in

If you were aware of Decatur's plans to transition to clean and renewable energy prior to this survey, how supportive are you of transitioning to cleaner energy?



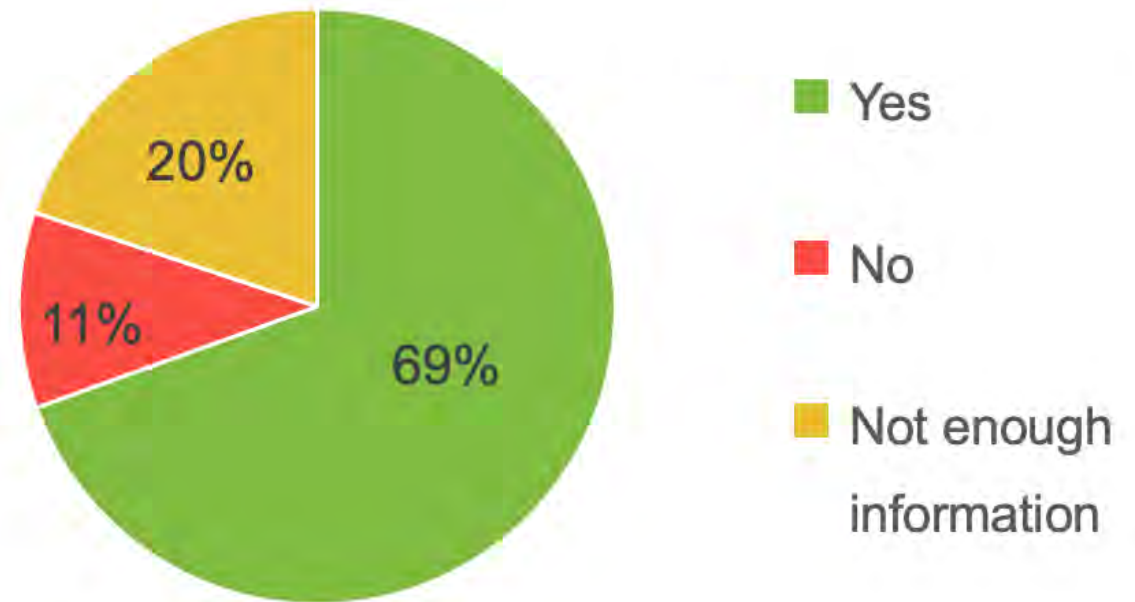
# Survey Results: Key Questions

69%

Respondents want to see Decatur completely phase out fossil fuels

Not counting write-in

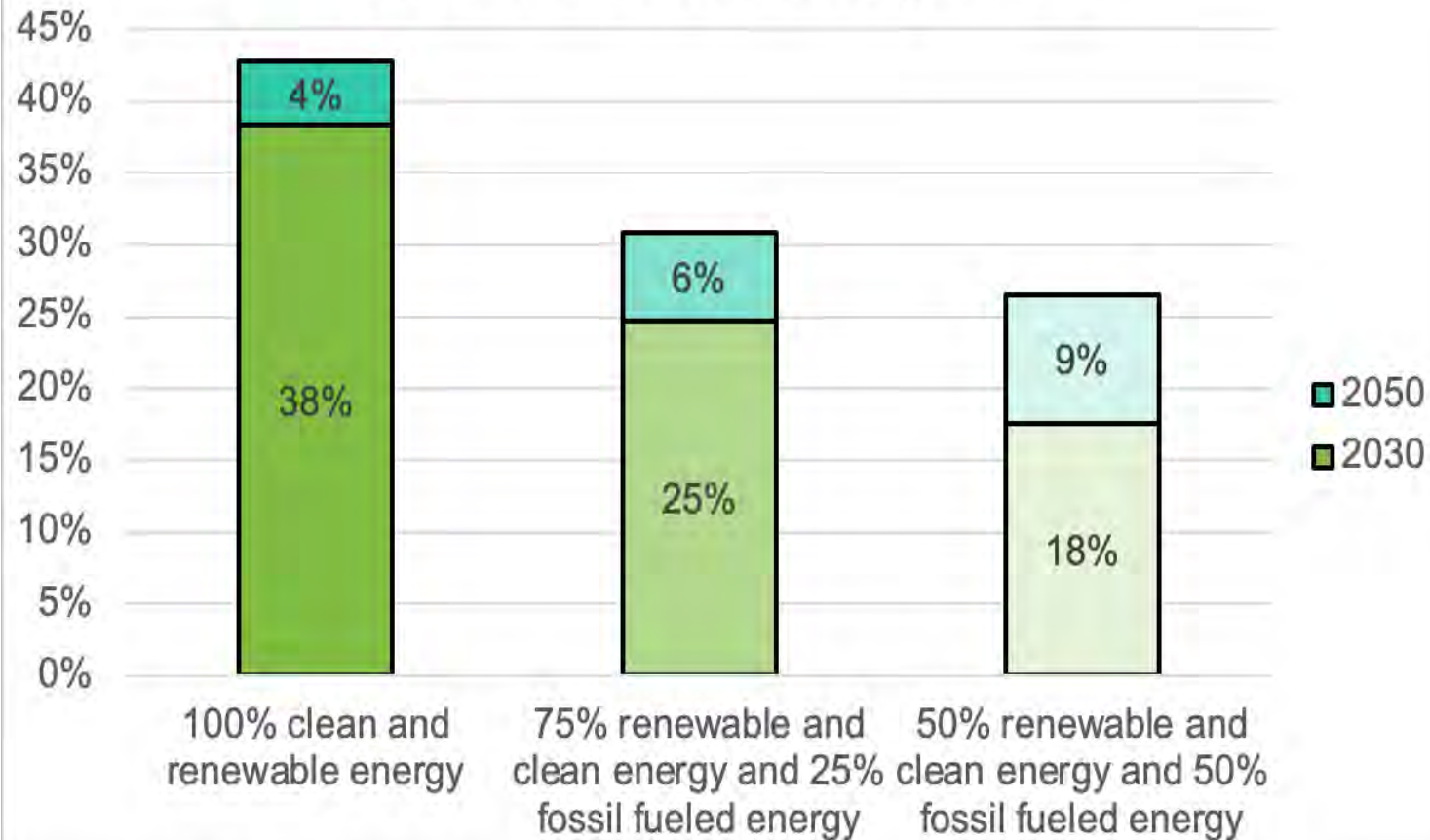
Do you think Decatur should completely phase out its use of fossil-fueled energy sources, such as coal and natural gas?





# Survey Results: Timeline

What timeline do you most agree with?



# 63%

Respondents want **at least**  $\frac{3}{4}$  of their energy to come from clean and renewable energy sources by 2030

# 81%

Respondents want **at least 50%** clean and renewable energy by 2030

A **majority** of respondents want these changes to be made

# by 2030

# Survey Results: Common Themes

---

## **Decatur should be a leader when it comes to reducing their impact on climate change:**

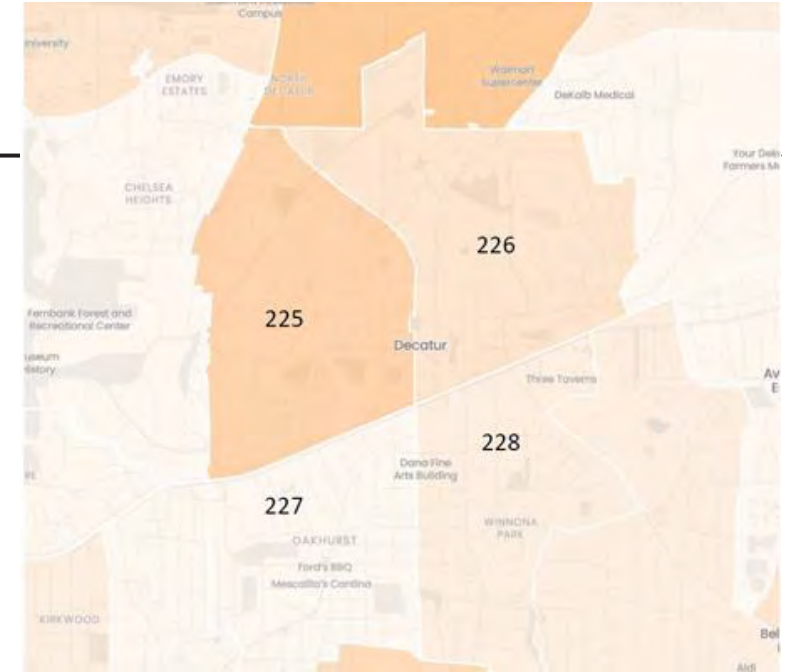
- *“We as a city should and absolutely MUST be the leader on this. We need to be the model for the rest of the state and all the south.”*
- *“[We need to] hold city leaders accountable to make this happen as quickly as possible.”*
- *“Prioritize commercial and municipal shifts before [making requirements from the] residential [sector].”*

## **Decatur needs to be transparent and engaging in their clean and renewable energy transition:**

- *“Decatur should make this a flagship and very visible program.”*
- *“Publicize the goals constantly; get material to classrooms”*

# Energy Burdens and Centering Equity

According to the Greenlink Equity Map (GEM), approximately **14% of households** in census tracts 225 – 228 spend more than 10% of their income on energy bills, making them **severely energy burdened**.



Energy burden is the percent of income a household spends on electricity and/ or natural gas bills. Causes of energy burden include:

- poor insulation,
- outdated appliances,
- deteriorating housing,
- excessive energy consumption.

High energy burden is particularly common for renters, low-income households, and communities of color that have disproportionately impacted by systemically racist housing policies.

Census Tract	Number of Households	Number of Households with Severe Energy Burden	Median Household Income
225	2662	638	\$90,645
226	2970	328	\$82,129
227	1730	141	\$136,333
228	1308	161	\$136,705



# ACES Pathway Summary

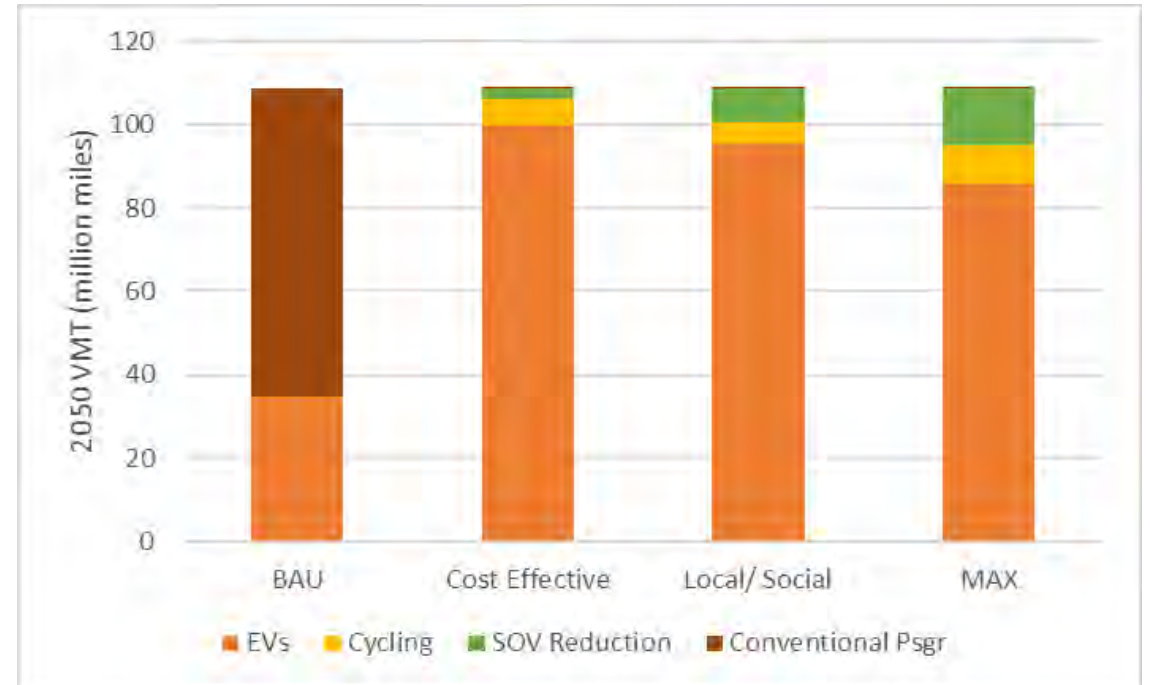
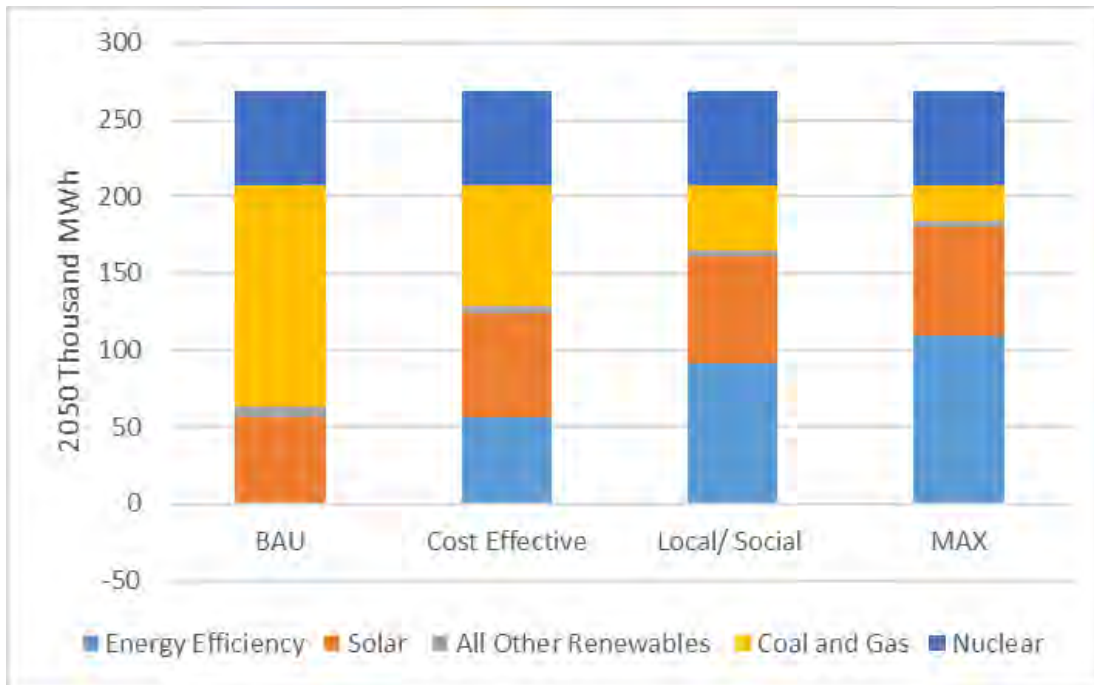
- Business-as-Usual (BAU) - No changes are made
- Most Cost-Effective (MCE) - Benefit/cost ratio prioritized
- Social and Loc Impact (SLI) - Higher community benefits than MCE, lower costs than MAX
- Maximum (MAX) -Decatur does everything in its power to reach 100% clean and renewable energy

**Pathway Cumulative (2030 – 2050) Outcomes**

	<b>BAU</b>	<b>MCE</b>	<b>SLI</b>	<b>MAX</b>
Cumulative Benefits (\$M)	0	428	520	634
Cumulative Costs (\$M)	0	35	57	86
Benefit/Cost Ratio	n/a	12.2	9.1	7.4
Net Jobs Created	0	120	160	225
Total Household Income Increase (\$M)	0	24	33	47
Gross Regional Product Growth (\$M)	0	55	72	99
Public Health Savings (\$M)	0	26	36	43
Household Bill Savings	0	20	24	30
CO2 Emissions Avoided (MMT)	0	0.59	0.92	1.17

# Pathways to 100% Clean Energy

*“During stakeholder and learning sessions, Decatur residents and government leaders compared each modeled scenario to a business-as-usual (BAU) scenario, or the scenario in which no action is taken and Decatur continues to move forward without any new policy intervention. If no new actions are taken, Decatur’s total energy consumption is expected to be 240 thousand MWh –primarily composed coal and natural gas – by 2035.”*



## Clean Energy Goals

---

- **2030** – Municipal buildings will be supplied by 100% clean and renewable energy
- **2035** – Municipal fleet will be fully electrified; Community buildings will be supplied by 100% clean and renewable electricity
- **2050** – All community uses, including transportation, will be supplied by 100% clean and renewable energy



# Clean Energy Impact Areas

---

## Leading by Example

- Transition all municipal buildings to 100% clean and renewable energy by 2030

## Building Community Through Equitable Investment

- Provide funding for energy audits, weatherization, and rooftop solar installations through Community Energy Funds eligible for donations from the public
- Fund local clean energy initiatives

## Community Energy Fund

- Establish a sustainable mechanism to support community projects; Focus on equity and local workforce development

## Greening the Built Environment

- Zero Energy Ready
- Building Performance Standard

## Moving to Low and No-Carbon Transportation

- Reduce single-occupant vehicle trips by enhancing cycling infrastructure and e-bike access
- EV Shuttle
- VMT Reduction

## Advocating for Larger Solutions

- Actively engage and intervene in future IRPs
- Create partnerships with similar cities

## Closing the Gap

- Design local offset programs
- Leverage Clean Energy Advisory Board
- Buy local RECs (strategy)-long term (after 2030 strategy)

# Pathways to 100% CE: Residential and Commercial Energy Efficiency

---

## Expand Existing Programs

- COD Community and Economic Development Department forms partnership with ACTION
- MLK Service Project
- Decatur Land Trust Home Rehab Program

## Create Community-wide Energy Efficiency and Weatherization Program

- Based on success of 'Solarize' to take advantage of bulk purchasing

# Pathways to 100% CE: Benchmarking and Performance Standards

---

## Policy Options and Goals

- Improve and advance code towards net-zero energy requirements for new municipal, institutional, and commercial construction
- Benchmarking: Require commercial and multifamily buildings to track and report energy and water consumption
- Performance Standards: Require periodic energy performance improvements

**2035**

Net Zero-Ready

**2038**

Net Zero



# Pathways to 100% CE: Electric Vehicles (EVs) and Public Transportation

---

## 10% Reduction in VMTs by 2030 with TDM Programming

- Expand local bus service including “first and last mile” connections to metro transit
- Parking management and monitoring, financial incentives
- Continue densification of commercial districts, transit-oriented development
- Commute reduction program
  - Carpool/vanpool through employer/city-provided vehicles
  - Transit incentives such as free MARTA pass

## Increase Bike/Pedestrian Commutes to 15% of total

- Bike lane striping, expanded bike lane and safety infrastructure
- Bike and E-bike rental program
- Achieve Gold Status: Bicycle Friendly Community Certification

# Pathways to 100% CE: State Level Advocacy

---

## 2022

- Expanded efficiency and equity-focused funding in Georgia Power (IRP)\*
- Monitor PSC proceedings
- Advocate for net metering (“monthly netting”) in Georgia Power Rate Case

## 2025

- IRP intervention with specific program requests from the Decatur Clean Energy Plan

## 2026 and Onward

- Decatur leadership in the DSMWG
- Re-negotiate Franchise Agreement with Georgia Power

# Pathways to 100% CE: Renewable Energy Credits (RECs)

---

## Purchase Locally

- Decatur > County > Metro > Southeast > National
- Consider carbon avoidance (if using National)
- Best to invest somewhere that doesn't have as much renewable energy

## Bulk Buying

- Buy them all at once (cheaper) or buy them annually (more expensive, but more options)
- Buying them now (\$5-10/ MW ) is cheaper but would still have to buy every year - based on a typical national price
- Building your own solar (\$70-80/ MW), but it will be there for the entirety of the 30 years





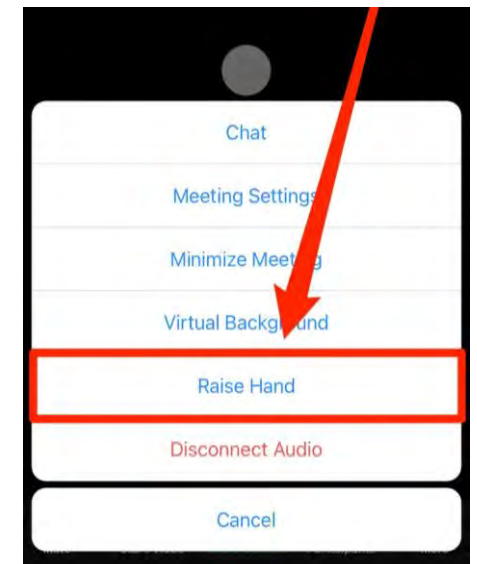
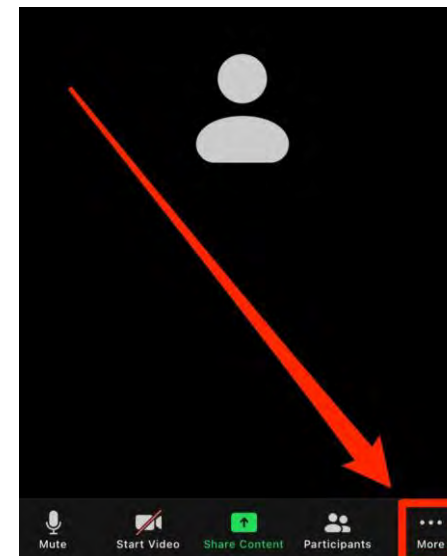
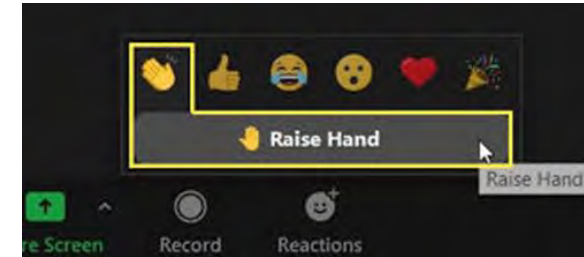
# THANK YOU!

VISIT US at [cleanenergydecatur.com](https://cleanenergydecatur.com)

@cityofdecaturga | [cleanenergydecatur@gmail.com](mailto:cleanenergydecatur@gmail.com)

# HOUSEKEEPING: ZOOM LOGISTICS

- Only presenters will have video & voice during the presentation.
- After the presentation, we will start the Q & A portion.
- At this time, you can request to talk using the phone icon under your name.
- Please feel free to ask question via the chat box throughout the session, and we will answer them at the end of the session





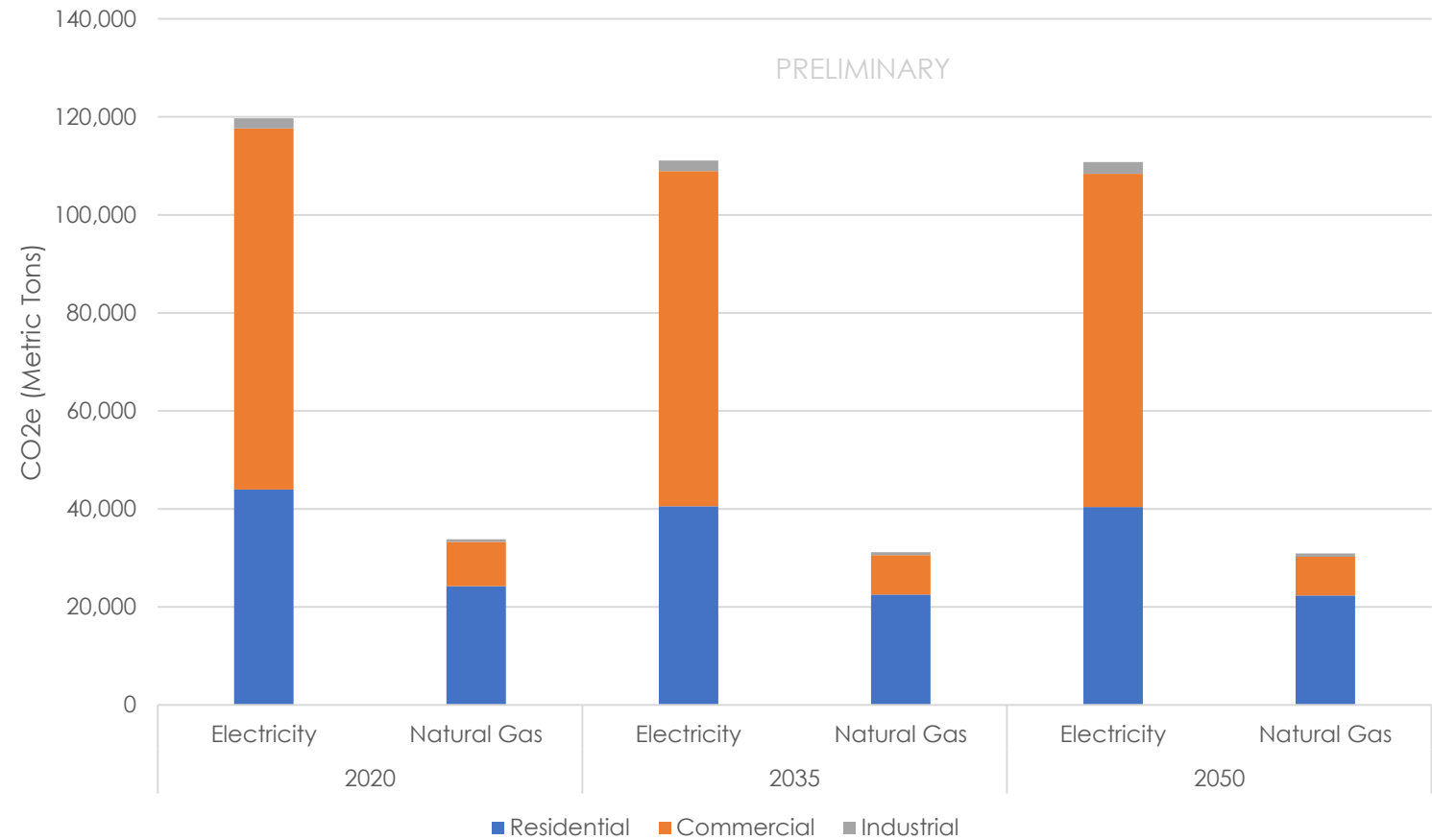
# APPENDIX



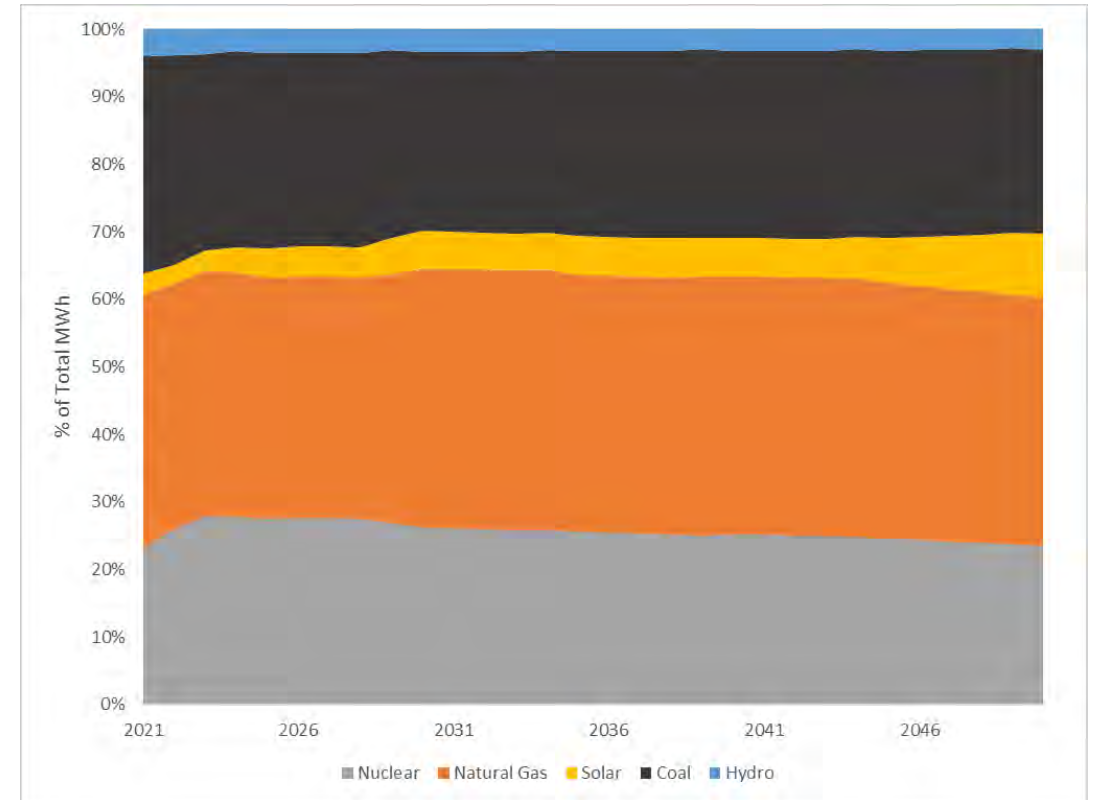
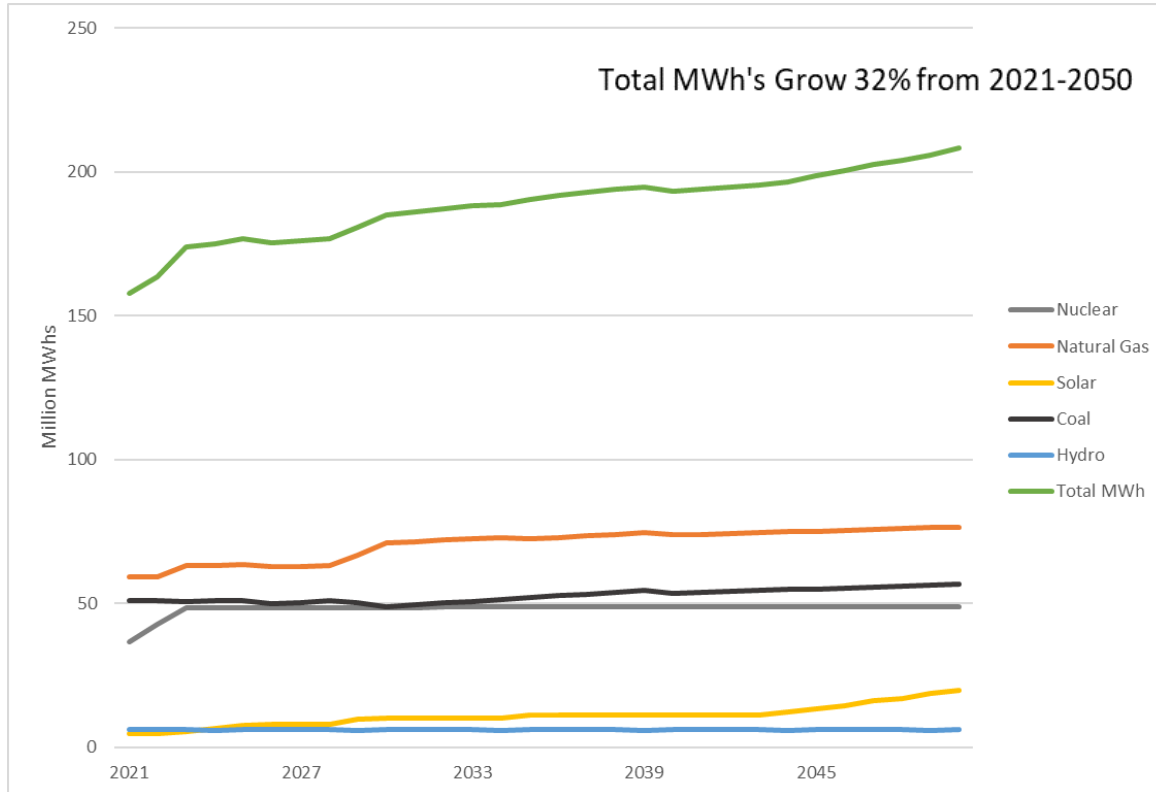
# Greenhouse Gas Emissions in Decatur

Residential buildings consume a majority of Decatur's energy demand (51%) but produce 17% less CO<sup>2</sup> emissions than commercial buildings.

Total emissions reduce by 8% from 2020 to 2050 if Decatur continues with business as usual.

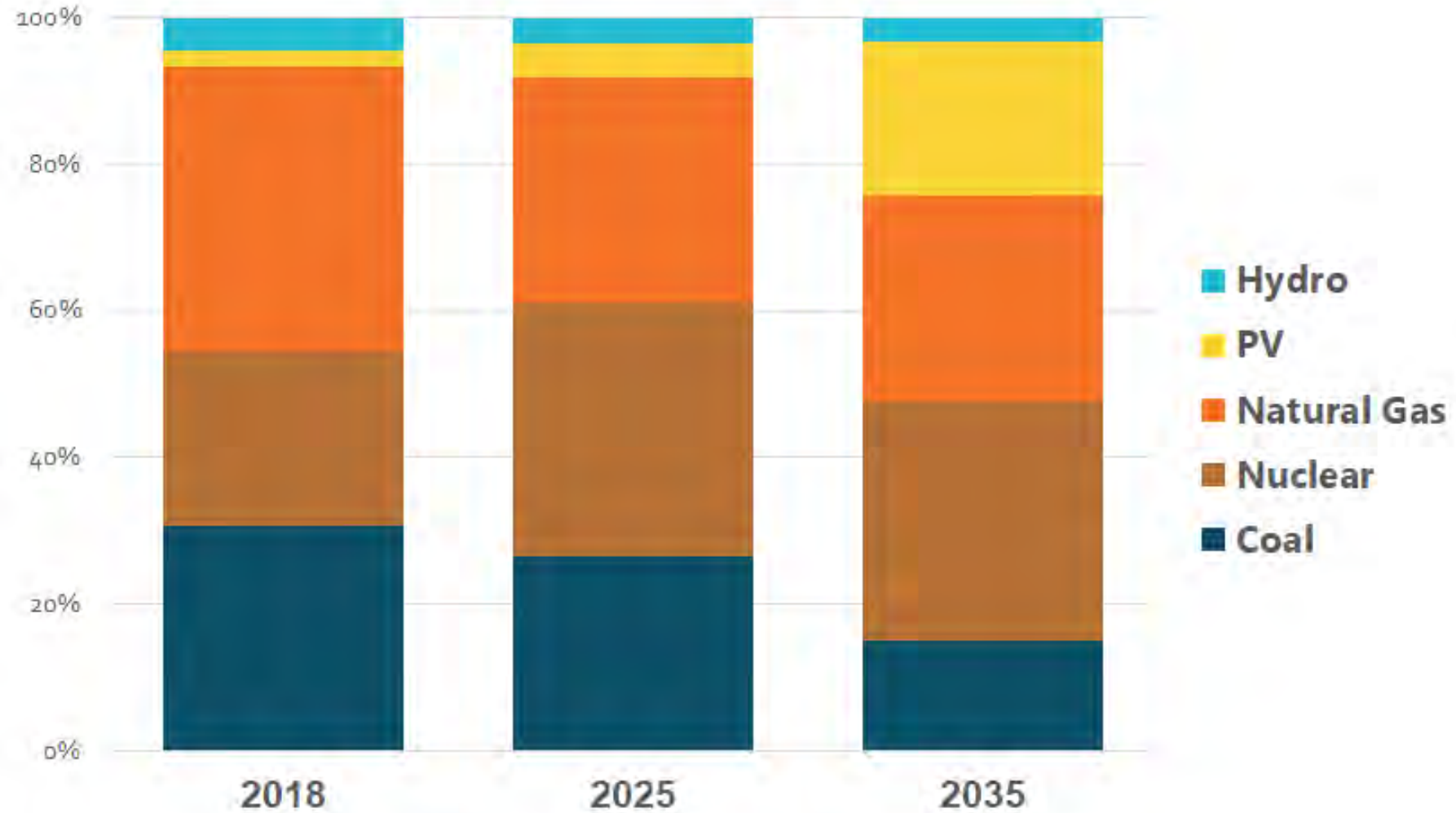


# Our Current Sources of Energy



# Our Current Sources of Energy

---





# Current Clean Energy Plan Outline

---

A	LETTER FROM THE MAYOR
B	EXECUTIVE SUMMARY
C	INTRODUCTION
D	THE CITY OF DECATUR TODAY
E	DECATUR'S CLEAN ENERGY LANDSCAPE
F	PATHWAYS TO 100% CLEAN ENERGY
G	COMMUNITY ENGAGEMENT PROCESS
H	CLEAN ENERGY ACTIONS

# Current Outline

A	LETTER FROM THE MAYOR
B	EXECUTIVE SUMMARY
C	INTRODUCTION
D	THE CITY OF DECATUR TODAY
E	DECATUR'S CLEAN ENERGY LANDSCAPE
F	PATHWAYS TO 100% CLEAN ENERGY
G	COMMUNITY ENGAGEMENT PROCESS
H	CLEAN ENERGY ACTIONS

## INTRODUCTION

On October 28th, 2022, the City of Decatur announced its initiative to develop Decatur's Clean Energy Plan for a clean energy future. This Plan incorporates the vision, mission, and climate action commitments from the 2020 Strategic Plan, which are:

**Think Holistically** - Create interconnected climate and social policies, programs, and projects by identifying gaps in equity and leveraging community-driven opportunities.

**Confront Climate Challenges** – Strengthen environmental sustainability and resiliency by aligning Decatur's goals and practices.

**Work Together** – Continue to design and promote community engagement opportunities and regional, cross-sector partnerships.

**Embrace Accountability** – Decatur commits to learning from past injustices to measure progress toward equitable climate outcomes.

**Pioneer Innovation** – Continue to seek bold and creative climate and social solutions to serve as an example to others.

# Current Outline

A	LETTER FROM THE MAYOR
B	EXECUTIVE SUMMARY
C	INTRODUCTION
D	THE CITY OF DECATUR TODAY
E	DECATUR'S CLEAN ENERGY LANDSCAPE
F	PATHWAYS TO 100% CLEAN ENERGY
G	COMMUNITY ENGAGEMENT PROCESS
H	CLEAN ENERGY ACTIONS

## Decatur's Energy Landscape

In 2019, the community-wide (residential and commercial buildings) electricity consumption was 241 million MWh.

The municipal activities of Decatur itself account for a small though important portion of energy use and CO<sub>2</sub> emissions - municipal building activities contribute to about 1.7 thousand metric tons of emissions.

Within the transportation sector, the Decatur community's 2019 vehicle miles traveled totaled approximately 84 million miles, equal to 38 thousand tons of CO<sub>2</sub> emissions.

The role of utilities in Decatur's energy consumption



# Current Outline

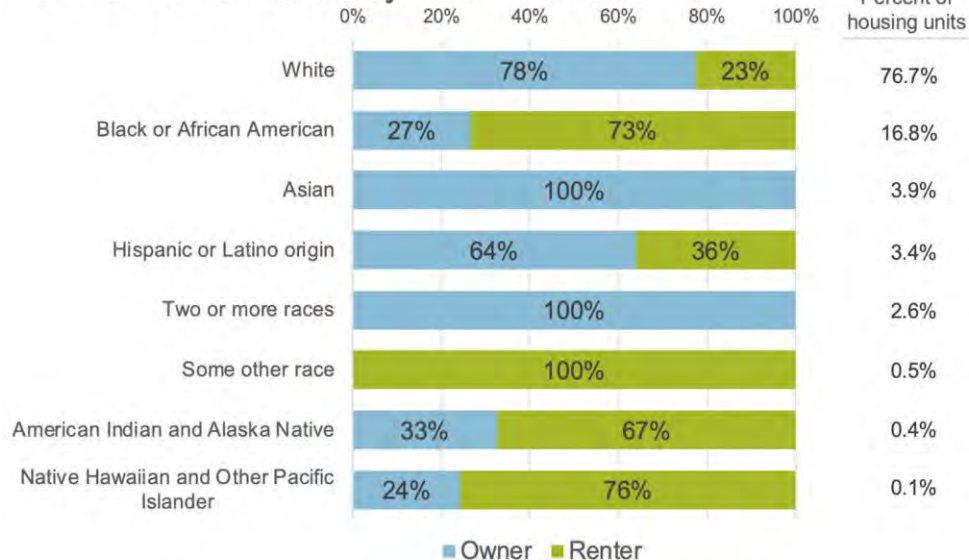
A	LETTER FROM THE MAYOR
B	EXECUTIVE SUMMARY
C	INTRODUCTION
D	THE CITY OF DECATUR TODAY
E	DECATUR'S CLEAN ENERGY LANDSCAPE
F	PATHWAYS TO 100% CLEAN ENERGY
G	COMMUNITY ENGAGEMENT PROCESS
H	CLEAN ENERGY ACTIONS

## THE CITY OF DECATUR TODAY

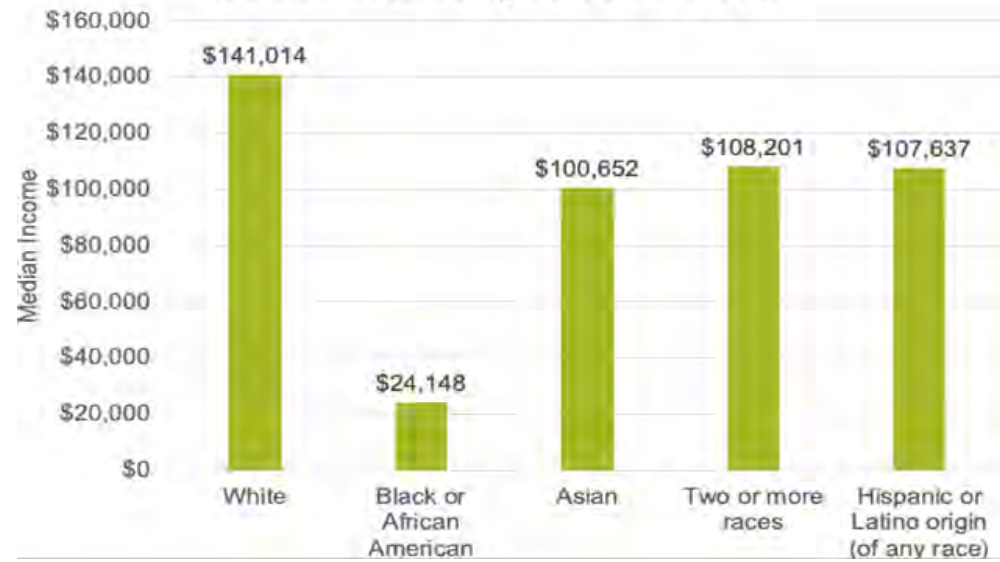
Decatur's demographics as they relate to race, education, income, and housing tenure

The economics of clean and renewable energy; *"roughly 10 jobs are created or sustained for every million dollars invested toward residential energy efficiency, each of which have an average annual salary of \$53 thousand. Construction workers, HVAC technicians, program administrators, and electricians are a few of the specialists that make up this field"*.

Owner/Renter Status by Race in Decatur

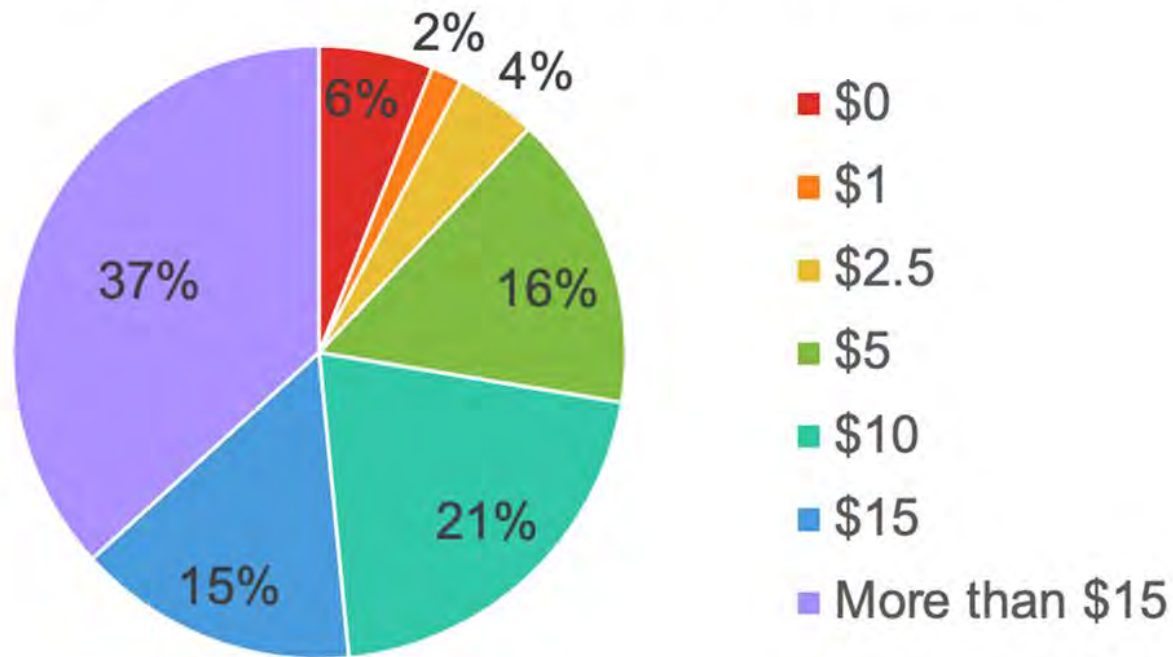


Median Income by Race in Decatur



# Survey Results: How much are respondents willing to spend?

In addition to your monthly energy bill, what is the maximum amount you could or would spend to receive clean and renewable energy?



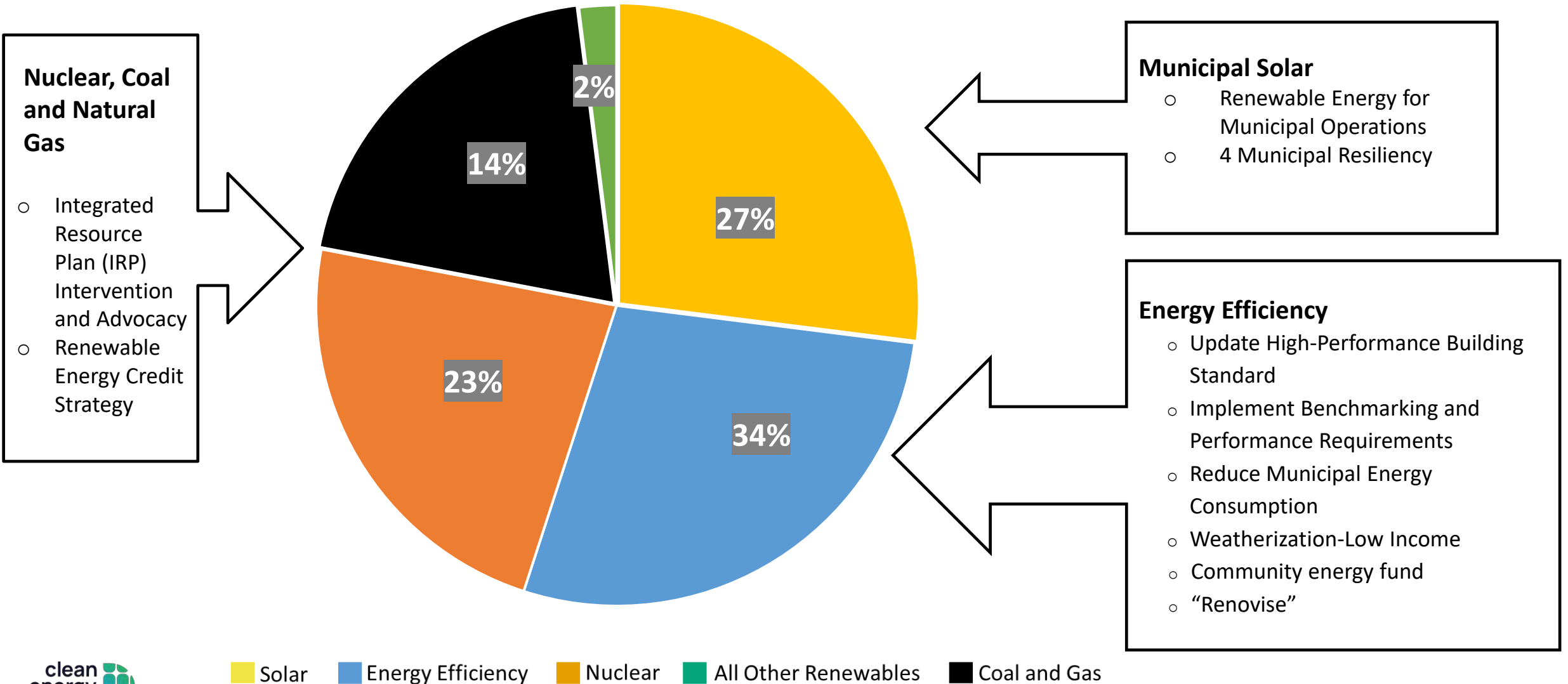
88%

Respondents would spend **\$5 or more** a month for clean energy

37%

Respondents would spend **\$15 or more** a month for clean energy

# Decatur's Top Policy Options





# Decatur Clean Energy Plan

July 28, 2022



## 2030

Municipal Buildings supplied with 100% Clean and Renewable Energy

## 2035

Community Buildings and Municipal Vehicles supplied with 100% Clean and Renewable Electricity

## 2030

All other community uses, including Transportation supplied with 100% Clean and Renewable Energy

### Clean Energy Action Areas and Pathways

Leading by Example	<ul style="list-style-type: none"> <li>○ Transition all municipal buildings to 100% clean and renewable energy by 2030</li> </ul>
Building Community Through Equitable Investment	<ul style="list-style-type: none"> <li>○ Provide funding for energy audits, weatherization, and rooftop solar installations through Community Energy Funds</li> <li>○ Fund local clean energy initiatives</li> </ul>
Developing a Community Energy Fund	<ul style="list-style-type: none"> <li>○ Work with partners to allow charitable donations</li> </ul>
Greening the Built Environment	<ul style="list-style-type: none"> <li>○ 2035 Net Zero-Ready</li> <li>○ 2038 Net Zero</li> </ul>
Moving to Low and No-Carbon Transportation	<ul style="list-style-type: none"> <li>○ Enhance cycling infrastructure and e-bike access</li> <li>○ 13% Increase in Bike/Pedestrian Commutes</li> <li>○ 10% Reduction in VMTs by 2030 with TDM Programming</li> </ul>
Advocating for Larger Solutions	<ul style="list-style-type: none"> <li>○ Actively engage and intervene in future IRPs</li> <li>○ Create partnerships with similar cities</li> </ul>
Closing the Gap	<ul style="list-style-type: none"> <li>○ Collegiate program for local offsets</li> <li>○ Leverage Clean Energy Advisory Board</li> <li>○ Buy local RECs</li> </ul>

# Community Engagement

*Community engagement directly informed the Decatur Clean Energy Plan Pathways*

## 3 Community Roundtables

- Community and Equity
- Clean Energy and the Economy
- The Built Environment

## 3 Learning Opportunities

- Weatherization and Equity
- Georgia Techs' Kendeda Building
- Climate Change and Health

## 2 day In-Person Charrette

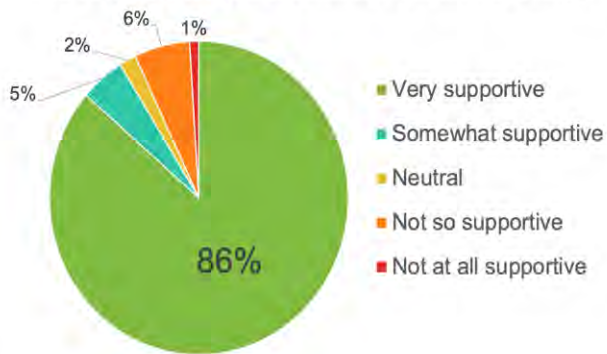
**260+ Survey Respondents**

**5 Youth Canvassing Events**

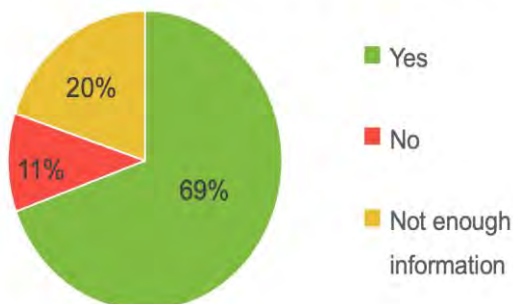


# Survey Results

If you were aware of Decatur's plans to transition to clean and renewable energy prior to this survey, how supportive are you of transitioning to cleaner energy?



Do you think Decatur should completely phase out its use of fossil-fueled energy sources, such as coal and natural gas?



What timeline do you most agree with?

