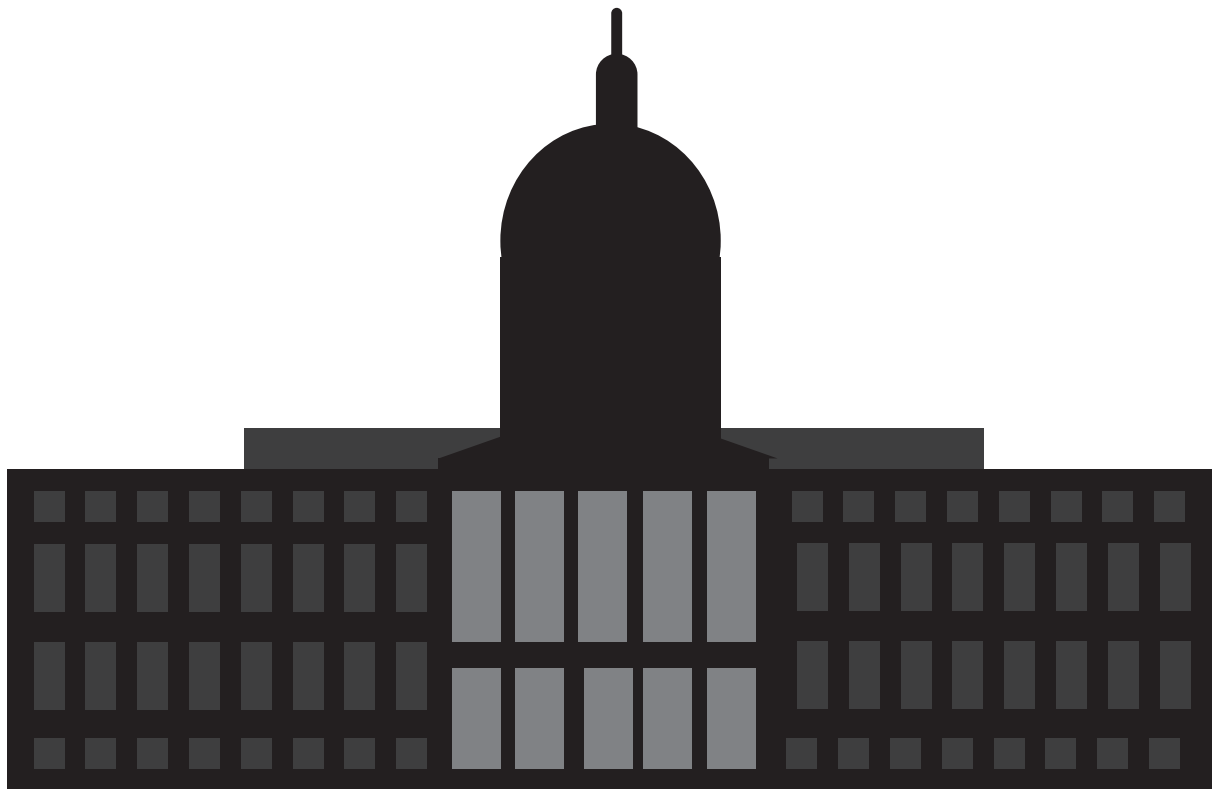


Data provided for the  
CDP Cities 2015 Report

[www.cdp.net](http://www.cdp.net)

# City of Atlanta



Written by



Report analysis & information  
design for CDP by

**AECOM**

In partnership with



**Bloomberg  
Philanthropies**



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CDP, C40 and AECOM are proud to present results from our fifth consecutive year of climate change reporting for cities. It was an impressive year, with 308 cities reporting on their climate change data (six times more than the number that was reported in the survey's first year of 2011), making this the largest and most comprehensive survey of cities and climate change published to date by CDP. City governments from Helsinki to Canberra to La Paz participated, including over 90% of the membership of the C40 – a group of the world's largest cities dedicated to climate change leadership.

Approximately half of reporting cities measure city-wide emissions. Together, these cities account for 1.67 billion tonnes CO<sub>2</sub>e, putting them on par with Japan and UK emissions combined. 60% of all reporting cities now have completed a climate change risk assessment. And cities reported over 3,000 individual actions designed to reduce emissions and adapt to a changing climate. CDP, C40 and AECOM salute the hard work and dedication of the world's city governments in measuring and reporting these important pieces of data. With this report, we provide city governments the information and insights that we hope will assist their work in tackling climate change.

This document contains the questionnaire data provided to CDP from Atlanta as part of its 2015 CDP submission.

To see all of the results for all participating cities, visit <https://www.cdp.net/cities>.

The graphics in this document are from the 2015 CDP Cities infographic.



Number of cities responding per year

48

2011

73

2012



110

2013



# 207

2014

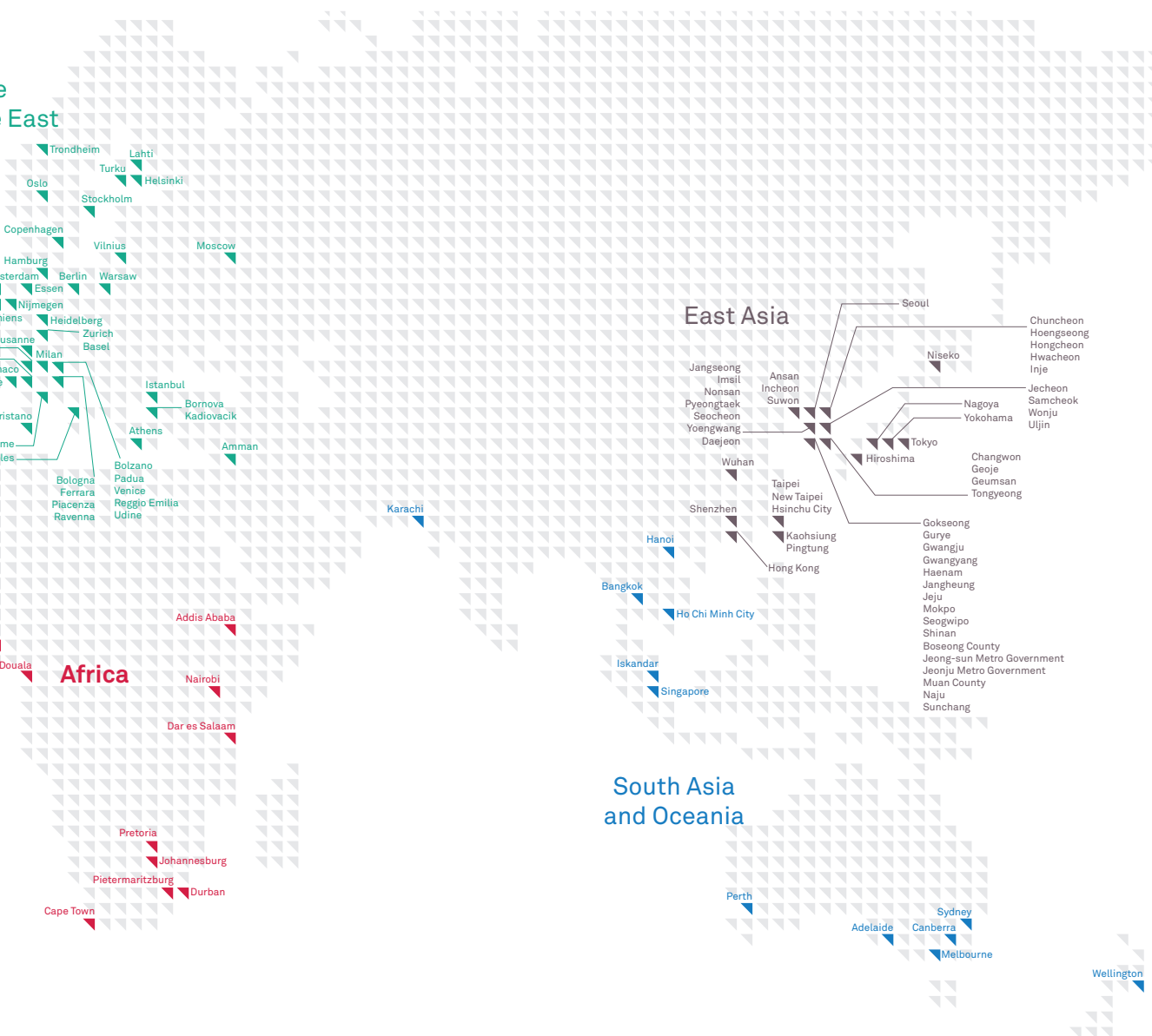


# 308

2015



Atlanta participation

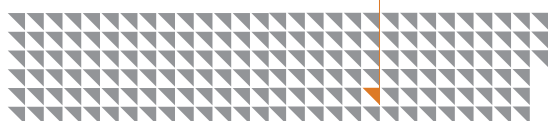


Total population of cities responding in 2015

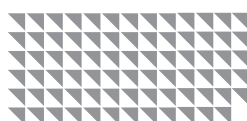
# 446,186,833

Atlanta  
**443,775**  
people

Where Atlanta fits



**171 small**  
600k population



**77 medium**  
600k-1.6m population



**60 large**  
1.6m+ population

---

Year reported

**2015**

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Area

**343**

**km<sup>2</sup>**

---

Population

**443,775**

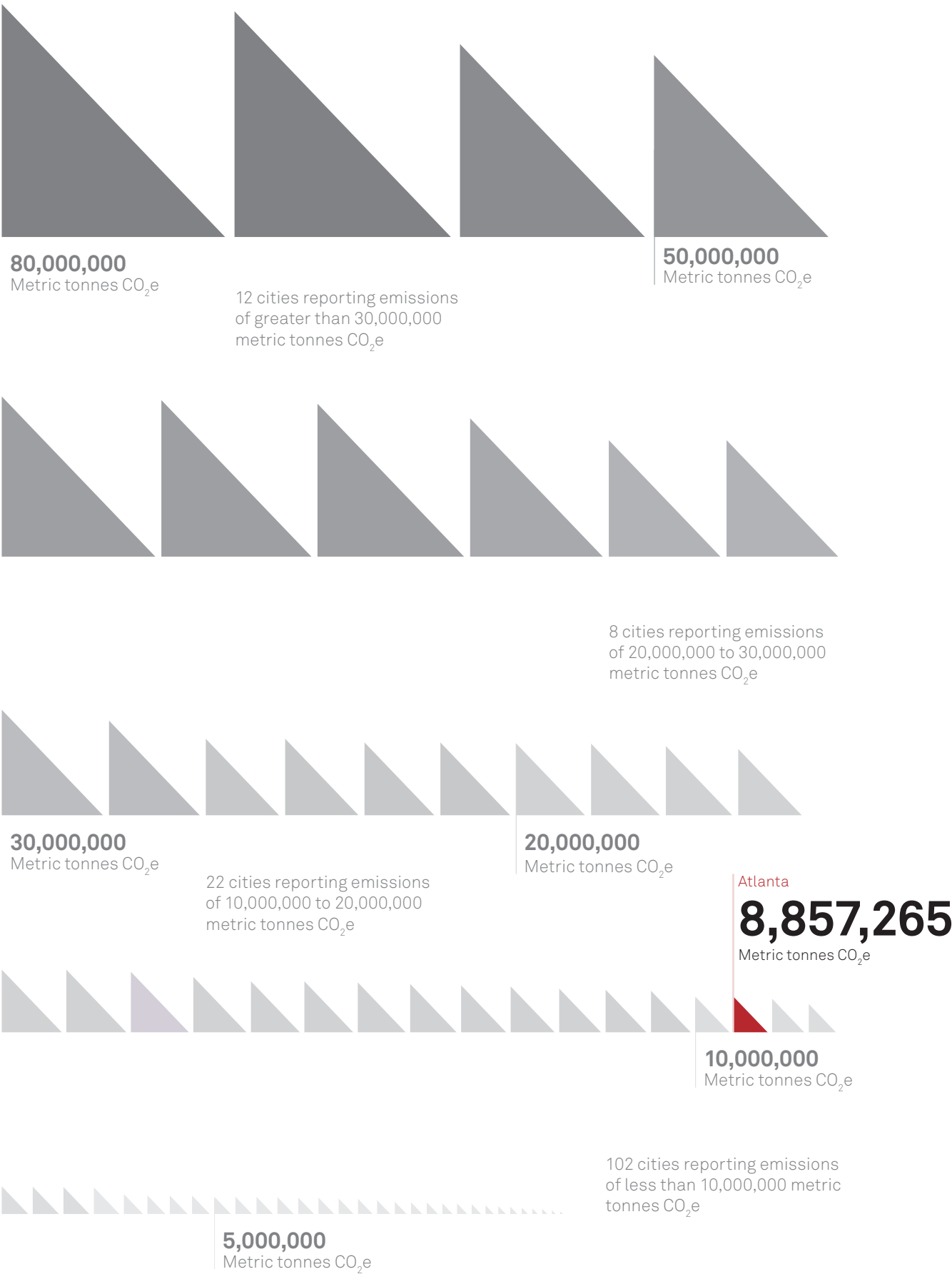
# Atlanta in focus

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Inventory method

**Global Protocol for Community-Scale  
Greenhouse Gas Emissions Inventories (GPC)**

144 cities reporting emissions in 2015





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## 0 Introduction

The City of Atlanta (also referenced in this document as Atlanta or the City), is located in the north-central part of the state of Georgia, USA. Atlanta was established in 1847 and provides municipal services to its inhabitants and visitors. These services include police and fire protection, the maintenance of streets and other infrastructures, recreational activities and cultural events, land use and building regulations, and solid waste collection and disposal.

# Introduction



The City is also responsible for the water and wastewater operations and infrastructure and operates the worlds' busiest passenger airport, the Hartsfield-Jackson Atlanta International Airport, which is financed exclusively with airport-generated income.

## 1.1 Governance

Atlanta's process for managing progress and responsibility for climate action:

### Emissions Reductions

The City of Atlanta is using the Global Protocol for Community-scale Greenhouse Gas Emission Inventories (GPC) as the framework to track citywide GHG emissions. By selecting this protocol, the City of Atlanta is consistent with international standards. Each of the city's GHG inventories has been verified by an independent 3rd party. The City of Atlanta Climate Action Plan (CAP), developed in 2012, is in the process of being updated. The update includes more aggressive emission

# Governance

reduction targets and new goals, strategies, and actions for mitigation. These goals, strategies, and actions have been selected with the participation of citywide experts from the five city stakeholder groups (i.e. business, non-profits, the academia, residents, and the government). The CAP will be submitted to the Atlanta City Council for endorsement. The expected date for endorsement is during the third quarter of 2015.

## Adaptation

The City of Atlanta Office of Sustainability is in the process of selecting a framework, such as the Handbook for Local Government Leaders, to detect risks and vulnerable areas for the purposes of creating an adaptation and resilience plan. The framework will include the “Ten Essentials for Making Cities Resilient” developed by UNISDR as a toolkit for local government resilience and disaster risk reduction.

*Atlanta has a plan and is committed to climate change adaptation.*

The City of Atlanta is still recovering from the economic recession of 2009, which produced high levels of unemployment and lowered property prices. Over the last couple of years the local economy has been improving, providing a moderate decrease in

unemployment and a moderate increase in the real estate market. Although the economy is not as strong as it was before the 2009 recession, the City of Atlanta is in a good position to focus on preparing for the challenges presented by climate change.

Atlanta anticipates that national and/or regional climate change activities will have impacts on Atlanta's own climate change activities.

In November 2014 President Obama laid out a national plan to reduce GHG emissions in the USA, in the range of 26 to 28 percent below 2005 levels by 2025. Among these measures, the President directed the Environmental Protection Agency (EPA) to develop carbon pollution standards for power plants and to improve energy efficiency at all levels of the government. These national activities impact directly and indirectly our own climate change activities at a local level.

Atlanta incorporates sustainability goals and targets into the master planning for the city.

In 2014, the City of Atlanta through the Mayor's Office of Sustainability, published the Power to Change sustainability plan. The plan, developed by more than 300 citywide stakeholders, identified 10 areas of impact, 30+ measures

of success, and 100+ sustainable initiatives. Power to Change identifies short, mid, and long-term goals for all the impact areas. Goals include reducing water and energy consumption 20% by 2020, from the 2009 baseline and 90% of waste diverted to the landfill by 2020.

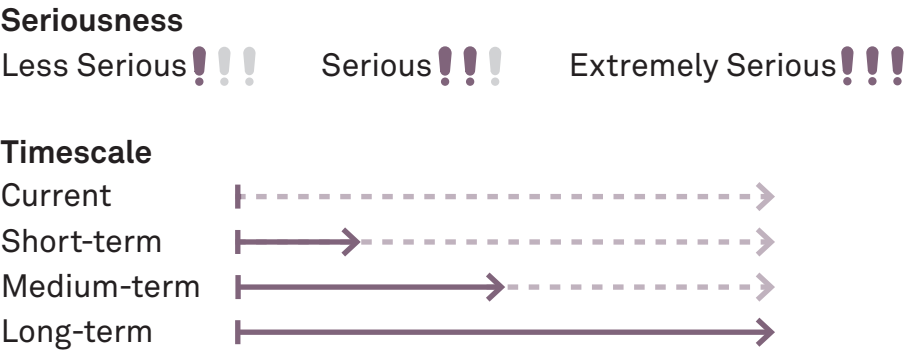
Atlanta has a climate change action plan for reducing GHG emissions.

City of Atlanta Climate Action Plan, 2015



2.1 Physical risks

Current and/or anticipated effects of climate change present significant physical risks to Atlanta.



# Risks & Adaptation

## More intense droughts

Risk:  Timescale: 

Droughts decrease the availability of the water in the Chattahoochee River, Atlanta's only water source. Droughts also exacerbate the urban heat island effect and produce wildfires in wooded areas near Atlanta, affecting the air quality of the entire region.

## More frequent heat waves

Risk:  Timescale: 

Heat waves can cause heat strokes in vulnerable populations, particularly those who do not have access to air conditioning. Heat waves increase pollution levels by requiring more electricity to run air conditioning units.

## More intense rainfall

Risk:  Timescale: 

Floods destroy houses in vulnerable areas, disrupt highways, and produce sewage spills in the Chattahoochee River by overloading the Atlanta storm sewer system.

## Increased frequency of large storms

Risk:  Timescale: 

Atlanta is not prepared for prolonged winter storms, which can cause traffic paralysis and food shortages.

## Air quality

Risk:  Timescale: 

The effects of global warming can increase the number of unhealthy air, or "red" smog alert" days for Atlanta.

## Infectious diseases

Risk:  Timescale: 

Increasing temperatures and humidity can increase risks for mosquito borne diseases that are associated with tropical climates such as yellow fever, dengue, and West Nile Virus.



Compounding factors may worsen the physical effects of climate change in Atlanta.

Extreme temperatures not only bring extreme hazardous weather but also put extra stress in Atlanta's aging infrastructure. As Atlantans increase the demand in heating/cooling and water use, they also increase their GHG emissions because most of the energy (74%) is generated from burning fossil fuels.

Atlanta considers that the physical impacts of climate change could threaten the ability of businesses to operate successfully.

Poor air quality, infectious diseases, and extreme weather can negatively affect employees' health. Atlanta businesses have experienced losses due to extreme weather events that have paralyzed the City. For example, the catastrophic flooding that impacted the Atlanta metropolitan area in September 15-22, 2009, greatly impacted community and businesses. Initial property damage in Georgia was estimated at \$250 million, but was eventually raised to \$500 million. More than 20,000 homes, businesses and other buildings had major damage; 10 Georgia residents lost their lives during this event and hundreds of people were rescued from their homes and vehicles; portions of all major Atlanta-area interstates, including I-20,

I-75 and I-85, were closed; 17 counties in Georgia received Federal Disaster Declarations, the majority of which were in the Atlanta Metropolitan area. The clean-up and rebuild process continued into 2010.

A climate change risk or vulnerability assessment is in progress for the Atlanta area.

## 2.2 Climate Hazards

Atlanta currently experiences the following climate hazards.

Drought

Heat wave

Rain storm

Heavy snow

Extreme hot weather

Atlanta expects the following hazards to affect the City in the future.

Rain storm

Heavy snow

Tornado

Extreme cold weather

Heat wave

Extreme hot weather

Drought

Forest fire

Flash/surface flood

Storm surge

Air-borne disease

## 2.3 Adaptation

Actions Atlanta is taking to reduce risks to infrastructure, citizens, and businesses from climate changes include the following.

### **Water efficiency equipment and appliances**

#### **Hazard: Water Scarcity**

The Department of Watershed Management encourages conservation efforts and offers incentive program and water conservation education/outreach.

### **Tree planting**

#### **Hazard: Extreme heat**

Atlanta implemented the Tree Protection Ordinance in 1995, which states that there shall be no net loss of trees within the boundaries of the city.

### **Water butts/rainwater capture**

#### **Hazard: Flood**

The City is a part of the local Clean Water Campaign which provides storm water management solutions, including education and infrastructure.

### **Crisis Management including warning and evacuation systems**

#### **Hazard: Large Storms**

In conjunction with the State, the City of Atlanta is part of the Winter Task Force that studies the best way to handle future storms and augment the infrastructure in place.

### **Community Engagement/Education**

#### **Hazard: Extreme heat**

Work with businesses and non-profits to educate and offer assistance to design and implement commuting options that make business sense and decrease carbon output; protect public health; create programs targeted to commuters and employers; provide Smog Alert notifications for Georgia cities; and work with elementary, middle and high schools to educate and protect children from harmful pollution and empower

children to take a positive role in reducing traffic and cleaning the air.

## Disease prevention measures

### Hazard: Precipitation

Work with the CDC (Centers for Diseases Control and Prevention) and other organizations in the prevention of mosquito borne diseases.

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## Cities are at risk from climate change



## 2.4 Social risks

Atlanta faces social risks as a result of climate change.

### Increased resource demand

**Timescale:** 

Increases in temperature cause Atlanta residents and businesses to use air conditioning units more frequently and extensively, which increase energy demand. The Atlanta utility, Georgia Power, produces a 74 percentage of the energy used in Atlanta, by fossil fuels.

### Increased incidence and prevalence of disease

**Timescale:** 

The Asthma and Allergy Foundation of America (AAFA) classified Atlanta as #13 in asthma cases from 100 US cities surveyed. The main reason for this rating is poor air quality, created by vehicles emissions.

### Increased risk to already vulnerable populations

**Timescale:** 

Poor air quality in Atlanta mostly affects vulnerable populations: 9% of children under the age of 18 suffer from asthma and other respiratory diseases. More than 200,000 children age 18 and younger in the region have asthma.

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### 3.1 Opportunities

Climate change action presents economic opportunities for Atlanta.

# Opportunities



Atlanta is positioning itself to take advantage of opportunities from taking climate change action.

## Improved efficiency of operations

The City of Atlanta adopted a buildings energy efficiency ordinance aimed at reducing energy and water consumption by 20% in commercial buildings by the year 2030, spur the creation of more than 1,000 jobs a year in the first few years, and reduce carbon emissions by 50 percent from 2013 levels by 2030. Buildings performance data collected under the ordinance benchmarking initiative will be made transparent to the public to allow the market to recognize, reward, and drive increased demand for high-performing buildings. The ordinance is part of the City's work under the City Energy Project, which is developing locally-tailored plans and programs to create healthier, more prosperous, and more resilient cities by reducing carbon pollution from buildings. Other participants include Boston, Chicago, Denver, Houston, Kansas City, Los Angeles, Orlando, Philadelphia and Salt Lake City. By investing in building energy efficiency programs and policies, together the City Energy Project participants are projected to cut up to 7 million tons of carbon emissions annually and save residents and businesses a combined total of nearly \$1 billion annually on their energy bills.

## Increased infrastructure investment

Vehicles generate more than one-third of emissions in Atlanta. The Atlanta BeltLine is the most comprehensive transportation and economic development effort ever undertaken in the City of Atlanta and among the largest, most wide-ranging urban re-development programs currently underway in the United States. The Atlanta BeltLine is a sustainable redevelopment project that will provide a network of public parks, multi-use trails and transit along a historic 22-mile railroad corridor circling downtown and connecting many neighborhoods directly to each other. In 2013, the City of Atlanta received \$18 million from the U.S. Department of Transportation for the development of a 2.5-mile portion of the Atlanta BeltLine in the southwest corridor. The building of the modern Atlanta Streetcar represents the first step in the dawning of a new era

for transit – one that will begin to transform how we get around in our community. The section that opened for use in December 2014 represents phase one of a grand vision for the Atlanta Streetcar. In the coming years, additional lines are planned, and project developers intend to expand service to additional neighborhoods and other popular destinations around the city. Ultimately, the Atlanta Streetcar is destined to become part of a whole new system of local and regional transportation. Phase one offers last mile connectivity to the city center for MARTA, the Atlanta BeltLine and other transit options, and additional phases will expand that service even further. The Atlanta Streetcar makes access easier within the city, and it also functions as a metaphorical link between the city’s rich history with rail transportation and its evolution into a robust centerpiece of the New South and 21st century connectivity. In March of 2015, Atlanta voters approved \$250 million bond referendum for transportation and construction projects. The projects include the repair and upgrades to bridges, roads, sidewalks, bike lanes, and public buildings.

## **Development of new business industries (e.g. clean tech)**

Atlanta is home to 541 clean tech company facilities representing 30,605 jobs focused on clean technology. Since 2010, Atlanta has attracted 34 clean tech companies, creating more than 2,200 jobs. Clean technologies in Atlanta include energy efficiency, recycling and solid waste, smart grid, and solar and water technology. The Georgia Green Loan funds support small business to start or expand eco-friendly product or services or “green” existing business.

Atlanta is hoping to attract private sector involvement for the following climate-related projects.

The Georgia Congress passed a bill that will allow the Atlanta BeltLine to use public-private partnerships to finance and build a wide variety of projects along the 22-mile loop, including:

Hiking trails

Sidewalks

Streetscaping

Bike lanes

Transit facilities

# 96 CITIES

or 1/3 of cities that reported are taking action to de-carbonize their energy supply.

# 86%

of these cities see an **ECONOMIC OPPORTUNITY** in climate change.

#### 4.1 Date and boundary

Atlanta is reporting a GHG measurement inventory for a period of one year.

**Mon 01 Jul 2013 – Mon 30 Jun 2014**

Boundary typology used for Atlanta's GHG emissions inventory:

**Departments, entities or companies over which financial control is exercised**

# Emissions – Local Government

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#### 4.2 GHG emissions data

Atlanta included the following major sources of emissions in its GHG emissions inventory:

Airport(s)

Buildings

Landfills

Municipal vehicle fleet

Street lighting and traffic signals

Wastewater treatment

Water supply

Atlanta has used the following protocol to inventory emissions:

Local Government Operations Protocol (ICLEI/  
The Climate Registry/California Climate Action  
Registry/California Air Resources Board)

Gases included in emissions inventory:

**CO<sub>2</sub>**

**CH<sub>4</sub>**

**N<sub>2</sub>O**

Total (Scope 1 + 2) emissions for Atlanta:

**520,123**

**Metric tonnes CO<sub>2</sub>e**

Breakdown of Atlanta's GHG emissions by scope:

Scopes are a common categorisation method. Scope 1: All direct GHG emissions (with the exception of direct CO<sub>2</sub> emissions from biogenic sources). Scope 2: Indirect GHG emissions associated with the consumption of purchased or acquired electricity, steam, heating, or cooling.

Total Scope 1 activity

**177,866**

**Metric tonnes CO<sub>2</sub>e**

Total Scope 2 activity

**342,257**

**Metric tonnes CO<sub>2</sub>e**

Total amount of fuel (direct/Scope 1 emissions) consumed in Atlanta during the reporting year:

Motor gasoline (petrol)

**71,454,027<sub>L</sub>**

Diesel/Gas oil

**17,430,298<sub>L</sub>**

Town gas or city gas (Buildings)

**4,357,990<sub>Therms</sub>**

Wastewater treatment

**116,188<sub>Metric tonnes</sub>**

Compressed Natural Gas (CNG)

**8,196<sub>L</sub>**

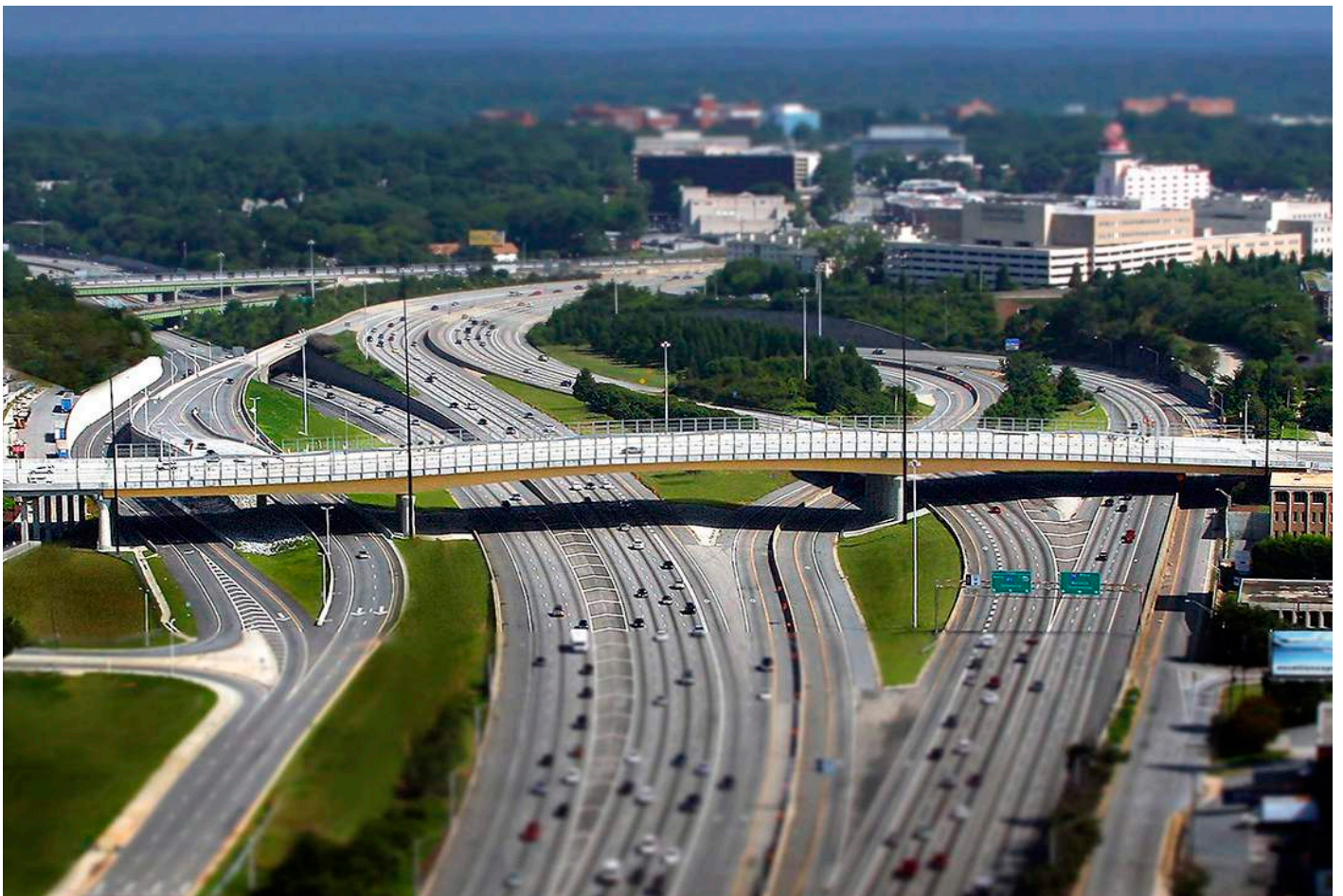
Methane (Landfills)

**570<sub>Short tons</sub>**



Electricity, heat, steam, and cooling (indirect/  
Scope 2 emissions) consumed by Atlanta during  
the reporting year:

**603,637<sub>MWh</sub>**



## Atlanta does not measure Scope 3 emissions.

The city is working to simplify the process for the annual municipal GHG inventories with scope 1 and 2, and will create the respective policies to acquire the necessary information to calculate and report scope 3.

Breakdown of Atlanta's GHG emissions by department (total):

Mayor's Office of Enterprise Assets Management

**Scope 1: 23,165**  
**Scope 2: 342,257**  
Metric tonnes CO<sub>2</sub>e

Watershed Department Office of Water Treatment and Reclamation

**116,188**  
Metric tonnes CO<sub>2</sub>e

Public Works Office of Fleet Services

**26,551**  
Metric tonnes CO<sub>2</sub>e

Public Works Office of Solid Waste Services

**11,962**  
Metric tonnes CO<sub>2</sub>e

#### 4.3 External verification

Atlanta's emissions decreased.

Emissions have decreased primarily due to energy efficiency measures.

Atlanta's emissions have been externally verified.

Valerie Thomas, Ph.D

2013

Doctor Thomas is an independent contractor with the Georgia Institute of Technology (Georgia Tech).



## 5.1 Date and boundary

Atlanta is reporting a GHG measurement inventory for a period of one year.

**Tue 01 Jan 2013 – Tue 31 Dec 2013**

Boundary typology used for Atlanta's GHG emissions inventory:

**Administrative boundary of a local government**

# Emissions – Community

## 5.2 GHG emissions data

Atlanta has used the Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories (GPC), (WRI, C40 and ICLEI).

The Atlanta Mayor's Office of Sustainability uses the Global Protocol for Community-Scale Greenhouse Gas Emission Inventories (GPC) as the framework for its annual citywide greenhouse gas (GHG) reports, which is consistent with international standards. The GPC level selected for the 2013 reports was BASIC. This level will serve as a baseline for more comprehensive reports in the future. This report included emissions from electricity and natural gas consumption, vehicles, city-owned landfills, municipal solid waste (MSW) generated inside the city but sent to landfills outside city limits, and emissions from wastewater treatment plants (WWTP), MARTA, and the Hartsfield-Jackson Atlanta International Airport (excluding aviation fuel emissions). All these emitting sources are in compliance with the GPC protocol.

Gases included in emissions inventory:

**CO<sub>2</sub>**

**CH<sub>4</sub>**

**N<sub>2</sub>O**

Total (Scope 1 + 2) emissions for Atlanta:

# 8,857,265

**Metric tonnes CO<sub>2</sub>e**

Breakdown of Atlanta's  
GHG emissions by scope:

Scopes are a common categorisation method. Scope 1: All direct GHG emissions (with the exception of direct CO<sub>2</sub> emissions from biogenic sources). Scope 2: Indirect GHG emissions associated with the consumption of purchased or acquired electricity, steam, heating, or cooling.

Total Scope 1 activity

# 3,440,523

**Metric tonnes CO<sub>2</sub>e**

Total Scope 2 activity

# 5,416,741

**Metric tonnes CO<sub>2</sub>e**

Breakdown of these emissions by end user,  
economic sector, IPCC sector, GHG  
or any other classification system used:

End user: buildings, water, waste, transport. Economic sector: residential, commercial, industrial, institutional. IPCC sector: stationary combustion, mobile combustion, industrial processes, waste. Greenhouse gas: CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O etc.

Stationary Energy: energy use – Scope 1

# 811,834

**Metric tonnes CO<sub>2</sub>e**

Stationary Energy: energy use – Scope 2

**4,800,781**

**Metric tonnes CO<sub>2</sub>e**

Transportation – Scope 1

**2,500,541**

**Metric tonnes CO<sub>2</sub>e**

Transportation – Scope 2

**281,302**

**Metric tonnes CO<sub>2</sub>e**

Waste: waste generated within the city boundary – Scope 1

**128,148**

**Metric tonnes CO<sub>2</sub>e**

Waste: waste generated within the city boundary – Scope 2

**334,657**

**Metric tonnes CO<sub>2</sub>e**

Total Basic Emissions

**8,857,265**

**Metric tonnes CO<sub>2</sub>e**



### Atlanta's emissions have decreased.

The decrease of emissions from the previous year was very small (0.52%) mainly caused by energy efficiency measures. The City is planning to increase its energy efficiency and follow a climate action plan to increase reductions to meet its 2020 climate targets.

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#### 5.3 External verification

### Atlanta's emissions have been externally verified.

Valerie Thomas, Ph.D.

2014

Doctor Thomas is an independent contractor with the Georgia Institute of Technology (Georgia Tech).

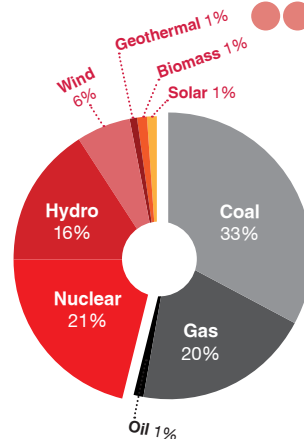
# CAN CITIES QUIT FOSSIL FUELS?

## 162 CITIES REPORTED THEIR ENERGY MIX,

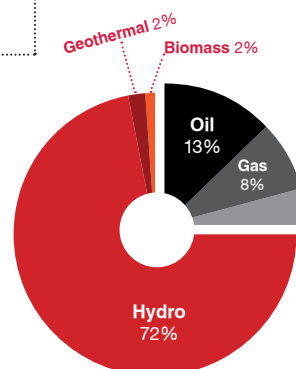
revealing a diversity of  
responses, for cities large and  
small across all regions.

**THE RESULTS ARE DIVERSE.**  
REVEALING MIXES FROM 100%  
NON-FOSSIL TO 100% CONTINUED  
RELIANCE ON FOSSIL AND MANY  
COMBINATIONS THEREOF.

## 55 NORTH AMERICAN CITIES

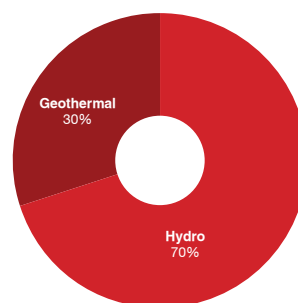


## 46 LATIN AMERICAN CITIES

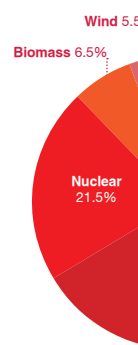


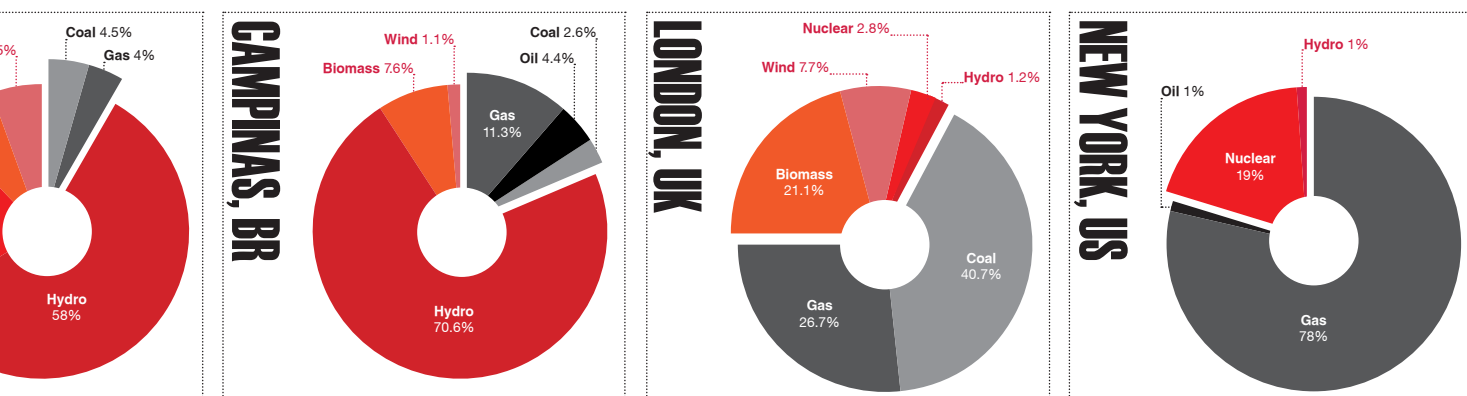
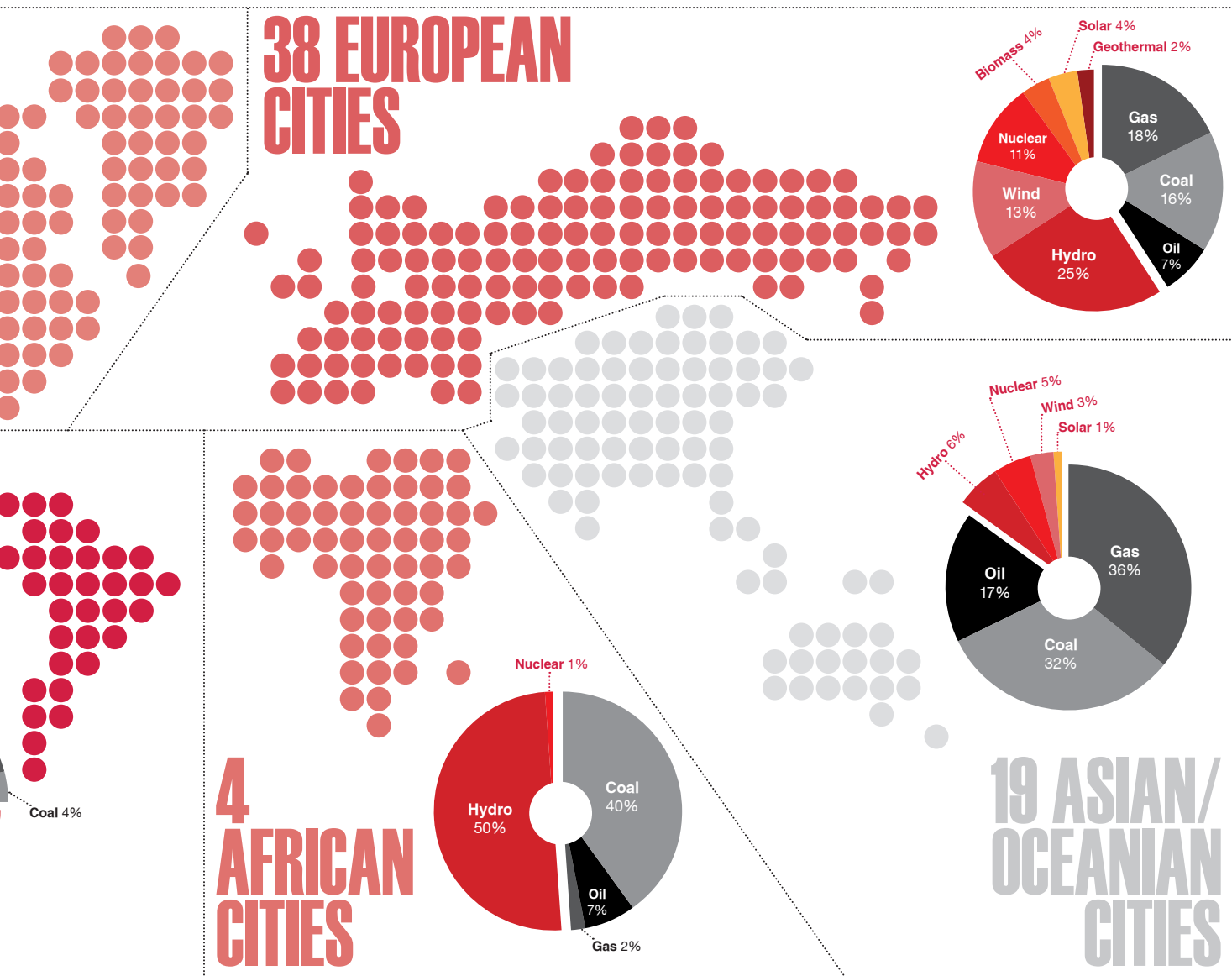
Energy mix by non-fossil %  
76% 0%

## REYKJAVIK, IS



## STOCKHOLM, SE







# Strategy

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## 6.1 Local government operations – GHG emissions reduction

Atlanta has a GHG emissions reduction target in place for local government operations.

Atlanta's local government operations  
GHG emissions reduction target in detail:

Baseline year

**2009**

Baseline emissions

**538,988**

Metric tonnes CO<sub>2</sub>e

Percentage reduction target

**20%**

Target date

**2020**

The City of Atlanta is the largest property owner impacted by the Atlanta buildings energy efficiency legislation with some 110 buildings subject to the portfolio requirements. Already benchmarking its assets, the City is expected to begin performance reporting in the fall of 2015. The City is soliciting proposals from qualified Energy Service Providers (ESPs) capable of providing comprehensive energy management and energy-related capital improvement services and equipment for City-owned facilities.

Activities undertaken to reduce Atlanta's emissions in its government operations:

Buildings

## Energy efficiency/retrofit measures

**Anticipated total reduction: 150,000 metric tonnes CO<sub>2</sub>e**

Benchmarking and retro-commissioning of municipal buildings

Outdoor Lighting

## LED / CFL / other luminaire technologies

**Anticipated total reduction: 20,000 metric tonnes CO<sub>2</sub>e**

Replace all the streetlight with LED

# JUST A LITTLE CHANGE WILL GO FAR.

43 cities reported that they want private sector support to deliver community renewable projects. CDP data indicates that less than half of these projects are located in the global south.

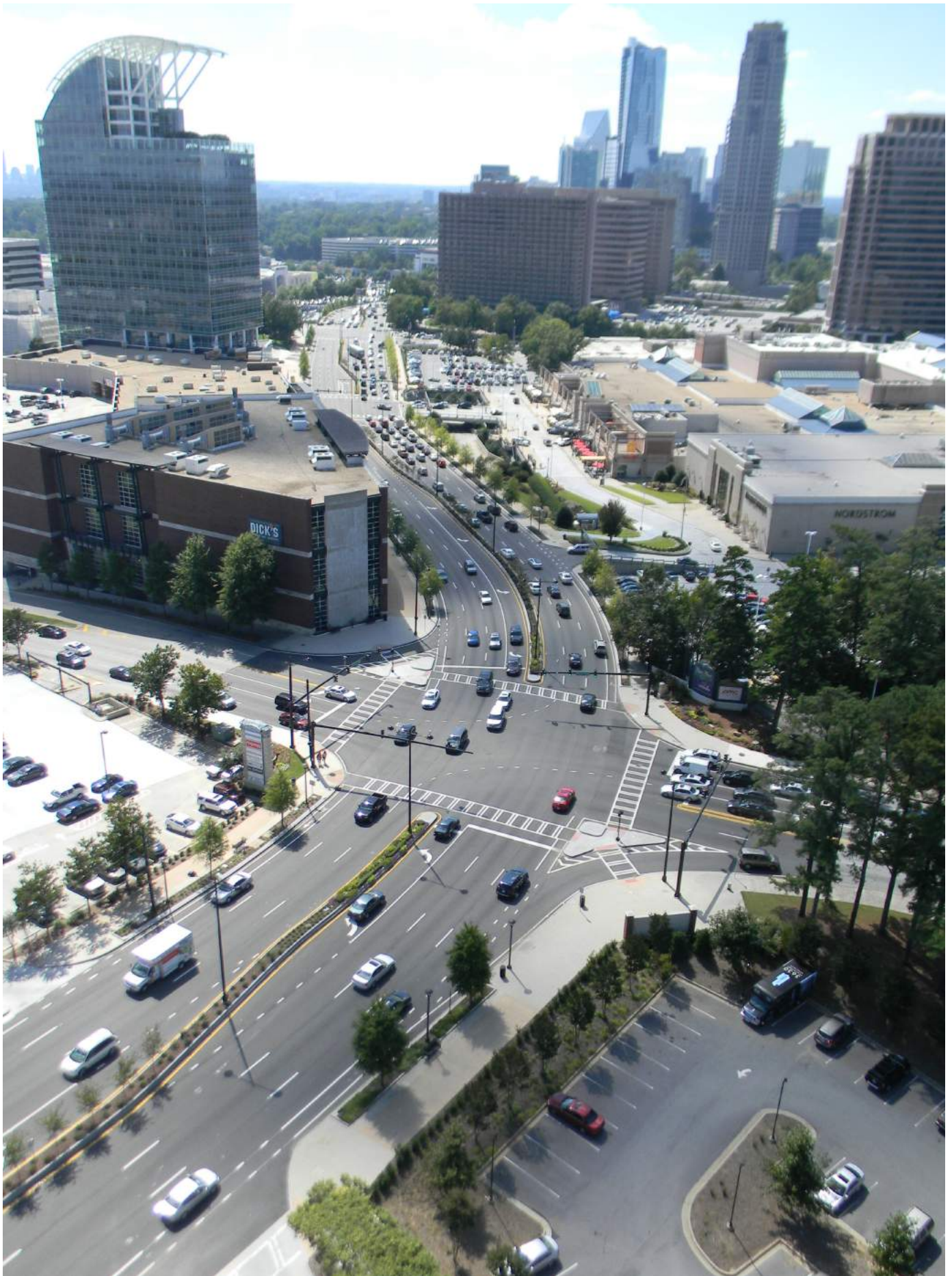
# \$57 TRILLION

will be invested in infrastructure through 2030. That means that less than 0.01% of this sum, or just

# \$1 OF EVERY \$8K

spent is required to support delivery of renewable goals for all the CDP cities that report a target. At just over \$7 billion in total, this is still a large price tag and represents a considerable challenge for cities, but with global focus it can be achieved.





## 6.2 Community – GHG emissions reduction

Atlanta has a GHG emissions reduction target in place for its community.

Atlanta's community GHG emissions reduction target in detail:

**2009**

Baseline emissions

**10,267,363**

Metric tonnes CO<sub>2</sub>e

Percentage reduction target

**20%**

Target date

**2020**



Activities currently being undertaken to reduce emissions city-wide:

#### Buildings

### Energy efficiency/retrofit measures

**Anticipated total reduction: 590,000 metric tonnes CO<sub>2</sub>e**

The City of Atlanta adopted an Ordinance that aims to reduce buildings' energy footprints while creating jobs. Actions include benchmarking, transparency, energy audits, and retro commissioning. The City projects that the ordinance will drive a 20 percent reduction in commercial buildings energy and water consumption by the year 2030, spur the creation of more than 1,000 jobs a year in the first few years, and reduce carbon emissions by 50 percent from 2013 levels by 2030. Other actions include cool roofs, sub-metering, and expanding voluntary programs (see Atlanta Climate Action Plan attached in section 1.5a). This measure is related to the energy efficiency in the residential sector and includes energy audits and retro fittings, tax credits, and code compliance.

#### Community-Scale Development

### Building standards

**Anticipated total reduction: 350,000 metric tonnes CO<sub>2</sub>e**

This measure is related to the energy efficiency in the residential sector and includes energy audits and retro fittings, tax credits, and code compliance.

#### Energy Supply

### Low or zero carbon energy supply generation

**Anticipated total reduction: 102,000 metric tonnes CO<sub>2</sub>e**

Encouragement and support of the use of renewable energy in the residential sector and municipal operations.

## Waste

## Recycling or composting collections and/or facilities

**Anticipated total reduction: 66,900 metric tonnes CO<sub>2</sub>e**

Education and pricing mechanisms to increase diversion rate from landfill.

## Water

## Water metering and billing

**Anticipated total reduction: 602,000 metric tonnes CO<sub>2</sub>e**

Optimization of water distribution system and conservation measures.

## Private Transport

## Infrastructure for non-motorized transport

**Anticipated total reduction: 374,000 metric tonnes CO<sub>2</sub>e**

Increase AFV (alternative fuel vehicles) usage and infrastructure and reduce VMT emissions by implementing policies such as congestion or emissions pricing.

## Community-Scale Development

## Green space and/ or biodiversity preservation and expansion

**Anticipated total reduction: 10,000 metric tonnes CO<sub>2</sub>e**

Increase green spaces (urban parks) and urban canopy to reduce the heat island effect. Allow accessibility to parks (half a mile) to 45% of the city population.

## Food and Agriculture

## Encourage sustainable food production and consumption

**Anticipated total reduction: 5,000 metric tonnes CO<sub>2</sub>e**

Promote the development and marketing of products from urban gardens and vertical farms and reduce food deserts.

### 6.3 Planning

The city-wide energy mix for Atlanta's electricity:

Gas

**39%**

Coal

**35%**

Nuclear

**23%**

Hydro

**3%**

Atlanta has a renewable energy target:

Municipal

**5%**

City-wide

**1%**

Target date

**2020**

## 6.4 Water

Atlanta foresees substantive risks to its water supply in the short or long term.

Risks to Atlanta's water supply as well as timescale:

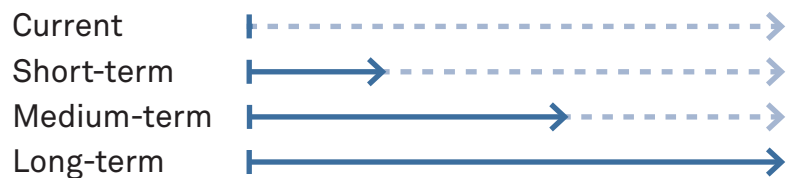
### Seriousness

Less Serious ! ! !

Serious ! ! !

Extremely Serious ! ! !

### Timescale



## Increased water stress or scarcity

Risk: ! ! ! Timescale: —————>

In 2007, the Atlanta region was affected by the worst drought and largest forest fire in over 100 years, with damage estimated at over \$1 billion. The drought was repeated in 2013, followed by the sixth heaviest May calendar day rain storm on record.

## Flooding

Risk: ! ! ! Timescale: —————>

In 2009, the City of Atlanta was affected by floods of historic proportion, breaking records that went back more than a century in some locations. The Chattahoochee River, the largest river in the region, measured water levels at a 500-year flood level.

Actions that Atlanta is taking to reduce risks to its water supply:

Increased water stress or scarcity

## **Municipal water efficiency retrofits**

The City of Atlanta is committed to improving its aged drinking water infrastructure by finding leaks and repairing or replacing those pipes. The Mayor's goal is to reduce system water loss from leakage by 50%.

Flooding

## **Stormwater management (natural or man-made infrastructure)**

The Department of Watershed Management has recently updated the Post-Development Stormwater Management Ordinance to promote the use of green infrastructure on new and redevelopment projects in the City. Green infrastructure uses natural hydrologic features to manage water and provide environmental and community benefits. On development sites, green infrastructure includes engineered practices that are designed to mimic natural hydrology by infiltrating stormwater runoff into the ground, evapotranspiration (uptake of water by plants) in landscaped areas, or capturing and reusing the runoff through rainwater harvesting techniques.







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