

# The Atlanta Way

## Public – Private Partnerships

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# Southface promotes sustainable homes, workplaces and communities

Education

Research

Policy

Technical Assistance



# Southface Campus Features

Passive Solar Design

Solar Water Heating

Organic Garden

Pervious Concrete

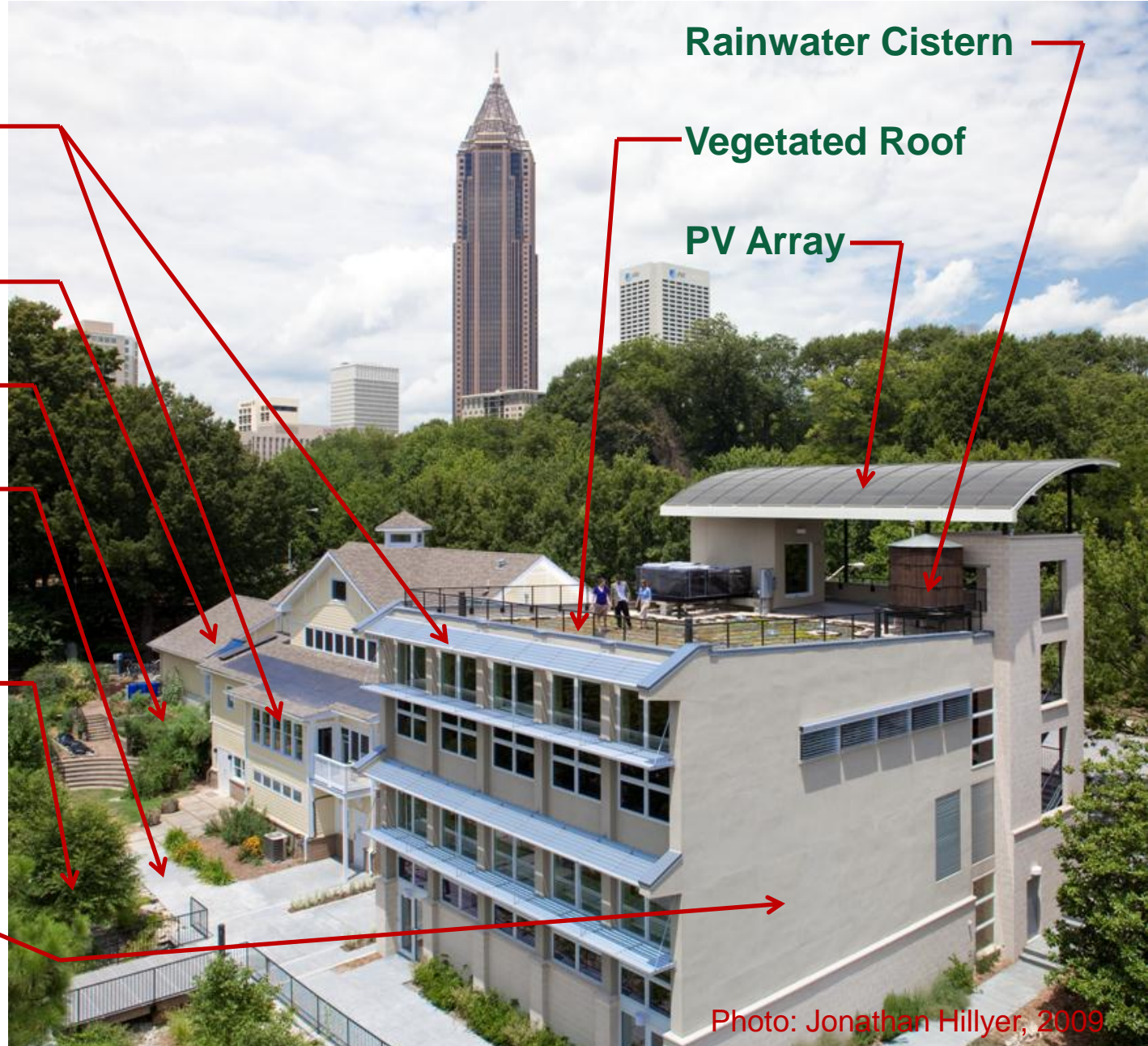
Stormwater Management Channel

Insulated Concrete Form Wall System

Rainwater Cistern

Vegetated Roof

PV Array



# About Atlanta



Georgia's capital and largest metropolitan area in the Southeast

Home to:

- Coca-Cola
- United Parcel Service
- Delta Airlines
- Cable News Network
- Porsche NA
- Centers of Disease Control and Prevention
- 25 diplomatic consulates, including Germany

# Where *is* Atlanta?

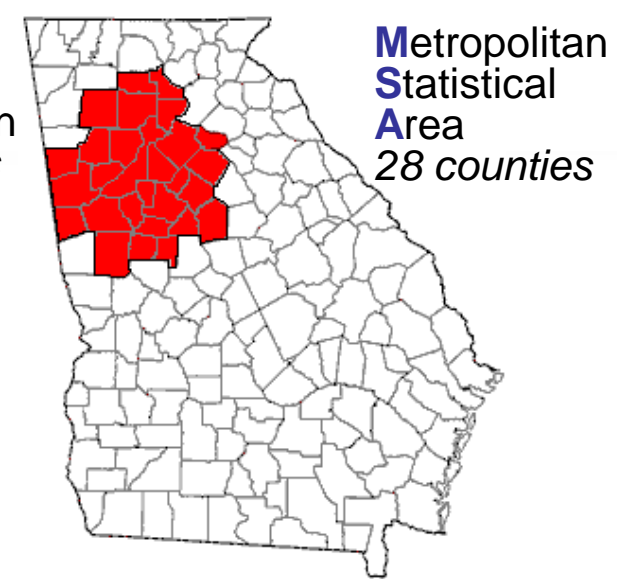
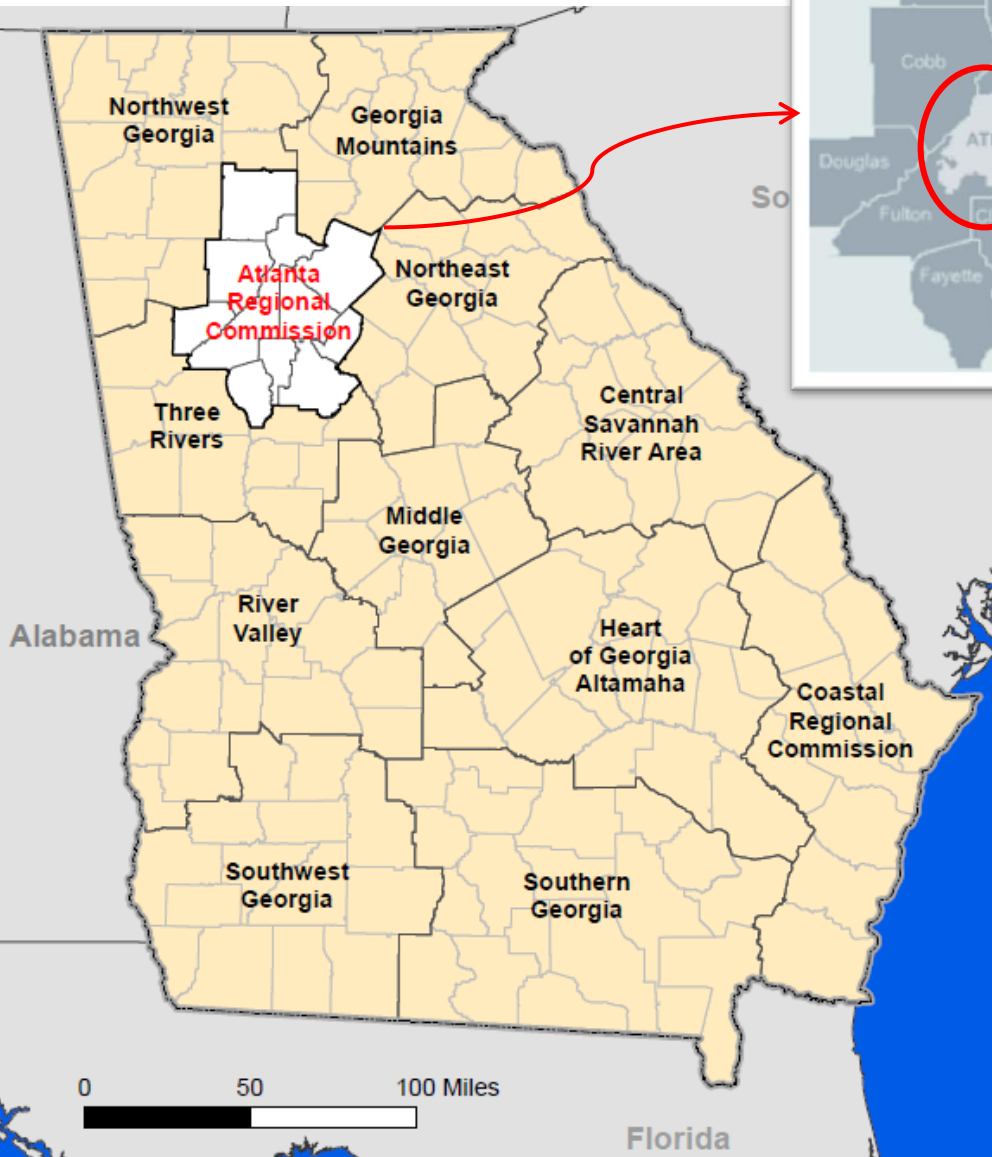
Georgia is about half the size of Germany



Atlanta



# Which Atlanta?



City of Atlanta is part of larger metropolitan area

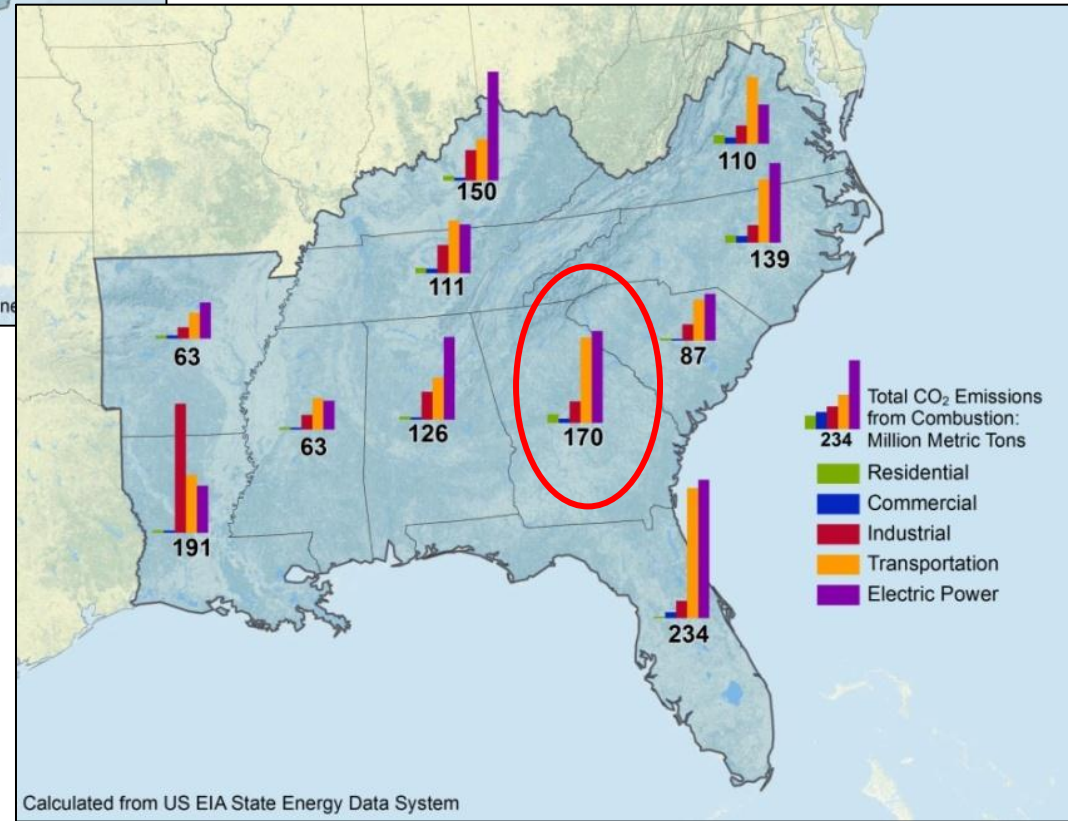
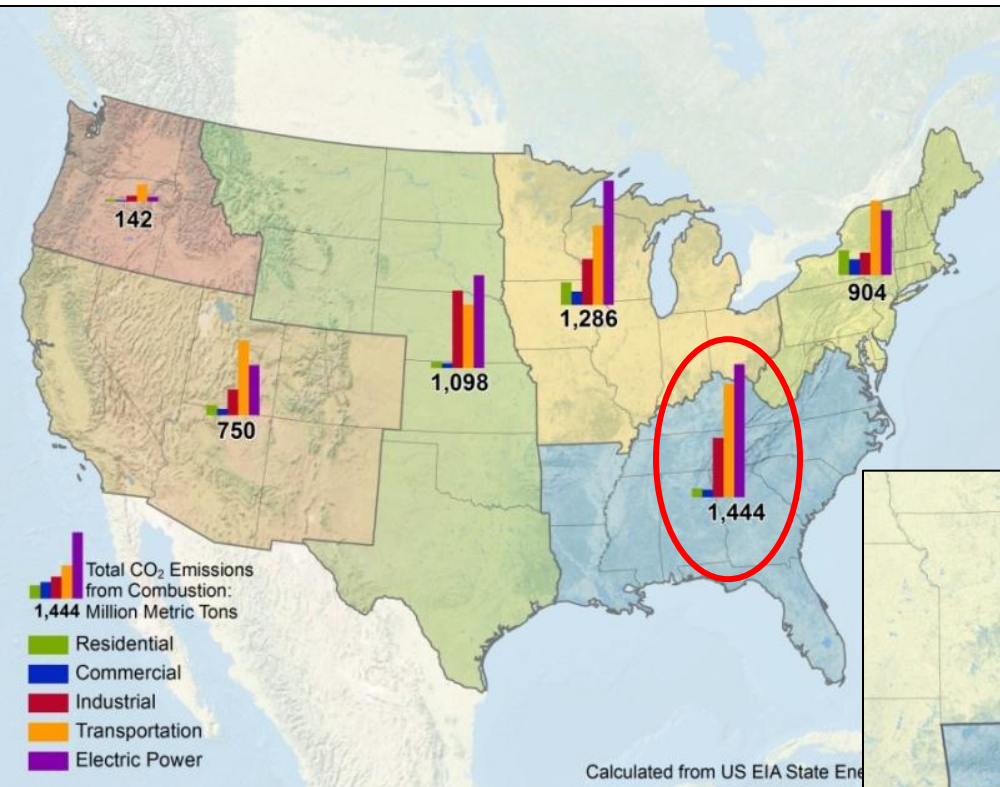
- ARC: 10 counties
- MSA: 28 counties and over 135 municipalities

Population (2011 est)

- Georgia: 9,815,210
- MSA: 5,268,860 (2010 est)
- ARC: 4,142,300
- City of Atlanta: 420,700

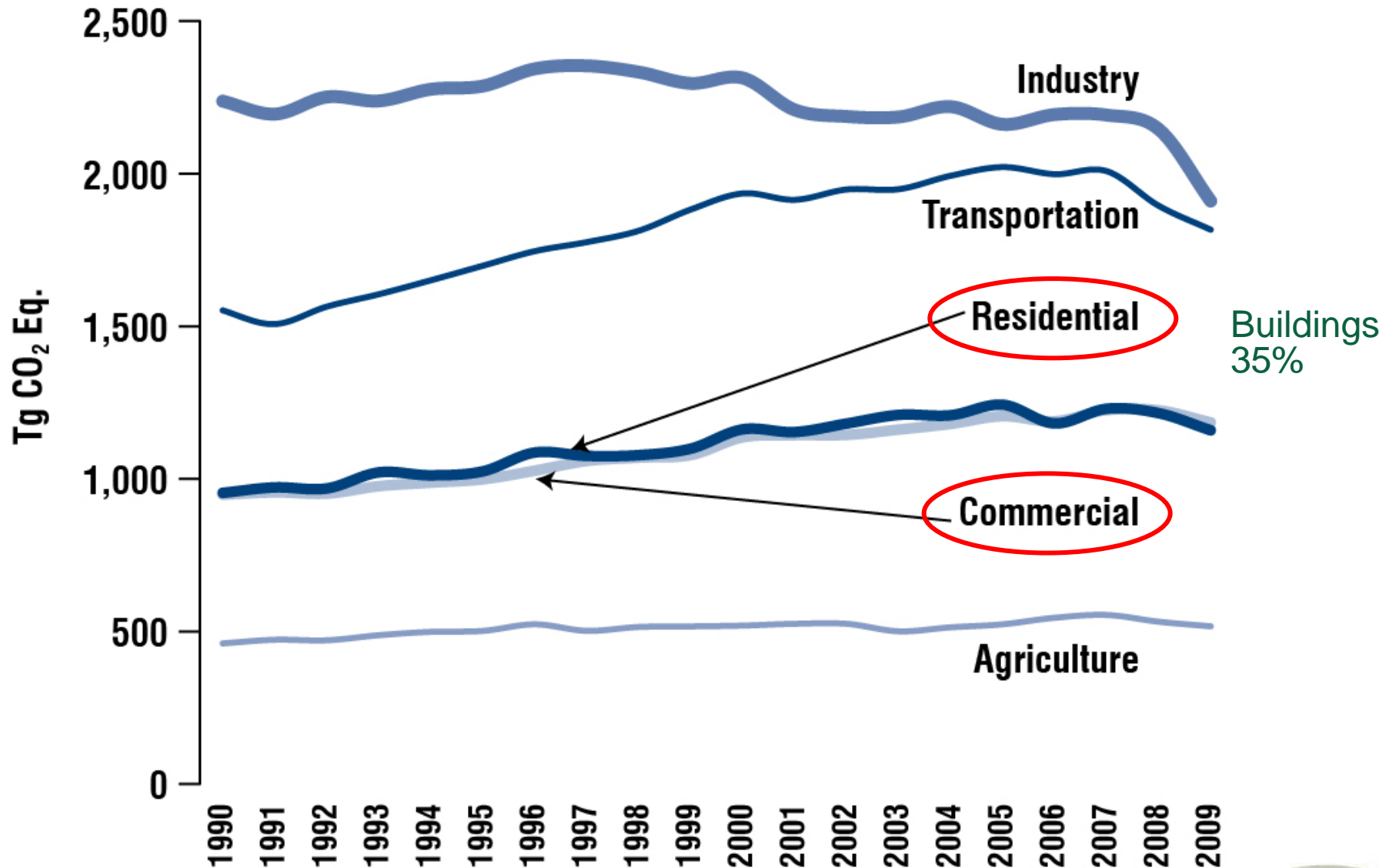
# 2009 Emissions from Combustion

Southeast #1 in GHG emissions



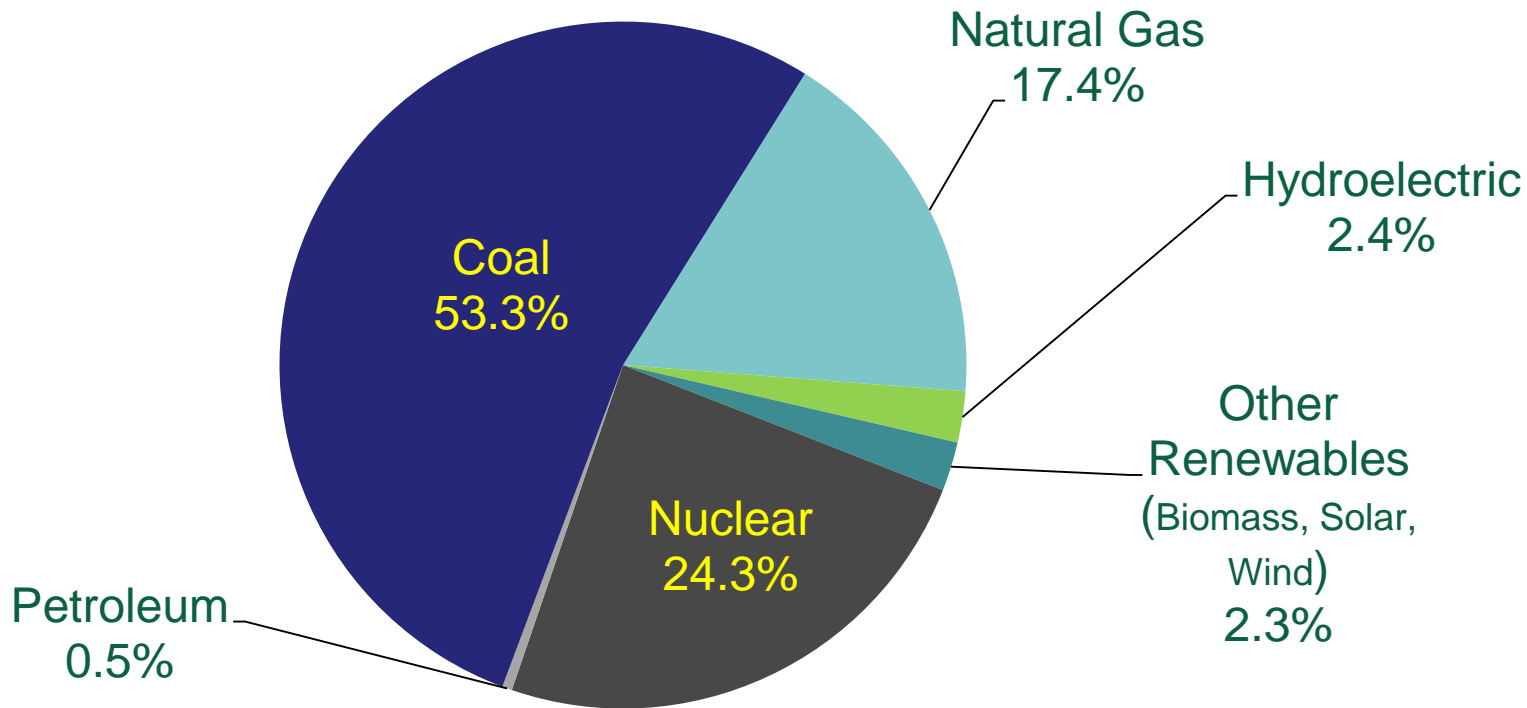
Electric power largest source of Georgia's GHG emissions from combustion

# GHG Emissions with Electricity Distributed Across Sectors





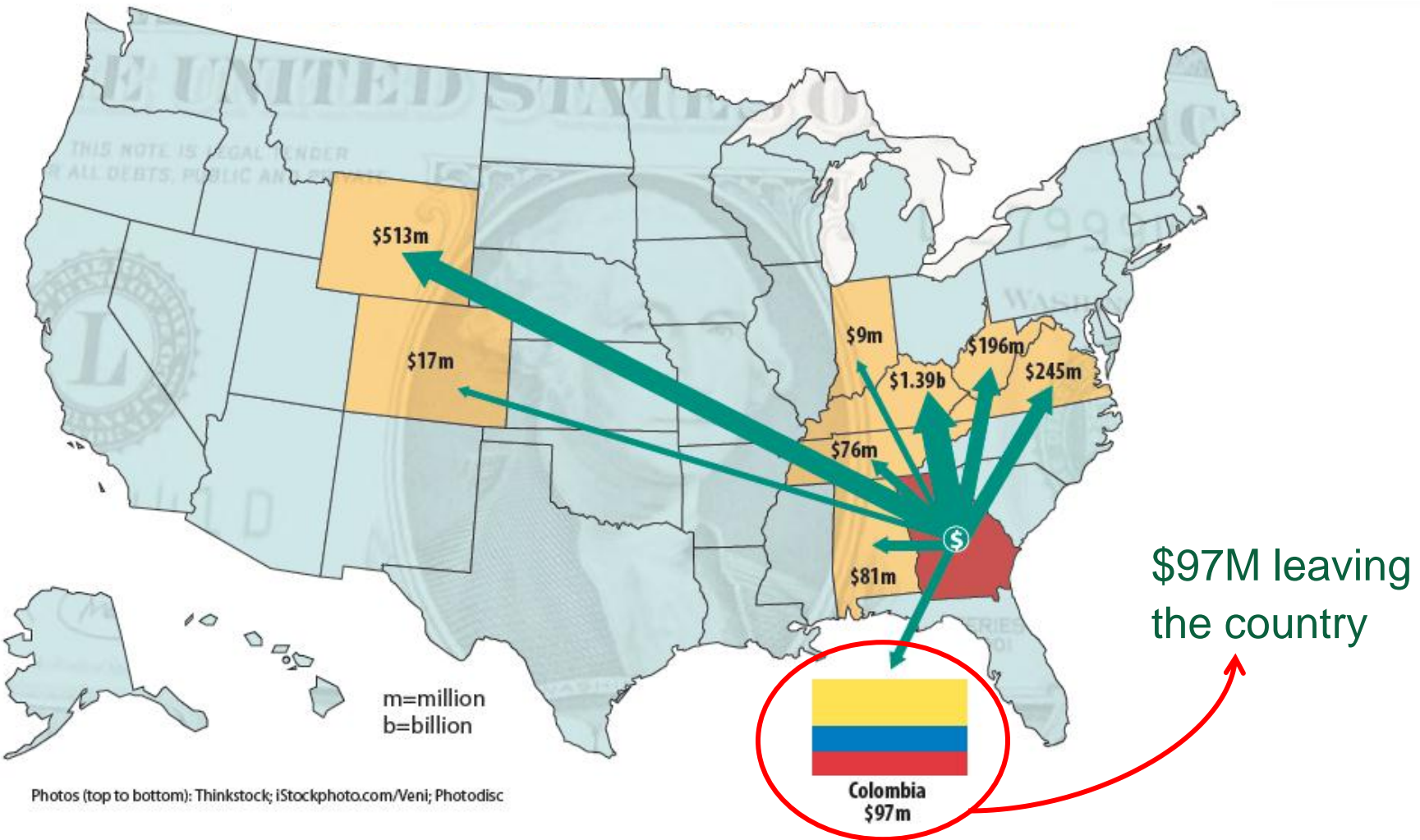
# 71% of GA Electricity from Fossil Fuels



Cheaper natural gas = decreased coal

Percentage Share	2000	2006	2010
Coal	64.7%	62.7%	53.3%
Natural Gas	3.4%	9.4%	17.4%
Total Renewables	4.5%	4.3%	4.7%

# Money Leaving to Pay for Imported Coal



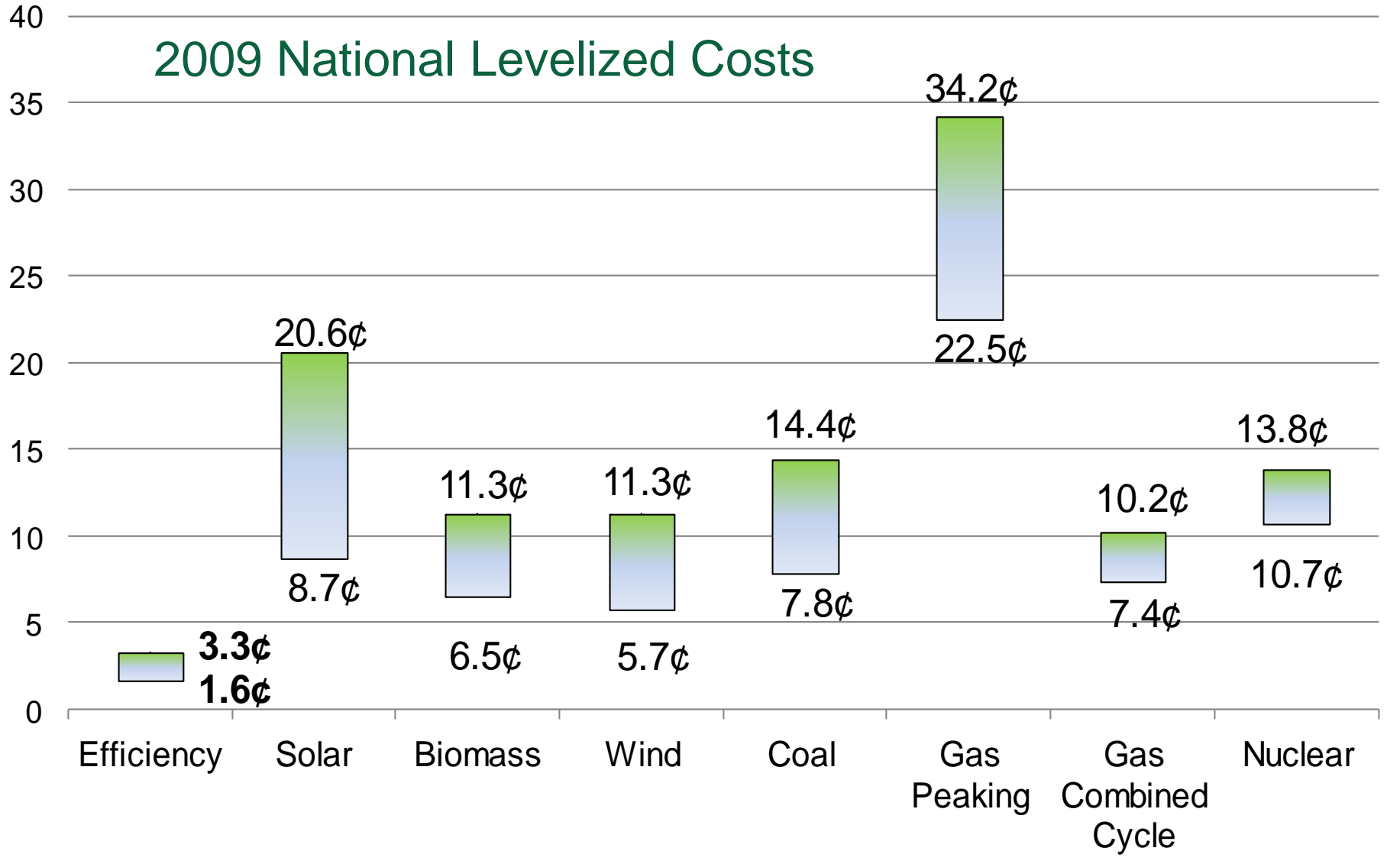
Photos (top to bottom): Thinkstock; iStockphoto.com/Veni; Photodisc

Georgia spent \$2.6 billion on coal imports in 2008

- \$1.6 billion spent on coal imports in 2005

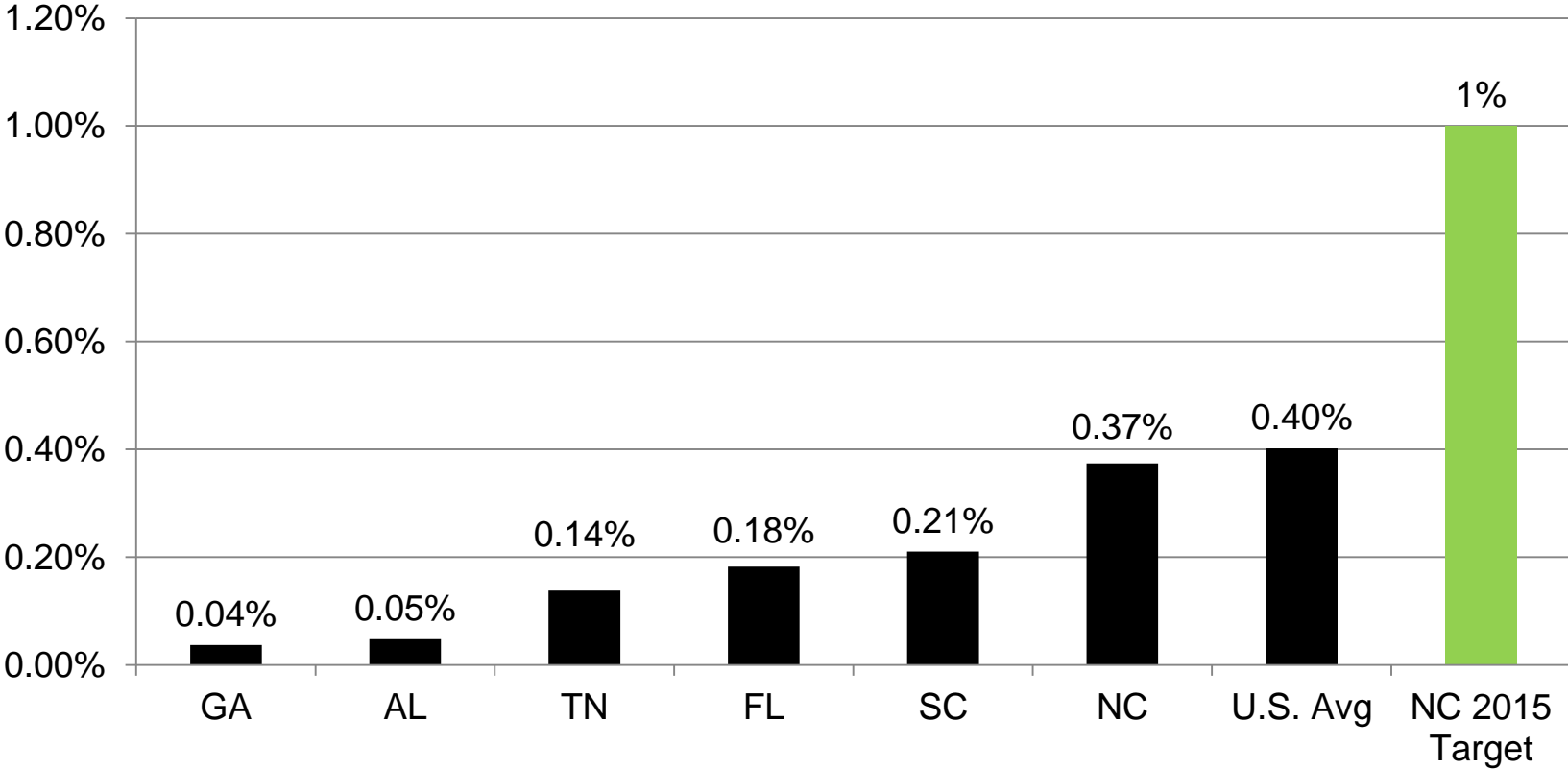
# EE Most Cost Competitive Option

2009 National Levelized Costs



# Utility Efficiency Program Comparison

## Annual Energy Savings from Utility Programs as Percentage of Retail Sales (2010)



# The Energy and Water Connection

In Georgia, 0.57 gal **consumed** for every thermoelectric kWh of electricity **produced**

- Power plants consumed 230M gallons per day (July 2011)
- Augusta, Savannah, Columbus, and Macon are permitted to withdraw 253M gallons a day for municipal water (Mar 2011)

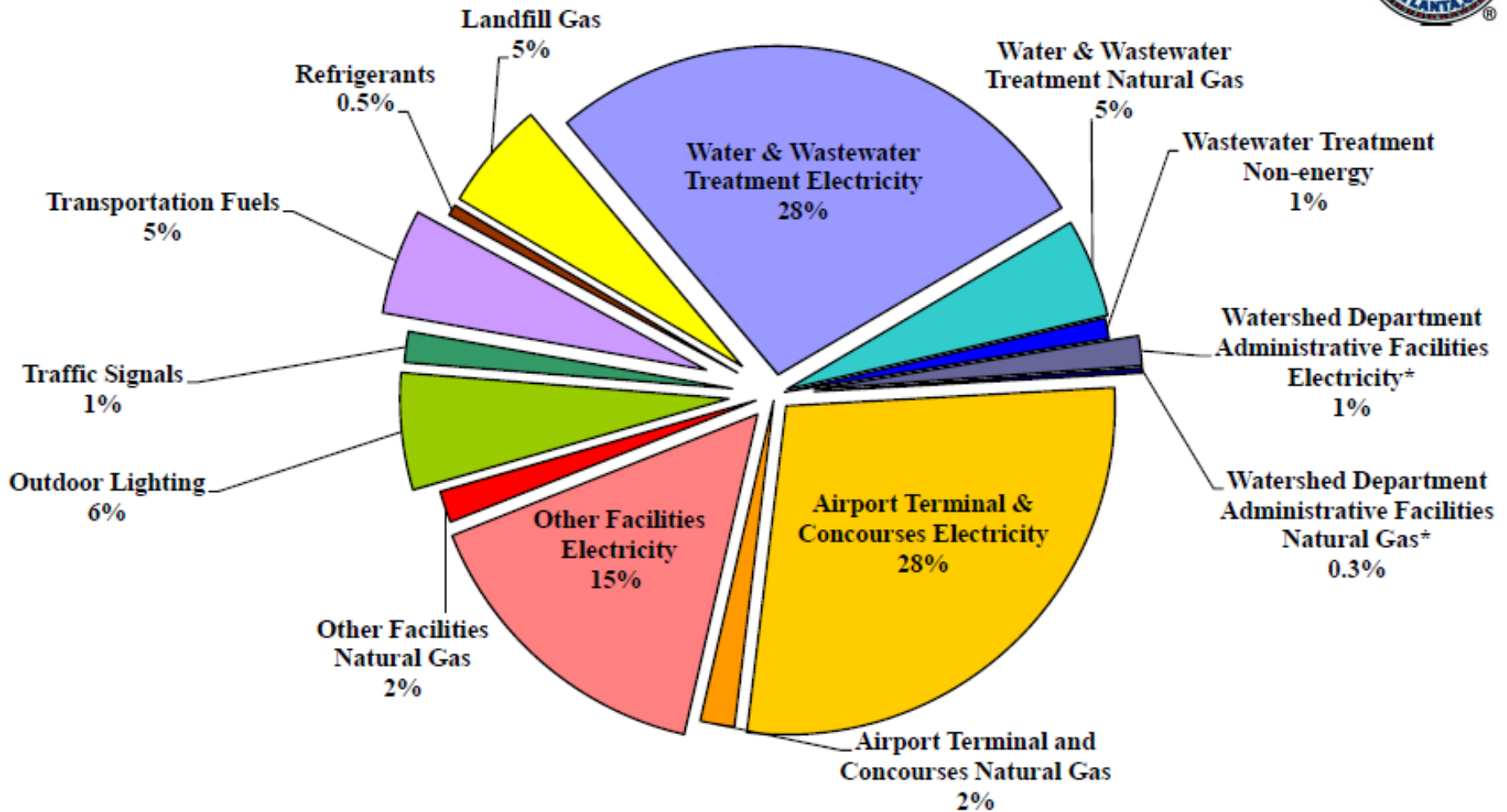


Georgia's coal, nuclear, and natural gas power plants account for 50% of total water **withdrawals**



Drought of 2006–2009 strained area reservoirs

**City of Atlanta Municipal Carbon Footprint  
2007 Total ~ 540,000 metric tons CO<sub>2</sub>e**



**Electricity is Atlanta's Major Source of GHG Emissions**

\*Watershed Department Administrative Facilities Electricity and Natural Gas based on estimated breakdowns.

# How Is Atlanta Going to Proceed?

Public-private partnerships forged to achieve specific goals

- Civic improvements: Corporation for Olympic Development
- Affordable housing:  
Atlanta Neighborhood Development Partnership
  - Over \$103M invested via grants from local corporations and foundations
- Economic development: Operation Legacy
  - One year after the Games – over 2,000 new jobs
  - End of the third year – over 6,000 new jobs



Flickr / Matthew Paulson



# Atlanta Signatory to U.S. Mayor's Climate Protection Agreement

First Georgia city to determine municipal carbon footprint:

**540 thousand metric tons CO<sub>2</sub>e** (2007 figure)

- Equivalent to GHG emissions from 150,000 households



2009: Reduced municipal carbon footprint by 12.5% from 2007 levels

- Initiatives included LEED construction and renovation, building efficiency improvements, reducing paper use, transportation alternatives
- Community water conservation produced 9.5% reduction in electricity use (2008)
- Change in fuel mix (Georgia Power)



# Atlanta's First Sustainability Plan



Mayor Reed's goal is to make Atlanta a Top 10 City for sustainability

Key Goals	2013	2015	2020	2030	2050
Reduce GHG emissions City-wide			25%	40%	80%
Reduce energy use for existing municipal operations			15%	40%	80%
Renewable energy as percentage of total municipal use		5%			
Reduce system water leakage		50%			
Reduce, reuse, and recycle residential waste City-wide	30%	50%	90%		



# Active Projects

## CHP project using biogas from wastewater treatment plant

- 90% complete
- Will save over \$1M / yr

## Airport LED lighting project

- 50% complete
- Will save over \$400K / yr



## Lighting retrofits at wastewater treatment plants

- Complete summer 2012
- Will save over \$400K / yr

# Private Sector EE – Commercial Buildings

Energy Star – Ranked 6<sup>th</sup> in U.S. with 201 buildings (2010)

- Doubled number of Energy Star buildings between 2009 & 2010

LEED – Currently ranks 8<sup>th</sup> in the U.S. with 162 buildings

- Perkins + Will Atlanta office received highest LEED points in northern hemisphere
- Emory University has one of the largest inventories of LEED certified buildings



Perkins + Will, Atlanta office

# Better Buildings Challenge



Goal of 20% energy and water savings

- Atlanta pledged to have 2M sq. ft.
- 30M sq. ft. have taken the Challenge!!!
  - Downtown has a little over 40M sq. ft. of building space
- Private capital, vendor incentives



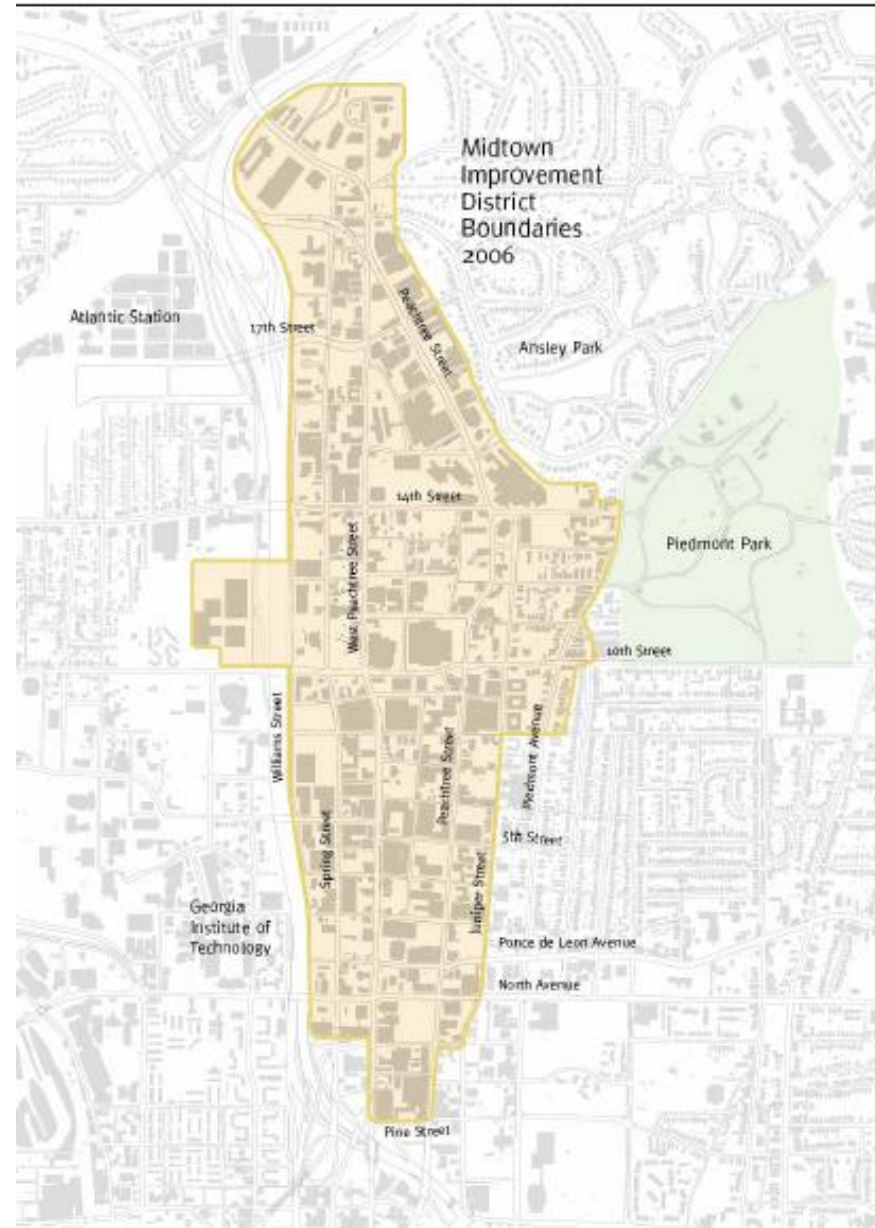
Central Atlanta Progress  
Atlanta Downtown Improvement District



# Greenprints Midtown

Goal – Create the South's first Eco-District:

- Target energy, water, waste, transportation and greenspace
- Provide education, technical assistance and financing for building energy upgrades



# “Country’s Best Smart Growth Project”

*Kaid Benfield – Director of Sustainable Communities with the National Resources Defense Council*

22-mile in-town loop of transit, trails,  
parks, and affordable housing



Must build to EarthCraft  
standards to receive incentives  
for affordable housing

# Atlanta Beltline



## Parties involved:



Atlanta BeltLine Partnership Capital Campaign Lead Donors:

- Robert W. Woodruff Foundation
- The Arthur M. Blank Family Foundation
- Cox Enterprises, Inc.
- Kaiser Permanente
- PATH Foundation/Sarah and Jim Kennedy
- The Home Depot Foundation
- The Coca-Cola Company
- Turner Broadcasting System, Inc.
- Mr. John C. Portman, Jr.
- SunTrust Foundation Atlanta and Suntrust Bank Trusteed Foundations
- Wells Fargo
- Ray and Helen Weeks
- Georgia Power Company
- Tull Charitable Foundation
- The UPS Foundation
- Fuqua Family Foundations
- Georgia-Pacific LLC
- AGL Resources
- Holder Construction Company
- IDI
- Mr. James Morgens, Morgens West foundation
- Norfolk Southern Foundation
- Herman J. Russell Foundation
- The David, Helen and Marian Woodward Fund
- Mr. Ralph G. Edwards

# Metro Atlanta Residential EE

City of Atlanta S.H.I.N.E. program:  
up to \$3,500 rebates

Georgia Power Home Energy Improvement program:  
up to \$2,200 rebates



Southface SWEET Center trained over 2,000 professionals



# EarthCraft: Public-Private Program

Over 19,000 certifications



# EarthCraft Communities

*Vickery*

*Cumming, GA*



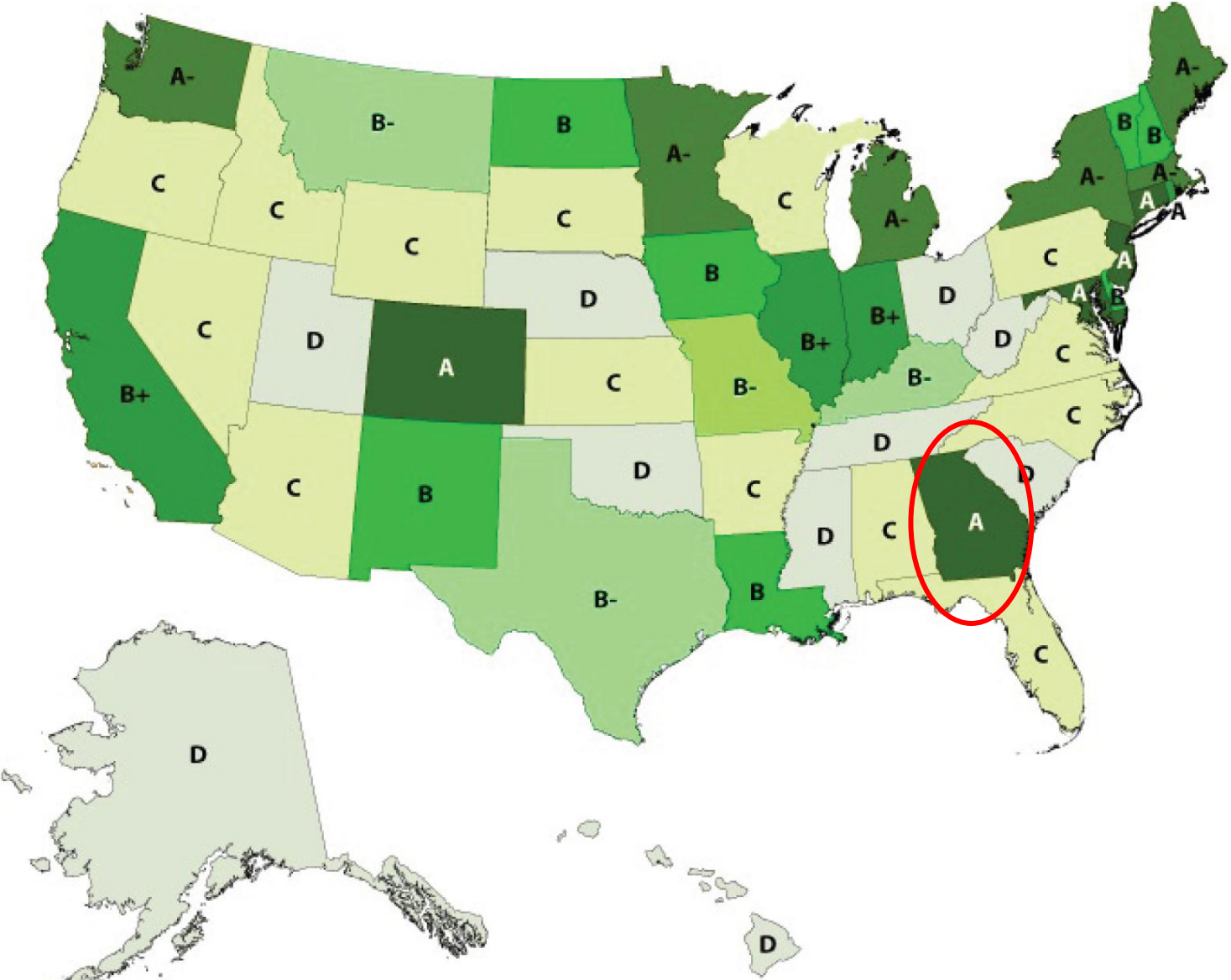
# Low-income Housing Tax Credit

Georgia tax credits incentivize green construction

- 100% of affordable housing projects built to “green” standards



# Georgia Top Tier in Green Affordable Housing

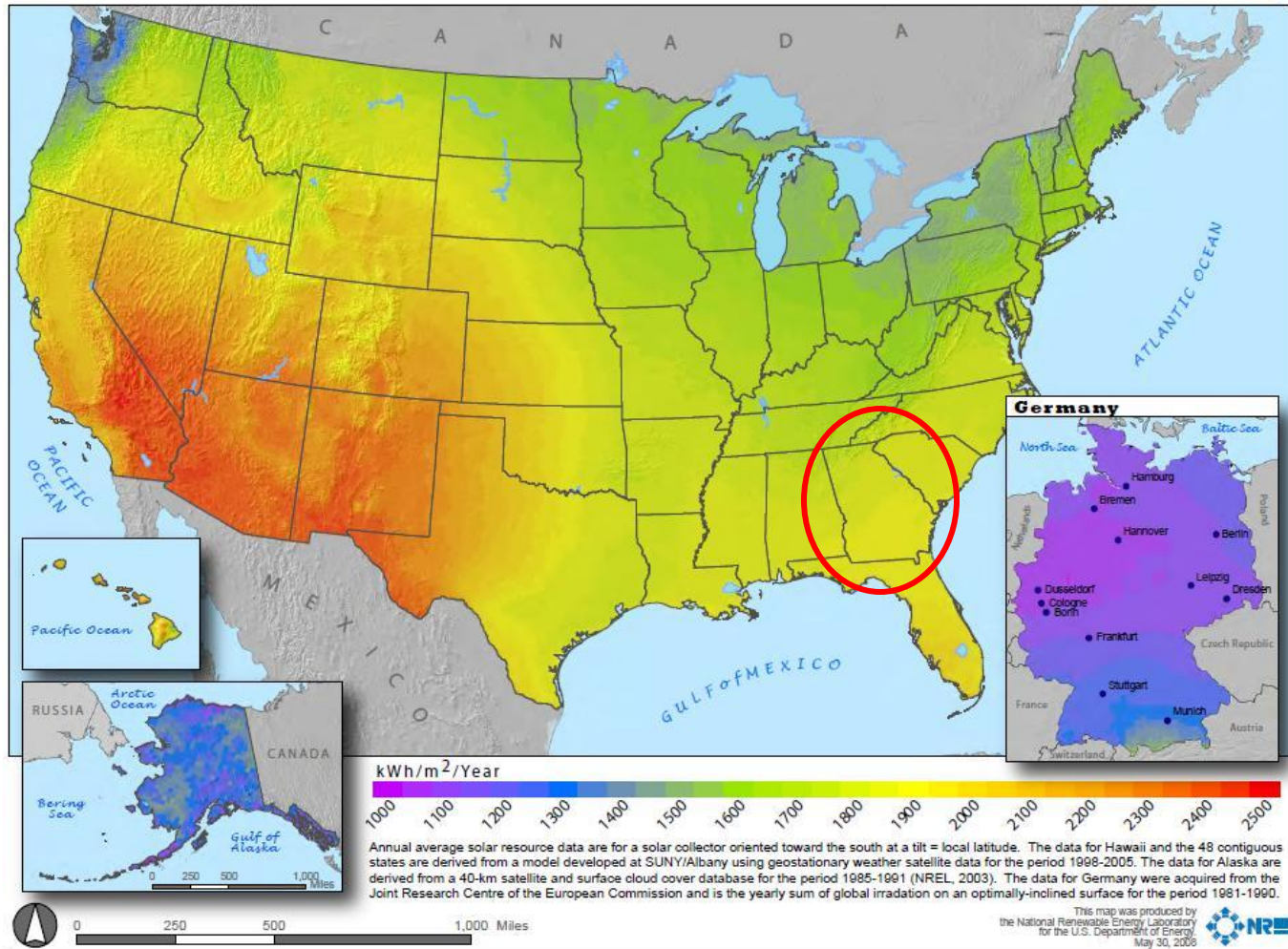


# Georgia Energy Code Adoption



# Abundant Solar Resource But Market Barriers

## Photovoltaic Solar Resource : United States and Germany



Germany a leading producer of photovoltaic panels *and* solar energy

Georgia has far greater solar potential than Germany

# Net Metering Program Comparison

## Net metering rate:

- GA: \$0.17/kWh
- NC: Retail rate  
~\$0.10/kWh

## Cap on aggregate capacity:

- GA: 2.5 MW a year
- NC: Unlimited and has RE/EE Portfolio Standard



2.5 MW is equivalent to the amount of solar on three IKEA stores

# Georgia Solar Manufacturers

MAGE – German manufacturer selects Dublin, Georgia as its North American HQ and site of production facility

- \$30M investment
- 350 jobs within five years



Suniva – Georgia manufacturer

- Exports Georgia-manufactured solar products to four continents
- Fastest growing privately held company in metro Atlanta (2011)





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welcome @  
Southface



Photo: Jonathan Hillyer, 2009