



sustainability

Metropolitan Atlanta is the fastest-growing area in the nation, adding more than a **million people** in the last **seven years** alone. Each of these new residents carves out their own ecological footprint, whether it is in fuel needed to travel, water to drink or other resources needed for clothing and shelter. From green building and energy-efficient construction, to simple conservation and cleaner-burning fuels—there are a variety of choices we can make to ensure that future generations enjoy the same quality of living we have today. In fact, to accommodate the growth we expect to attract over the next few decades, moving to a more sustainable path really isn't just an option—it's a requirement.

The Atlanta Regional Commission's Fifty Forward initiative is an ambitious visioning effort to delve into the critical issues that will shape metro Atlanta 50 years into the future. This will be achieved through a series of public, open-house style forums held quarterly for the next two years, attracting the best national thinkers on a variety of key topics vital to the future success of Atlanta, such as sustainability, population and employment shifts, regional economic trends and future development patterns.

The Fifty Forward initiative is led by three co-chairs:

The Honorable Karen Handel, Georgia Secretary of State

Suzanne Sitherwood, Senior Vice President, Southern Operations, AGL Resources and President, Atlanta Gas Light, Chattanooga Gas, Florida City Gas

Milton Little, Jr., President, United Way of Metropolitan Atlanta



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There is no single solution for reducing carbon emissions and ozone pollution. It's going to take a variety of technologies and new approaches to the most common decisions. The good news is that these innovations can save money and create jobs.



energy efficiency

In the U.S., about **22 percent** of all energy consumption is used for lighting.

Source: Department of Energy

A Compact Fluorescent Light (CFL) uses **20 to 25 percent** of the energy of an incandescent light bulb.

Source: EnergyStar

If every home in the U.S. replaced only one incandescent light bulb with a CFL, the electricity saved each year could light **3 million** homes and prevent greenhouse gas emissions equal to that of **800,000** vehicles.

Source: EnergyStar

Nuclear power accounts for about **one-fourth** of Georgia's electricity generation.

Source: Energy Information Administration

The average American household has **2.5** incandescent light bulbs on for **4 or more hours** each day. If every household replaced those bulbs with compact fluorescent bulbs, the nation would save nearly **32 billion kilowatt hours** every year, or about **35 percent** of all electricity used for lighting homes.

Source: Energy Information Administration

Coal-fired power accounts for roughly **63 percent** of Georgia's electricity generation.

Source: Energy Information Administration

Less than **10 percent** of Georgia's total electricity generation comes from natural gas, hydro-electric or other renewable sources.

Source: Energy Information Administration

More than **4,000** "EarthCraft House" single-family homes and **1,500** "EarthCraft House" multi-family units have been built in the Atlanta metro area.

Source: Southface

Is increased efficiency the answer? Is the solution to our pollution problem to drive less? Or should we use alternative and renewable fuels to ensure that we leave the next generation with cleaner air? Is 'All of the Above' the correct answer?



transportation & air quality

Transportation is the world's fastest-growing form of energy use, accounting for nearly **30 percent** of world energy use and **95 percent** of global oil consumption.

Source: Worldwatch Institute

If fuel economy were improved by **5 m.p.g.**, American consumers would save **1.5 million** barrels of oil per day, more than half of what the U.S. imports from the Middle East.

Source: Environmental Defense

There were more than **17,000** alternate fuel vehicles (AFVs) in Georgia in 2005, ranking Georgia 7th in the nation. (This doesn't include gasoline-electric hybrids or diesel-electric hybrids, nor does it include E85 vehicles used by private individuals, i.e. non-fleet users.)

Source: Energy Information Administration

There were more than **4,600** hybrid vehicles registered in Georgia in 2006.

Source: www.discoveralternatives.org

There were more than **138,000** flex-fuel vehicles registered in Georgia in 2006.

Source: www.discoveralternatives.org

There are **five** public E85 facilities in Georgia, including **one** in metro Atlanta (Smyrna).

Source: www.e85fuel.com

Lawn and garden equipment (lawn mowers, leaf blowers, chain saws) that run on gasoline currently contribute **16 percent** of hydrocarbon emissions and **21 percent** of carbon monoxide emissions from mobile sources nationwide.

Source: EPA

There are **two** fueling stations in the 10-county Atlanta region that offer bio-diesel or E85—a fuel mixture of up to **85 percent** ethanol and unleaded gasoline.

Source: ARC's 2006 Transportation Fact Book

Each Atlanta traveler wasted an estimated **44 gallons** of gasoline, annually, while sitting in congested conditions.

Source: Texas Transportation Institute

There were more than **480,000** daily transit boardings in 2006, up from **460,000** in 2004.

Source: ARC's 2006 Transportation Fact Book

Between 2001 and 2007, almost **100 acres** of agricultural and forested lands have been converted each day into some other use.

Source: ARC

The conversion of agricultural and forested lands has slowed dramatically in the past two years. Between 2005 and 2007, about **31,000 acres** of agricultural and forested land were converted into some other use, most likely residential. This represents a **70 percent** reduction in conversion rates when compared to 2003 to 2005, when some **112,000 acres** of agricultural and forested lands were converted to some other use.

Source: ARC

ARC identified approximately **170,000 acres** of protected land and greenspace as of the end of 2007, which is about the size of DeKalb County.

Source: ARC

In the 20-county area, there are about **33 acres** of greenspace for every 1,000 residents. Source: ARC

More than **90** Livable Centers Initiative (LCI) communities are in the Atlanta area. LCI is an ARC program that encourages quality, sustainable growth.

Source: ARC

Modeling shows that if LCI plans are built as planned, greenhouse gas emissions from vehicles can be reduced, even when those communities significantly add to their population and employment.

Source: ARC

There are **28** “green roofs” in Georgia, almost all in the Atlanta area, encompassing some **912,000 square feet**.

Source: www.greenroofs.com



Atlanta's economic engine is closely tied to growth. Historically, new growth has occurred where land was available – a pattern that is no longer sustainable. We have to develop smarter ways to grow for the sake of future generations.

In 2003, paper and paperboard accounted for **35 percent** of the total materials discarded in the United States. This is up from **29 percent** in 2000.

Source: EPA

One ton of **100 percent** virgin (non-recycled) newsprint uses **12** trees.

Source: Conservatree

Producing recycled paper requires about **60 percent** of the energy used to make paper from virgin wood pulp.

Source: EPA

Organic materials continue to be the largest component of municipal solid waste by weight: paper and paperboard products account for **35 percent** of the waste stream, with yard trimmings and food scraps together accounting for about **24 percent**.

Source: EPA

Each ton of recycled paper can save **17** trees, **380 gallons** of oil, **three cubic yards** of landfill space, **4,000 kilowatts** of electricity and **7,000 gallons** of water.

Source: Recycling Georgia

Each individual generates about **1.5 tons** of solid waste per year – about **4.5 pounds** per person, per day. If we continue this pattern, we will have each created **90,000 pounds** of trash in our lifetimes.

Source: EPA

It's estimated that Americans go through about a **hundred billion** plastic bags a year, or **360** bags per year for every man, woman and child in the country.

Source: Garbage Land: On the Secret Trail of Trash

In 2003, plastics accounted for **11 percent** of the total materials discarded in the U.S. by weight.

Source: EPA



recycling & waste reduction

Waste isn't just landfills and garbage anymore. It's about harnessing energy for electricity and figuring out ways to reuse – and rethink our waste streams.

This year's unprecedented drought has severely affected metro Atlanta and much of Georgia and the Southeast. With lake levels near historic lows, aggressive conservation measures are no longer a choice; they are a necessity.



water

The majority of all water use is consumed at the home – some **55 percent**.

Source: Metropolitan North Georgia Water Planning District

A conventional washer uses **40 gallons** of water per full load of clothing, while the same load done in a certified Energy Star washer only uses **18-25**.

Source: EnergyStar

Average rainfall in metro Atlanta historically is around **52 inches** per year. In 2007, that number was about **32 inches**.

Source: National Oceanic and Atmospheric Administration

Replacing an old (pre-1993), inefficient toilet with a new, low-flow unit can save **10 gallons** of water per person per day. A family of four could save **1,200 gallons** per month.

Source: American Water Works Association

The improper disposal of used motor oil from a single oil change can contaminate a **million gallons** of fresh water. That's a year's supply of water for **50** people.

Source: U.S. Environmental Protection Agency

To continue to ensure safe drinking water, the nation's water utilities will need to make an estimated **\$277 billion** investment over the next **20 years**.

Source: EPA

Georgia's Clayton County Water Authority has saved **\$14.62** in reduced water production for every **\$1.00** invested in a water-conserving leak detection and repair program. This program found and fixed more than **350** leaks, which equates to a decreased production requirement of **5.8 million gallons** of water per day.

Source: Conservewatergeorgia.com

Over-watering your lawns encourages shallow root growth, which causes grass to lose its ability to survive drought.

Source: Conservewatergeorgia.com

An inefficient sprinkler can deliver up to **300 gallons** of water per hour onto a lawn. (Source: Conservewatergeorgia.com)

A typical U.S. household washes **400** loads of laundry in **one year**.

Source: EnergyStar



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