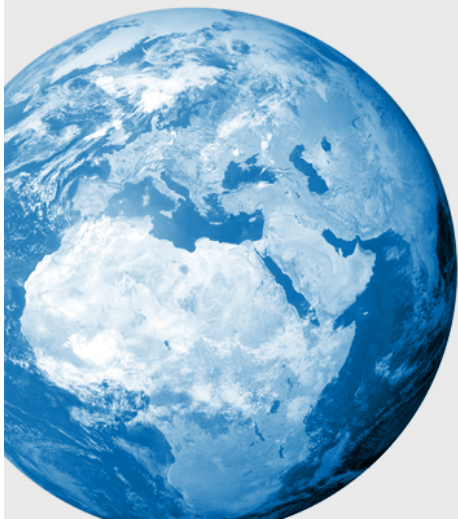


Metro Atlanta's Sustainable Economy Growth Initiative

Georgia Tech Clean Energy Speaker Series
January 25th, 2012

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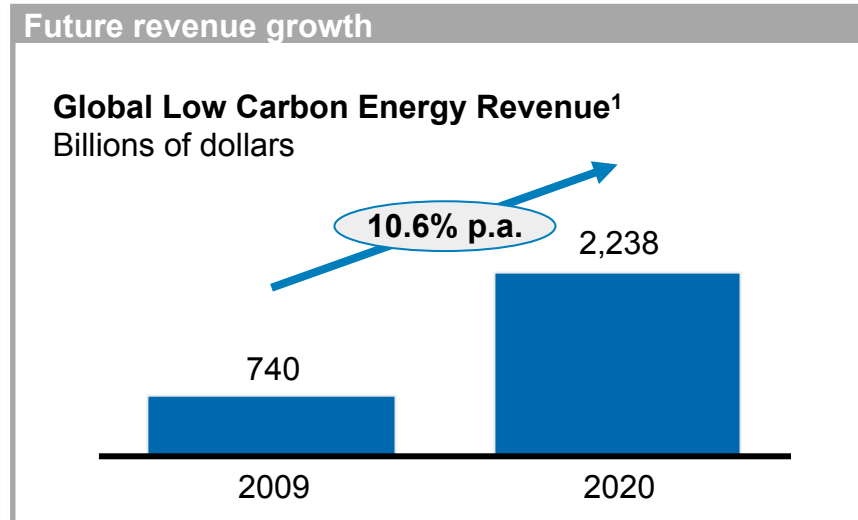
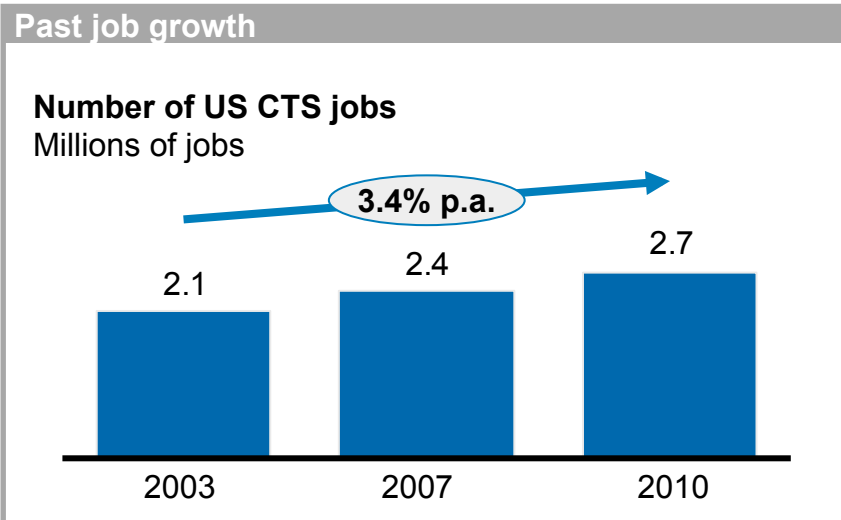
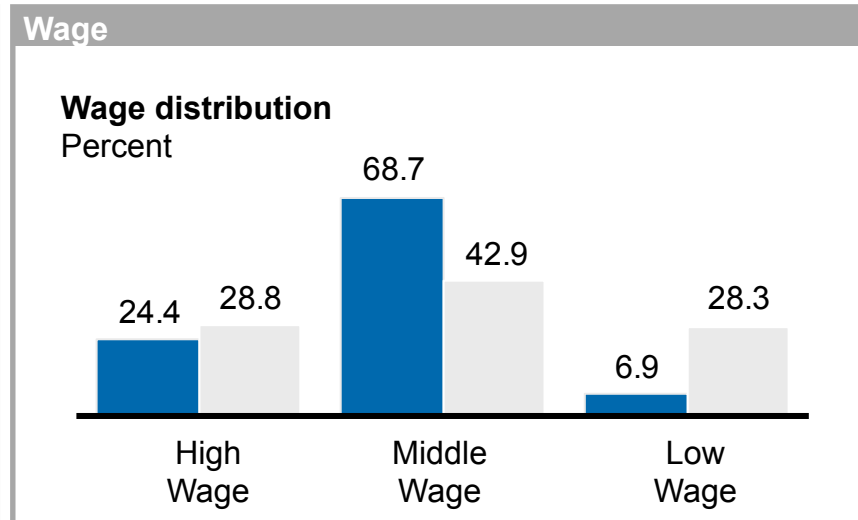
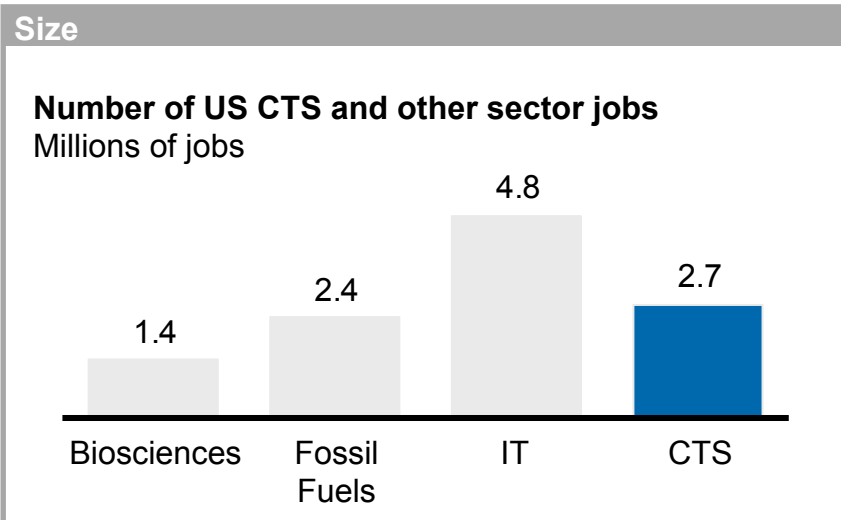


To accomplish our ultimate objective of growing jobs in metro Atlanta we recommended working across three action areas

Utilize the sustainability lens to help grow & retain jobs in metro Atlanta	
Action areas	Objectives
A Recruit and grow clean tech and sustainable businesses in metro Atlanta	<ul style="list-style-type: none">▪ Drive direct job creation and attraction▪ Improve the metro Atlanta value proposition for clean tech companies
B Improve metro Atlanta's sustainable reputation	<ul style="list-style-type: none">▪ Improve the current perception of metro Atlanta and bring to light regional success▪ Attract and retain the next generation of top talent interested in living in a sustainable city▪ Enable the execution of sustainable ideas that will have a positive economic impact
C Improve business performance with sustainability best practices	<ul style="list-style-type: none">▪ Make businesses more economically viable through sustainable practices▪ Increase demand for local companies offering economical & sustainable solutions▪ Connect the business community with our academic institutions on sustainability



Why CTS jobs? It's a large sector, skewed towards higher wages that has grown in the past and is projected to grow faster in the future



¹ Includes renewable and nuclear energy and energy efficiency in buildings, industry and transport

In order to identify opportunities in the CTS space, we adopted a taxonomy that classifies CTS jobs on 5 categories and 39 segments

Category	Detailed Segments
Agricultural and Natural Resources Conservation	<ul style="list-style-type: none"> Conservation Organic Food and Farming Sustainable Forestry Products
Education and Compliance	<ul style="list-style-type: none"> Regulation and Compliance Training
Energy and Resource Efficiency	<ul style="list-style-type: none"> Appliances Battery Technologies Electric Vehicle Technologies Energy-saving Building Materials Energy-saving Consumer Products Fuel Cells Green Architecture and Construction Services
Greenhouse Gas Reduction, Environmental Management, and Recycling	<ul style="list-style-type: none"> Air and Water Purification Technologies Carbon Storage and Management Green Building Materials Green Chemical Products Green Consumer Products Nuclear Energy
Renewable Energy	<ul style="list-style-type: none"> Bio-fuels/Biomass Geothermal Hydropower Renewable Energy Services Solar Photovoltaic

Taxonomy adopted by the Bureau of Labor Statistics to track the evolution of “green” jobs in the U.S. and will enable longitudinal analysis

Adopted by The Brookings Institution on the most rigorous and comprehensive analysis of CTS jobs to date

- HVAC and Building Control Systems
- Lighting
- Professional Energy Services
- Public Mass Transit
- Smart Grid
- Water Efficient Products

- Pollution Reduction
- Professional Environmental Services
- Recycled-Content Products
- Recycling and Reuse
- Remediation
- Waste Management and Treatment

Atlanta already is a high performer on CTS jobs: First large scale survey of CTS jobs identifies Atlanta as one of the country's top ten cities (#7)

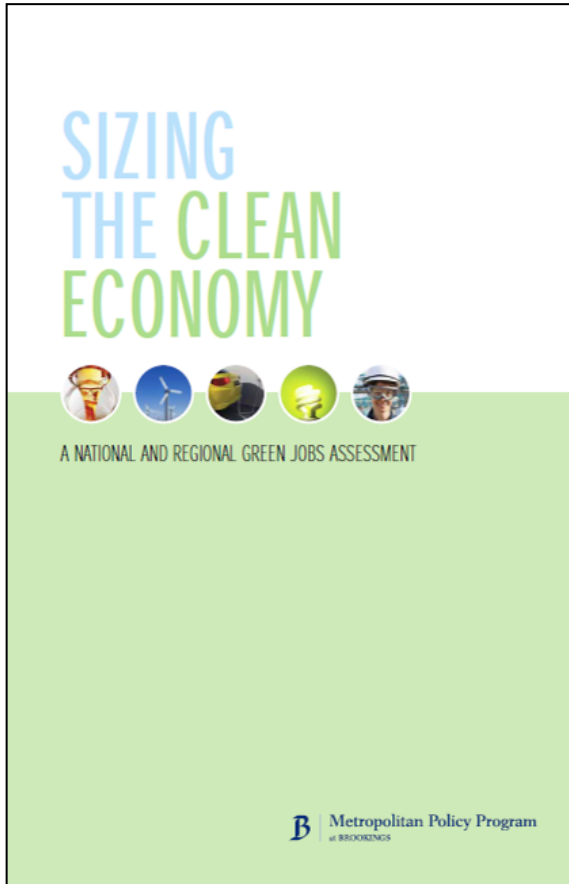


Table 4. Metro Areas with the Most Clean Economy Jobs, 100 Largest Metros, 2010

Metro Area	Clean Economy Jobs	Clean Share of All Jobs (%)
New York-Northern New Jersey-Long Island, NY-NJ-PA	152,034	1.8
Los Angeles-Long Beach-Santa Ana, CA	89,592	1.7
Chicago-Joliet-Naperville, IL-IN-WI	79,388	1.8
Washington-Arlington-Alexandria, DC-VA-MD-WV	70,828	2.3
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	54,325	2.0
San Francisco-Oakland-Fremont, CA	51,811	2.7
Atlanta-Sandy Springs-Marietta, GA	43,060	1.9
Boston-Cambridge-Quincy, MA-NH	41,825	1.7
Houston-Sugar Land-Baytown, TX	39,986	1.6
Dallas-Fort Worth-Arlington, TX	38,562	1.3

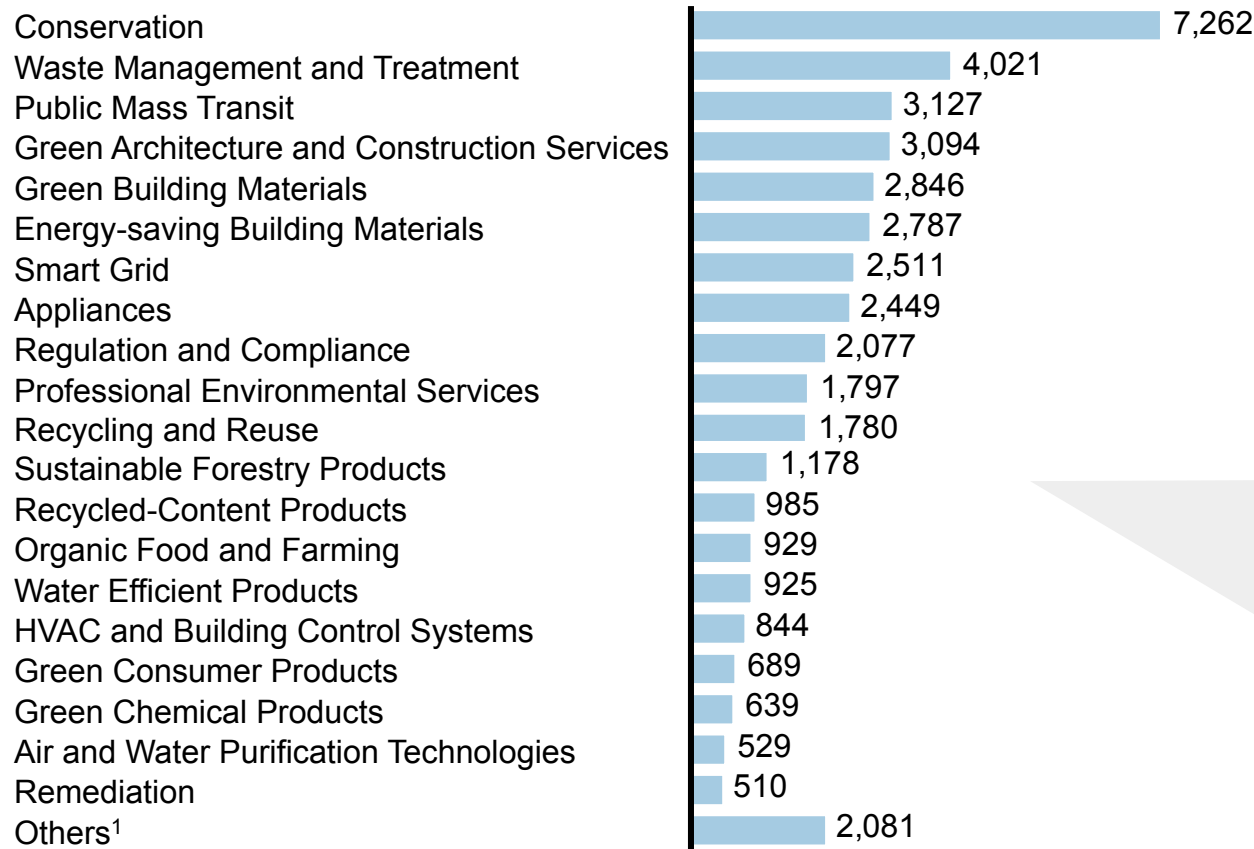
Source: Brookings-Battelle Clean Economy Database and Moody's Analytics

Atlanta has more CTS jobs (in absolute terms and as share of total jobs) than all southern cities and Boston

Atlanta also has the most diverse clean economy in the nation: There are ~43K CTS jobs, concentrated in 20 segments with more than 500 jobs

Atlanta CST jobs by segment

Thousand of jobs (2010)



“Atlanta-Sandy Springs-Marietta is the **most diverse metropolitan area clean economy in the nation**. Its approximately 43,000 clean economy jobs are very evenly spread across the 39 segments of the clean economy. With this breadth and depth, Atlanta—the seventh largest metro clean economy in the country—is **well positioned to be a major hub** in a variety of clean activities”

The Brookings Institution

¹ Others includes: Battery Technologies, Professional Energy Services, Nuclear Energy, Solar Photovoltaic, Pollution Reduction, Hydropower, Lighting, Wind, Biofuels/Biomass, Fuel Cells, Geothermal, Carbon Storage and Management, Renewable Energy Services, Energy-saving Consumer Products, Solar Thermal, Waste to Energy, Training, Electric Vehicle Technologies, Wave/Ocean Power

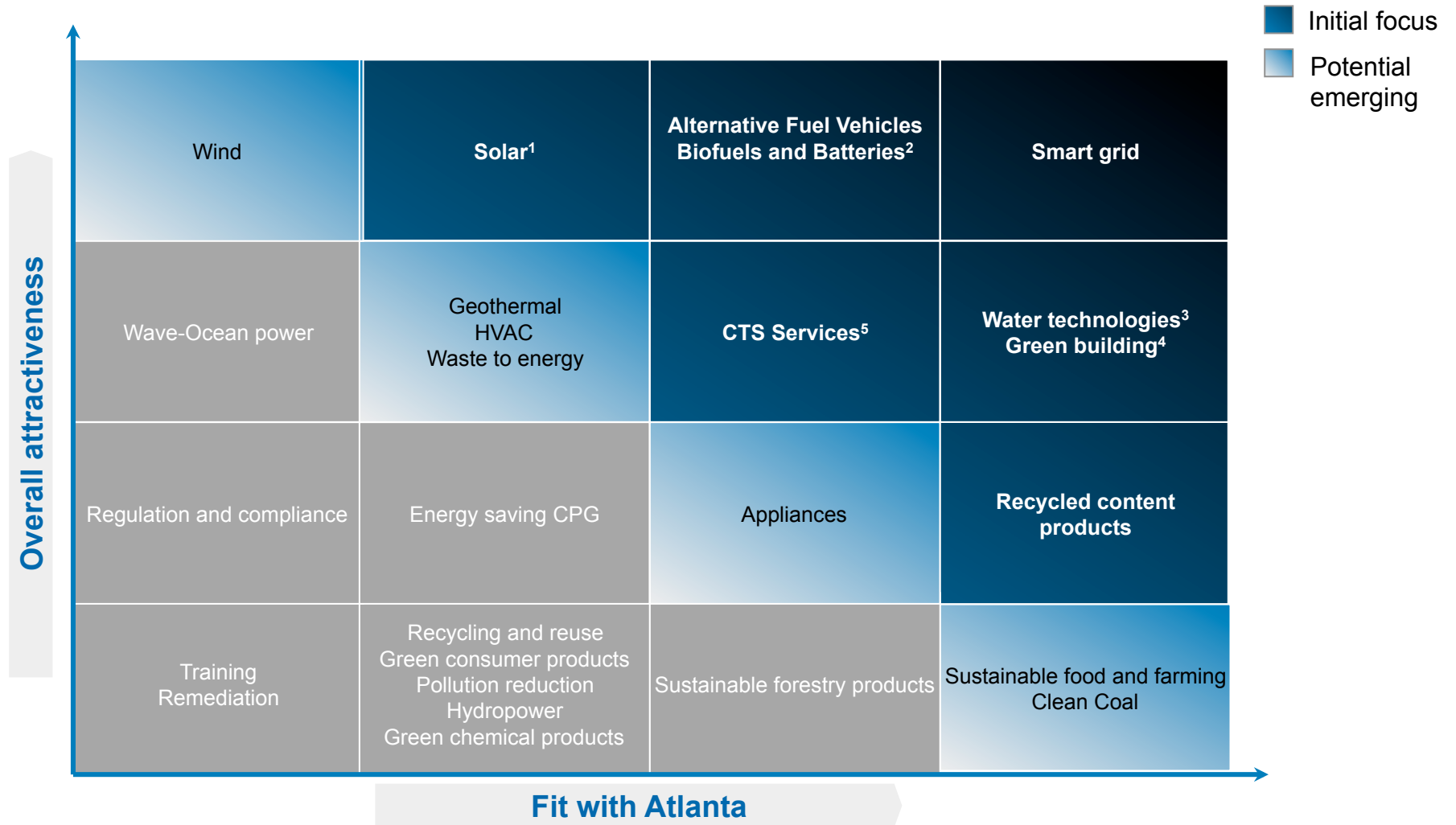


For the purpose of this effort, we prioritized among the 39 CTS segments based on 13 criteria of segment attractiveness and fit with metro Atlanta

	Variable	Metric	Rationale
Segment Attractiveness	1a Sector job size (2010)	Number of US jobs	Captures short term job creating potential of segment.
	1b Past job growth (03-10)	2003-2010 growth in US jobs	Captures medium term job creating potential of segment. Caveat that 2003-2010 incorporates the effect of the 2008 recession
	1c Revenue Growth	Forecasted revenue growth (CAGR)	Captures long term creating potential of segment. Caveat that long term projections are somewhat inaccurate.
	1d Level of fed. funding	Relative prioritization of segment in US policy	Captures the priority policy makers assign to segment. Important as proxy for future growth, but subject to variation after each election cycle
	1e Level of VC funding	Level of VC funds invested in firms in the segment	Captures the prospects of commercial viability that VC funds see in the segment.
	1f Sector clusterability	Sector's propensity to cluster	Captures whether the structural elements of the sector favor the clustering of companies, and hence, feasibility of hub strategy
	1g Job quality	Share of employees with college+ degree	Captures quality of potential jobs.
	1h Reputational benefit	Reputation upside from attracting segment	Captures the reputational impact of attracting segment.
Fit with Atlanta	2a Existence of Hub	Share of jobs in top MSA	Captures whether a different city has already become a cluster to specific segment and hence Atlanta's chances of becoming one
	2b Current starting point	Atlanta MSA share of total US jobs	Captures whether Atlanta has an inherent advantage for the segment that it can build upon
	2c Existing local momentum	Metro Atlanta's demand and prioritization	Captures whether there is significant local demand for segment and appetite for adopting necessary policies
	2d Match with talent pipeline	Quality and quantity of talent offering in the segment	Captures whether Emory, Georgia Tech, and other institutions have best-in-class educational programs on areas relevant to the segment
	2e Existing econ. dev. activity	Level of company interest for location in metro Atlanta area	Captures level of historical (2007-2010) leads, inquiries and projects by clean-tech sustainability companies as recorded by the MAC

NOTE: For our analysis, we excluded the following 4 segments: Conservation, Public Mass Transit, Waste Management and Treatment and Nuclear Energy

Based on the 13 criteria, we identified 7 sectors to initially focus on



1 Includes Solar Photovoltaic and Solar Thermal

2 Includes Battery Technologies, Biofuels-Biomass, Electric Vehicle Technologies and Fuel Cells

3 Includes Air and Water purification, Water Efficient Products

4 Includes Energy-saving Building Materials, Green Architecture and Construction Services, Green Building Materials, HVAC and Building Control Systems, Lighting

5 Includes Professional Environmental Services, Professional Energy Services and Renewable Energy Services

Establishing metro Atlanta as a leader in the target sectors yields ~6,000 jobs over the next 5 years

■ Current jobs
■ Target job growth



1 Calculated by taking the current company sizes in each sector and overall distribution across size buckets and assuming growth will come from all major size groups
2 Brookings data on aggregate clean economy jobs % requiring college degree or some college



The plan to achieve this is three fold:

- Proactively target the clean tech sustainability space with MAC economic development effort, focusing initially on 7 leading segments and defined establishment types with the goal of attracting ~6,000 jobs by 2017
- Create a MAC Clean Tech Leadership Council to serve as the business voice of metro Atlanta for sustainability-driven job creation and growth. The Council will also work with the current Environmental Policy and Sustainability Committee on sustainability topics impacting our economy and region
- To improve likelihood of success in recruiting CTS companies, the CTL Council should focus on improving metro Atlanta's competitiveness in location drivers that can be addressed the short and medium term.



To increase success in recruitment efforts, research indicates there are three areas where metro Atlanta could improve that would be impactful

Political commitment and policy environment

We are not on the map for CTS jobs. When the Mayor announced its ambitious sustainability plan, that immediately sparked interest

- Eco dev team member

Companies want to be close to final customers and demonstration projects – promoting local demand would go a long way

- Site selection consultant

Our legislators are not enthusiastic about this space. In other states, government officials are more involved in CTS recruitment process

- Eco dev team member

State and local incentives

Survey of companies and site selection consultants points to State and local incentives as one of the key location drivers that can be influenced – even more in 2010 than in 2009¹

We are so far off in terms of incentives that we can't compete. We offered a company 750K and the competing state 10 million!

- Eco dev team member

Engagement from regional universities and local talent

Showcasing Atlanta's researchers in key conferences would go a long way to attracting companies to the region

- Site selection consultant

Being able to say where Georgia Tech is distinctive would strengthen our economic development pitch

- Eco dev team member

Proximity to a knowledge center would be a great asset for international companies looking to penetrate US market

- Site selection consultant

¹ Area Development Magazine: 25th Annual Corporate Survey, 7th Annual Consultants Survey

Q & A

