Georgia Drawdown™



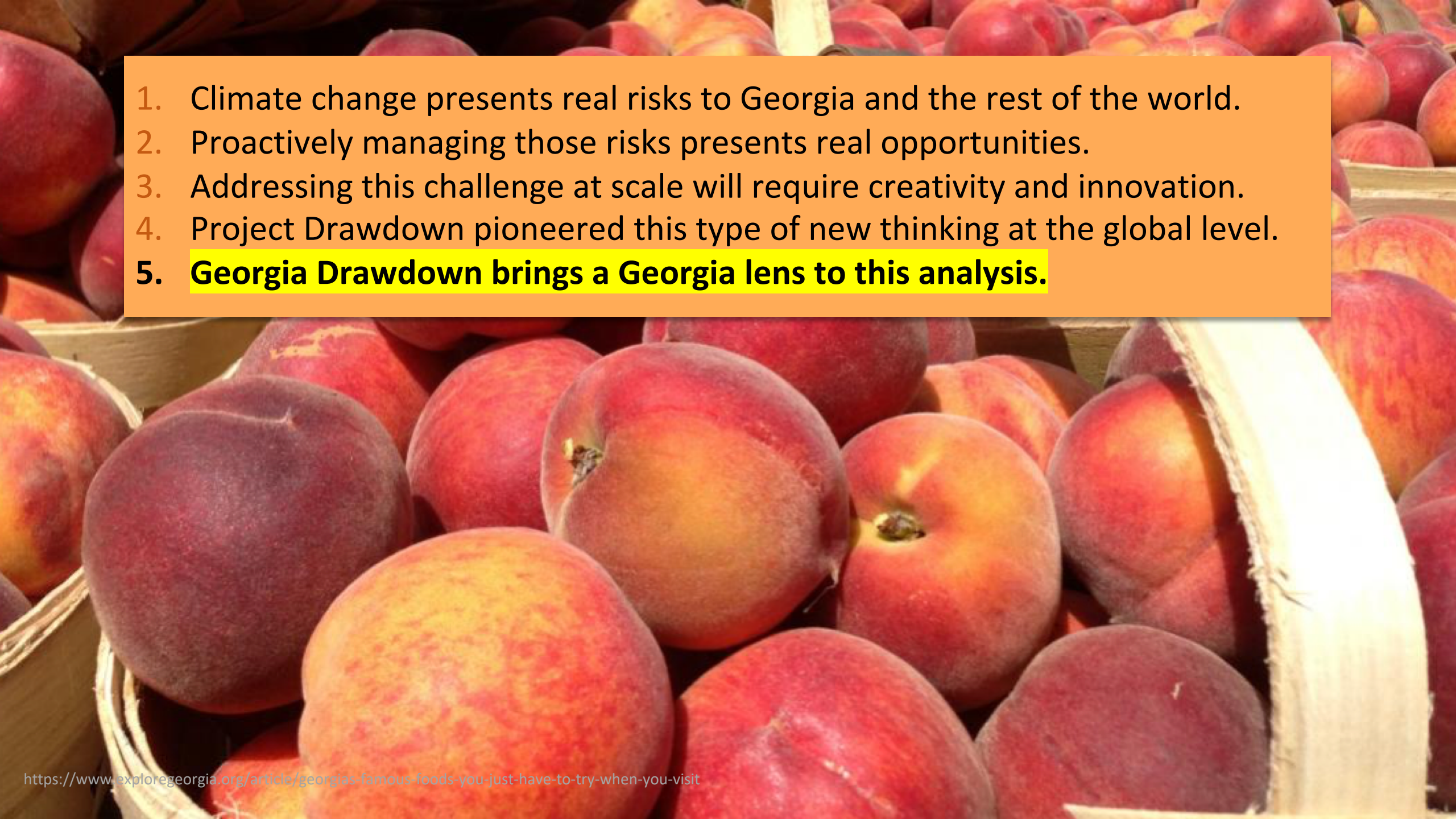


Identifying the most promising solutions
for achieving carbon neutrality in Georgia.

Dr. Marilyn A. Brown
Regents' & Brook Byers Professor of Sustainable Systems
Georgia Institute of Technology

www.GeorgiaDrawdown.org

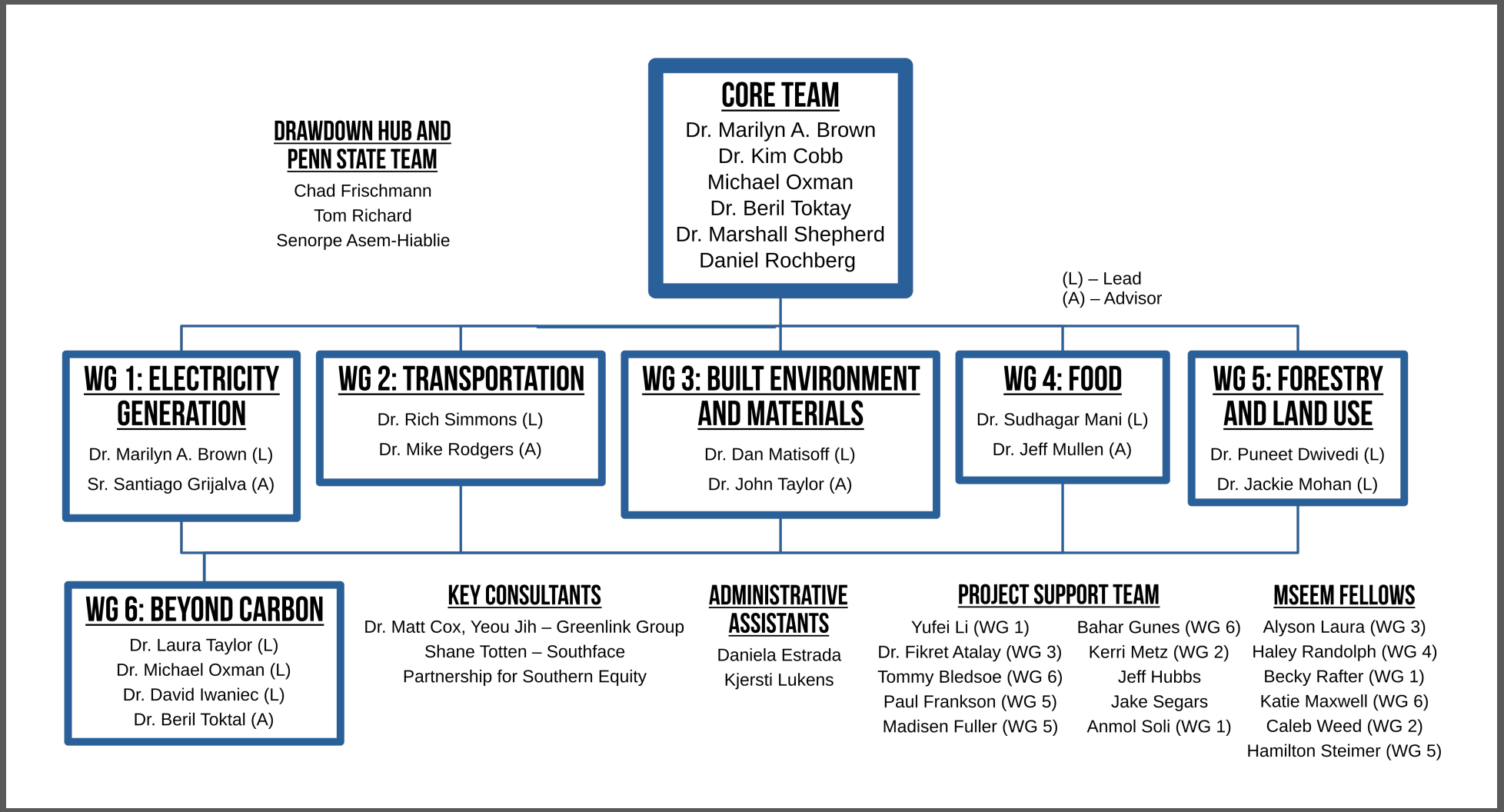
Georgia Tech
UNIVERSITY OF GEORGIA
EMORY UNIVERSITY
the RAY C. ANDERSON foundation



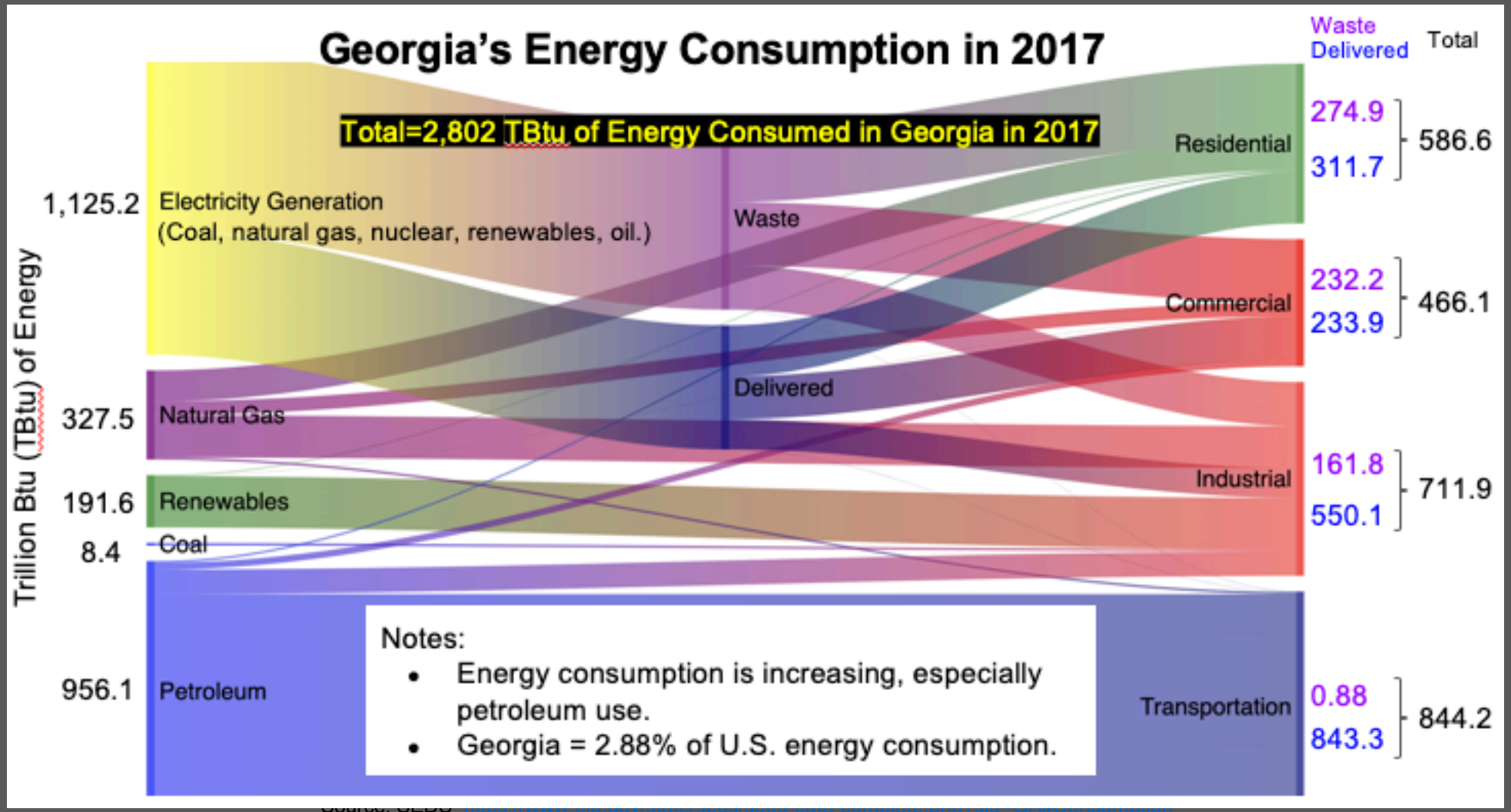
1. Climate change presents real risks to Georgia and the rest of the world.
2. Proactively managing those risks presents real opportunities.
3. Addressing this challenge at scale will require creativity and innovation.
4. Project Drawdown pioneered this type of new thinking at the global level.
5. **Georgia Drawdown brings a Georgia lens to this analysis.**

https://www.exploregeorgia.org/article/georgias-famous-foods-you-just-have-to-try-when-you-visit

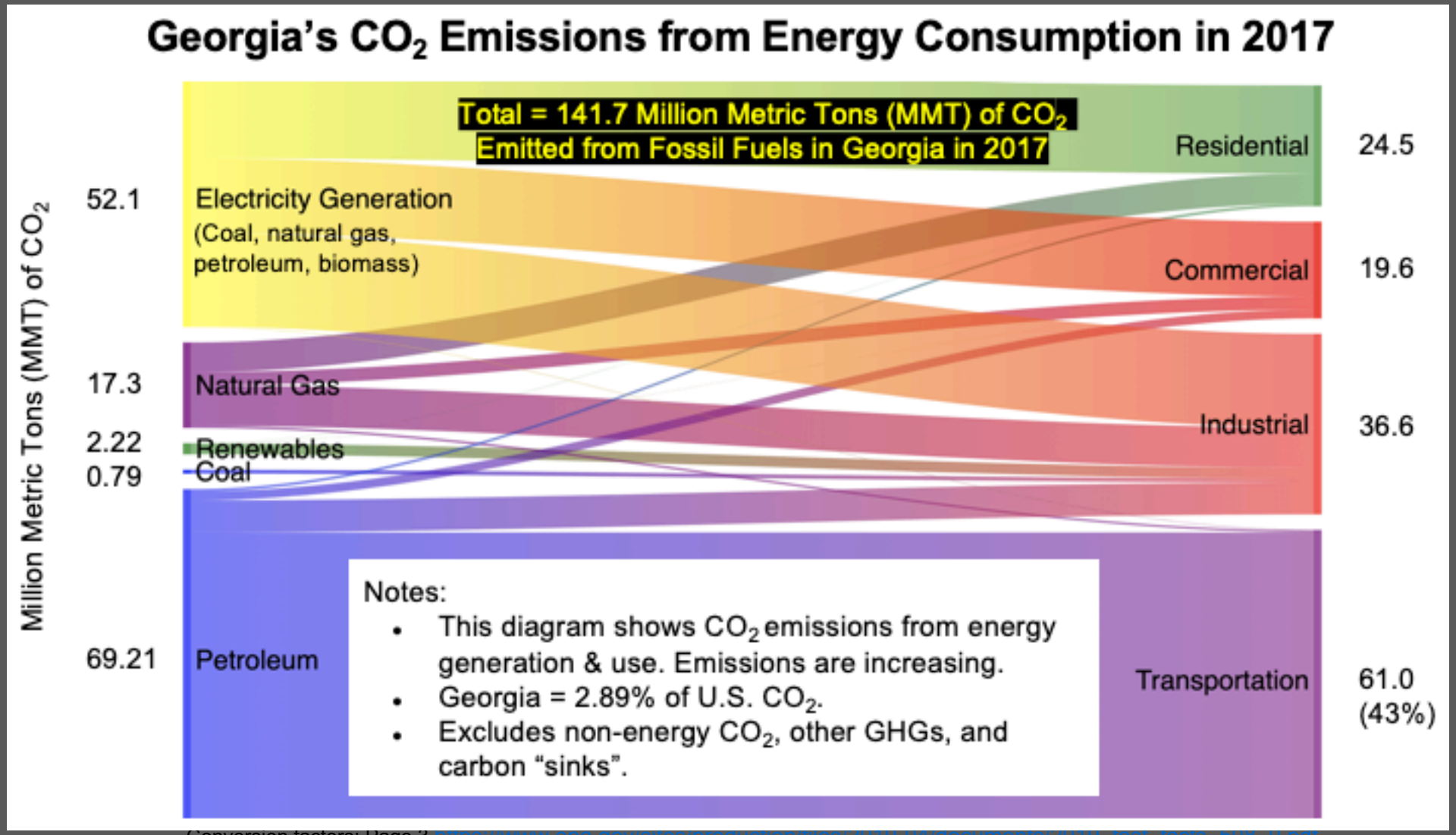
Project Overview | Georgia Drawdown Organizational Chart



Initial Work | Baselining Energy Consumption

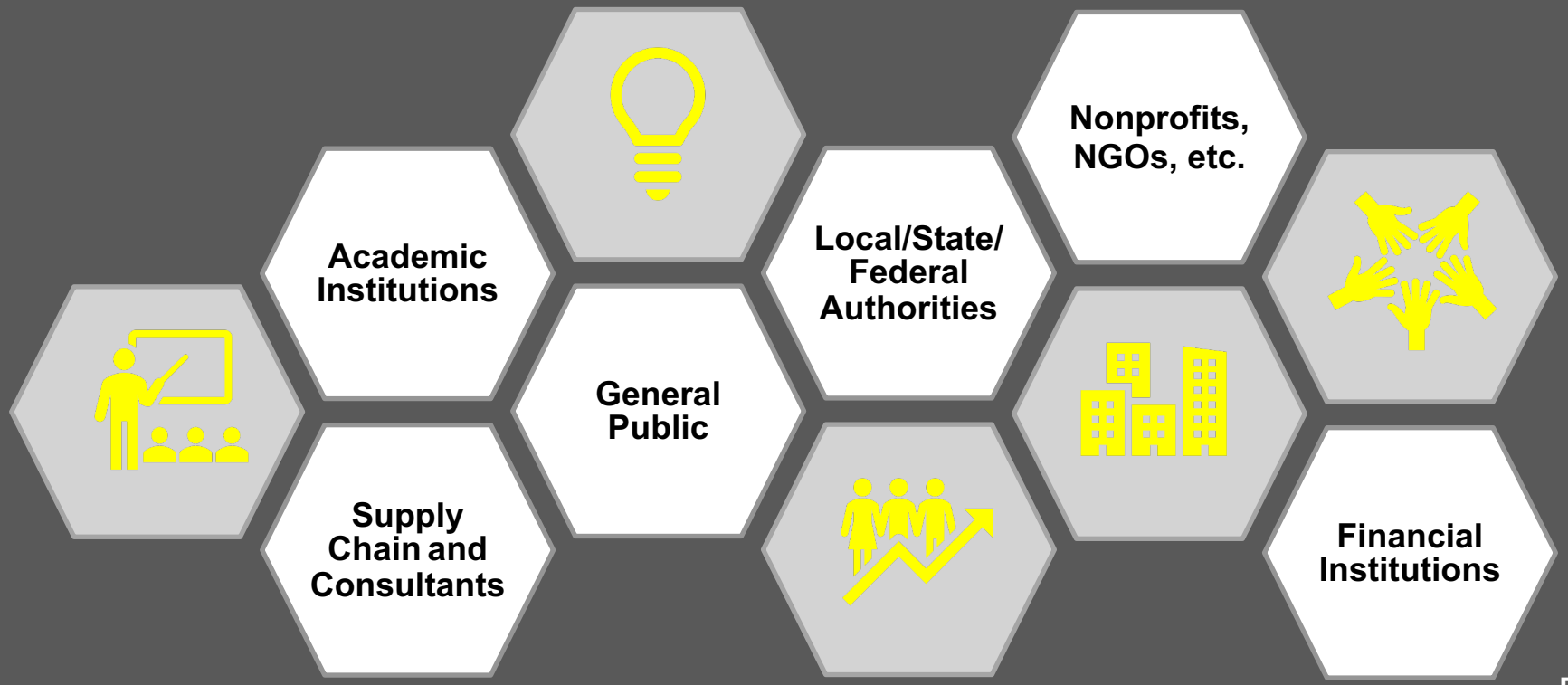


Initial Work | Georgia's Current Carbon Footprint ~ 100 Million Metric Tons



Conversion factors: Page 3 https://www.epa.gov/sites/production/files/2019-04/documents/2019_fast_facts_508_0.pdf

Expert and Crowdsource Surveys: Rate solutions and identify missing solutions



Final Electricity Survey

https://gatech.co1.qualtrics.com/jfe/form/SV_0f6YHJybj8qjKsd

Crowdsource Survey

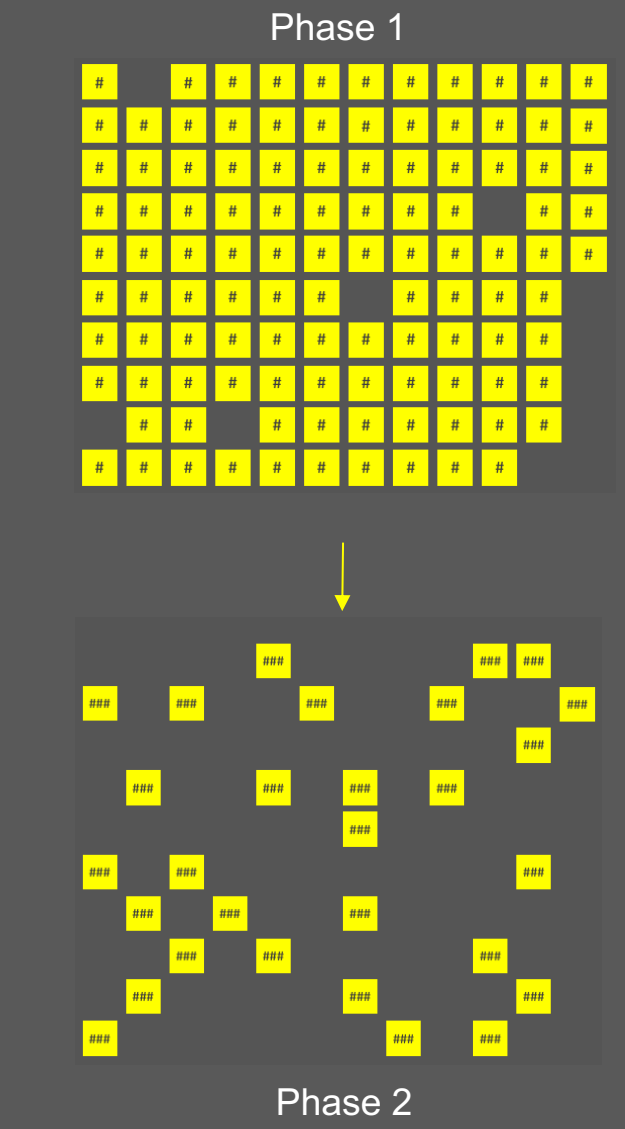
https://gatech.co1.qualtrics.com/jfe/form/SV_57oUUxIFLvvMWO1

Four Questions:

1. Rate/rank the carbon reduction potential of solutions
2. Rank top 5 solutions by cost effectiveness
3. Nominate solutions for Georgia that were missed by Project Drawdown
4. Write in "beyond carbon" considerations

Down-Select Criteria Used by Working Groups

1. **Technology and Market Readiness**
2. **Local Experience & Data Availability**
3. **Technically Achievable CO_2 Reduction Potential**
4. **Cost-Competitiveness**
5. **Other Considerations ("Beyond Carbon")**



Some Rigorous and Some Back-of-the-Envelope Calculations

80 OPTIONS

↓

72 IDEAS

Downselect Criteria

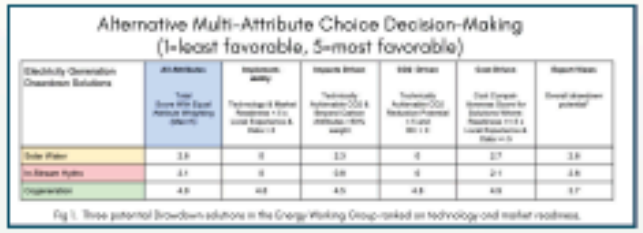
↓

25 SUGGESTIONS

↓

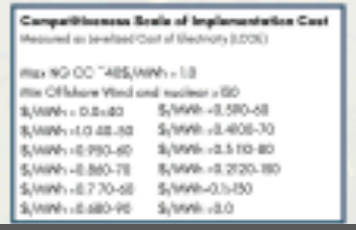
10 SOLUTIONS BY 2020

1. Technology & Market Readiness
Are the solution's components ready to be launched at significant scale over the next decade? Can innovation, technology, and policy developments make the solution workable by 2030, if it is not workable already?



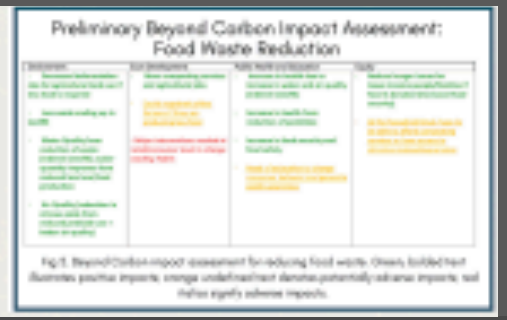
2. Local Experience & Data Availability
Is there sufficient data or qualitative analysis to adequately consider the solution in a Georgia context? Is there local familiarity with the technology? Are there any local pilot or demonstrations to study? Is the solution's level of complexity manageable so that it can be credibly assessed?

3. Technically Achievable CO2 Reduction Potential
Could the Solution achieve significant carbon reductions in the 2030 timeframe as compared to other Solutions available to this sector? (A minimum threshold might be 1 MMTCO2 annually--about 1% of 2017 CO2 emissions from fossil fuels.)



4. Cost Competitiveness
Is the solution's levelized cost of electricity (LCOE) in Georgia competitive with other Solutions available to the sector? Are the up-front capital costs affordable? Is the payback period competitive with other Solutions?

5. Other ("Beyond Carbon") Attributes
Major co-benefits or co-costs beyond carbon on four dimensions: environment, economic development, public health, & equity.]



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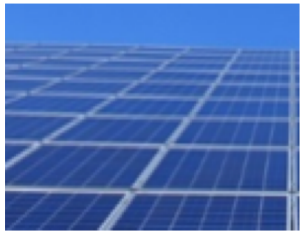
Georgia Drawdown's Short List of 24 Solutions



Electricity Generation

Solar Farms & Community Solar*

Rooftop Solar*

Cogeneration

Biomass Power

Demand Response**

- *Some coupling with storage
- **Multiple technologies

Transportation

Energy-Efficient Cars

Energy-Efficient Trucks

Mass Transit

Aviation*

Electric Vehicles

- *Focused on ground transport at airports

Built Environment & Materials

Refrigerant Management

Waste Management*

Retrofitting*

Landfill Methane

Alternative Mobility*

- *Multiple technologies & markets

Food Systems

Reduced Food Waste

Regenerative Agriculture

Conservation Agriculture

Composting

Nutrient Management

Forestry & Land Use

Temperate Forests

Forest Protection

Afforestation

Coastal Wetlands

HEALTH

EQUITY

JOBS

ENVIRONMENT

Beyond Carbon

Next Steps

Deeper Assessment of ~24 High Impact 2030 Solutions: Data Collected, Tools and Models Deployed

Further Analysis of Beyond Carbon Considerations

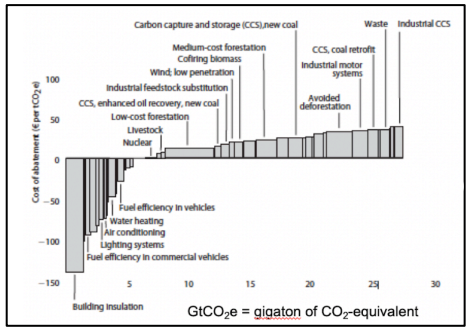
Roundtable with Georgia CEOs + Board Chairs

Consider “honorable mentions” and short list for 2030-50

Development of User-Friendly Data Portal and Dashboard of Information on Final Down-Selected Solutions

Envisioning our Final Products

Deeper Analysis of 24 Georgia Drawdown Solutions Including Their "Beyond Carbon" Attributes



Dashboard Calculator and Marginal Abatement Cost Curves

Georgia Drawdown Interactive Webpage

Roundtable with CEOs and Board Chairs

Conference in May 2020

A Broad and Accessible Published Article

A plan for Next Steps: policy assessments, stakeholder analysis & engagement

Roadmap for Other States to Pursue Carbon Neutrality

Engagement Opportunities

To reach us and stay up to date:

- Email us at drawdown@gatech.edu
- Sign up for email updates at www.GeorgiaDrawdown.org