



# DRAWDOWN GA

[www.DrawdownGA.org](http://www.DrawdownGA.org)

## Industrial Sector

### Local GHG Emissions Tracker

Technical Documentation  
Figures for Major Data Sources  
and Emissions Calculations



# Industrial sector emissions

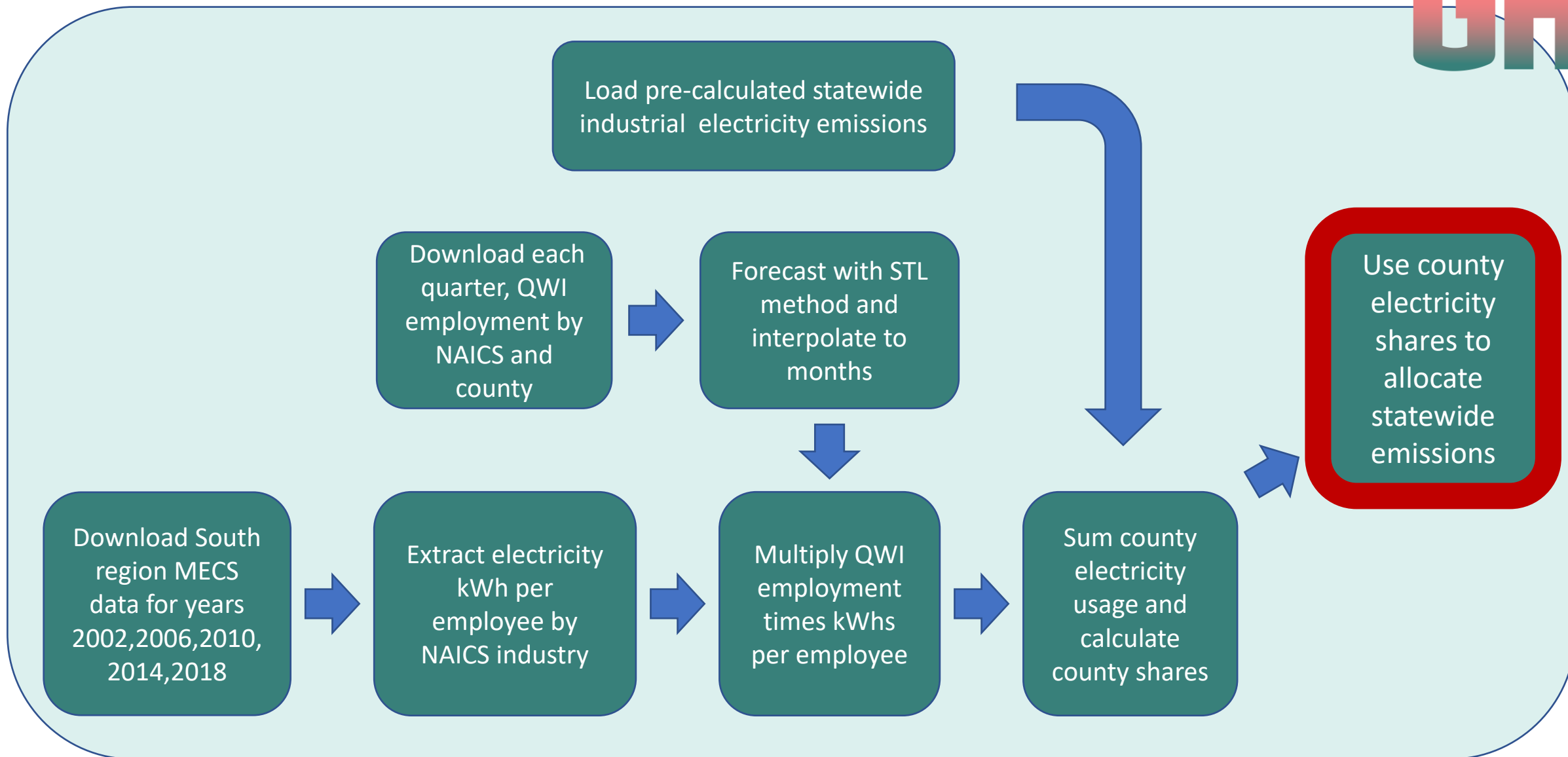
# Industrial data sources

1. EIA Open Data API monthly data: Prior calculation of **statewide electricity emissions**
2. Census Quarterly Workforce Indicators (**QWI**)  
employment by county and NAICS code
3. EIA manufacturing energy consumption survey (**MECS**) for  
South Census region for years 2002, 2006, 2010, 2014  
,2018
4. EPA State Inventory Tool (**SIT**) industrial process emissions

# Industrial electricity basic strategy

1. Load prior calculations of **monthly statewide industrial electricity emissions**
2. Load prior calculations of monthly **QWI industrial employment**
3. Load **MECS** for 2002, 2006, 2010, 2014, and 2018 and extract **kWh per employee** by NAICS industry
4. **Interpolate** kWh per employee values for intermediate years and extend for years beyond 2018
5. For each industry **multiply kWh per employee times QWI employment**, sum across industries, and calculate each county's **share** of statewide emissions
6. Multiply each county's **share of industrial electricity usage** times statewide industrial electricity emissions

# Industrial electricity emissions

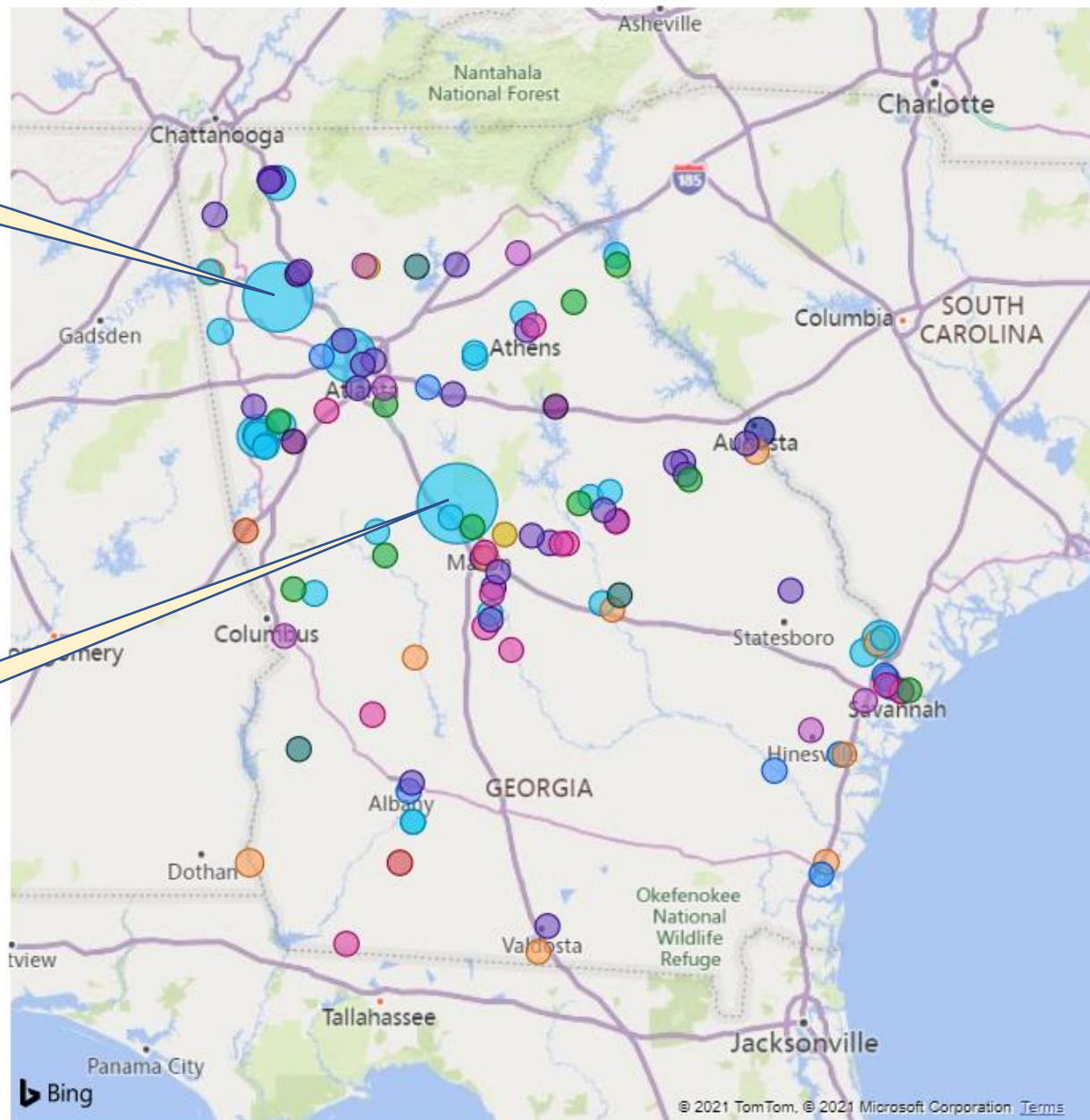


# Industrial non-electricity basic strategies

1. Download annual EPA **Greenhouse Gas Reporting Program** datasets from facilities emitting over 25,000 metric tons annually
2. **Filter** for Georgia-only sources and exclude facilities from electric power and agriculture sectors
3. Conduct GIS **point-in-polygon** operation to locate each facility by county
4. **Aggregate** emissions by county and by year
5. **Method 1:** result is county annual aggregate emissions
6. **Method 2:**
  - a. Calculate each county's share of annual statewide emissions
  - b. Use shares to allocate EPA State Inventory Tool emissions from industrial processes
  -

C02 emissions (non-biogenic) by Industry Type (sectors), Latitude and Longitude

Industry Type (sectors) ● Chemicals ● Chemic... ● Import ... ● Metals ● Minerals ● Other ● Other,P...



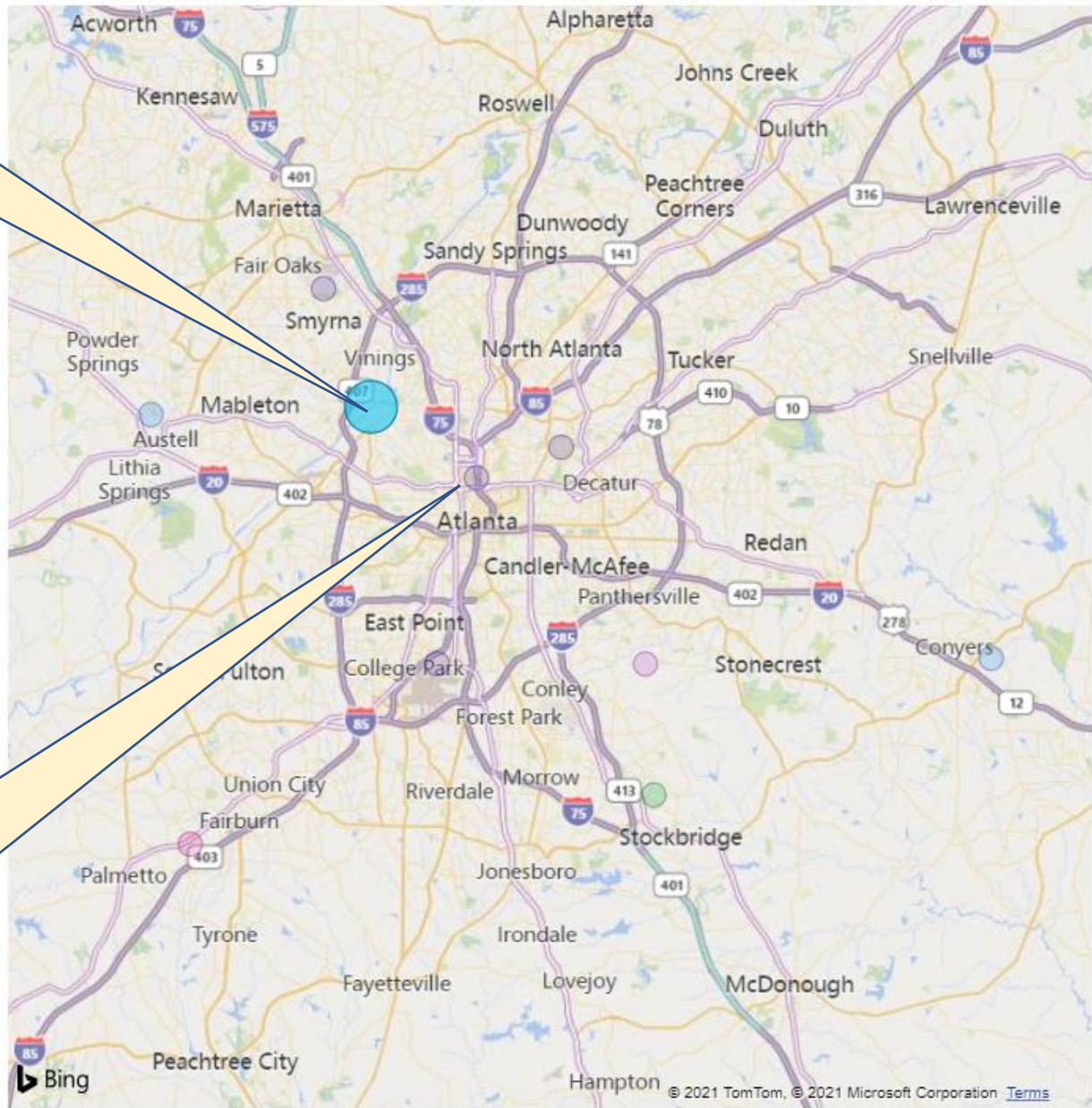
Plant Bowen  
Coal Power Plant

FLIGHT dataset  
of large CO<sub>2</sub>  
emitters

Plant Sherer  
Coal Power Plant

CO2 emissions (non-biogenic) by Industry Type (sectors), Latitude and Longitude

Industry Type (sectors) ● Chemicals ● Chemic... ● Import ... ● Metals ● Minerals ● Other ● Other,P...



**Jack McDonough Natural Gas Power Plant**

FLIGHT dataset of large CO<sub>2</sub> emitters

**Georgia Tech Natural Gas Plant for Building Heating and Cooling**



# Industrial non-electricity emissions

