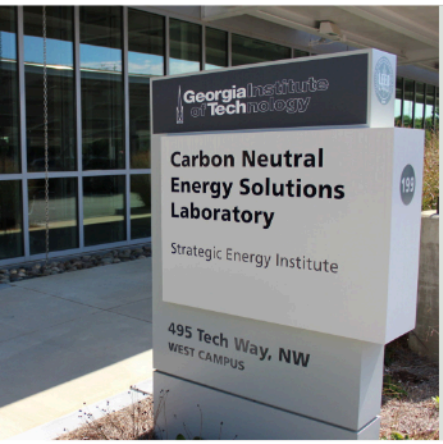
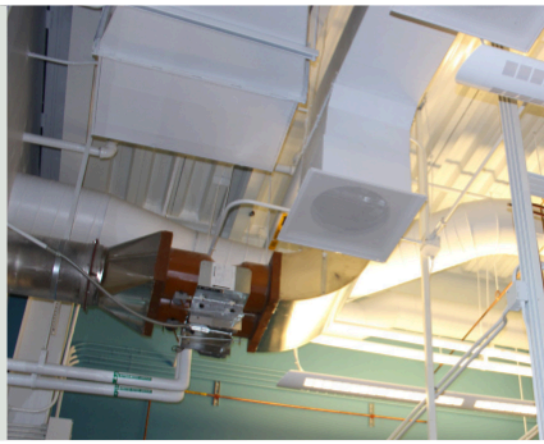
Georgia Institute of Technology

Carbon Neutral Energy Solutions Laboratory





About the Lab

The Carbon Neutral Energy Solutions Laboratory is a 43,000-square-foot facility located on the campus of the Georgia Institute of Technology in Atlanta, Georgia. The lab is a Platinum LEED-certified building focused on researching sustainable energy solutions including:

- High-efficiency combustion engines
- Biomass gasification kinetics
- Biochemical-enzymatic conversion of biomass materials
- Capturing carbon dioxide from power plants and combustion engines

Triatek's integrated laboratory solutions are part of the award winning, energy-efficient, and minimalist design that reduces electricity loads, maximizes the use of renewable energy, and capitalizes on passive energy technologies. The lab harvests energy on-site through solar panels to achieve carbon neutrality without having to purchase carbon offset credits. The lab features both high bay and mid bay work stations with fume hoods.

About the Installation

The installation included:

- 3 Room Pressure Controllers placed outside the lab entryways
- 9 Fume Hood Controllers
- 10 Variable Air Volume (VAV) Controllers
- 20 Venturi Air Valves coated in Heresite® to prevent corrosion from toxins in the air stream

The Venturi Air Valves installed in the duct work are connected to fume hoods to control exhaust, and they were also ganged together and installed in other areas of the lab to increase airflow. The room controllers regulate the overall air pressure within the laboratory to ensure it is negative compared to the hallway, and the VAV controllers provide energy efficiency based on room occupancy. The fume hood controls help protect researchers from toxic dusts and vapors during experiments. Triatek's products work seamlessly together to provide a safe, protective working environment.