

# SECCA

# Energy

A career pathway offered by Southeastern Early College and Career Academy

419 Pete Phillips Drive, Vidalia, Georgia 30474

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

## Energy 3-Course Pathway

Foundations of Energy Technologies  
Generation, Transmission, and Distribution  
Energy Systems Applications



## What is SECCA?

SECCA is an educational partnership among four Georgia school systems and Southeastern Technical College (STC). SECCA builds course opportunities for high school students that are directly relevant to their career and educational goals.

Our mission and goals include building schools' capacity to produce work-ready students and increase workforce readiness through a variety of career pathways.

SECCA has been approved by the Center for Energy Workforce Development as an Approved Course Provider for the Energy Industry Fundamentals course. Only students taking coursework from an approved course provider qualify to earn the Energy Industry Fundamentals Certificate from the Center for Energy Workforce Development (CEWD).

Energy Industry Fundamentals provides a broad understanding of the electric and natural gas utility industry. The course includes the study of energy generation, transmission, and distribution infrastructure, commonly called the "largest machine in the world," which forms the backbone for the industry. It also includes business models, regulations, types of energy and their conversion to useable energy such as electric power, how generated power is transmitted and distributed to the point of use, emerging technologies, and the connection to careers in the energy industry.

The bearer of the Energy Industry Fundamentals Certificate has a foundational knowledge and understanding of the utility industry.



## Certificate



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County  
Schools



## Energy and Power: Generation, Transmission, and Distribution

### Foundations of Energy Technologies

Course Number 49.53700

Course Description: Foundations of Energy Technologies explores the relationship among force, work, energy, and power. Students study the characteristics, availability, conversion, control, transmission, and storage of energy and power. They also examine and apply the principles of electrical, fluid, and mechanical power. Students research renewable, nonrenewable, and inexhaustible resources as well as conservation efforts.

### Energy and Power: Generation, Transmission, and Distribution

Course Number: 49.53800

Course Description: Energy and Power: Generation, Transmission, and Distribution course is designed to allow students to develop a broad understanding of the energy industry including infrastructure, generation, transmission and distribution of nonrenewable, renewable, and inexhaustible energy sources. Energy sources will be researched to include the regional and global economic implications as well as environmental and sustainability issues.

### Energy Systems Applications

Course Number: 49.53900

Course Description: In Energy Systems Applications, students will further their knowledge regarding electric power generation, transmission and distribution. In addition, the students will gain knowledge about business models, regulations, and safety within the energy industry.



**Module 1 - History and Organization of the Industry**

**Module 2 - Safety**

**Module 3 - Electric Power Generation**

**Module 4 - Electric Power Transmission**

**Module 5 - Electric Power Distribution**



**Kipling D. Hart, Ed.D.**  
Energy Pathway Instructor

Dr. Hart is an experienced Georgia educator with highly developed skills in curriculum and instructional practices. With a strong chemistry background, he brings to SECCA innovative instruction and a passion for career preparation for area students.