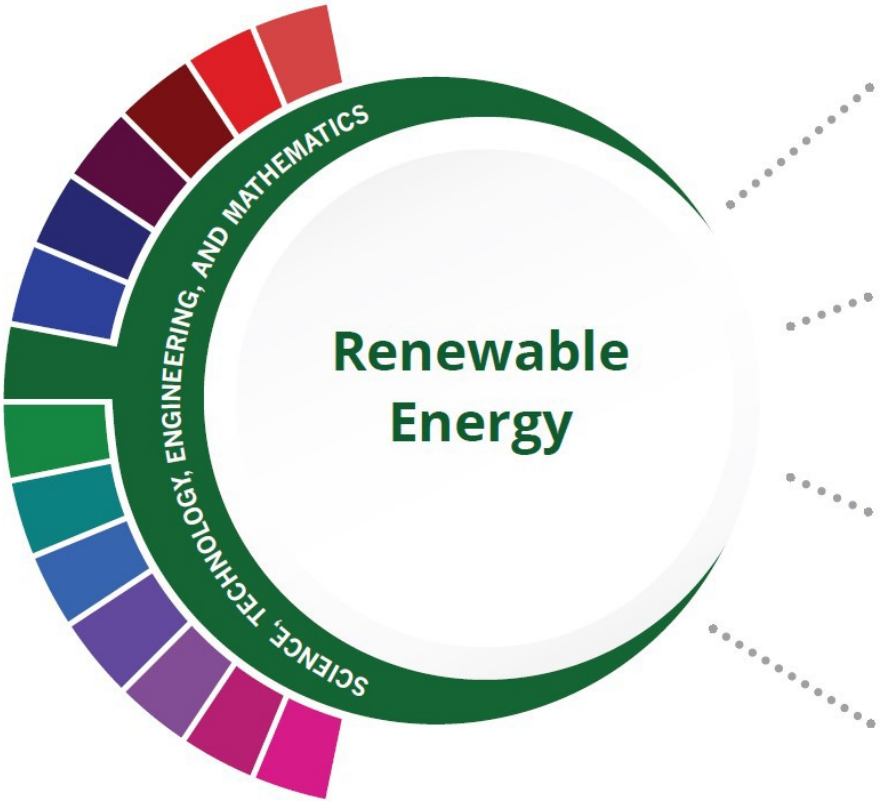

Level 1	Principles of Applied Engineering Foundations of Energy
Level 2	AC/DC Electronics Introduction to Renewable Energy (TBD)
Level 3	Energy and Natural Resources Technology/Lab Environmental Sustainability (PLTW) Solid State Electronics Scientific Research and Design
Level 4	Digital Electronics Engineering Design and Problem Solving Project-Based Research Applied Mathematics for Technical Professionals Practicum in STEM Practicum in Energy (TBD)

HIGH SCHOOL/ INDUSTRY CERTIFICATION	CERTIFICATE/ LICENSE*	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	MASTER'S/ DOCTORAL PROFESSIONAL DEGREE
	Photovoltaic Installer-Level I Professional	Industrial Mechanics and Maintenance Technology	Surveying Engineering	Surveying Engineering
	Solar Photovoltaic Certification	Solar Energy/ Technology	Systems Engineering	Systems Engineering
	Small Wind Installer-Level I	Engineering, Mechanics	Engineering, Mechanics	Manufacturing Engineering
		Engineering, General	Engineering, General	Engineering, General

*Includes Level I and Level II Certificates

Additional industry-based certification information is available on the TEA CTE website. For more information on postsecondary options for this program of study, visit TXCTE.org.

Occupations	Median Wage	Annual Openings	% Growth
Wind Turbine Services Technician	$51,334	387	108%
Solar Photovoltaic Installer	$43,957	47	81%

WORK BASED LEARNING AND EXPANDED LEARNING OPPORTUNITIES

Exploration Activities:	Work Based Learning Activities:
Skills USA Science Club	Research four renewable energy companies and compare them.

The Renewable Energy program of study helps CTE learners discover to assemble, inspect, maintain, and repair different equipment required for renewable energy. It introduces students to solar photovoltaic equipment and wind turbines, the systems and processes used to maintain and manage these types of equipment, and helps students develop the skills needed to do so.

The Science, Technology, Engineering, and Mathematics (STEM) Career Cluster focuses on planning, managing, and providing, scientific research and professional and technical services, including laboratory and testing services, and research and development services.

Successful completion of the Renewable Energy program of study will fulfill requirements of the Business and Industry or STEM endorsement if the Math and Science requirements are met. Revised - July 2020

Texas Education Agency

COURSE INFORMATION

COURSE NAME	SERVICE ID	PREREQUISITES (PREQ) COREQUISITES (CREQ)	Grade
Principles of Applied Engineering	13036200 (1 credit)	None	9-12
Foundations of Energy	13040503 (1 credit)	None	9-12
AC/DC Electronics	13036800 (1 credit)	PREQ: Principles of Applied Engineering	10-12
Energy and Natural Resources Technology/Lab	13001100 (1 credit) 13001110 (2 credits)	PREQ: At least 1 credit from courses in Agriculture, Food and Natural Resources Cluster	10-12
Introduction to Renewable Energy	TBD	TBD	TBD
Environmental Sustainability (PTLW)	N1303746 (1 credit)	None	9-12
Solid State Electronics	13036900 (1 credit)	PREQ: AC/DC Electronics	11-12
Scientific Research and Design	13037200 (1 credit)	PREQ: Biology, Chemistry, Integrated Physics and Chemistry (IPC), or Physics	11-12
Digital Electronics	13037600 (1 credit)	PREQ: Algebra I and Geometry	10-12
Engineering Design and Problem Solving	13037300 (1 credit)	PREQ: Algebra I and Geometry	11-12
Project-Based Research	12701500 (1 credit)	None	11-12
Applied Mathematics for Technical Professionals	1270410 (1 credit)	None	11-12
Practicum in STEM	13037400 (2 credits) 13037405 (3 credits) 13037410 (2 credits) 13037415 (3 credits)	PREQ: Algebra I and Geometry	12
Practicum in Energy	TBD	TBD	TBD

FOR ADDITIONAL INFORMATION ON THE SCIENCE, TECHNOLOGY, ENGINEERING, AND MATHEMATICS CAREER CLUSTER, PLEASE CONTACT:

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https://tea.texas.gov/cte