

An aerial photograph of a renewable energy farm. In the foreground, there are rows of solar panels. In the background, several wind turbines are visible against a blue sky with light clouds. The scene is a mix of green and brown fields.

Energy Technology Transfer and Workforce Development (TT&WD) Presentation to College Council October 14, 2020

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Kern County's Industry Sector Assets

Dave Mooney, NREL, quote: "If Kern County were a country, it would be 20th in solar production and 21st in wind in the world."

- More than 5,000 wind turbines in the Tehachapi-Mojave wind corridor, producing 1.3 terawatt hours (1.3 million megawatts) each year
- The East Kern Mojave Desert has some of the best solar resources in the nation, home to one of two utility scale solar power plants in Kern County (200+ Mw each) and 19 commercial projects (20 Mw or less) are in permitting

<https://www.kerncounty.com/government/county-administrative-office/cao/economic-development/economic-development-clusters/energy-and-natural-resources>

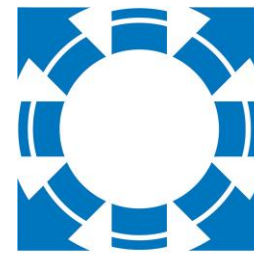


Kern County's Industry Sector Assets

- Kern County produces 72% of California's total oil production and is the 5th producing county in the nation
(https://kernedc.com/wp-content/uploads/2019/09/AC5152-Kern-EDC-2019-Market-Overview-Member-Directory-January-2019_WEB.pdf)
- Kern agriculture commodities are valued over \$7.6B+
(http://www.kernag.com/dept/news/2020/2019_Kern_County_Crop_Report.pdf)
- Kern County leads in the growing need for and development of energy storage projects —battery storage, water storage, and underground energy storage



Energy TT&WD Partnerships



NREL

Transforming ENERGY



THE SHAFTER RESEARCH STATION



**BAKERSFIELD
COLLEGE**

What is Energy TT&WD?

Future of a stable energy sector in Kern County depends on an innovative coalition of public and private partners

Research

Connecting with partners who have the research capabilities for deployment into the workplace.

Policy

Facilitate discussions on energy expansion issues resulting in influence on governmental policy.

Workforce Development

Provide critical job training to the region to ensure an economically inclusive expansion of the energy sector.

Innovation

Provide capacity building for communication of innovative projects in the energy sector

What is Energy TT&WD?

In partnership with KCCD-BC, NREL will serve as a

- Strategic technical partner advising on the creation of a virtual campus
- Content partner to support Central Valley students and faculty with cutting edge knowledge on renewable energy technologies
- Research partner on local and regional pilot programs centered on the intersection of energy, land, agriculture and water use in Kern County





What is Energy TT&WD?

In partnership with NREL, KCCCD-BC will play a leadership role in:

- Providing critical job training to the region to ensure economically inclusive and diverse energy solutions
- Facilitating strategic research and statewide discussions on the issues related to the expansion of the energy sector
- Convening industries in the energy sector, governmental agencies, and institutions of higher learning to offer a “safe zone” for substantive conversations which may serve to influence state and local energy policy

What is Energy TT&WD?

Kern County will support the partnership between KCCD-BC & NREL by:

- Providing perspective of the impact of energy issues on Kern County
- Contributing to planning of webinars and symposiums
- Participating in Energy TT&WD events



Partnership Structure

Guidance Structure:

Steering Committee

Guide the work in general oversight of activities, programming decisions, research strategies, and fundraising.

Planning Task Force

Develop the curriculum design and program outcome details based on feedback from the steering and advisory committees.

Advisory Committee

Provide advisory guidance on curriculum and program outcomes based on the collective experience of industry, academic, community, and political partners.

Fundraising Task Force

Develop a strategic fundraising plan to establish and sustain the expanded goal of a NREL Virtual Campus

Partnership Structure



Linda Parker
President,
Linda Parker Consulting, Inc

Core Team - subset of the
Steering Committee
developing the webinar
deliverables



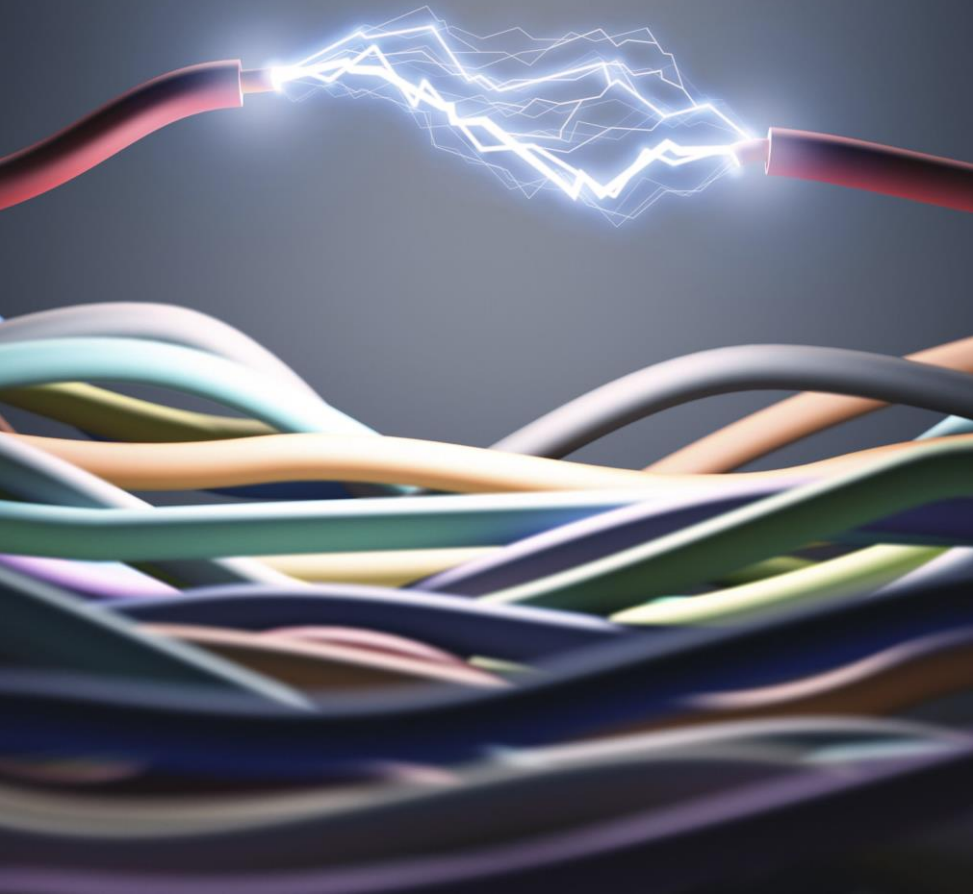
Linda Parker
developing an
Advisory Committee



Grant Development
Team & Fundraising
Task Force - financial
sustainability

Energy Defined as “the ability to do work”

- Kern County poised as entrepreneurial center for the development of new energy technologies.



How do we accomplish this?

- Energy TT&WD Virtual Campus with NREL guidance
- BC & Cerro Coso Partnership
- Industry Partners – New Technologies

How do we fit?

Start by Exploring the Possibilities

- Technician Training
- Computer Science & Cybersecurity
- Engineering & Science Interns
- Industrial Automation Baccalaureate Graduates

Bakersfield College - Curriculum Planning Task Force

- Agriculture
- Biological Science
- BMIT – Computer Science
- Engineering & Systems
- Physical Science



Questions?