

Training and Development for the 21st Century

Integrated Advanced Training Center



New Mexico Junior College

Dr. Robert Rhodes

The Need



- **by 2016, approximately 200,000 high-skill, high-wage workers) may need to be replaced due to retirement or attrition.**
- **150,000 new jobs would be needed to design and operate low- carbon power sources in the coming years in addition to those replacements.**
- **Nearly 50 percent of the five million oil and gas workers will need to be replaced in the next five years.**
- **This industry is already 1,000,000 workers short.**

The Need ...



- In the next **ten years** the Permian Basin in Eastern New Mexico and Western Texas will need an additional
- **100,000 energy technicians.**

From Truck Drivers making up \$100,000 to Technicians that 2-3 times the annual income of most non-energy professionals

In the meantime



Over the last 20 years the:

- **Number of workers completing technician training has declined**
- **Skills needed for the technician continues grow**

Energy?

In the Lea County EnergyPlex we have:

- **Wind**
- **Solar**
- **Biofuel (algae and CO₂-to-Fuels Platform)**
- **Oil**
- **Natural Gas**

Energy?

In the Lea County EnergyPlex we have:

- **Midstream Products**
- **Nuclear Enrichment**
- **Traditional Natural Gas Generation Plants**
- **Combined Cycle Natural Gas Plants**
- **Hybrid Natural Gas/Wind Plant**
- **Compressed Air Storage Wind System**

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Advanced Energy Training Center



New Mexico Junior College throughout its history has always stepped up to meet our community's needs.

- **Automotive: Ford ASSET and GM ASEP Programs**
- **Petroleum Technician Programs**
- **Radioactive Waste technician Program for WIPP**
- **Police Academy**
- **Corrections Academy**

Addressing the Need



- **Beginning in 2005 we began ramping up our capacity to serve industry in new ways**
- **This became an even greater mandate with announcement and startup of the National Enrichment Facility In Eunice**

At New Mexico Junior College



We needed to build a pipeline of technicians with not only the core skill sets but the culture of the Energy Industry

It Must also:

- Be Industry Driven**
- Be Competency Based, and**
- Have Flexible Delivery**

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Working with industry we have developed an Energy Training Program that includes multiple tracks

- **Energy Technician Training Program**
- **Nuclear Technician Training Program**
- **Petroleum Technician Training Program**
- **Alternative Energy Technician Program**

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Energy Training Program Includes:

- Short term,**
- Certificate and**
- Associate Degree tracks**
- Fully accredited online and traditional delivery**

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To support this New Mexico Junior College is developing a practical hands-on energy field. The training field includes:

- An Alternative Energy field with 45 KWH of Wind and 45 KWH of Solar**
- An Oil and Gas Training site with a functioning well site that can be customized to meet the different training requirements of industry**
- A Transportation Training site with CDL practice and testing areas**
- A Micro Grid Training system**
- Multiple classrooms of industrial scale mechanical simulators**

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- **Currently we have over 100 students in our Energy Degree programs and have provided credit based energy education to over 500 students since 2006.**
- **We annually train 4000 to 6000 students in non-credit training.**
- **2014-2014 we provided 4,336 students with nearly 48,000 hours of training**
- **This training supported the needs of over 200 local businesses.**

**Where we area headed from
here**

NMJC
and
Lockheed Martin

Training Development Partnership

Training and Development for the 21st Century



New Mexico Junior College

LOCKHEED MARTIN



Integrating Advanced Energy Training Center



- **2010 NMJC and Lockheed Martin begin to collaborate on Energy Training Development. Primarily Nuclear.**
- **2011 NMJC and Lockheed Martin**
 - **Broadened the focus to all energy**
 - **Identified the need to create student and industry friendly content in the program**
- **By 2015 we will have completed the 12 core classes with interactive online delivery.**

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- **Increased use of technology supported training.**
 - **Immersive 3D training for Lineman and Power Transmission Technicians**
 - **Advanced CDL training with a fully integrated simulation unit**
 - **Tablet and pad based just in time training programs**

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New Programs

- * Linemen Training**
- * Instrumentation and Control Technicians**
- * NM Energy and Minerals**
- * Bureau of Land Management**

New Horizons Research Foundation



- **To help support the needs of industry, New Mexico Junior College established a research foundation to support true technology transfer.**
- **Focusing on application instead of research the foundation has begun to harvest the wealth of our national labs based on needs of our growing energy industry.**

Thank you!