

## **University-Industry-Government Collaboration: Next Generation NM Energy Empowerment**

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Diversification in global energy supply will continue to grow over the next several decades, Society will push for low emission energy sources, driving substantial increases in renewables. New Mexico has an abundance of sun, wind and geothermal resources, making it a natural choice both for renewable energy production and clean energy jobs. The state is ranked second in the nation for potential solar energy-generated electric power production and 10<sup>th</sup> in wind potential. Taken together, New Mexico has more renewable energy potential than any other state.

The New Mexico State Land Office has approximately 9 million acres of land available for lease to renewable energy companies and has a sustained track record of partnering with companies to create successful projects, making the state even more attractive as a place for innovative, collaborative ventures.

Hyper-competitive knowledge driven economies, changing demographics, increasing globalization and an accelerated pace of technology progress has led to a change in the role, character and relationship of knowledge organizations. They include research universities, corporate R&D organizations, federal laboratories, and government. A new system for creating wealth has developed and is dependent upon the creation and application of new research. Multi-stakeholder partnerships have emerged as a tool of choice to build domestic capacity in science, innovation, technology and engineering.

In this model, there are several lessons for the successful joint development of technology. The mission is dependent on universities, industry, and government collaboration. It also requires a culturally sensitive needs assessment, forming technology development partnerships, scalability, and product/system evaluation for long-term sustainability. Not surprising, one barrier to growth is funding, even as the *impact investing* industry continues to grow.

This presentation will include two examples of relevance to the Energy Innovation Network as it considers operationalization models: MIT's Leaders for Manufacturing Partnership and Consortium Formation and the Harvard School of Engineering and Applied Sciences Technology Transfer to India.

- Leaders for Manufacturing Partnership- Developed as a collaborative effort between MIT's Sloan School, School of Engineering, and initially 11 manufacturing companies to address perceived eroding manufacturing infrastructure and loss of US leadership in manufacturing
- School of Engineering and Applied Sciences Technology Transfer- Program that encourages Harvard students, institution-wide, to undertake multidisciplinary collaborations focused on innovation. The program taught students how to design and develop innovative medical devices for low resource environments.

To provide a best practices model, technology licensing case studies taken from research universities and a government lab will also be presented. Successful transfer of new technologies has many benefits: the creation of wealth, new jobs and new solutions to significant challenges. We will discuss an overview of the technology transfer process, technology ownership and licensing.