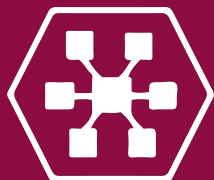




# New Mexico's Clean Energy Economy Roadmap

Chancellor, Dan Arvizu, PhD

July 29, 2021

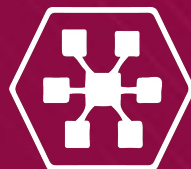
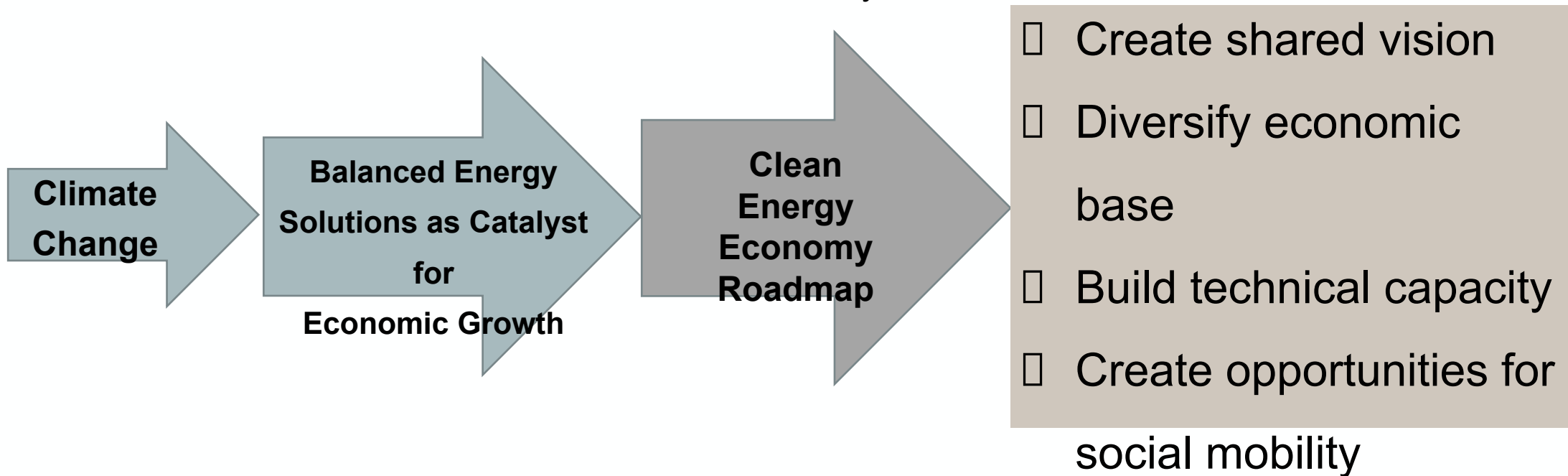


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# A Unique Challenge and Opportunity

The U.S. is at a critical juncture with post-pandemic recovery, climate challenges, and an aging workforce. The EDA funded iCREW (*Innovation and Commercialization for a Regional Energy Workforce*) grant is helping build statewide collaborations to lead the creation of a clean energy economy.



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# Redefining Strategies for Success

## Shared Vision

- Incentivize Collaboration
- Shared investments
- Move the Needle

## Diversified Economic Base

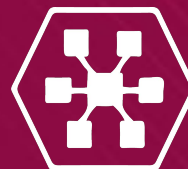
- Identify areas of strength
- Align assets with opportunities

## Building Workforce Capacity

- Trained workforce (CTE and Community Colleges)
- Up-skill and New-skill degreed professionals (4-Year Universities)
- Advanced degrees in STEM fields

## Opportunities for Social Mobility

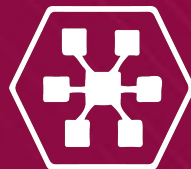
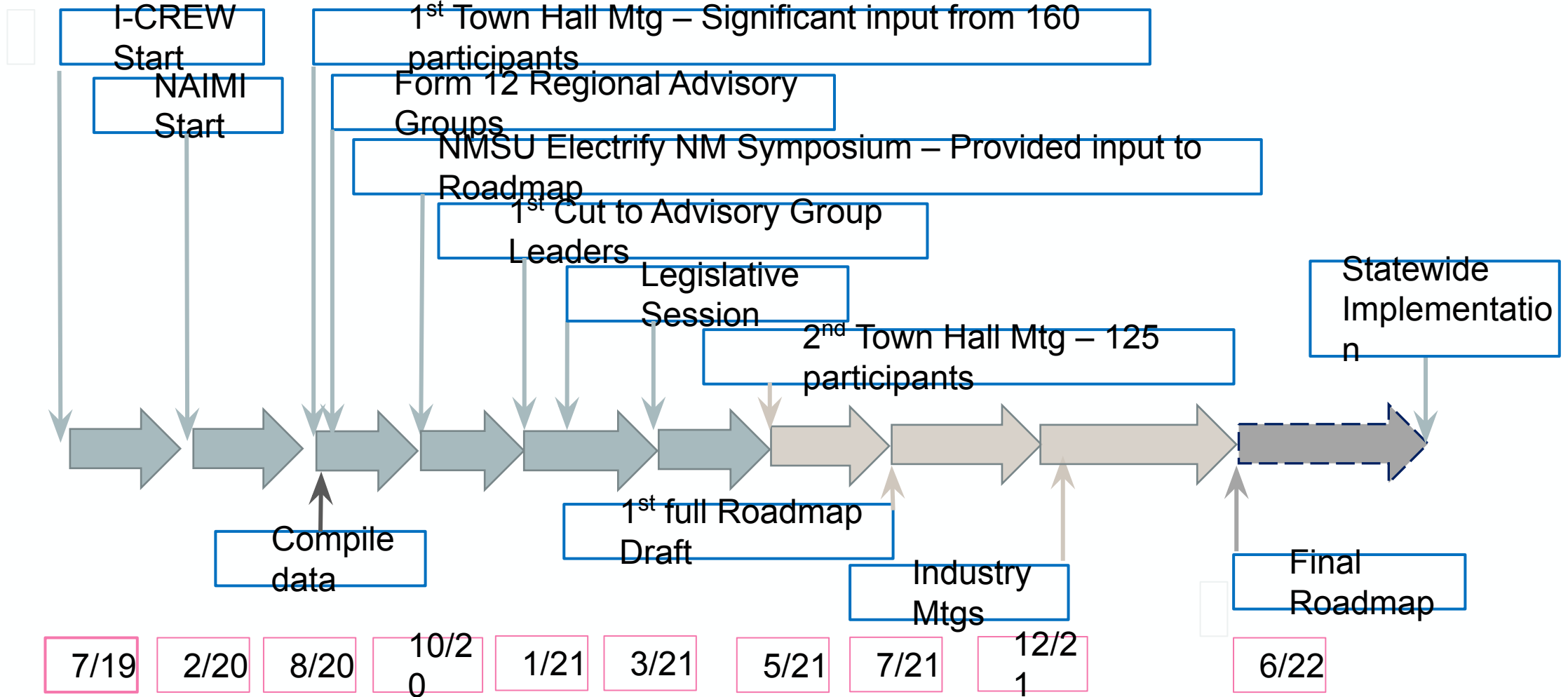
- Place-based innovation
- Engage rural and tribal communities
- Foster generational advancement



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# iCREW Roadmap Timeline



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# Statewide Needs Assessment

## Innovation

- Connect businesses with National Labs and Universities
- Diversify economy to include Intelligent Manufacturing
- Energy storage that is inclusive or rural and tribal communities
- Hydrogen fuel technologies
- Beneficial Electrification
- Energy efficiency

## Infrastructure

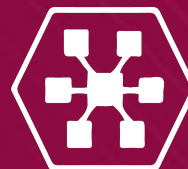
- Expand Broadband
- Electric Vehicle infrastructure
- Improvements to roads and bridges

## Workforce Development

- Connect workforce with industry needs
- Train workforce for growing cybersecurity Jobs
- Upskill and new-skill existing degreed workforce to remain relevant and competitive
- Develop clean energy service sector

## Public Policy

- Incentivize participation in rural and tribal communities
- Adopt Policies & Regulatory Processes to make NM more business friendly
- Incentivize public-private partnerships with universities



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# Snapshot of Regional Aspirations



## Southeastern Counties

Develop regional EnergyPlex  
Increase solar and wind generation



## Socorro and Sierra Counties

Increase broadband connectivity to support technology-related businesses  
Solar generation



## Four Corners Region

Explore pumped hydro storage  
Agricultural applications for clean energy



## McKinley and Cibola Counties

Re-purpose warehousing for intelligent manufacturing that leverages rail services  
Environmentally controlled agriculture



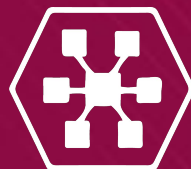
## Hidalgo and Grant Counties

Geothermal energy  
Leverage mining assets for emerging circular economy



## Dona Ana County

Grid Modernization  
Energy Storage  
Electric Vehicle infrastructure hub  
Energy Efficiency  
Circular economy and green manufacturing



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# Identified Opportunities for NM



## Intelligent Manufacturing

Re-shoring  
Manufacturing  
Near-shoring With  
Mexico  
Green-shoring  
Manufacturing (Circular  
Economy)  
Development Of Supply  
Chain



## Diversify Economy

Beneficial Electrification  
Energy Efficiency  
Hydrogen Production  
And Use  
Soil Health  
Agricultural Innovation  
Water Quality And  
Re-use



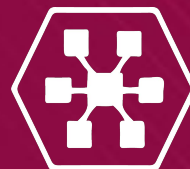
## Infrastructure Investments

Grid Modernization  
Smart Grid Systems  
Cyber-secure  
Infrastructure  
Energy Storage  
EV Transportation



## Entrepreneurship

Arrowhead Center  
Energy Sprint  
U.S. DOE Clean Energy  
Resilience and Growth  
Cluster  
NM Small Business  
Assistance  
Angel Investment Groups  
Rainforest Innovations



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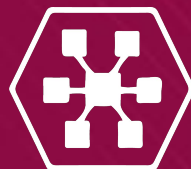


# Potential Opportunities for NM

*The American Jobs Plan reflects elements of the NM Clean Energy Economy Roadmap. If enacted, funding may be available to realize many of the identified recommendations.*

President Biden's **American Jobs Plan** proposes to revitalize

- **Roads and Bridges:** \$600B to transform nation's transportation
- **Public Transportation:** Modernize public transit with an \$85B investment.
- **Broadband:** \$100B to bring hi-speed, affordable coverage to all U.S.
- **Manufacturing:** Invest \$300B to retool and revitalize American
- **Clean Energy Jobs:** Create good paying jobs advancing clean energy



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# U.S. DOE Earthshot Initiatives

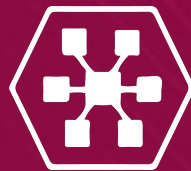
DOE is organizing major crosscutting and multi-disciplinary research activities around eight Earthshots to provide 100% clean energy electricity by 2035 and net-zero carbon emissions economy-wide by 2050.

First two Earthshots were announced this summer:

- Hydrogen Shot: Reduce the cost of clean hydrogen by 80% to \$1 per 1 kilogram in 1 decade
- Long Duration Shot: Reduce the cost of grid-scale energy storage by 90% within the next decade for systems more than 10 hours of duration.



# Thank you!



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