



# New Mexico Clean Energy Economy Roadmap Progress Report

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# Roadmap Goals

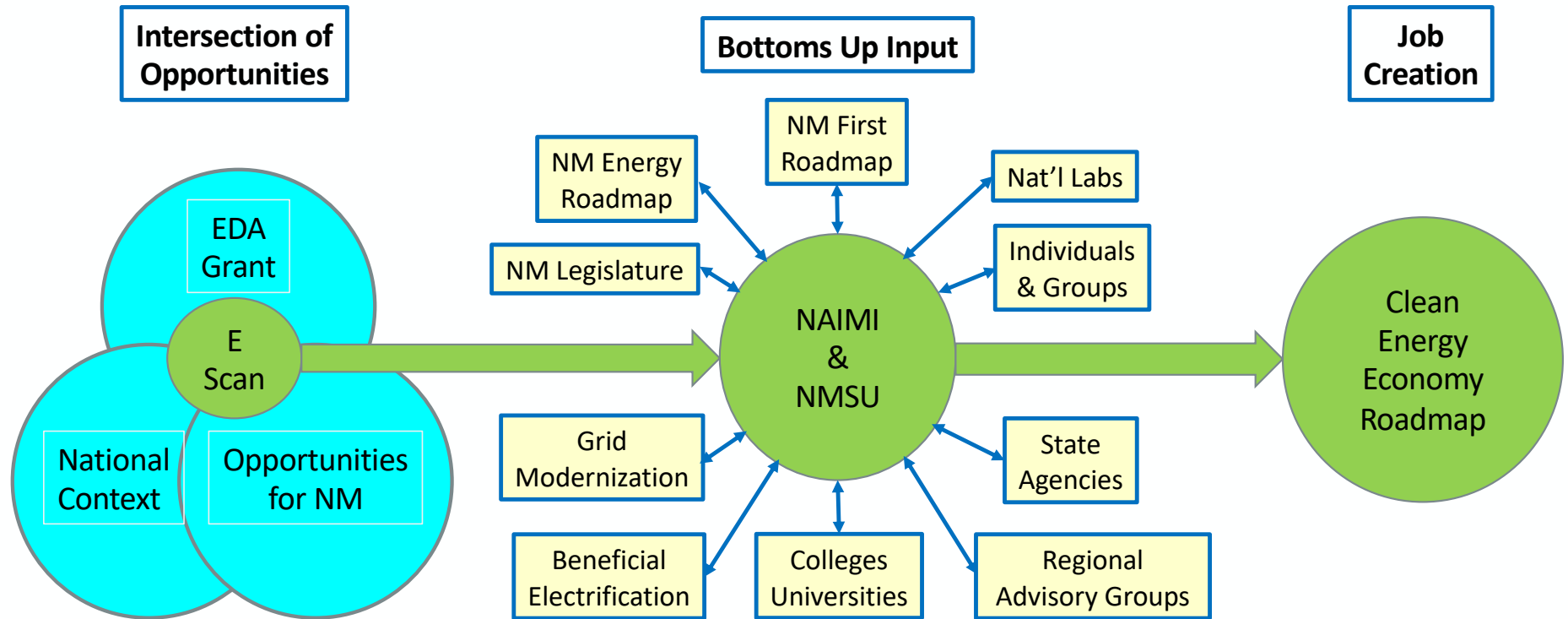
- NAIMI is partnering with NMSU on the iCREW EDA grant
  - NAIMI's role is to develop a Clean Energy Economy Roadmap
    - *i.e., how do we create jobs around the availability of clean energy?*
- The Roadmap is a bottoms up assessment based on input we receive
  - *The Roadmap does not compete with other efforts, but rather combines their findings with input we receive to produce an integrated plan for creating clean energy economy jobs.*
- The Roadmap is designed to provide benefit to participants and New Mexico to create jobs in a Clean Energy Economy
- The Roadmap provides the path to creating jobs by:
  - Assessing issues and challenges restricting growth
  - Determining the opportunities and actions needed
  - Matching needs with resources



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# Roadmap Basis



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# Roadmap Process

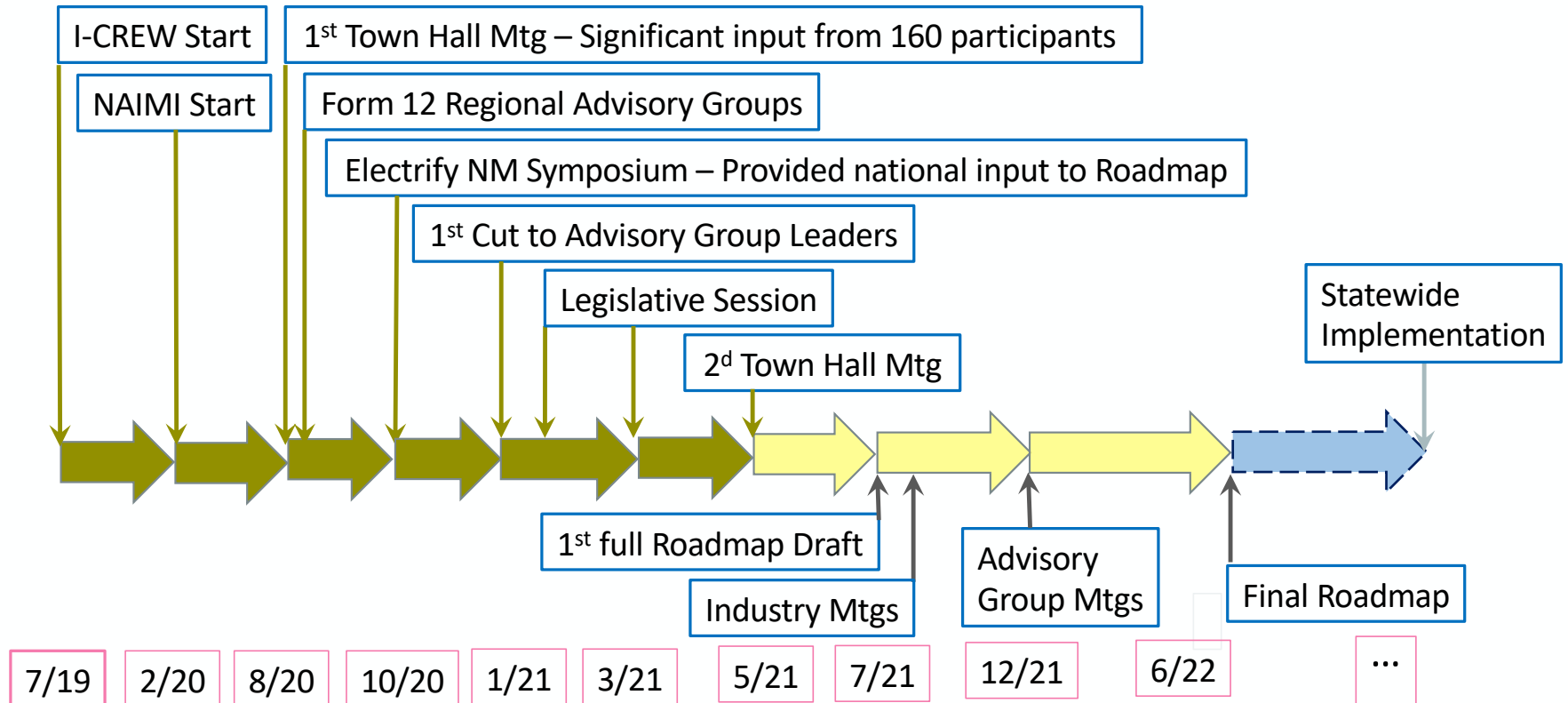
- NAIMI is gathering information from a wide range of sources:
  - 12 Regional Advisory Groups
  - Entrepreneurs and businesses
  - Local, State, and Federal agencies
  - Colleges and universities
  - National laboratories
  - Economic/workforce development groups
  - Council on Competitiveness
  - NM nonprofits
  - Roosevelt Project
  - Utilities
  - Oil and gas companies
  - Interested individuals



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# Roadmap Timeline

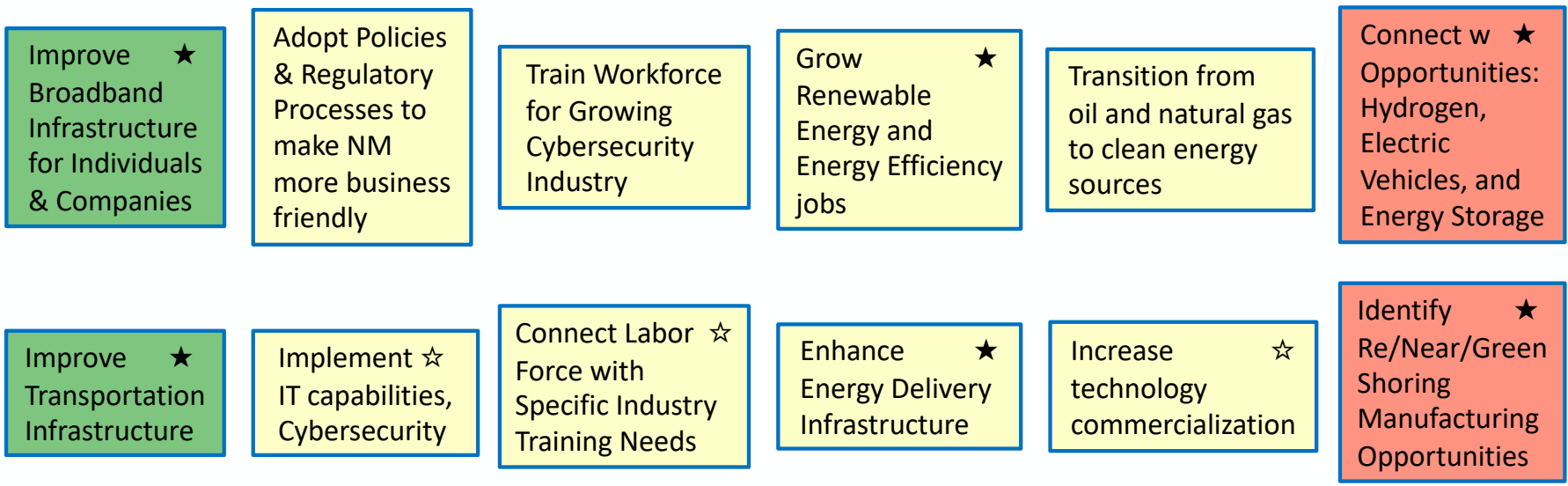


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# Roadmap Challenges

Developed with input from advisory groups and other organizations



Immediate Challenges  
 Green Being Implemented, Yellow Partially Implemented, Red Needs Efforts

★ included in American Jobs Plan  
 ☆ included in Council on Competitiveness



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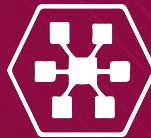


# Potential Opportunities for NM

- President Biden’s American Jobs Plan proposes to revitalize manufacturing, secure U.S. supply chain, invest in R&D, and train Americans for future jobs.
- The American Jobs Plan has the potential to benefit NM:
  - Roads and Bridges: \$600B to transform nation’s transportation infrastructure.
  - Public Transportation: Modernize public transit with an \$85B investment.
  - Broadband: \$100B to bring hi-speed, affordable coverage to all U.S. families.
  - Manufacturing: Invest \$300B to retool and revitalize American manufacturers.
  - Clean Energy Jobs: Create good paying jobs advancing clean energy sector.

The American Jobs Plan reflects a number of the elements of the Roadmap from the 1<sup>st</sup> Town Hall.

If approved, it could provide funding for some of the recommendations of the Roadmap.



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# Roadmap Assessed Needs

## Support Needed for Economic Growth

Support Improved Broadband Infrastructure Bill

Train Workforce for Growing Cybersecurity Industry

Adopt Policies & Regulatory Processes, to make NM more business friendly

Connect Labor Force with Industry Training Needs

Support Transportation Infrastructure Bill

Connect rural businesses w Tech Transfer at Labs

NAIMI will help support these efforts for Economic Growth

Status of Efforts: **Green Underway**, **Yellow Under Development**



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# Roadmap Opportunities/Recommendations

## Creating New Jobs

Develop Opportunities in Growing Areas of Hydrogen, Electric Vehicles, and Energy Storage

Renewable Energy and Energy Efficiency Jobs -

Use NAIMI Connections for Manufacturing/ Near Shoring Opportunities

COVID demonstrates need to reshore manufacturing

Develop Pumped Hydroelectric Energy Storage

IT Sector: Cybersecurity and Smart Grid

IT Sector: RD&D Data Storage and Handling

Timeline: Yellow Under Development, Red in Planning



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# Creating Clean Energy Economy Jobs

Roadmap defines sectors that can create jobs:

- Reshore, nearshore, green shore manufacturing  
*Awareness the grid is susceptible to foreign supply chain*
- Pumped hydroelectric storage of energy  
*Large-scale system in Four Corners area to stabilize SW grid*  
*Modular systems in Permian Basin w benefit for oil and gas*
- Distribution of goods\*  
*Take advantage of I-25, I-40, I-10 crossroads and good weather*  
*Amazon distribution center on west side of ABQ*
- *NAIMI includes supply and distribution in manufacturing chain*



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# Hydrogen Economy

- Production of green hydrogen
- Production/distribution of hydrogen from natural gas
- Production of hydrocarbon materials from green hydrogen
- Hydrogen as a fuel source/fueling stations for transportation
- Manufacture of systems for land and air transport



Six-seater Piper Malibu M350 first flight in Sept with ZeroAvia's hydrogen powertrain



Germany's new hydrogen-powered train



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# Information Technology & Cybersecurity

- R&D - *Intel announcement of \$6B R&D effort in Rio Rancho*
- Data Storage and Handling - *Facebook multi \$B Los Lunas data center*
- Digital Media - *Netflix Albuquerque Studios and Institute for Digital Media*
- Field Programmable Gate Arrays – *UNM Cosmiac Program*
- Recent Cybersecurity Incidents
  - SolarWinds Hack
  - Colonial Gas Pipeline Hack
- Smart Grid Cybersecurity
  - LANL quantum cryptographic grid control system*
- Cybersecurity Programs
  - *2.1M unfilled cybersec jobs in 2021*
  - NMSU and NMT courses*
  - NMT Cybersecurity Education Center*
  - NMT Cybersecurity Center of Excellence*



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# Roadmap Status

- The Energy Transition Act of 2019 is driving New Mexico to define the path to a carbon-free electric grid by 2045.
- The Roadmap will address energy, water, environment, agriculture, and oil and gas holistically.
- The Roadmap provides a path to achieving NM energy goals by creating sustainable jobs around the availability of clean energy in NM.



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- The Roadmap will address energy, water, environment, agriculture, and oil and gas holistically.
- The Roadmap provides a path to achieving NM energy goals by creating sustainable jobs around the availability of clean energy in NM.
- The Roadmap provides a bottoms-up assessment of issues, challenges, and opportunities for a Clean Energy Economy.
- NAIMI is on track to exceed the requirements of the EDA grant.
- The Roadmap directly benefits participants and NM by defining actions needed and matching needs with resources to grow jobs in NM.



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# Contact Information

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