

# CLEAN ENERGY WORKFORCE STUDY

## COMMUNITY VIEWS TO INFORM TRAINING AND WORKFORCE DEVELOPMENT



NATIVE AMERICAN  
BUDGET & POLICY  
INSTITUTE



CENTER FOR  
SOCIAL POLICY



CRADLE TO CAREER  
POLICY INSTITUTE



# Summary of Our Research Team

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- Center for Social Policy executed the research design across our full team of integrated research institutes.
  - Native American Budget and Policy Institute to address goal of ensuring Native American communities are included.
  - Cradle to Career Policy Institute to conduct higher education analysis.
  - Center for Civic Policy was a key partner who helped connect our team with community members and ensured our work was community engaged.

# Research Design - Methodology

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- Literature Review: Extensive landscape research to identify best practices for preparing a workforce for transition, and demographics of the existing workforce.
- Analysis of higher education system in NM, including Interviews with key personnel.
- Open access on-line survey to capture views of general population- filled gap created by need to cancel large community events in key areas of NM.

# Research Design – Survey Design

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- Statewide on-line survey with 1,754 completes conducted June 1, 2020 – June 24, 2020
- Conducted in English and Spanish and accessible across all platforms including smart-phones. Our team also conducted a small number of phone interviews for community members without web access.
- The data were weighted to match the U.S. Census ACS for New Mexico adults on key demographics including education, race, gender and income.

# Research Design- Qualitative Data

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- Focus groups with important sub-groups across the state:
  - Clean energy workforce (solar installation crews)
  - Members of parallel workforce sectors (construction)
  - Non-profit organizations leaders who are part of the Power4NM Coalition
  - Community members in target regions of the state (NW quadrant, Southern NM, Abq metro)
- This included multiple Spanish speaking groups

# Research Design- Qualitative Data

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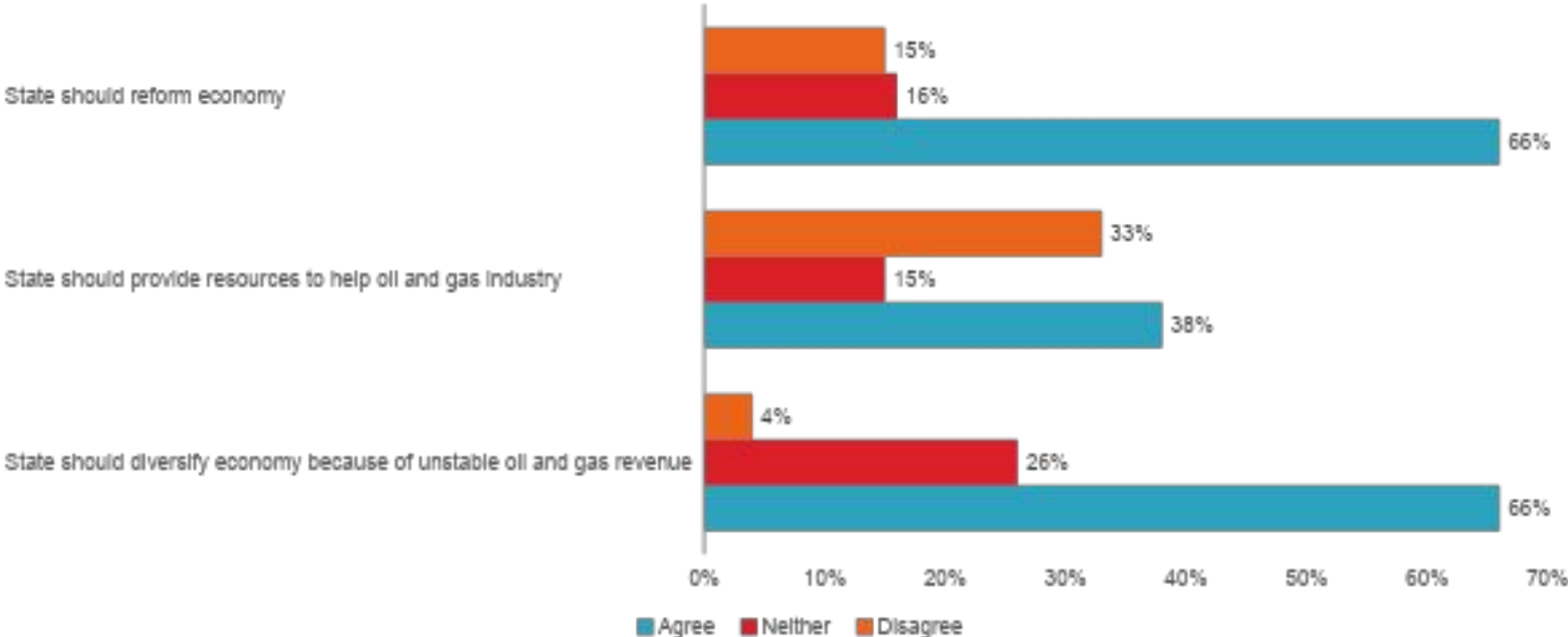
- Semi-structured interviews were conducted with administrators and faculty, representing 13 higher education institutions including Tribal, two-year, and four-year colleges and universities.
- In all our team collected input from 1,864 New Mexicans:
  - 1754 from the survey
  - 110 through qualitative interviews/groups

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## Community Views Regarding Economic Challenges

# Economic Challenges Motivate Support for Diversification

Do you Agree With the Following Statements?





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## Limited Knowledge of ETA - Jobs in Clean Energy

# Limited Knowledge of the ETA

Have you ever heard of the Energy Transition Act or ETA which was passed in 2019?



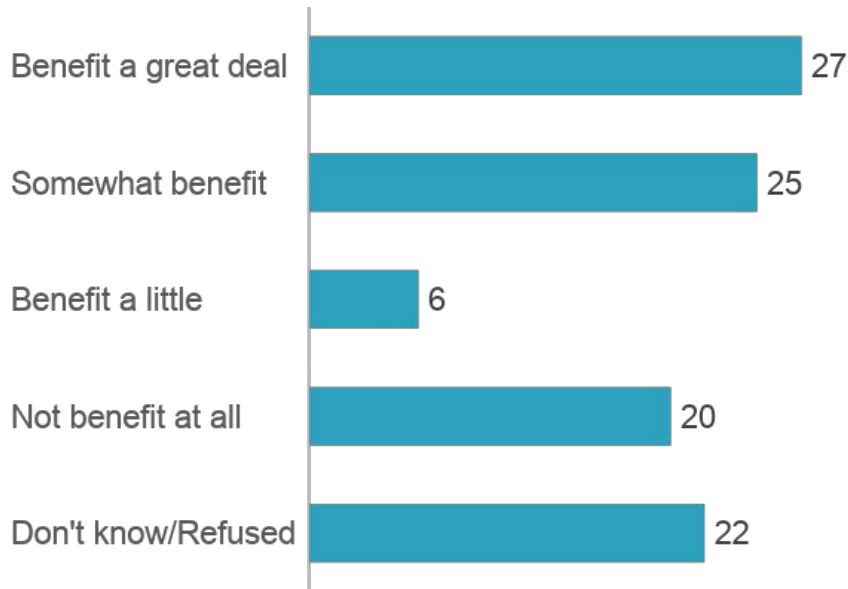
# Limited Knowledge of the ETA

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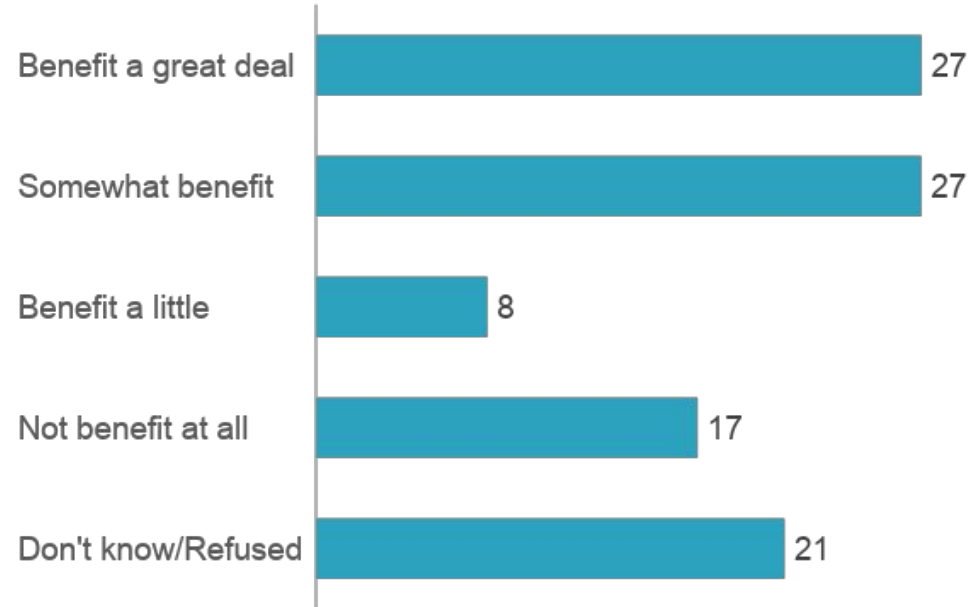
- **People don't know what the Energy Transfer Act is...they don't know the bill name or the details of what the bill did. Much of what is being shared in the local media about the transition is what people are using as a kind of baseline of information around what the bill does. The media and the local officials may be biased one way or the other as well. There is a lot of misinformation too** *Organizational Stakeholder, Rio Arriba County*

# Perceived Benefits of ETA Following Basic Information Provided by Survey

How much do you think the ETA will benefit you and your family?



How much will the ETA benefit the wider NM community?



## Access to Jobs is a Priority

High concerns about access to jobs for all New Mexicans, and misconceptions about quality and availability of current jobs

# Concerns of Community Regarding Access to Clean Energy Jobs

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- That all of the jobs that come from clean energy will go to people who live in Albuquerque and Santa Fe without equal access to New Mexicans who live in rural areas – **72%**
- That all of the jobs that come from clean energy will go to people with advanced education without many jobs for New Mexicans who only have a high school education – **76%**
- That all of the training opportunities to be competitive for jobs in clean energy will only be available in the urban areas of the state, making it challenging for those who live in the rural areas to acquire training – **74%**
- That small businesses that rely on the mining of fossil fuels will suffer when that industry is phased out - **60%**

**“We have all seen national numbers on clean energy jobs and that industry does not look at all like New Mexico. Green industry jobs are mostly filled by white men, we are of course concerned that this will happen in New Mexico.”** Non-profit leader

**We don’t want these to be another set of jobs that go to Santa Fe or out of state corporations. We want the economic opportunity; we want to be able to tap into jobs and to get long-term and well-compensated jobs for our families. We want that energy and work in Northern New Mexico.**  
*Community Member, Rio Arriba*

**“We have a lot of interest in hiring young workers because we know we need them. Most of my guys are in their 30’s and 40’s and were recruited from other industries like construction. My boss has asked me to hire two new younger workers from a recruitment fair next weekend, so this is a priority. We do not have good luck with the younger guys though. They come out of the trade schools with certificates but struggle when they get into the field. It’s one thing to connect panels or wire up the electricity in the classroom; they get on the roof with the wind and the weather and they want to quit. Most of our young guys do not last more than a couple of weeks.”** Local Solar Company Manger



# Accurate Information About Job Availability is Needed

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- Along with an overall lack of knowledge about the ETA, we found evidence that there may be a narrative permeating that state suggesting that clean air energy jobs are sparse and are low paying compared to other sectors requiring similar skills.

**“Students do not understand the many job opportunities that exist in the state beyond oil and gas. I have seen a tendency, I think, for students to perceive that all there is available are installation jobs. We need more outreach to the student population to inform them of the many jobs available with college degrees and technical training, as it seems that we only promote the extremes, PhD level jobs and the installation jobs.”** Higher Education Administrator

**“I am planning to start a job with the oil and gas industry when I finish school. This is not based on wanting to work in that industry, I would rather work in something that is better for the environment. I have been told that my job prospects here in New Mexico though are better in oil and I want to stay here if I can.”** Student in an energy training program

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## Lessons Learned From Landscape Analysis

# Literature Review Focused on Community Concerns

- Our landscape analysis focused on concerns raised in our interviews.
- This research provided mixed results, as there are positive trends in the national research regarding overall job projections in clean energy, relative wages, and economic development in rural areas.
- However, the concerns raised regarding lack of diversity are substantiated in the data.

# High Potential for NM Workforce

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- Workers in clean energy earn higher and more equitable wages when compared to all workers nationally (Brookings, 2019).
  - Workers at lower ends of the income spectrum can earn \$5 to \$10 more per hour than other jobs.
- Analysis conducted by the New Mexico Department of Workforce Solutions, Economic Research and Analysis Bureau confirms similar positive trends in NM.

# Wages are Higher in Clean Energy Industry in NM

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- The average annual wage for all clean energy occupations working in clean energy industries in 2018 was \$66,840, which is 47.2 percent higher than the average annual wage for all occupations in all industries in New Mexico (\$45,400).
- The median annual wage for all clean energy occupations working in clean energy industries in 2018 was \$59,870, while the median annual wage for all occupations working in all industries in New Mexico was \$34,120.

# Rural Communities and Clean Energy Industry

- The wind energy industry is much more amenable to rural communities than other clean energy industries (E2 2018).
- Wind technician jobs are among the fastest growing jobs nationally (BLS 2019), and are housed almost exclusively in rural areas where the turbines are located (Robinson-Avila 2018)
- Online education has been identified as a best practice to prepare the clean energy workforce if internet/access to computers is available (White & Walsh 2008).

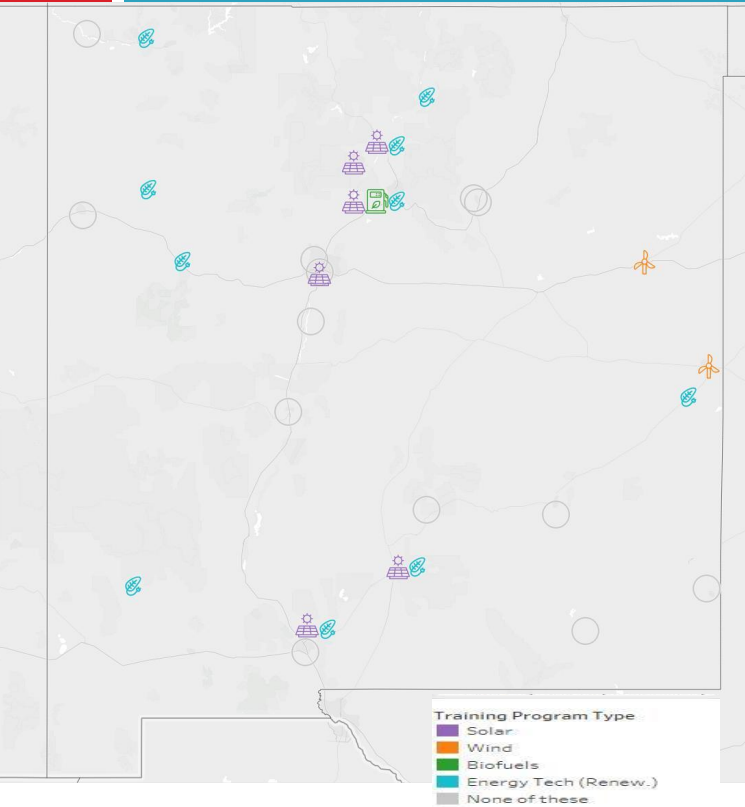
## Current Training Capacity in NM

Our team conducted analysis of our higher education system, and conducted informal interviews with 20 higher education stakeholders



# Green Energy-Focused Programs

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## GREEN ENERGY-FOCUSED PROGRAMS

	Solar	Wind	Biofuels	Energy Technology
Northwest	†			Navajo Tech Univ San Juan College*
North Central	Northern NM* UNM-Los Alamos			Northern NM UNM-Taos
Central	Santa Fe CC* CNM*		Santa Fe CC*	Santa Fe CC
Central West				NMSU-Grants ENMU-Portales
East		Mesalands Clovis CC*		
South	Dona Ana CC NMSU-Alamogordo			Dona Ana CC NMSU-Alamogordo Western NM*

\*Programs eligible for WIOA funding for green job training

†San Juan College has solar curriculum, but is not currently offering courses.

# Higher Ed Infrastructure in NM

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- Demand for programs is uneven and underdeveloped
- In Development:
  - Center for Excellence (Farmington): Hydrogen Power, Lithium-Ion Battery Reuse, Electric Vehicle Technician
- Well-developed infrastructure for traditional trades training, increasingly inclusive of CE applications:
  - E.g., Building Construction; HVAC; Industrial, Mechanical, Electrical Technologies; Instrumentation and Controls; Automotive Technologies

# Identified Needs

- Statewide plan for aligned, comprehensive clean energy workforce development that connects K-12, postsecondary ed and regional workforce needs
- Coordinated statewide system of stacked and latticed industry-recognized credentials, so that workers can build marketable careers
- Paid apprenticeships, internships and stipends through duration of training/retraining

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# Community Views on Training/Policy

Would you be interested in learning more about any job training opportunities related to clean energy?

42%

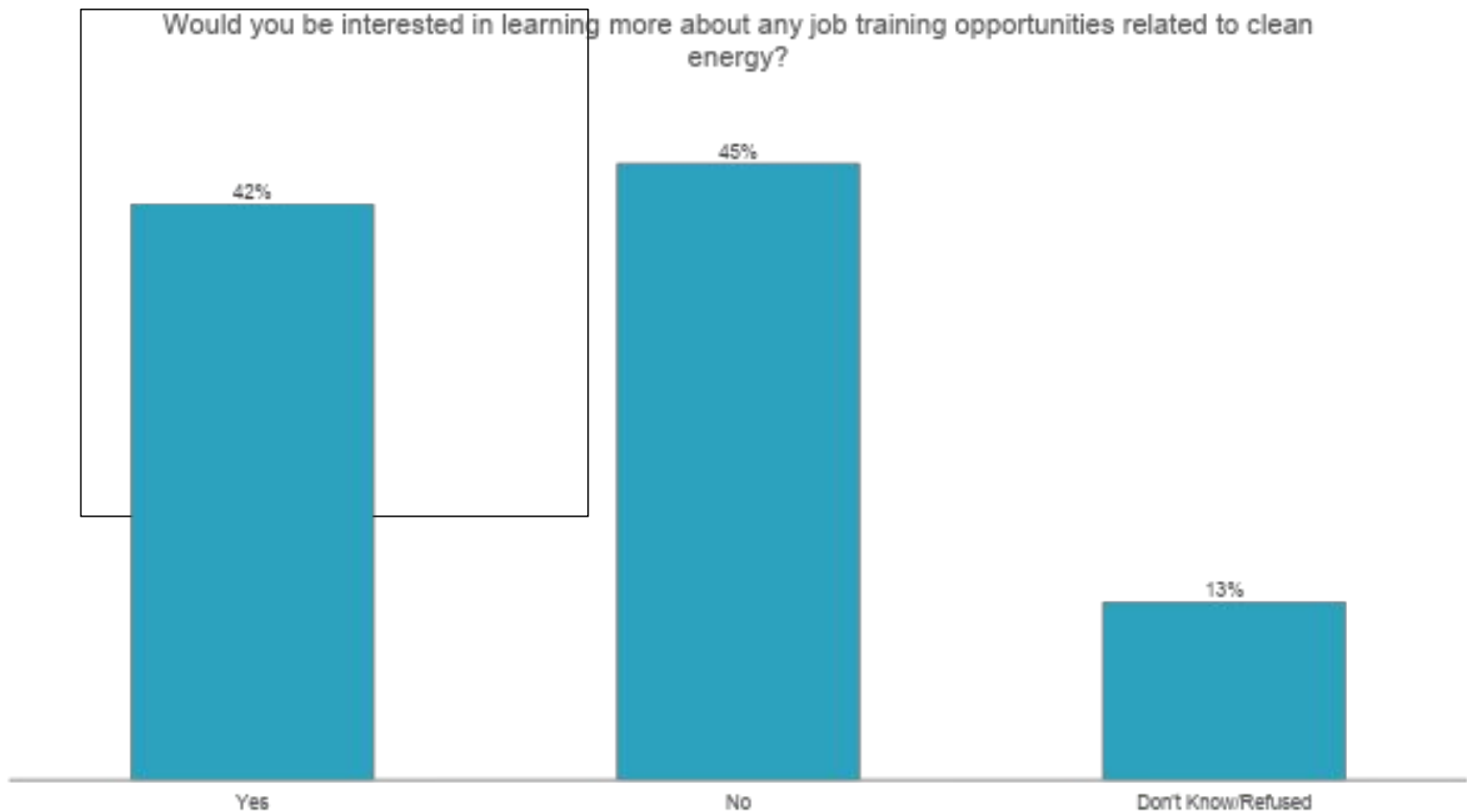
45%

13%

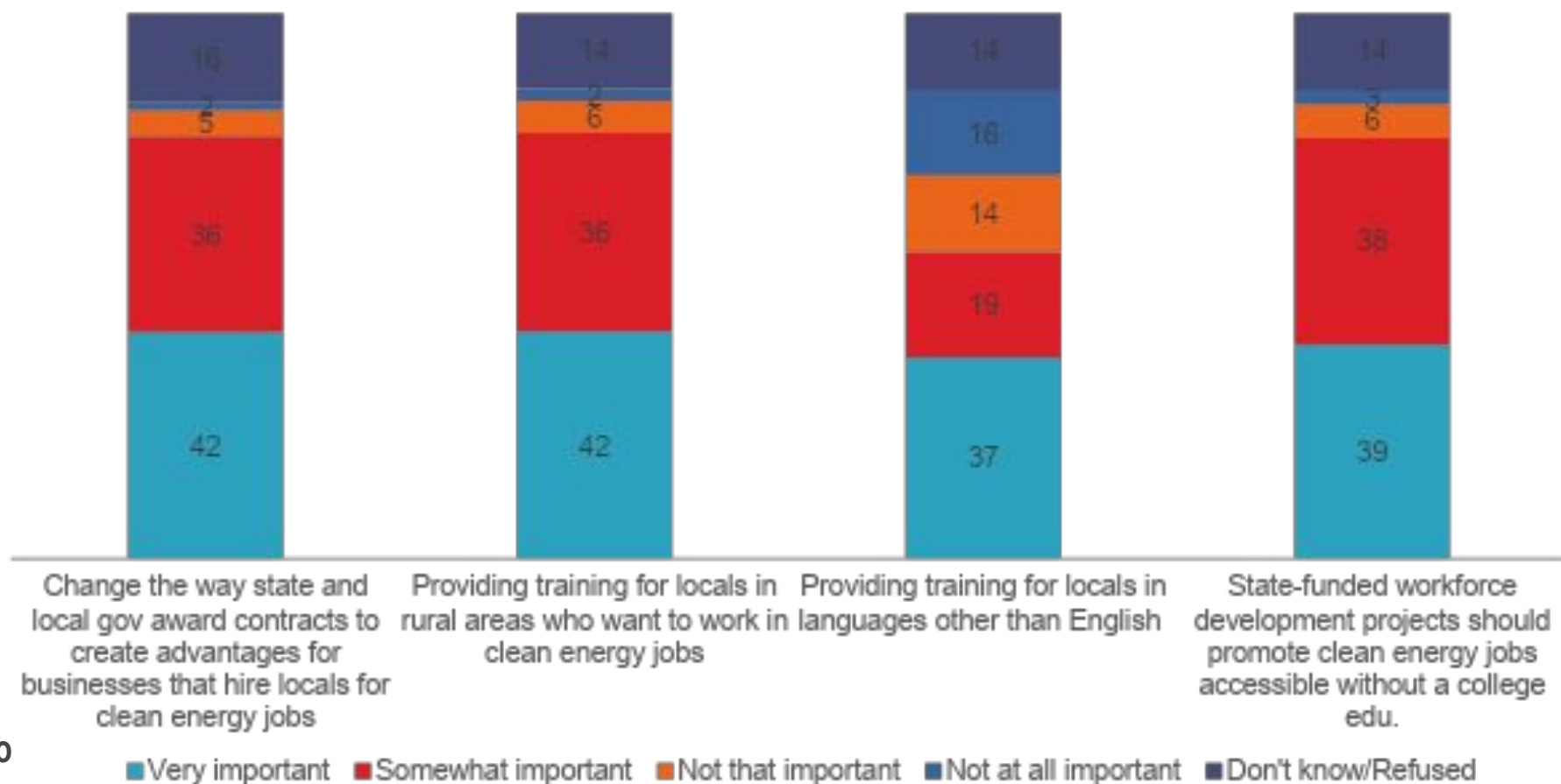
Yes

No

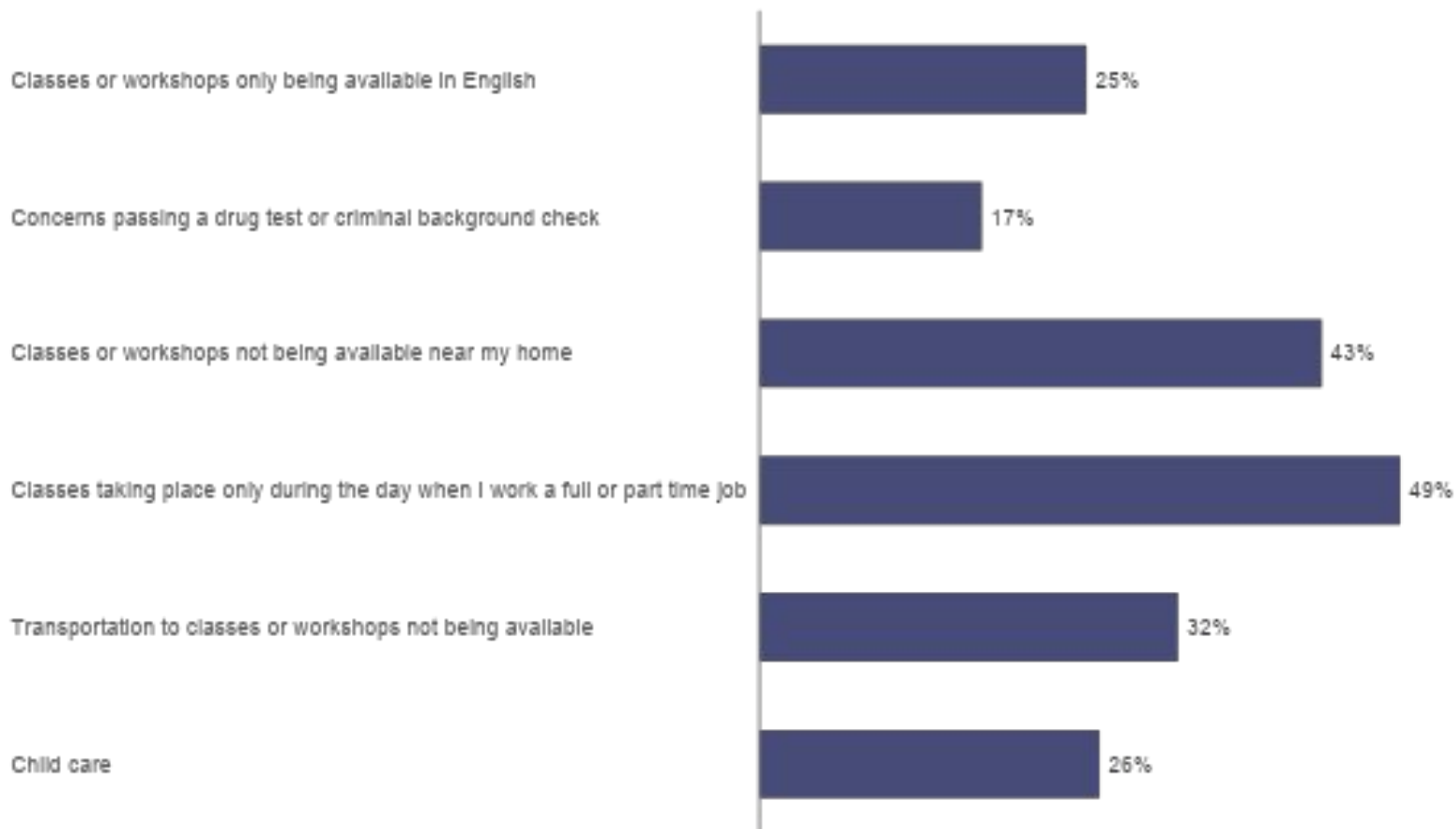
Don't Know/Refused



## How important are the following for jobs created in clean energy industries for NM?



Would any of the following obstacles limit your ability to participate in training opportunities for jobs in the clean energy industry?



# Concluding Thoughts

How to connect other economic development opportunities to the clean energy industry?



# Look for Creative Opportunities for Economic Development Tied to Clean Energy

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- Stakeholders in the clean energy workforce recognize that there may not be a 1 to 1 match in jobs through this transition away from fossil fuel energy extraction.
- However, if the workforce infrastructure is built to take advantage of the the movement to clean energy, the state could diversify revenue streams and create many new jobs.
- Here are some of the suggestions from our qualitative interviews and focus groups.

**“We should not anticipate clean energy filling all of the gap created by fossil fuel based energy and think creatively about how to bring in other industries that could partner with clean energy. This could include agricultural production in areas like Grants that could benefit from the positive impact of removing fossil fuel based energy in the region which makes food production more attractive, while simultaneously addressing food desert issues in the area.”**

**“Vestas manufacturing in Colorado has secure the supply chain in this region for wind turbine manufacturing, and given how close we are to that existing infrastructure we might not land a major manufacturing plant. However, how can we connect to that supply chain to fill in some gaps in related and needed infrastructure? This could be creating the components, manufacturing some of the blades, data monitoring etc. We have the capacity to engage and can get ahead of other states in the region if we think creatively and move quickly.”**

# Questions/Suggestions?

- You can reach our team at [csp@unm.edu](mailto:csp@unm.edu) or individually for any follow up questions - [sanchezg@unm.edu](mailto:sanchezg@unm.edu)