

# Introduction to Study: Presentation to the Just Transition Working Group of the Maryland Climate Change Commission

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# About the Lab



## NREL

One of the U.S. Department of Energy's 17 national research laboratories and the only one dedicated to renewable energy and energy efficiency.



## Motivation

Growth of clean energy poses new challenges for the clean energy workforce. Requires a cohesive lab strategy to leverage solutions across the organization



## Alignment

Clean energy future goes beyond technology and is underpinned by a trained and engaged workforce.



## Core Work

Workforce Analysis

Workforce Pipeline

Community and Industry Engagement



## Tools

Multiple workforce analysis models including: Workforce Impacts and Regional Economic Development (WIRED)



Photo by Joshua Bauer, NREL 63861

- How do we bring research together to implement change?
- How do we scale something at the community level?
- How do we support community priorities?

# NREL Support Strategy



## Identify Key Issues

Identify issues and opportunities specific to energy efficiency and clean energy technologies

## Identify Industries and Trades

Identify energy-intensive industries and sector-specific impacts on the workforce

## Identify Transferrable Skills

Identify avenues to maximize worker skills and expertise in new energy roles

## Provide Education and Training

Training and opportunities for disadvantaged communities and underrepresented populations

## Initiate Stakeholder Engagement

Develop stakeholder engagement plans for connecting communities with resources and opportunities



## Strategic Considerations

### “Leave no one behind”

Persistently consider and incorporate issues of diversity, equity, and inclusion in all tasks, analyses, and strategies.

### Template for Progress

Utilize the tasks and communities identified in the initial study to develop a model that can be expanded across the state.

# Primary Tasks

Task 1: State-Wide  
Community Survey

Identify where local  
workforce and  
economy will be  
impacted

Task 2:  
Decarbonization  
Opportunity  
Assessment

Identify cost-effective,  
appropriate strategies  
for resource  
investment

Task 3: Evaluation of  
Career Pathways

Build prioritization  
matrix based on  
analysis of strategies  
identified in task 2

# State-Wide Community Survey

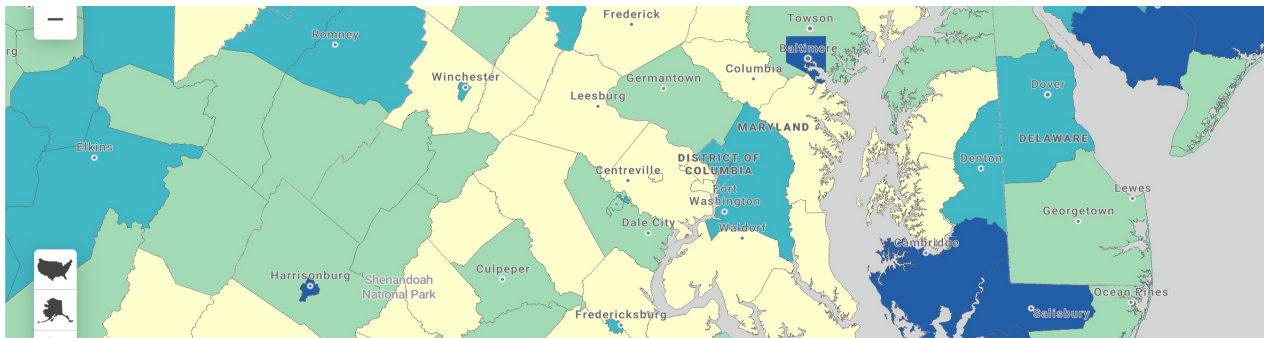
- Emissions Intensity Analysis
  - County level emissions
  - Identifying communities likely to be most disrupted by energy transition
- Just Transition Analysis
  - Combine emissions intensity outputs with energy justice metrics
  - Identify communities most likely to be disrupted and to benefit from interventions
- Priority Community Selection
  - Present results and key findings of Emissions Intensity Analysis and Just Transition Analysis
  - Facilitate discussion designed to identify up to six communities for pilot



Photo by Werner Slocum, NREL 66692

# Decarbonization Opportunity Assessment

- Decarbonization Opportunity Identification
  - Analyze all possible areas for decarbonization opportunities within the selected six communities
  - Generate local-specific data to inform climate, workforce, and energy goal setting and planning
- Local Clean energy Strategy Development
  - Support Maryland Department of Environment in leveraging the outputs from the decarbonization opportunity assessment
  - Identify cost-effective and appropriate strategies for public resource investment for up to three of the originally selected six communities



National Renewable Energy Laboratory. "Maryland Energy and Environmental Justice - Social Vulnerability Index" State and Local Planning for Energy, accessed [Date], <https://maps.nrel.gov/slope>

# Evaluation of Career Pathways

- Just Transition Workforce Analysis
  - Analyze employment implications of decarbonization strategies
  - Highlight careers likely to grow in demand based on various strategies and impacts.
- Education and Training Analysis
  - Analyze workforce development opportunities in and around the three communities and legacy energy communities
  - Build a prioritization matrix for additional investments required for transition
- Just Transition Workforce Planning
  - Present results and key findings of Just Transition Workforce Analysis and Education and Training Analysis
  - Facilitate discussion oriented toward developing strategic investment of resources and future programming to support goals



Photo by Werner Slocum, NREL 79439



# Questions & Discussion

## **Just Transition Principles:**

- Quality clean job creation
- Hiring and retaining underrepresented workers
- Promoting investments in clean jobs and impacted communities
- Identifying and eliminating structural barriers to employment
  - Occupational training and education
  - Stakeholder Collaboration

# Resources

[Wind Energy Workforce Development](#)

[National Wind Energy Workforce Assessment: Challenges, Opportunities, and Future Needs](#)

[Workforce Development Affiliate Programs](#)

[Building Science Workforce Development](#)

[Geothermal Workforce Development and Education](#)

[Offshore Wind Energy Workforce Assessment](#)

[Power Sector, Supply Chain, Jobs, and Emissions Implications of 30 Gigawatts of Offshore](#)

[Wind Power by 2030](#)

[Offshore Wind Workforce Network](#)

[Wind Workforce Webinar Series](#)